



ARIS CONNECT

ARIS CONNECT DESIGNER USER MANUAL

VERSION 10.0 - SERVICE RELEASE 12

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This document applies to ARIS Version 10.0 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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1 ARIS Connect

This manual contains the online help that is provided for ARIS Connect users using an **ARIS Connect Designer** license.

ARIS Connect is an integrated environment in which you can create, display, and change processes, as well as discuss and improve them jointly with other ARIS Connect users. When you open ARIS Connect in your Web browser, you obtain role-based access to the process descriptions that are relevant to you.

As a designer, you can create new models (page 170), edit existing models (page 171), and version models. You can assign documents to models and objects from ARIS document storage. In addition, you can create groups in databases in order to store your models in a structured way and to version selected models.

- Learn how to create a model
- Work with models
- Overview database content (page 414)
- Check models
- Collaborate with users (page 419)
- Contribute as a viewer (page 254)
- Show dashboards
- Use documents (page 253)
- Use favorites (page 110)
- Use filters (page 102)
- Highlight model items (page 222)
- Show models (page 201)
- Generate reports (page 413)
- Use the repository
- Search content
- Execute tasks
- Manage versions

News on ARIS is available in ARIS Community.

(https://www.ariscommunity.com/system/files/files/ARIS_10_SR12_Features_Overview.pdf)

Note: You can watch videos for some procedures in the help. If your browser is unable to open the quick videos within the help, please use a different browser. The videos are also available in ARIS Community (<http://www.ariscommunity.com/help/quick-videos>).

2 Using the help system

This section contains information on how to use the help system.

The content of the online help in some way represents the user interface of the Classic view (page 35), which is delivered as standard.

The help structure of the subject area **Use ARIS Connect** thus reflects the entry points of the header of ARIS Connect: **Work in the portal**, **Use the Catalog**, **Collaborate with users**, **Search content**, and **Use the repository**.

You can use the Contents tab, the Index tab, and the help search to open the relevant help pages.

2.1 Text conventions

Menu items, file names, etc. are indicated in texts as follows:

- Menu items, key combinations, dialogs, file names, entries, etc. are displayed in **bold**.
- User-defined entries are shown as **<bold text in angle brackets>**.
- Example texts that are too long to fit on a single line, such as a long directory path, are wrapped to the next line by using ↵ at the end of the line.
- File extracts are shown in this font format:
This paragraph contains a file extract.
- Warnings have a colored background:

Warning

This paragraph contains a warning.

2.2 What features does the online help offer?

The help system offers you various options for orientation and navigation. This page gives you an overview of the structure and functions of the help system. You will learn how to easily find the information you are looking for.

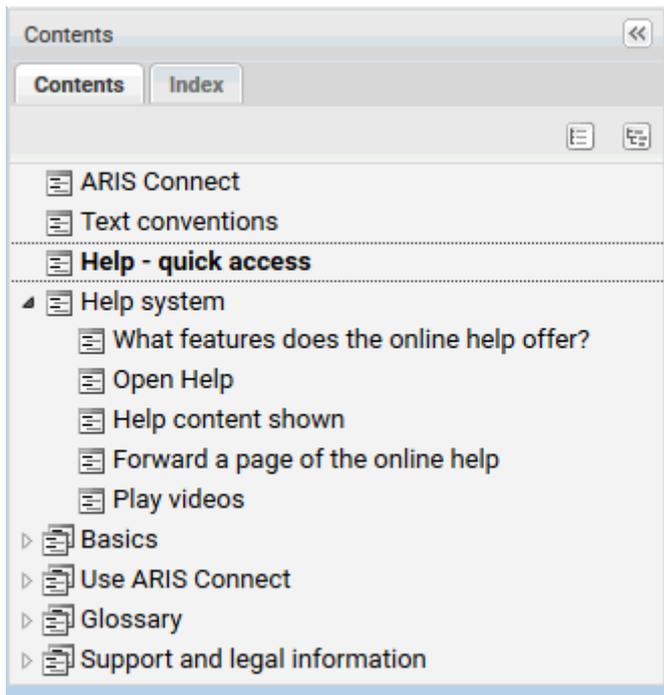
BUTTONS

The following buttons are available in the help viewer.

Buttons	Action
 Home	Displays the Contents tab and the first topic.
 Previous arrow	Selects the previous topic in the table of contents.
 Next arrow	Selects the next topic in the table of contents. If the next topic is a subordinated topic of the selected topic, the superordinate topic is expanded.
 E-mail this page	Opens an e-mail with the reference to the selected help page in the subject and the link to the selected help page in the body.
 Print this page	Opens the Print dialog to print the selected help page.
<input type="text" value="Search"/> Search field	Records the search text.
 Search button	Searches for the text entered in the search field.
<input type="checkbox"/> Match partial words (Disabled)	Searches for any word in the entered text that matches exactly. For example, if you search for modeling convent , the topics are found with modeling , but no topics with conventions .
<input checked="" type="checkbox"/> Match partial words (Enabled)	Searches for any word in the entered text that matches partially. For example, if you search for modeling convent , the topics are found both with modeling and with conventions .
 Collapse	Collapses the table of contents.
 Expand all	Expands the table of contents.

CONTENTS TAB

The **Contents** tab contains the structure of the help topics as a tree.



The **Contents** tab provides access to general information, such as the purpose of the product described, basic information on operating the program and the online help system, or the structure of the program interface. You can expand and collapse the tree of the **Contents** tab using the  **Expand all** and  **Collapse** buttons of the help viewer.

REPRESENTATION OF THE USER INTERFACE

To a certain extent, the tree of the **Contents** tab represents the user interface of the standard Classic view (page 35) of ARIS Connect. Depending on the license you are using, you will find the topics Work in the portal (page 35), Use the Catalog (page 414), Collaborate with users (page 419), Search content, and Use the repository in this order, which corresponds to the arrangement of the program components.



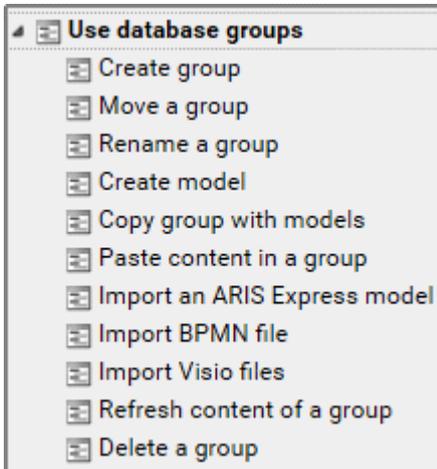
This makes it easy to assign the contents of the help to the program interface.

PROCEDURES AND CONCEPT DESCRIPTIONS

The tree also provides specific information such as procedures and concept descriptions.

THEMATICALLY GROUPED

Procedure descriptions show you how you can use the functionality of the program. They are provided with actively formulated headings such as **Create model**. Related topics are grouped thematically.



USE CASE ORIENTED

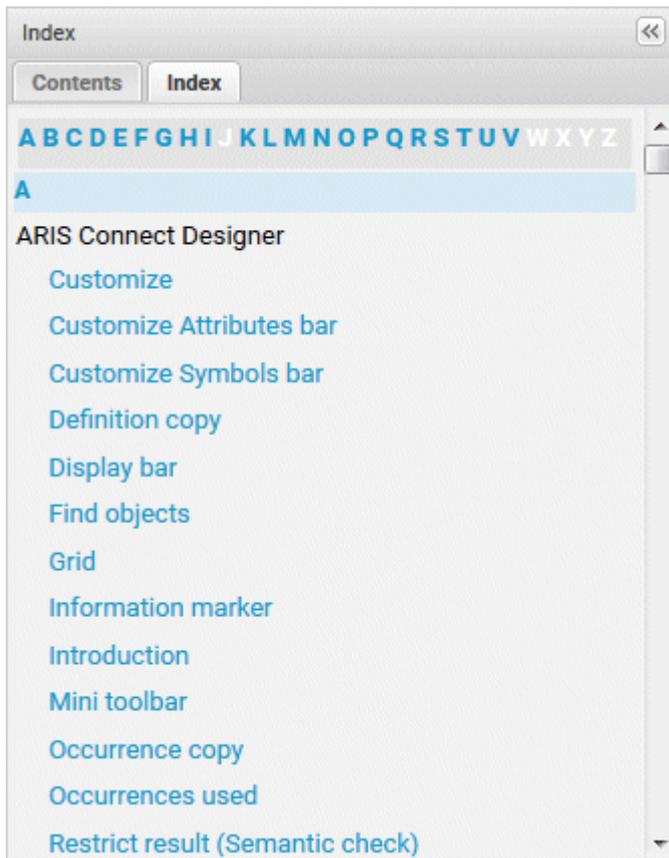
If possible, the procedure pages are arranged in such a way that they result in a use case. The following simple example shows the use case for groups: create group, manage group contents and, if no longer required, delete group.

DISTINCTION BETWEEN PROCEDURES AND CONCEPTS

You will find concept descriptions under **Valuable information**. Headings of concept descriptions are formulated as questions or marked by "How to" formulations, which makes it easy to distinguish between concept descriptions and procedure descriptions.

INDEX TAB

The **Index** tab provides keyword links to the respective help pages in alphabetical order.



The alphabet is arranged above the keywords. For colored letters there are keywords. By clicking on these letters, you jump to the keywords that begin with this letter.

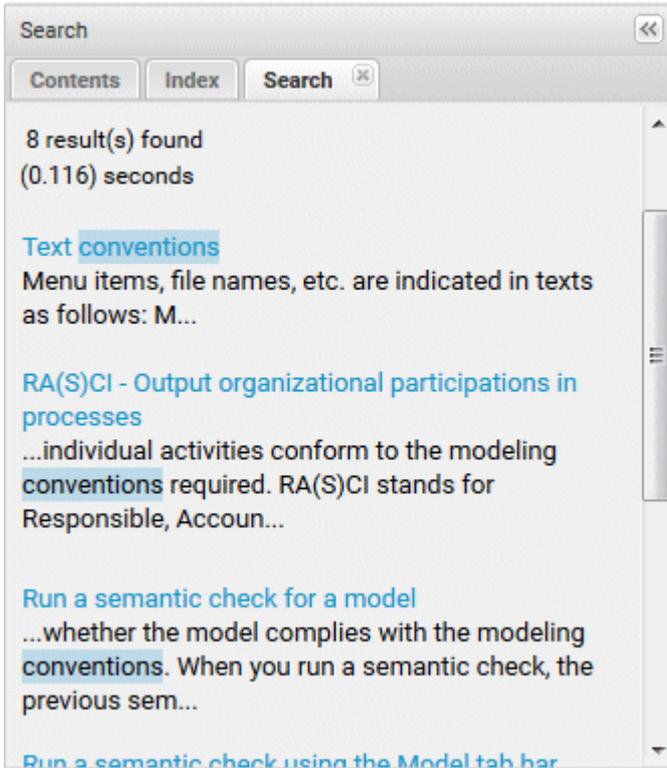
Click on a keyword to display the corresponding help page.

SEARCH

You can insert a search term in the search input box and execute the search.



The **Search** tab appears with the search result.



The search term is highlighted. You can extend the search by enabling the **Match partial words** check box to find every word of a term that partially matches.

Click on a page to display it.

HELP PAGES

BREADCRUMB

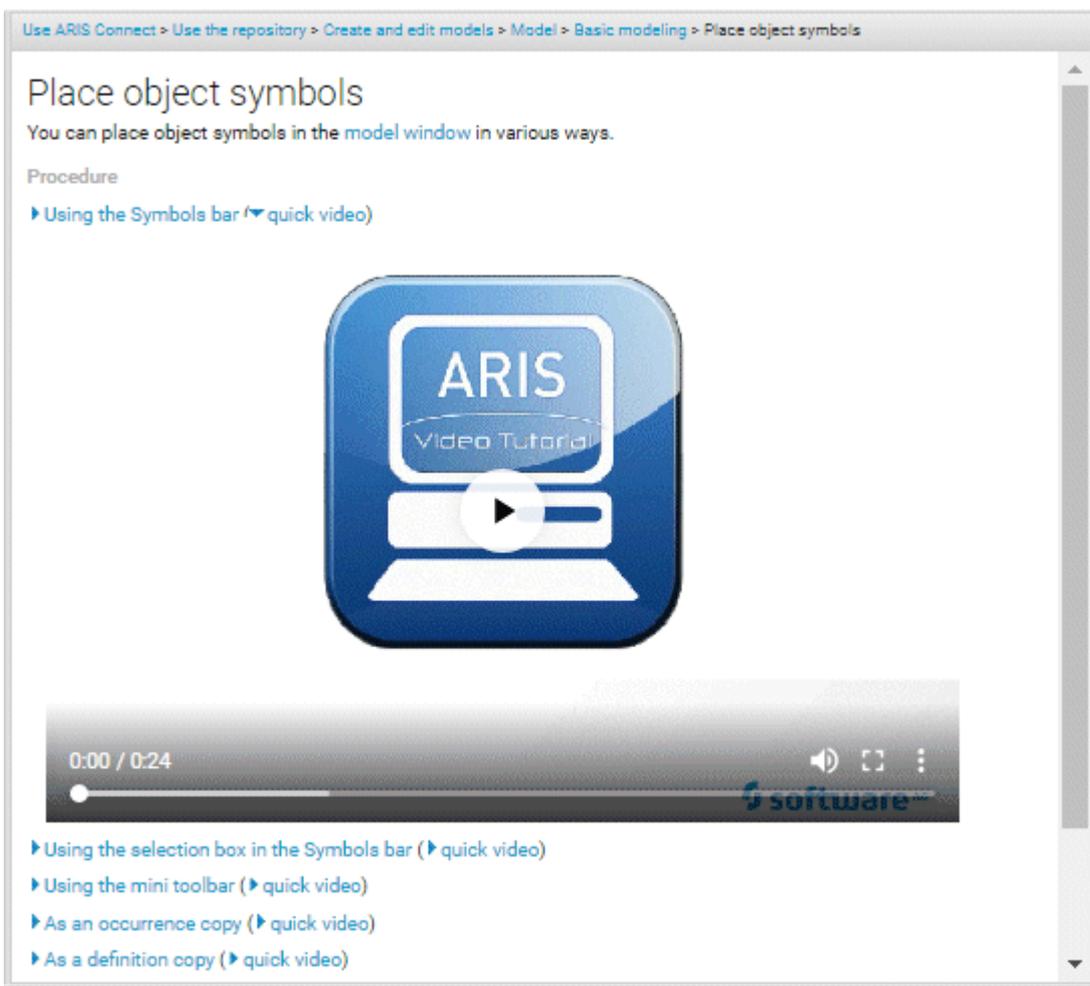
A breadcrumb navigation is displayed above the help pages.

[Use ARIS Connect](#) > [Work in the portal](#) > [Use models](#) > [Create model](#)

The breadcrumb represents the path in which a help page is stored in the content tree. This allows you to see the context of the information provided. You can click on the colored structure entries to navigate to a higher level.

HELP PAGE CONTENT

Help pages offer information as text, but also via videos, and illustrations.



Quick videos visualize described processes for certain functions. This enables you to follow basic and complex functions directly in the program. As the name **Quick video** says, the information given is very brief.

Task-related processes are presented in video tutorials.

[ARIS video tutorial](#)
[Process administration overview \(approx. 3 minutes\)](#)

Due to the complexity of the topics, video tutorials run for several minutes. If you click on a video tutorial link, you will be redirected to the ARIS Community (<http://www.ariscommunity.com>) web site where the videos are stored.

Help pages often provide **See also** links. These links allow you to jump to content-related help pages.

SKIP LINKS

Help pages of related topics are grouped thematically under superior pages in the content tree. If you select a parent page, you can access the skip links to open the corresponding help page.

Help system

The content of the online help in some way represents the user interface of the portal view, which is delivered as standard. The help structure of the subject area Use ARIS Advanced thus reflects the entry points of the header of ARIS Advanced: [Work in the Content view](#), [Collaborate with users](#), [Search content](#), and [Use the repository](#).

You can use the **Contents** tab, the **Index** tab, and the help search to open the relevant help pages. In addition the following links directly open the frequently used help areas.

- [ARIS Advanced Designer \(Create and edit models\)](#)
- [Check models \(semantic checks\)](#)
- [Check a model in ARIS Advanced Designer \(semantic check\)](#)
- [Collaboration](#)
- [Documents](#)
- [Favorites](#)
- [Diagram fact sheet](#)
- [Reporting \(ARIS Advanced Designer\)](#)
- [Reporting \(Portal\)](#)
- [Repository](#)
- [Search](#)
- [Versions](#)

Topics

[Text conventions](#)

[What features does the online help offer?](#)

[Forward a page of the online help](#)

[Play videos](#)

Legal notes | Contact | Publication data | ARIS Website

Skip links are listed under the **Topics** section. They are at the beginning of the main content, so that screen readers have immediate access to the topics for reading aloud.

For more information that goes beyond the application help, see the technical documentation.

Technical documents are available on:

- ARIS DVD (...Documents\English\5 Customizing)
- Empower (<https://empower.softwareag.com/>) (login required)
- ARIS Download Center (<https://aris.softwareag.com/>)

FOOTER LINKS

The links lead to the corresponding web pages.

2.3 Open Help

You can open the online help to find out more about the range of functions normally delivered with ARIS Connect. Since ARIS Connect is fully configurable, the range of functions and the user interface in your product may differ significantly from what is described in the Help.

Procedure

1. Click your name.
2. Click **Help**.

A new tab opens. You will be offered different content depending on your role as a viewer, designer, or administrator. You can obtain the information you want using the **Contents** tab, the **Index** tab, and the **Search** field.

2.4 Help content shown

The ARIS Connect help content shown depends on your function or license privileges.

- If you are logged in with **ARIS Connect administrator** function privileges, the whole ARIS Connect help content is shown.
- If you are logged in with **ARIS Connect Designer** license privileges, you will see all the help content you need to work with models. This means that the **Administrate ARIS Connect** content is hidden, because you do not have access to administration features such as **Manage users** functionality.
- If you are logged in with **ARIS Connect Viewer** license privileges, you will see the entire help content describing how to navigate in the  **Portal**. This means that the **Use ARIS Connect > Using the repository** content is hidden, because you do not have access to the repository to create and edit models. Even if you do not have the **Contribution** license privileges, the **Working in the portal > Contribute as viewer** descriptions are offered in the **Viewer** help. This is because the **Contribution** feature is an additional feature that is directly linked to the viewer features.

2.5 Forward a page of the online help

You can forward a link to the current page of the online help to others.

Prerequisite

- An e-mail program is associated with the **mailto** command.
- The recipients you are sending the link to can access the server on which the online help is located.

Procedure

3. Open the page of the online help that you want to refer to.
4. Click  **E-mail this page**. An e-mail opens, in which the link to the current page is already inserted.
5. Enter the e-mail recipient and send the e-mail.

The link to the help page is available to the e-mail recipients.

2.6 Play videos

You can watch videos for some procedures. The procedure pages contain links for playing the videos.

Procedure

On the procedure page, click the video link. The video plays.

Note: If your browser is unable to open the quick videos within the help, please use a different browser. The videos are also available in ARIS Community (<http://www.ariscommunity.com/help/quick-videos>). If an empty page is displayed after you have opened a video page, please press **F5** to refresh the page.

3 Use ARIS Connect

ARIS Connect is an integrated environment in which you can create, display, and change processes, as well as discuss and improve them jointly with other ARIS Connect users. When you open ARIS Connect in your Web browser, you obtain role-based access to the process descriptions that are relevant to you.

3.1 Basics

This area lists some basic points that make your life easier when working with the ARIS Connect and its online help.

3.1.1 Select language

You can change the interface language, the language for Help, and the language for models all at the same time.

Procedure

1. Click your name.
2. Click **Languages**. The available languages are listed.
3. Click the language in which the interface language, Help, and model content are to be displayed.

The language is changed.

If content such as Help or model content is not available in the selected language, it is displayed in the alternative language. The alternative language is the database language in which database content is displayed if attribute values are not specified in the database language used. Using this, for example, you prevent names from being displayed as **(Untitled)** if they have not been specified in the relevant database language. When you create a database, **English (United States)** is selected automatically.

3.1.2 Edit your user account

Change the data of your user account. Data from LDAP users can be edited only to a limited extent.

Procedure

1. Click your name > **User settings**. If the Browser window is scaled-down, click  **User menu** > **User settings** instead. The user data (details) is displayed.
2. Click  **Edit** to change the e-mail address, telephone number, etc. Some entries cannot be changed, such as the user name.
3. Click **Save**.
4. Click  **Change picture** to change or delete your picture. The corresponding dialog opens.
 - If you want to upload a picture or change the current picture, click **Select file** to navigate to the picture file you want to upload, select the picture file, and click **Open**. The picture is displayed in the preview of the **Change picture** dialog. Click **Upload**.
 - If you want to delete the current picture, click **Clear**. The picture is deleted from your profile.

If a different picture is uploaded in ARIS Connect or in Collaboration, it is automatically transferred to the other application. You have changed your user account.

3.1.3 Change password

Change your password in the user profile after your first login or after the password was reset by the administrator. If an LDAP system is used for user management, please contact your LDAP administrator to request a new password.

Procedure

1. Click your name > **User settings**. If the Browser window is scaled-down, click  **User menu** > **User settings** instead. The user data (details) is displayed.
2. Click  **Edit**.
3. Enable the **Change password** check box. The **Old password**, **New password**, and **Confirm password** fields are displayed.
4. Enter a new password, and reenter it. If you want to use the webMethods integration, passwords must not contain a colon.
5. Click **Save**.

The password is changed. The user receives a notification by e-mail.

3.1.4 Switch your profile

You can switch between profiles (page 20) if more than one profile is assigned to you in ARIS Administration. Profiles provide you a profile based view of the portal. Depending on the profile, you have access to different content and functionality. Only one profile can be active at a time.

Procedure

1. Click your name.
2. Click **Profiles** > <profile_xy>.

The content and functionality of the selected profile is displayed.

3.1.5 Start quick search

You can begin the search for items directly on the start page of ARIS Connect.

Procedure

1. If more than one database is provided, select the database (page 94) your search is to be based on.
2. Click in the  **Search** box.
3. Enter the relevant term.



A list with first results is shown as you enter the term. As you complete the term, the list will be updated.

4. In the list, click the entry of the category to which you want to navigate. The categories displayed depend on the license you are using.

The item opens. For example, if you click the name of a model, the model opens in ARIS Connect Designer. If you click a collaboration entry, it is output in Collaboration.

3.1.6 Open the search area

Searching in ARIS Connect enables you to conveniently find items such as models, objects, documents, groups in Collaboration, etc., throughout the system.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database (page 94) your search is to be based on.

You have opened the **Search** area and you can restrict the result to the items you want to find by using the search context and filters.

3.1.7 Open ARIS Download Client page

You can switch to the ARIS Download Client page to download and use an ARIS product, that is, ARIS Architect/Designer.

Prerequisite

Your administrator has enabled the use of download clients.

Procedure

1. Click your name.
2. Click **Download clients**.

A new tab opens with the **Download clients** page. You can download and start the ARIS products your administrator has configured for use.

3.1.8 Open ARIS Administration

You can open ARIS Administration, for example, to publish databases, create users, or activate Collaboration.

Prerequisite

You are logged in as a user with the **ARIS Connect administrator** function privilege.

Procedure

1. Click your name.
2. Click **Administration**.

The administration areas, such as **User management** and **Configuration** are opened for editing.

3.1.9 Open information window

You can view information about ARIS Connect.

Procedure

1. Click your name.
2. Click **About**.

Information about ARIS Connect will be displayed.

3.1.10 Log out of ARIS Connect

You can log out of ARIS Connect when you have finished editing.

Procedure

1. Click your name.
2. Click **Log out**.

You will be logged out and the ARIS Connect Log in page will be displayed.

You can log in with your current user name or another user name, if you have different user names for different roles.

3.1.11 Available ARIS Connect keyboard shortcuts

You can use keyboard shortcuts to control the program.

ARIS Connect in general (page 22)

Keyboard shortcuts for Collaboration (page 23)

PORTAL

Portal in general (page 24)

Quick start page (page 26)

Quick search (page 27)

Database selection (page 28)

Hierarchies (page 30)

List views (page 25)

Comment bar (page 29)

Matrix model (page 250)

ARIS CONNECT DESIGNER

Model tab (page 32)

Select attribute dialog

Collaboration bar (page 30)

Modeling table

Matrix model

3.1.12 Known issues

AD BLOCKERS

Some ad blockers may prevent ARIS Connect from being started correctly.

If you have logged in to ARIS Connect and a white screen is displayed instead of the start page, please configure the ad blocker to consider ARIS Connect secure.

POP-UP BLOCKERS

Under certain circumstances, if the response time is too long, a Web browser may consider the tab of ARIS Connect Designer as a pop-up. In this case, no new tab is created and no model opens.

If you attempt to open a model, but the tab with the model is not displayed, please check whether your pop-up blocker prevents the tab from opening and allow ARIS Connect pop-ups.

MICROSOFT® INTERNET EXPLORER® AND MICROSOFT® EDGE®

When you open many dashboards, switch back to the Portal and back to the dashboards again, the browser may freeze and no content is displayed. You must close and restart the browser again.

3.1.13 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.1.13.1 What profiles include which content?

Profiles provide users a profile based view of the portal. Depending on the profile, the information and functionality that users have access to varies. Example: For users to which the **Viewer** profile is assigned, the **Steps** fact sheet is displayed when a model is selected. They are unable to view the **Tasks** fact sheet and the **Contribute** function as they do not have an active role. Profiles are applied in addition to the function and license privileges. If more than one profile is assigned, the user can switch between these profiles via **<user name> > Profiles > <profile_xy>**. Only one profile can be active at a time. You can assign the following profiles to users or user groups in ARIS Administration.

Profile name	Views and functionalities
CoE member	The Overview fact sheet is displayed when a model is selected in the  Portal .
Contributor	The Steps fact sheet is displayed when a model is selected in the  Portal . If the Steps fact sheet is not available, the Overview fact sheet is displayed.
Designer	The Diagram fact sheet is displayed when a model is selected in the  Portal .
Manager/Owner	The Dashboards fact sheet is displayed when a model is selected in the  Portal .
Viewer	<ul style="list-style-type: none"> ▪ The Steps fact sheet is displayed when a model is selected in the  Portal. If the Steps fact sheet is not available, the Overview fact sheet is displayed. ▪ The Tasks area is not available. ▪ The  Contribute function is not available.
Viewer (accessible)	<ul style="list-style-type: none"> ▪ The Steps fact sheet is displayed when a model is selected in the  Portal. If the Steps fact sheet is not available, the Overview fact sheet is displayed. ▪ The Tasks area is not available. ▪ The  Contribute function is not available. ▪ ARIS document storage and Process Governance are not available.

These profiles are predefined in the XML configuration.

3.1.13.2 What licenses are available in ARIS Connect?

For working with ARIS Connect, the **Designer** and **Viewer** licenses are available.

DESIGNER

- The **ARIS Connect Designer** license gives users access to the entire repository. They can access models, documents, and dashboards and feeds. In the **Models & Object** area, for example, users can create, edit, and delete models in databases.
- The **ARIS Connect Designer** license can be extended with the **ARIS Aware** license. The **ARIS Aware** license allows users to view configured dashboards (page 1143) for which they have view rights. The users can view the dashboards, for example, in the Dashboards fact sheet.

VIEWER

- The **ARIS Connect Viewer** license enables users to view models in databases. This means that these users use databases for review and information purposes.
- The **ARIS Connect Viewer** license can be extended with the **ARIS Aware** license. The **ARIS Aware** license allows users to view configured dashboards (page 1143) for which they have view rights. The users can view the dashboards, for example, in the Dashboards fact sheet.
- The **Contribution** license is an additional license to users using an **ARIS Connect Viewer** license. If you have both the **ARIS Connect Viewer** and **Contribution** license privilege, you can change values of specific model types and objects (page 263), create new or reuse existing items (page 255), as well as delete items (page 257) in the  **Portal**.

3.1.13.3 Keyboard shortcuts generally available

The following shortcuts refer to the web browser. They are relevant because, for example, they can close the contents of ARIS Connect. For example, pressing **Ctrl + F4** closes a ARIS Connect tab without asking if it does not contain content that has been changed.

Shortcut	Action
Alt + F4	Closes the web browser with all tabs. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Alt + left arrow	Moves backwards through previously visited areas of ARIS Connect, such as  My activities ,  Recent changes , but also  Search and  Catalog .
Alt + right arrow	Moves forward through previously visited areas of ARIS Connect, such as My  activities ,  Recent changes , but also  Search and  Catalog .
Ctrl + F	Opens the Find bar of the web browser to search the page for a term.
Ctrl + F4	Closes the ARIS Connect tab without asking.
Ctrl + Page down	Depending on the web browser: Switches to the next web browser tab from left to right if your web browser supports changing tabs using the keyboard.
Ctrl + Page up	Depending on the web browser: Switches to the next web browser tab from right to left if your web browser supports changing tabs using the keyboard.
F3	Depending on the web browser: Opens the Find bar of the web browser to search the page for a term.
F5	Updates the current view based on the database changes.
F11	Turns full screen mode on or off if your web browser supports full screen.

3.1.13.4 Keyboard shortcuts for Collaboration

The following shortcuts are available in Collaboration (page 419).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
End	Moves to the lower entries if they cannot be displayed completely due to the window size or the screen resolution.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
Home	Moves to the upper entries if they cannot be displayed completely due to the window size or the screen resolution.
Tab	<ul style="list-style-type: none"> ▪ Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page. ▪ Highlights the next control or input box. ▪ Jumps from the Comment box to the  Tag,  Link, and  File symbols that you can use to attach tags, links, or files to your comment. It also jumps to the other input fields and to the Post button.
Shift + Tab	Highlights the previous control or input box.
Right arrow/ Left arrow	Moves the cursor through the text in input boxes.
Up arrow/ Down arrow	Selects the previous/next item in lists.
Enter	<p>Opens the attachment fields and places the cursor in the input field if the Tag or Link symbol is selected. Opens the Select document dialog when the File symbol is selected.</p> <ul style="list-style-type: none"> ▪ Posts the comment when the Post button is selected. ▪ Executes the highlighted button. ▪ Opens the dialog/the selection list of the highlighted item.
Ctrl + Enter	Posts a comment when the Post button is active.

3.1.13.5 Keyboard shortcuts for the portal

The following shortcuts are generally available for the  **Portal**.

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Opens the focused drop-down menu, selects the first menu item, and jumps down through the menu items.
Enter	Invokes the action of the selected menu item.
Esc	Closes the drop-down menu.
Left arrow	Closes the submenu of a menu item.
Right arrow	Opens the submenu of a menu item.
Shift + tab	Focuses the previous control, such as  Portal ,  Search , a menu, or an input box, that you can select with the Enter key, open with the Down arrow or Up arrow keys (menus) or enable with the Space key (check boxes). For users with Contribution license privileges, jumps from one input box to the previous one in Edit mode.
Space	Opens a menu and selects the first menu item. Invokes the action of a selected item, for example, My favorites .
Tab	<ul style="list-style-type: none"> ▪ Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page. ▪ Focuses the next control, such as  Portal,  Search, a menu, or an input box, that you can select with the Enter key, open with the Down arrow or Up arrow keys (menus) or enable with the Space key (check boxes). ▪ For users with Contribution license privileges, jumps from one input box to the next in Edit mode.
Up arrow	Opens the drop-down menu, selects the last menu item, and jumps up through the menu items.

3.1.13.6 Keyboard shortcuts for list views

Elements are listed in list views. List views are, for example, areas such as My favorites, My activities, Recent changes, and Catalog (page 414).

Shows the current activities you are following in Collaboration (page 419) or in the portal (page 422).

The following shortcuts are available for these areas.

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Moves the entries down one entry if they cannot be displayed completely due to the window size or the screen resolution.
End	When in focus: Moves to the lower entries if the contents cannot be displayed completely due to the window size or the screen resolution.
Enter	Sorts the table entries column by column in descending or ascending order if the column name is selected. Glossary and Catalog: Displays and hides the Choose items starting with the same letter and opens and closes the filter for the catalog (page 416).
F5	Updates the current view.
Home	When in focus: Moves to the upper entries if the contents cannot be displayed completely due to the window size or the screen resolution.
Left arrow	Moves the entries to the left if they cannot be displayed completely due to the window size or the screen resolution.
Page down	When in focus: Moves to the lower entries if they cannot be displayed completely due to the window size or the screen resolution.
Page up	When in focus: Moves to the upper entries if they cannot be displayed completely due to the window size or the screen resolution.
Right arrow	Moves the entries to the right if they cannot be displayed completely due to the window size or the screen resolution.
Up arrow	Moves the entries up one entry if they cannot be displayed completely due to the window size or the screen resolution.

3.1.13.7 Keyboard shortcuts for the Quick start page

The following shortcuts are available for the Quick start page (page 70).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Alt + Down arrow Alt + Up arrow	Activates the area of the tiles (page 70) for navigation.
Down arrow	If the main area has the focus: Moves the tiles (page 70) up if they cannot be displayed completely due to the window size or the screen resolution.
End	Moves to the lower tiles (page 70) if they cannot be displayed completely due to the window size or the screen resolution.
F5	Updates the current view.
Home	Moves to the upper tiles (page 70) if they cannot be displayed completely due to the window size or the screen resolution.
Page down	Displays as many of the next tiles (page 70) as possible in the visible area if they cannot be displayed completely due to the window size or the screen resolution.
Page up	Displays as many of the previous tiles (page 70) as possible in the visible area if they cannot be displayed completely due to the window size or the screen resolution.
Shift + Tab	Jumps from the selected to the next left tiles (page 70).
Space	Activates the Quick start page if the focus is on  Quick start .
Tab	<ul style="list-style-type: none"> ▪ Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page. ▪ Jumps from the selected to the next right tiles (page 70).
Up arrow	If the main area has the focus: Moves the tiles (page 70) down if they cannot be displayed completely due to the window size or the screen resolution.

3.1.13.8 Keyboard shortcuts for the quick search

The following shortcuts are available for the quick search (page 15).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Arrow down	Selects the next entry of the result list downwards. If the last entry is selected, press the Arrow down key to select the first entry of the list.
Arrow right	Jumps to the selected entry, for example, to the fact sheets of a model in the portal, or opens the Open dialog, for example, to download a document from ARIS document storage.
Arrow up	Selects the next entry of the result list upwards. If the first entry is selected, press the Arrow up key to select the last entry of the list.
Enter	Opens the Search area if no entry is selected or jumps to the selected entry.
Tab	Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page.

3.1.13.9 Keyboard shortcuts for the database selection

The following shortcuts are available for the database selection (page 94).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Opens the database selection menu, selects the first entry. If the down arrow is pressed again, the next entry below is selected.
Enter/Space	Opens the selected database.
ESC	Closes the database list.
Up arrow	Opens the database selection menu, selects the first entry. If the down arrow is pressed again, the last entry is selected. Each further press marks the next entry above.

3.1.13.10 Keyboard shortcuts for the Comment bar

The following shortcuts are available in the Comment bar (page 118) when the cursor is in the **Comment** field.

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Tab	Jumps from the Comment box to the Tag , Link , and File symbols that you can use to attach tags, links, or files to your comment. It also jumps to the other input boxes and to the Post button.
Enter	Opens the attachment fields and places the cursor in the input box if the Tag or Link symbol is selected. Opens the Select document dialog when the File symbol is selected. Posts the comment when the Post button is selected.

3.1.13.11 Keyboard shortcuts for hierarchies

The following shortcuts are available for hierarchies, such as the Groups hierarchy (page 38) in the Classic view (page 35).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Jumps down to the next entry.
Left arrow	Closes the selected hierarchy.
Right arrow	Opens and closes the selected hierarchy.
Space	Toggles the selected hierarchy.
Tab	Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page.
Up arrow	Jumps up to the next the entry.
1 - 9	Jumps to one of the first nine items of the current level.
0	Jumps to the parent item of the selected item.

3.1.13.12 Keyboard shortcuts for the Collaboration bar

The following shortcuts are available in the Collaboration bar when the cursor is in the **Comment** field.

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Tab	Jumps from the Comment box to the  Tag ,  Link , and  File symbols that you can use to attach tags, links, or files to your comment. It also jumps to the other input fields and to the Post button.
Enter	Opens the attachment fields and places the cursor in the input field if the Tag or Link symbol is selected. Opens the Select document dialog when the File symbol is selected. Posts the comment when the Post button is selected.

3.1.13.13 Keyboard shortcuts for the search

The following shortcuts are available for the search.

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Alt + Down arrow Alt + Up arrow	Activates the result area or the page selection area.
Enter	Opens the selected result entry, adds or removes a selected filter, or opens the selected page.
Esc	Closes the result entry list and removes the search term from the quick search field.
Shift + Tab	Jumps to the next element of the user interface or to the next entry from right to left and from bottom to top.
Tab	<ul style="list-style-type: none">▪ Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page.▪ Jumps to the next element of the user interface or to the next entry from left to right and from top to bottom.

3.1.13.14 Keyboard shortcuts for ARIS Connect Designer

The following shortcuts are available in ARIS Connect Designer.

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Alt	Temporarily switches off Guided Modeling and grid when you drag items.
Alt + down arrow	Moves selected objects down four grid lines.
Alt + F4	Closes the web browser. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Alt + left arrow	Moves selected objects four grid lines to the left.
Alt + - (minus)	Inserts an optional hyphen at the cursor position in a text.
Alt + right arrow	Moves selected objects four grid lines to the right.
Alt + up arrow	Moves selected objects up four grid lines.
Backspace	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Ctrl + A	Selects all items.
Ctrl + C	Copies selected items to the clipboard. This enables you to paste copied items from the clipboard into models/diagrams and into other Windows programs.
Ctrl + down arrow	Moves selected items downwards by increments of one pixel.
Ctrl + End	Displays the bottom right pane of the modeling area.
Ctrl + Enter	Inserts a line break for text attributes, such as free-form texts, object names, etc.
Ctrl + F	Opens the Find bar.
Ctrl + F4	Closes the model tab. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Ctrl + Home	Displays the upper left pane of the modeling area.
Ctrl + left arrow	Moves selected items to the left by increments of one pixel.
Ctrl + Page down	Switches to the next web browser tab from left to right if your web browser supports changing tabs using the keyboard.
Ctrl + Page up	Switches to the next web browser tab from right to left if your web browser supports changing tabs using the keyboard.

Shortcut	Action
Ctrl + right arrow	Moves selected items to the right by increments of one pixel.
Ctrl + S	Saves your changes.
Ctrl + Shift + V	Inserts a definition copy of an object if an object is in the clipboard.
Ctrl + up arrow	Moves selected items upwards by increments of one pixel.
Ctrl + V	Pastes the content of the clipboard, if this is content that can be placed in the modeling area. If an object is in the clipboard, an occurrence copy of the object is inserted.
Ctrl + X	Cuts selected items and copies them to the clipboard.
Ctrl + Y	Redoes editing steps that were undone.
Ctrl + Z	Undoes preceding editing steps.
Del	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Down arrow	Moves the modeling area contents up (the contents of the modeling area that are further down will be displayed).
Enter	Ends the input.
Esc	Removes selections and closes dialogs. Closing dialogs with the ESC key is the same as clicking Cancel .
F2	Selects the selected text attribute of an element or the object name of a selected object for editing.
F3	Opens the Find bar. When the find bar is open, pressing the F3 key jumps to the next occurrence of the searched term.
F5	Updates the current view based on the database changes.
F11	Turns full screen mode on or off if your web browser supports full screen.
Left arrow	Moves the modeling area contents to the right (the contents of the modeling area that are further left will be displayed).
- (minus)	Reduces the display of the model content by 10%.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
+ (plus)	Enlarges the display of the model content by 10%.
Right arrow	Moves the modeling area contents to the left (the contents of the modeling area that are further right will be displayed).

Shortcut	Action
Shift	Keeps the shapes of a circle and a square when you place and scale the graphic objects Circle/Ellipse and Square/Rectangle .
Shift + Del	Deletes a structurally relevant object (page 1154) without creating a connection between the remaining objects when you use Smart Modeling.
Shift + down arrow	Moves the object one grid to the left.
Shift + left arrow	Moves the object down one grid.
Shift + Page down	Moves the contents of the modeling area page by page to the right (the contents of the modeling area that are further left will be displayed).
Shift + Page up	Moves the contents of the modeling area page by page to the left (the contents of the modeling area that are further right will be displayed).
Shift + right arrow	Moves the object one grid to the right.
Shift + up arrow	Moves the object one grid up.
Up arrow	Moves the modeling area contents down (the contents of the modeling area that are further up will be displayed).

3.2 Work in the portal



ARIS Connect is an integrated environment in which you can create, display, and change processes, as well as discuss and improve them jointly with other ARIS Connect users. When you open ARIS Connect in your Web browser, you obtain role-based access to the process descriptions that are relevant to you.

If you click  **Portal**, you can view all information relevant to you.

Depending on your role, the view, and the published databases your administrator selected, the function and content of the portal may vary. In the following, the functions of the Classic view (page 67) and the Default view (page 68) are described.

3.2.1 Views

The portal shows specific information for each user. Different views display information in different ways. By default, ARIS comes with two different views. The Classic view (page 67) and the Default view (page 68). These views are defined in configuration sets that cannot be changed. However, administrators can define multiple modification sets based on these templates.

3.2.1.1 Classic view

If the administrator provides at least one database you have access to, this view shows all content relevant to you in a clear structure.

- Home (page 36)
- Groups (page 38)

Content filters restrict the information in specific areas of the portal to content that is relevant to you. Content filters can be defined in two ways:

- Content filters can be assigned via role. If a role object is assigned (page 104) in models to an existing user group you are member, the relevant filters are added to the **My content** area automatically.
- You can add filters (page 102) and activate them as content filters (page 105) to further restrict this content.

3.2.1.1.1 Home

Depending on your license, not all described tiles (page 70) may be available.

There are several areas available:



QUICK START (PAGE 70)



MY CONTENT

Opens the **My content** area (page 87) where you can filter the portal content of the databases you have access to by various categories, e. g. **Role** and **Location**.



MY FAVORITES



MY ACTIVITIES

Shows the current activities you are following in Collaboration (page 419) or in the portal (page 422).



DASHBOARDS

Opens the **Dashboards** area where you can access various dashboards sorted in categories such as Portal usage (page 316).



MY TASKS

Opens the list of tasks for which you are responsible.



CONFIRMATIONS

Shows an overview of the confirmation process (page 1140) you initiated. Check the confirmation status in the list of confirmation processes, for example, if the process is already generated or how many addressees have already confirmed. Click a process to navigate directly to the related object or model.

For detailed information on confirmations, refer to Confirmations (page 144).



MY GRC TASKS

Shows an overview of your current tasks from ARIS Risk & Compliance Manager (page 163) in ARIS Connect, as well as confirmation tasks (page 153).

RECENT CHANGES

Shows all links to models that were changed recently. In addition, for each model the time elapsed since the last change and the path are shown.

CONTACTS

Lists all users of the current ARIS Connect server with **User administrator** function privileges. If you have any requests regarding the privileges of your user account, you can get in touch with these ARIS Connect users.

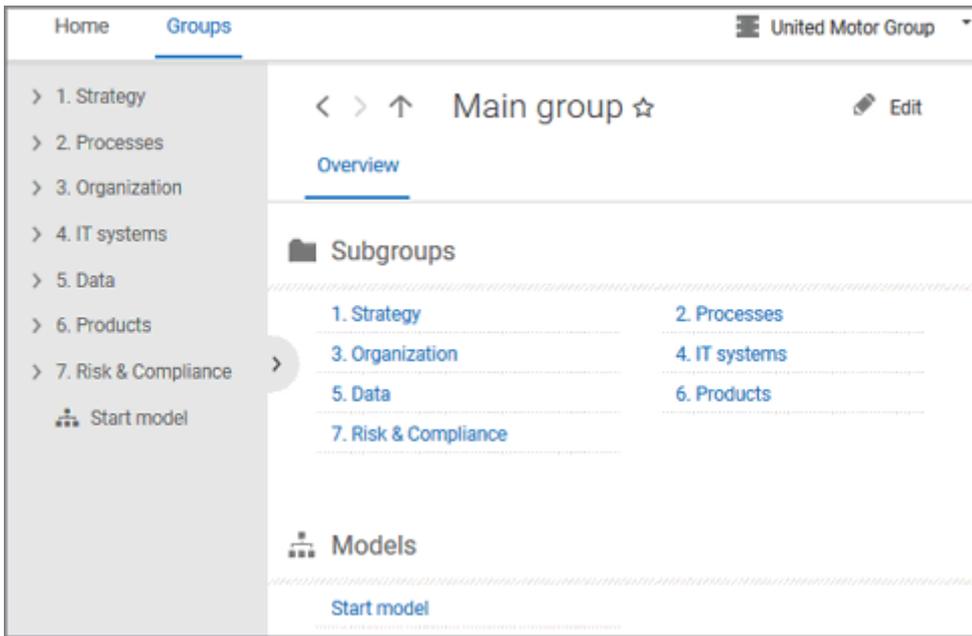
3.2.1.1.2 Groups

Use the tree to navigate to the entire contents of the portal you selected (page 94). Depending on the license, the contents selected and the model type, different functions and fact sheets (page 1144) are available.

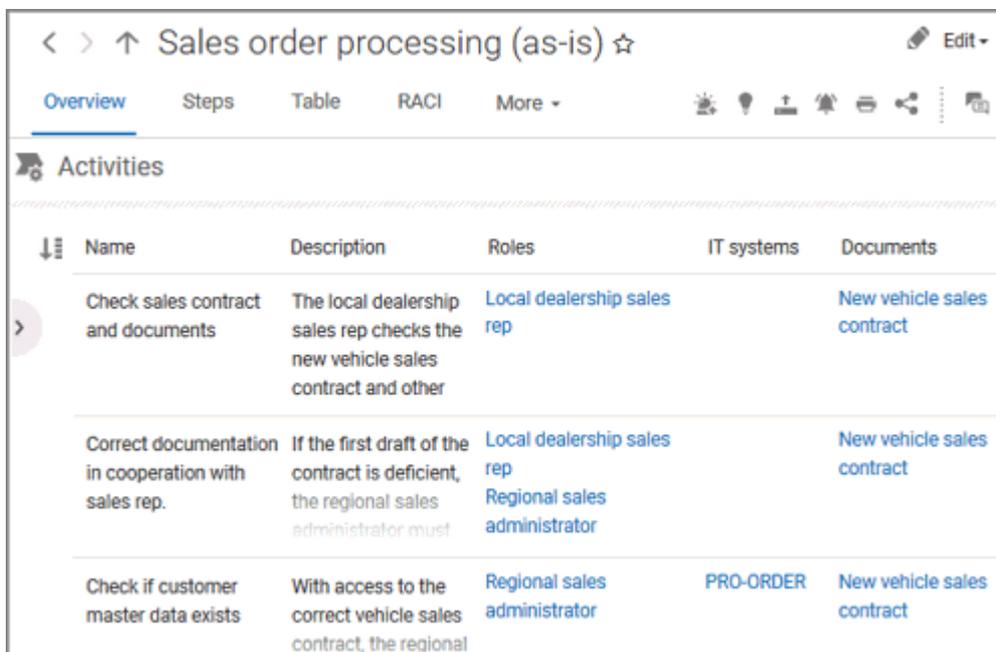
FACT SHEETS OF ARIS MODELS

OVERVIEW

Gives an overview of the item selected, for example, displays variant relationships of the selected item or the content of a selected group.



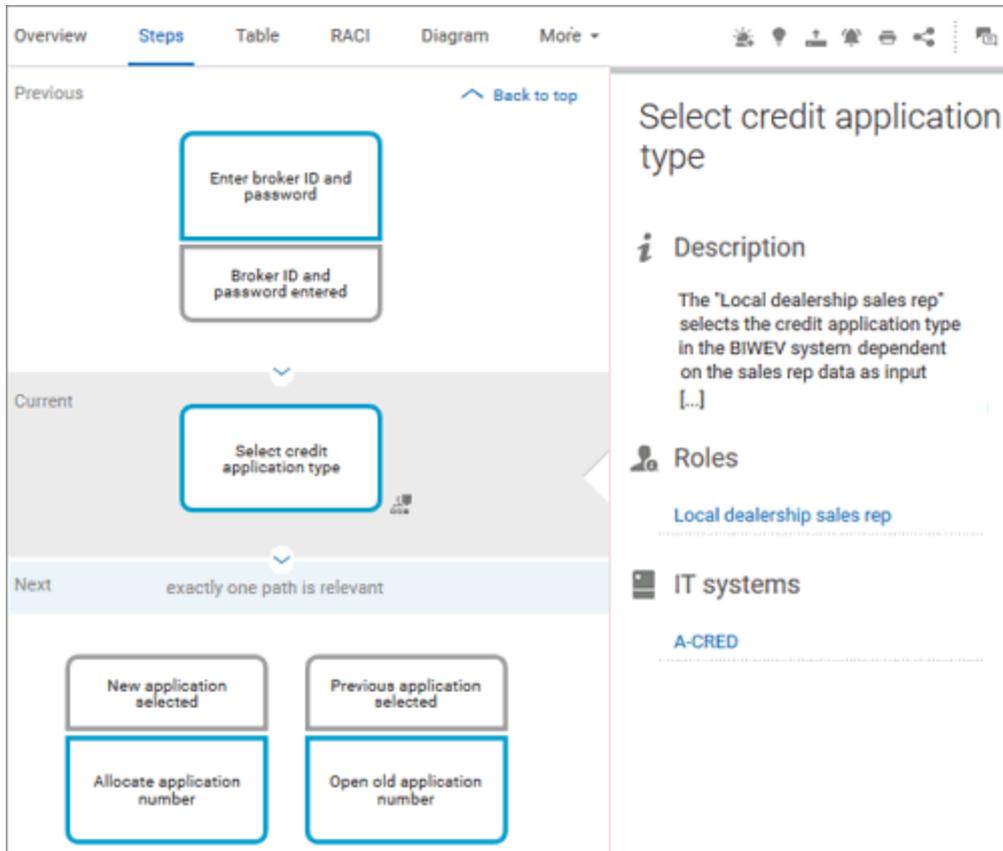
If you have selected a model, additional headings are shown depending on the context.



Content that can be used to navigate to other content is displayed as links.

STEPS

Transparently displays all steps of a process (EPC) (page 96). Regardless of the process size you can view only the previous, current, and subsequent process steps. For the current step the relevant information is provided in the form of links.



You can easily navigate to the top of the **Steps** fact sheet (page 101) and you can easily navigate between the **Steps** and the **Diagram** fact sheet (page 100).

The following information is provided for operators:

Information	Operator	Symbol
all paths are relevant	AND	
	OR/AND	
	XOR/AND	
one or more paths are possible	AND	
	OR/AND	
	XOR/OR	
exactly one path is relevant	XOR	
	AND/XOR	
	OR/XOR	
	Gateway	
complex decision	Rule	

TABLE

To open the **Table** fact sheet, click  **Application launcher** >  **Published content**, navigate to the database group in which the process model, such as EPC and BPMN process, is saved and select the model name and **Table**.

The **Table fact sheet** the functions that a process of type **EPC** and **BPMN** contains, as well as the roles assigned to them. In the tables, you can add columns and remove added columns again.

Functions	Roles
Welcome customer	Local dealership sales rep
Determine requirements	Local dealership sales rep
Present vehicle	Local dealership sales rep
Arrange test drive	Local dealership sales rep
Configure vehicle	Local dealership sales rep
Verify customer's buying intention	Local dealership sales rep

You can sort the functions in different ways by clicking the column title.

You can open a matrix based on the **Table** fact sheet to clearly display the interrelations between the individual roles and functions.

Functions	Local dealership sales rep
Welcome customer	<input checked="" type="checkbox"/>
Determine requirements	<input checked="" type="checkbox"/>
Present vehicle	<input checked="" type="checkbox"/>
Arrange test drive	<input checked="" type="checkbox"/>
Configure vehicle	<input checked="" type="checkbox"/>
Verify customer's buying intention	<input checked="" type="checkbox"/>

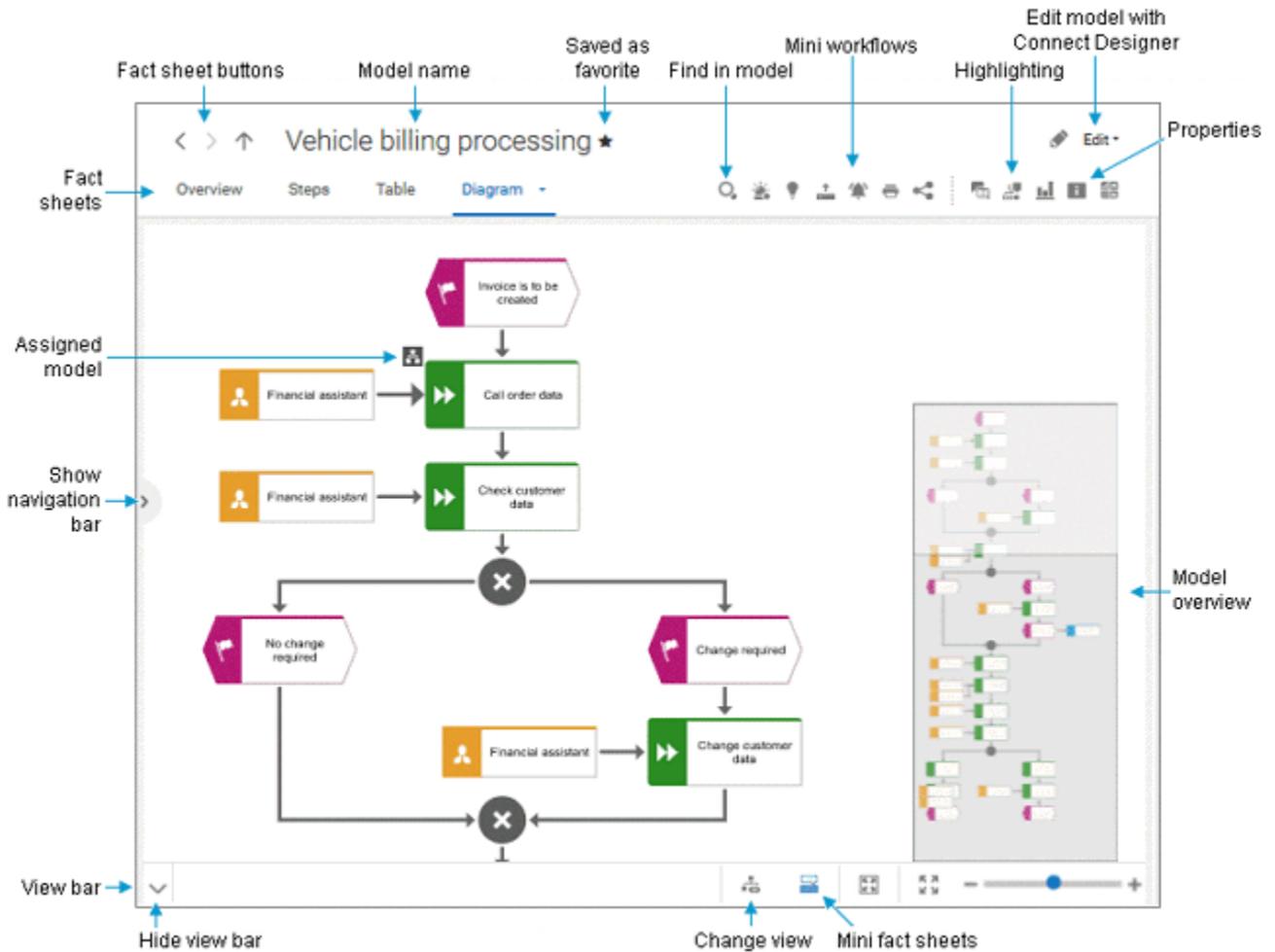
RACI

RACI matrices display the activity processes and the associated organizational responsibilities. RACI matrices are displayed only if RACI information is available for this process (page 272). You can sort the functions (page 245) of matrices.

Overview Steps RACI ▾			
↓ Functions ▾	Financial assistant	Financial clerk	Accountant
Call order data	R A C I	R A C I	R A C I
Check customer data	R A C I	R A C I	R A C I
Change customer data	R A C I	R A C I	R A C I
Check order data	R A C I	R A C I	R A C I

DIAGRAM

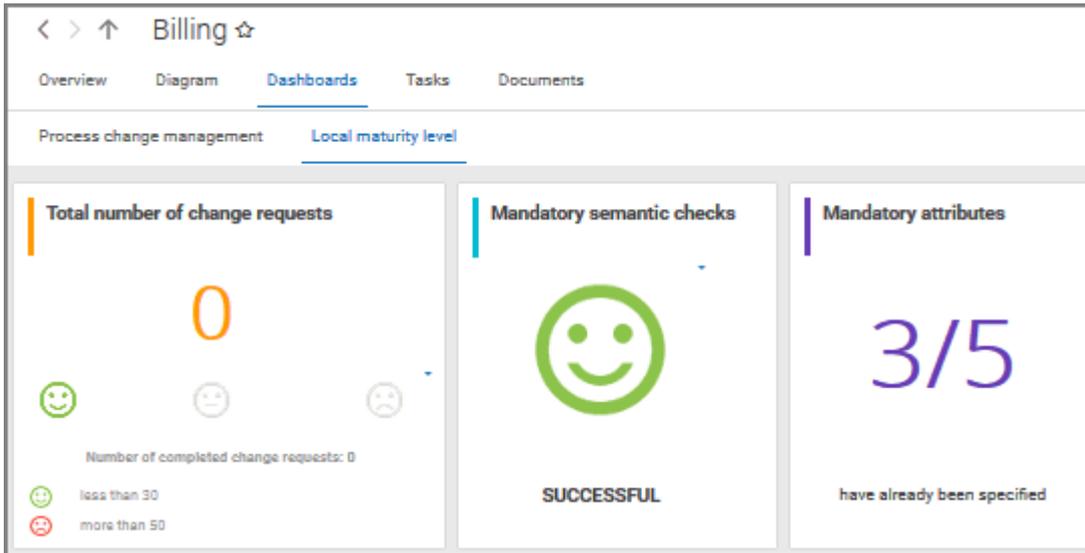
The **Diagram** fact sheet (page 201) graphically displays diagrams. Depending on the diagram type, different functions are available.



You can find model items (page 202) (🔍) in the diagram. Click **i Properties** to show the properties of a model or a model item. (page 205) You can highlight objects in the diagram (page 206) (👉) that meet a defined condition. In addition, you can open assigned models (page 207) (📁). You can change the view of the diagram (page 210) (📄) to show the aspects you want to focus on. Using the functions of the view bar you can change the size of appearance (page 203).

DASHBOARDS

Shows the dashboards available for the selected diagram.



The **Dashboard** fact sheet is shown to users who have the **ARIS Aware** license (page 21).

TASKS

Shows your tasks created by mini workflows or Process Governance processes. For editing, selected tasks are opened in  My tasks.

Task	Priority	Status
 New document submitted: Assigned Nov 26, 2019		New

EXECUTABLES

Executables are displayed if you are using ARIS for SAP Solutions and if this function has been configured in the  **Portal**.

Overview	Steps	Table	RACI	Diagram	Tasks	Transactions
Transaction code	Name	Supports			Type	
	Create contract	Contract negotiation and completion in ERP Create contract			SAP transaction	
	Periodic billing	Contract negotiation and completion in ERP			SAP transaction	
	Display contract	Contract negotiation and completion in ERP Inform sales office about contract			SAP transaction	
	Change contract	Contract negotiation and completion in ERP			SAP transaction	
	Create quotation	Quotation processing in ERP (to-be)			SAP transaction	
SDQ1	Expired quotations	Quotation processing in ERP (to-be)			SAP transaction	▶ ▼
SDQ2	Expired quotations	Quotation processing in ERP (to-be)			SAP transaction	
SDQ3	Complete quotatio	Quotation processing in ERP (to-be)			SAP transaction	

You can start (page 402) the  executable automatically via the default server in each row displaying a Transaction code. Click the  arrow head to display all registered SAP Servers. The default server selected is indicated by a check mark.

16 A08 Solution Manager 7.1

18 S04 Solution Manager 7.2

SAP URL

Logon data

To start the executable, click an SAP Server or a URL. The Login dialog opens.

SAP logon

Client:

User:

Password:

Log on to the SAP system in the current language and the executable starts. The login remains valid until you log out of the portal or enter different login data (page 404). To delete the

current SAP logon data, click the ▼ arrow head and then **Reset logon data**. For the next executable start you need to log on to the SAP system again.

If you click an executable on the **Executables** page, such as **SDQ1**, its fact sheet (page 1144) including detailed information is displayed. If documents are available, you will be able to download (page 403) them.

DOCUMENTS

Lists documents assigned to models, for example, by the **Link 1 - Link 4** attributes. The list displays the latest approved version of each document. These documents are stored in ARIS document storage. Click a document to download it. You can open the downloaded document.

Overview Steps Table RACI Diagram Documents ▼			
1-1 of 1			
Name	Owner	Last update	Related to
Modeling conventions	John Designer	2019-11-26, 10:25.38	Vehicle billing processing

FACT SHEETS OF UML ELEMENTS

OVERVIEW

The relevant content is displayed based on the item selected. If you have selected a group, the group content is displayed. Content that can be used to navigate to other content is displayed as links.

The screenshot shows the 'Groups' tab in ARIS Connect Designer. The left sidebar contains a tree view with 'Example diagrams' expanded to show '2 UML basics [UML2 Package]'. The main content area displays a fact sheet for this package with the following details:

2 UML basics [UML2 Package]	
Overview	Relationships Reused objects More
name	2 UML basics
creationDate	Apr 30, 2015 3:43:53 PM
creator	system
lastChange	Jul 10, 2015 1:47:24 PM
lastUser	system
guid	f0aedd01-ef3e-11e4-737e-a138dfaf8de5
packagedElement	2.2 Diagram types [UML2 Package] Specific features [UML2 Package]
visibility	public

For example, if you have selected a UML element, additional headings are shown depending on the context.

The screenshot shows the 'Groups' tab in ARIS Connect Designer. The left sidebar contains a tree view with 'Sales system' expanded to show 'Analysis diagrams [UML2 Model]'. The main content area displays a fact sheet for this model with the following details:

Analysis diagrams [UML2 Model]	
Overview	Relationships Reused objects More
name	Analysis diagrams
creationDate	May 7, 2015 1:15:10 PM
creator	system
lastChange	Jul 26, 2016 2:08:26 PM
lastUser	system
guid	31440f92-f4a6-11e4-737e-a138dfaf8de5
packagedElement	Classes [UML2 Package] Use Cases [UML2 Package]
visibility	public

RELATIONSHIPS

Displays the relationships of the selected UML element as a link. If you click the link, the related element is displayed and highlighted in the tree.

REUSED OBJECTS

Lists the objects that the selected element reuses as a link. If you click the link, the related element is displayed and highlighted in the tree.

LINKED DIAGRAMS

Lists the diagrams with which the selected element is linked. If you click the link, the related element is displayed and highlighted in the tree.

PRESENTATIONS

Lists the diagrams in which the selected element occurs as a link. If you click the link, the related element is displayed and highlighted in the tree.

STEREOTYPES

Lists the stereotypes that were applied to the selected element as a link. If you click the link, the related element is displayed and highlighted in the tree.

PROFILES

Lists the profiles that were applied to the selected element.

TAGGED VALUES

Lists the tagged values with which the selected element is linked as a link. If you click the link, the related element is displayed and highlighted in the tree.

DIAGRAM

This entry is displayed if you have selected a UML diagram. It displays the UML diagram graphically in the **Diagram** fact sheet.

3.2.1.2 Default view

If you click  **Portal**, you can view all information relevant to you.

If the administrator provides at least one database, you have access to, this view shows all content relevant to you in a clear structure:

- Home (page 36)
- Processes (page 52)
- Organization (page 63)
- IT systems (page 64)

In the default view, only assignments are shown that belong to the current hierarchy, for example, assignments from an object of Value-added chain diagrams (VAC) to process models like EPCs, but no assignments to organizational charts.

Content filters restrict the information in specific areas of the portal to content that is relevant to you. Content filters can be defined in two ways:

- Content filters can be assigned via role. If a role object is assigned (page 104) in models to an existing user group you are member, the relevant filters are added to the **My content** area automatically.
- You can add filters (page 102) and activate them as content filters (page 105) to further restrict this content.

3.2.1.2.1 Home

Depending on your license, not all described tiles (page 70) may be available.

There are several areas available:



QUICK START (PAGE 70)



MY CONTENT

Opens the **My content** area (page 87) where you can filter the portal content of the databases you have access to by various categories, e. g. **Role** and **Location**.



MY FAVORITES



MY ACTIVITIES

Shows the current activities you are following in Collaboration (page 419) or in the portal (page 422).



DASHBOARDS

Opens the **Dashboards** area where you can access various dashboards sorted in categories such as Portal usage (page 316).



MY TASKS

Opens the list of tasks for which you are responsible.



CONFIRMATIONS

Shows an overview of the confirmation process (page 1140) you initiated. Check the confirmation status in the list of confirmation processes, for example, if the process is already generated or how many addressees have already confirmed. Click a process to navigate directly to the related object or model.

For detailed information on confirmations, refer to Confirmations (page 144).



MY GRC TASKS

Shows an overview of your current tasks from ARIS Risk & Compliance Manager (page 163) in ARIS Connect, as well as confirmation tasks (page 153).

RECENT CHANGES

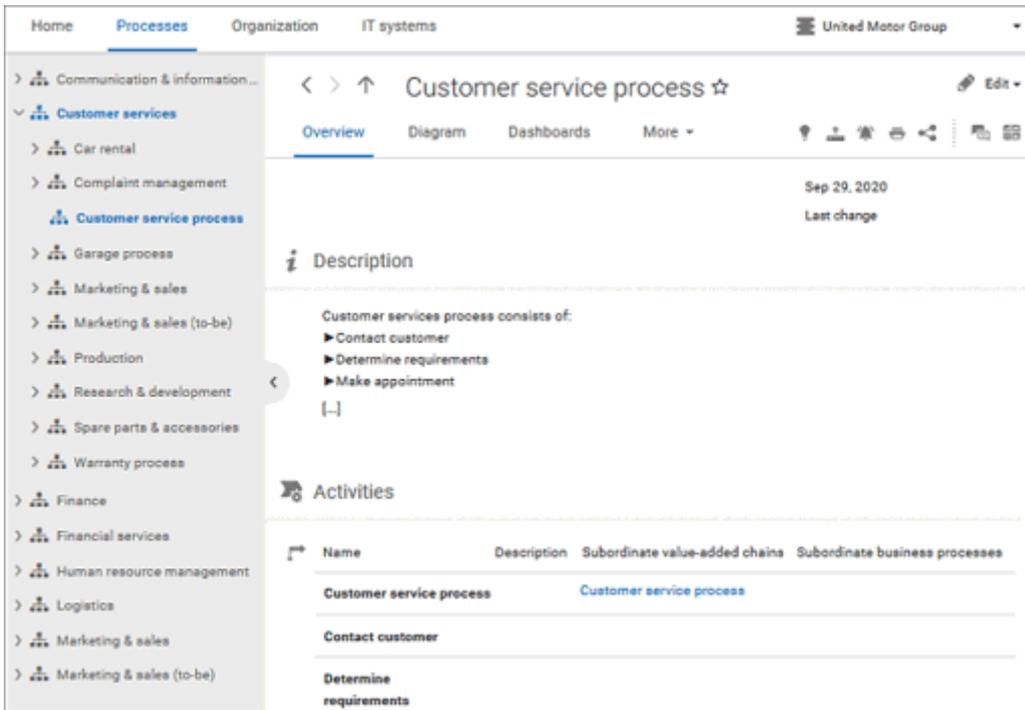
Shows all links to models that were changed recently. In addition, for each model the time elapsed since the last change and the path are shown.

CONTACTS

Lists all users of the current ARIS Connect server with **User administrator** function privileges. If you have any requests regarding the privileges of your user account, you can get in touch with these ARIS Connect users.

3.2.1.2.2 Processes

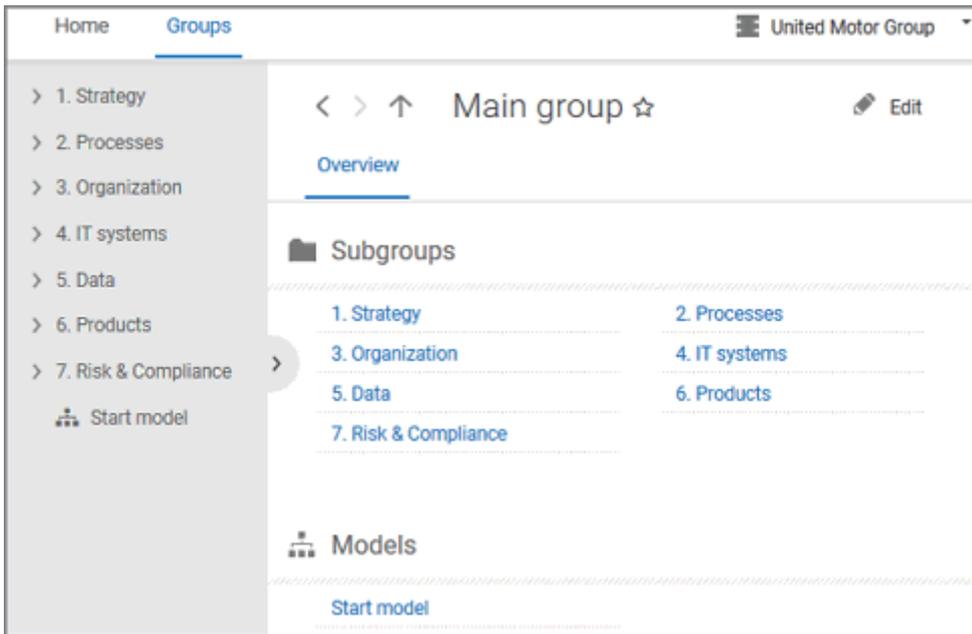
Quickly gain an overview of all processes that are relevant to you. Navigate via value-added chains to the process chains of the portal selected.



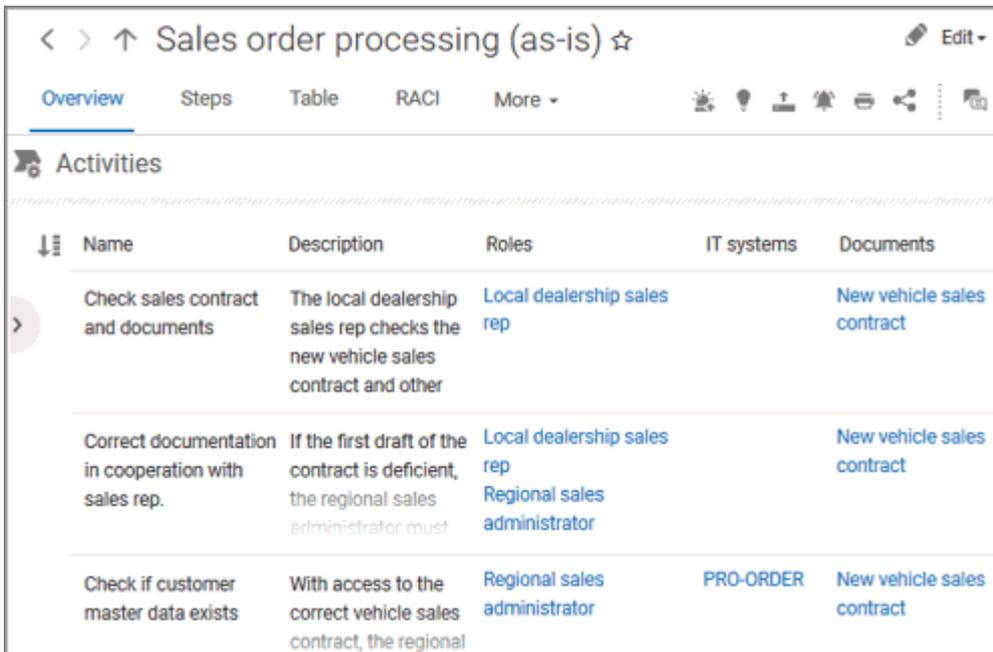
Depending on the installed components, the content selected, and the type of a diagram, different fact sheets (page 1144) and functions are available.

OVERVIEW

Gives an overview of the item selected, for example, displays variant relationships of the selected item or the content of a selected group.



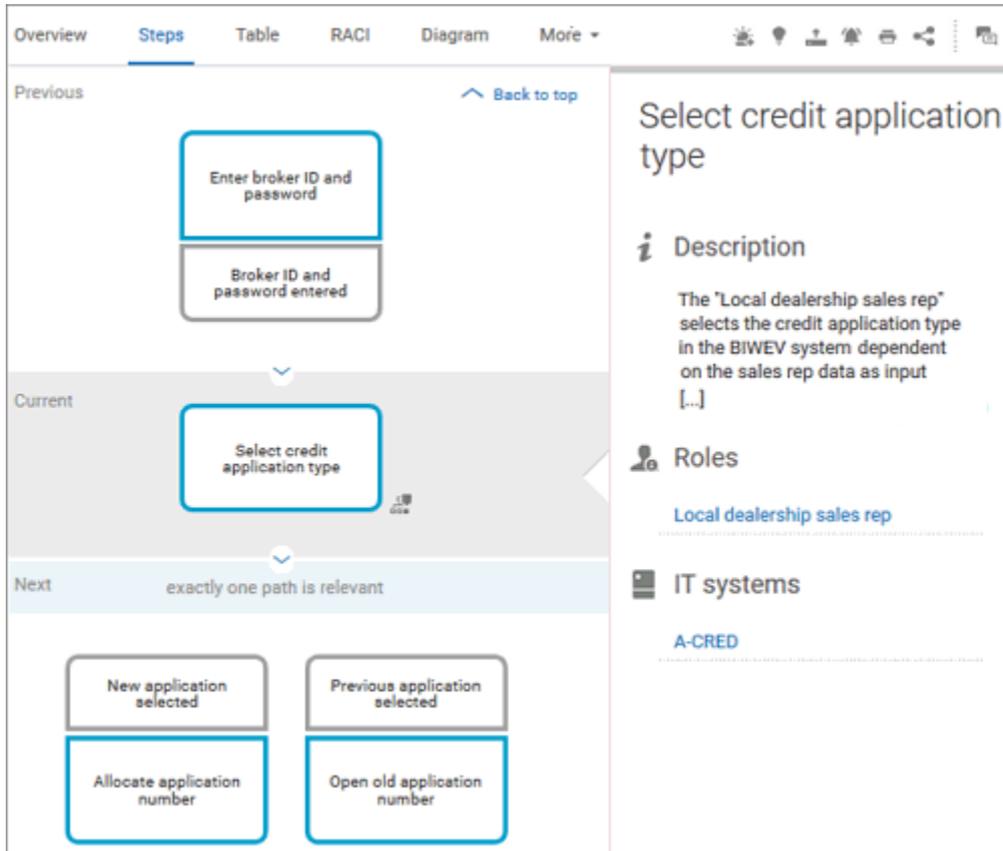
If you have selected a model, additional headings are shown depending on the context.



Content that can be used to navigate to other content is displayed as links.

STEPS

Transparently displays all steps of a process (EPC) (page 96). Regardless of the process size you can view only the previous, current, and subsequent process steps. For the current step the relevant information is provided in the form of links.



You can easily navigate to the top of the **Steps** fact sheet (page 101) and you can easily navigate between the **Steps** and the **Diagram** fact sheet (page 100).

The following information is provided for operators:

Information	Operator	Symbol
all paths are relevant	AND	
	OR/AND	
	XOR/AND	
one or more paths are possible	AND	
	OR/AND	
	XOR/OR	
exactly one path is relevant	XOR	
	AND/XOR	
	OR/XOR	
	Gateway	
complex decision	Rule	

TABLE

To open the **Table** fact sheet, click  **Application launcher** >  **Published content**, navigate to the database group in which the process model, such as EPC and BPMN process, is saved and select the model name and **Table**.

The **Table fact sheet** the functions that a process of type **EPC** and **BPMN** contains, as well as the roles assigned to them. In the tables, you can add columns and remove added columns again.

Functions	Roles
Welcome customer	Local dealership sales rep
Determine requirements	Local dealership sales rep
Present vehicle	Local dealership sales rep
Arrange test drive	Local dealership sales rep
Configure vehicle	Local dealership sales rep
Verify customer's buying intention	Local dealership sales rep

You can sort the functions in different ways by clicking the column title.

You can open a matrix based on the **Table** fact sheet to clearly display the interrelations between the individual roles and functions.

Functions	Roles
	Local dealership sales rep
Welcome customer	<input checked="" type="checkbox"/>
Determine requirements	<input checked="" type="checkbox"/>
Present vehicle	<input checked="" type="checkbox"/>
Arrange test drive	<input checked="" type="checkbox"/>
Configure vehicle	<input checked="" type="checkbox"/>
Verify customer's buying intention	<input checked="" type="checkbox"/>

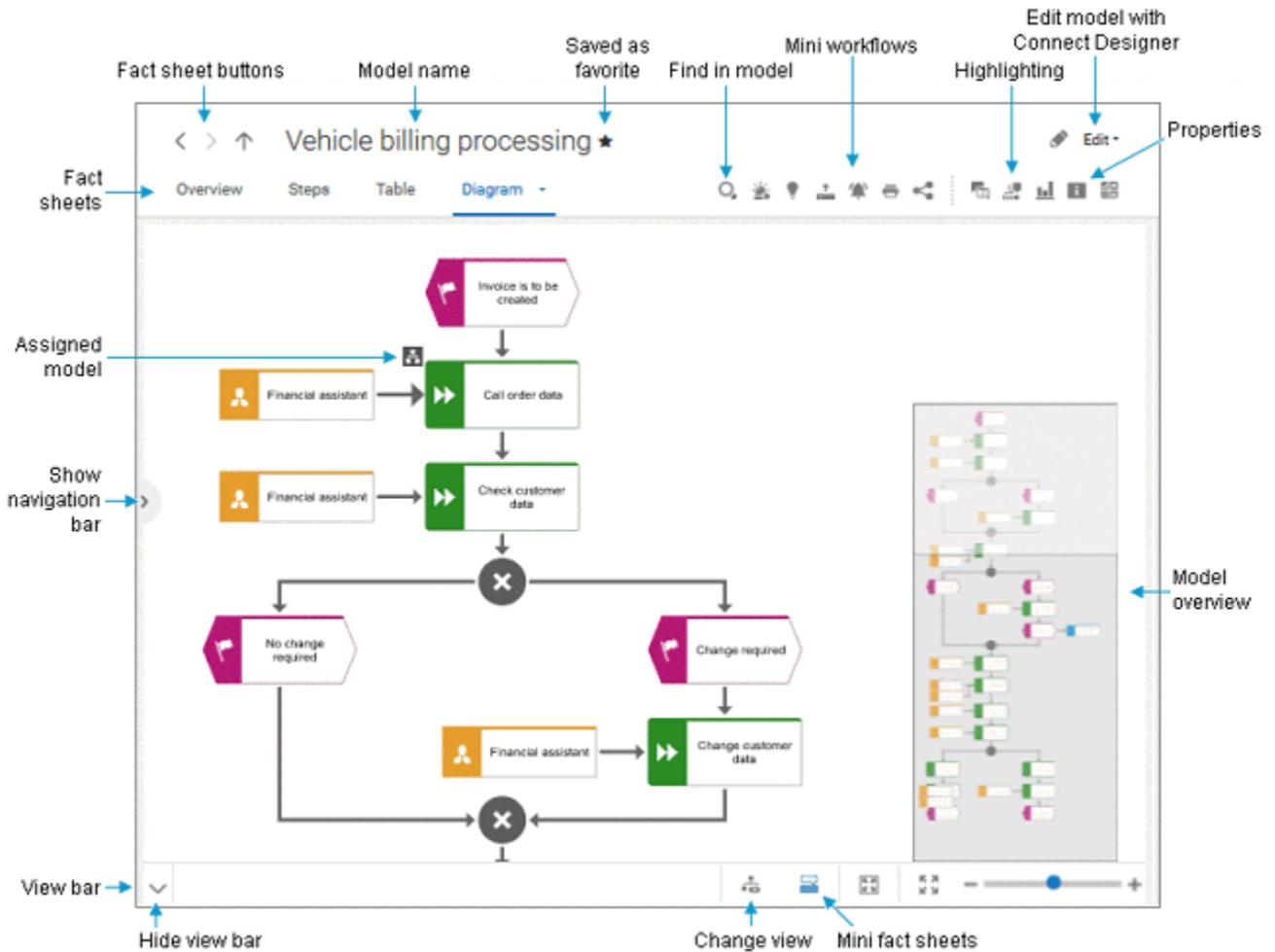
RACI

RACI matrices display the activity processes and the associated organizational responsibilities. RACI matrices are displayed only if RACI information is available for this process (page 272). You can sort the functions (page 245) of matrices.

Overview Steps RACI ▾			
↓ Functions ▾	Financial assistant	Financial clerk	Accountant
Call order data	R A C I	R A C I	R A C I
Check customer data	R A C I	R A C I	R A C I
Change customer data	R A C I	R A C I	R A C I
Check order data	R A C I	R A C I	R A C I

DIAGRAM

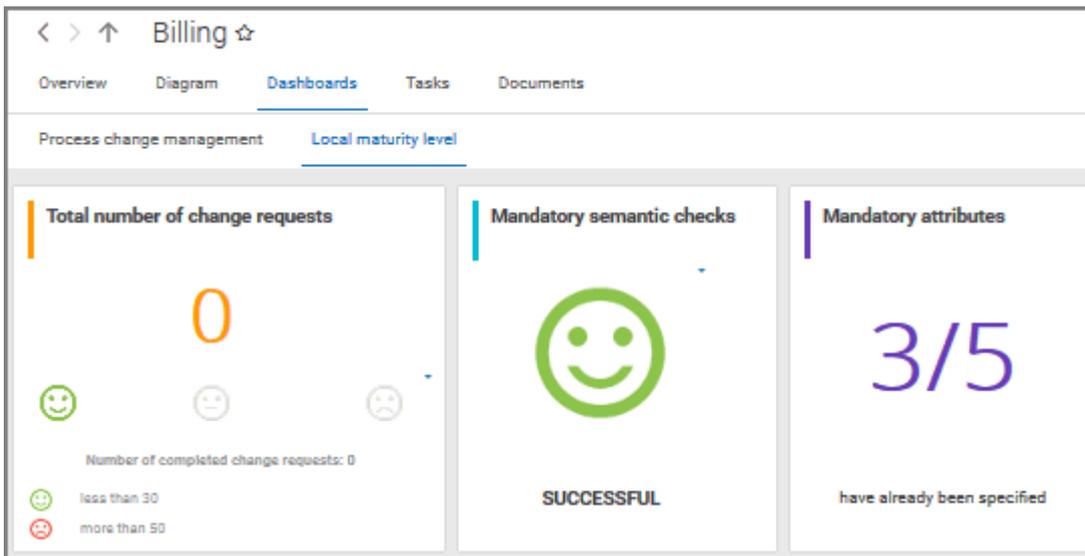
The **Diagram** fact sheet (page 201) graphically displays diagrams. Depending on the diagram type, different functions are available.



You can find model items (page 202) (🔍) in the diagram. Click **i Properties** to show the properties of a model or a model item. (page 205) You can highlight objects in the diagram (page 206) (👉) that meet a defined condition. In addition, you can open assigned models (page 207) (📁). You can change the view of the diagram (page 210) (📄) to show the aspects you want to focus on. Using the functions of the view bar you can change the size of appearance (page 203).

DASHBOARDS

Shows the dashboards available for the selected diagram.



The **Dashboard** fact sheet is shown to users who have the **ARIS Aware** license (page 21).

TASKS

Shows your tasks created by mini workflows or Process Governance processes. For editing, selected tasks are opened in  My tasks.

The screenshot displays the 'Tasks' section for a 'Billing' diagram. The interface includes a navigation bar with 'Overview', 'Diagram', 'Dashboards', 'Tasks', and 'Documents'. Below this, there are icons for a lightbulb, an upload arrow, a bell, a refresh icon, a vertical ellipsis, and a document icon. The main area contains a table with the following data:

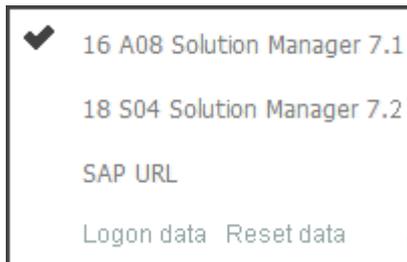
Task	Priority	Status
 New document submitted: Assigned Nov 26, 2019		New

EXECUTABLES

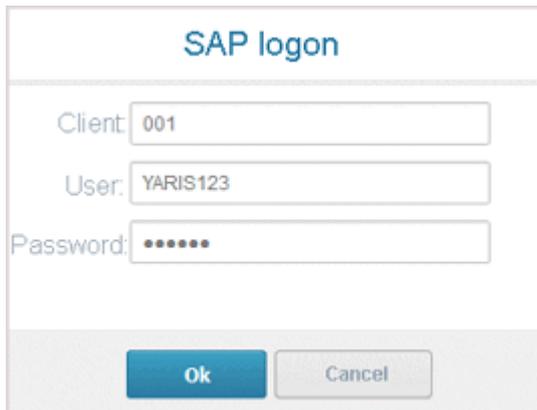
Executables are displayed if you are using ARIS for SAP Solutions and if this function has been configured in the  **Portal**.

Overview	Steps	Table	RACI	Diagram	Tasks	Transactions
Transaction code	Name	Supports			Type	
	Create contract	Contract negotiation and completion in ERP Create contract			SAP transaction	
	Periodic billing	Contract negotiation and completion in ERP			SAP transaction	
	Display contract	Contract negotiation and completion in ERP Inform sales office about contract			SAP transaction	
	Change contract	Contract negotiation and completion in ERP			SAP transaction	
	Create quotation	Quotation processing in ERP (to-be)			SAP transaction	
SDQ1	Expired quotations	Quotation processing in ERP (to-be)			SAP transaction	▶ ▼
SDQ2	Expired quotations	Quotation processing in ERP (to-be)			SAP transaction	
SDQ3	Complete quotatio	Quotation processing in ERP (to-be)			SAP transaction	

You can start (page 402) the  executable automatically via the default server in each row displaying a Transaction code. Click the  arrow head to display all registered SAP Servers. The default server selected is indicated by a check mark.



To start the executable, click an SAP Server or a URL. The Login dialog opens.



Log on to the SAP system in the current language and the executable starts. The login remains valid until you log out of the portal or enter different login data (page 404). To delete the

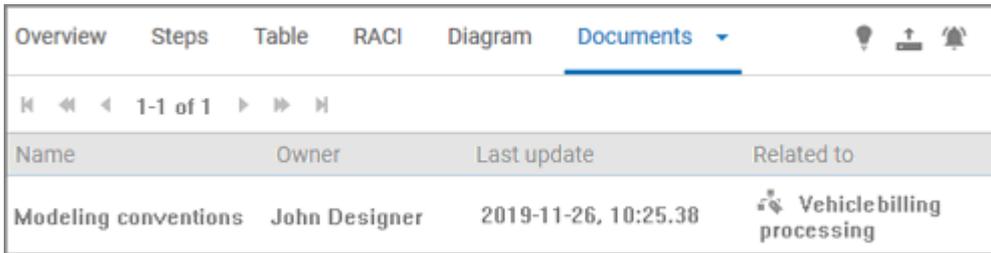
current SAP logon data, click the ▼ arrow head and then **Reset logon data**. For the next executable start you need to log on to the SAP system again.

If you click an executable on the **Executables** page, such as **SDQ1**, its fact sheet (page 1144) including detailed information is displayed. If documents are available, you will be able to download (page 403) them.

Overview	
Transaction code	Supported processes
SDQ1 (Expiring Quotations)	Customer qualification (to-be) Sales process (to-be) Contract negotiation and completion in ERP (to-be)
Type	Activities
SAP transaction	Quotation processing in ERP (to-be)
Logical component	Documents
ZSAP ECC 50	Quotation processing in ERP
	Roles
	Head of regional sales Regional sales
	Transaction siblings
	Display quotation Change quotation Create quotation List of incomplete quotations Batch processing of quotations

DOCUMENTS

Lists documents assigned to models, for example, by the **Link 1 - Link 4** attributes. The list displays the latest approved version of each document. These documents are stored in ARIS document storage. Click a document to download it. You can open the downloaded document.



Name	Owner	Last update	Related to
Modeling conventions	John Designer	2019-11-26, 10:25.38	Vehicle billing processing

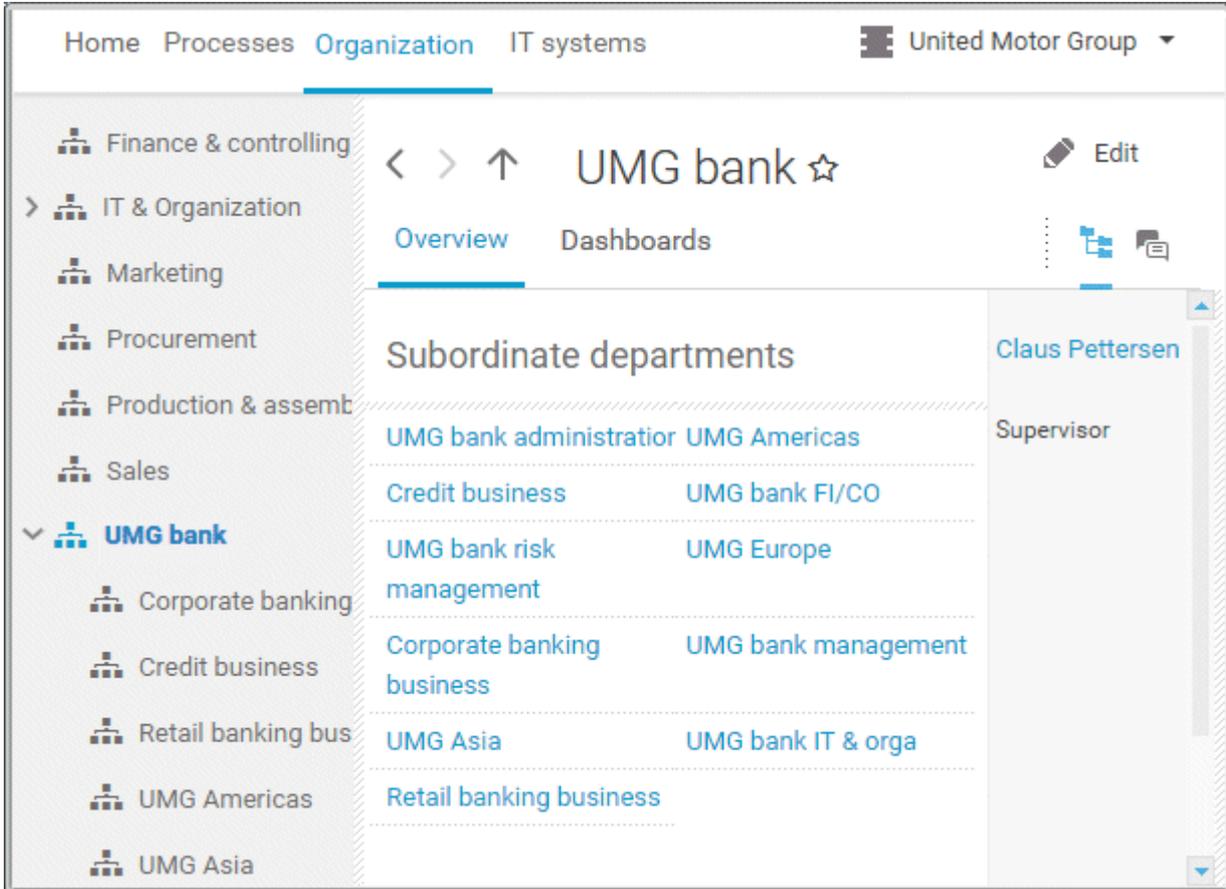
ARIS video tutorial

ARIS Connect - Process improvement (<http://www.ariscommunity.com/videos/aris-connect-process-improvement-everyone>)

3.2.1.2.3 Organization

Quickly gain an overview of the organizational structure. Navigate to all organizational elements of the portal selected (page 94).

The Overview gives you access to the relevant information. For example, if you click a supported process, the process information (page 52) is displayed. IT information (page 64) is available when clicking a system in use.



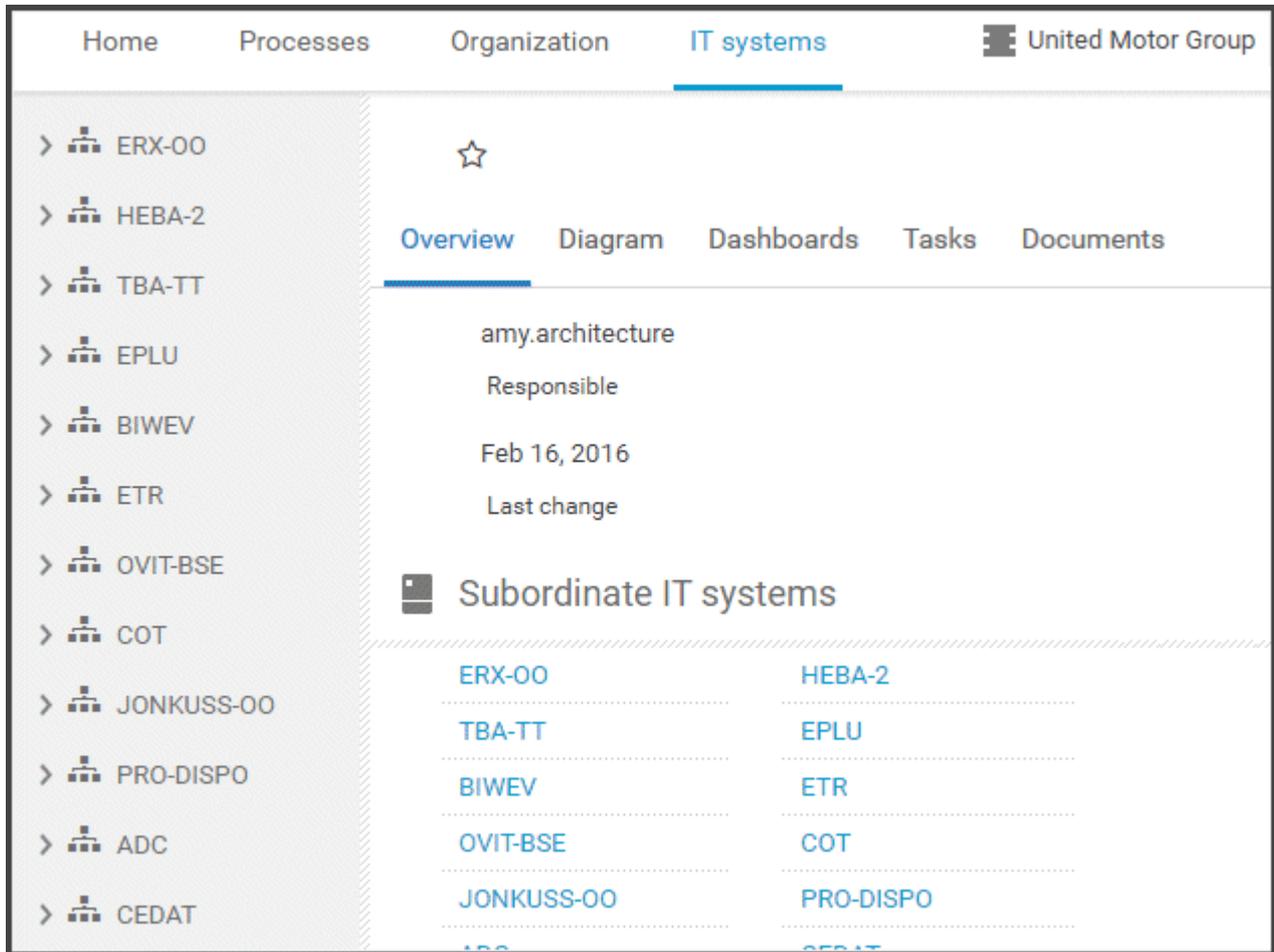
3.2.1.2.4 IT systems

Quickly obtain an overview of the IT landscape. Use the Explorer tree to navigate to all IT systems of the portal (page 94).

Depending on the contents selected, different functions are available.

OVERVIEW

The **Overview** fact sheet gives you access to the relevant information. If you do not select any items in Explorer, all IT systems are listed in alphabetical order.



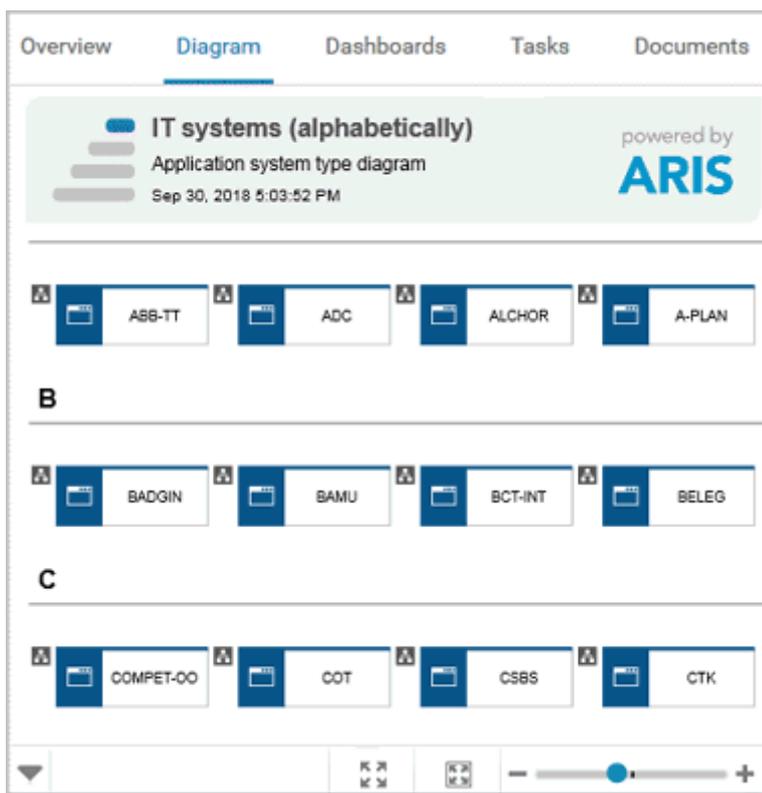
DIAGRAM

All information is also available via the **Application system type diagram** model type containing all IT systems.

Using the functions of the view bar you can change the size of appearance. Navigate in the model using the small frame of the thumbnail view above the slider. Clicking the ▼ arrow head will hide the bar.

Click **i Properties** to view all attributes specified. If you have selected an object, the attributes for that object are displayed. Click **More** to view related objects or occurrences. The model properties are shown if no object is selected.

If you navigate by clicking an **assignment icon** of an IT system, all diagrams assigned are offered for selection. These diagrams provide detailed information on the given IT system, as well as on the related roles, persons, and items.



TASKS

Lists the tasks for the logged in user regarding the selected item. For editing, selected tasks are opened in  My tasks.

DOCUMENTS

Lists the documents connected to the selected item.

IT SYSTEM FACT SHEETS

If you click an IT system in the Explorer tree, the IT system fact sheets provide you with important information at a glance. There are fact sheets (page 1144) like **Process architecture**, **Information architecture**, or **IT infrastructure**.

The screenshot displays the ARIS Connect Designer interface for the 'A-PLAN' IT system. The top navigation bar includes 'Home', 'Processes', 'Organization', and 'IT systems', with 'IT systems' selected. The user is identified as 'United Motor Group'. The left sidebar shows a tree view of IT systems, with 'A-PLAN' selected. The main content area is divided into three sections: 'Description', 'Properties', and 'Persons responsible'. The 'Description' section contains the text: 'A-Plan is part of the application system class marketing&sales. It is a tool to process orders for CKD shipments.' The 'Properties' section is a table with the following data:

Name	A-PLAN
Short description	Order processing for CKD shipments
Manufacturer	Proprietary system
Standardization status	Non-standard
Warranty until	May 1, 2017
Number of internal users	Up to 10000
Number of external users	0
Criticality	Normal
Availability	99.6 percent

The 'Persons responsible' section lists 'Peter Brown' as the person responsible and 'EMEA sales support' as the department responsible.

3.2.1.3 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.1.3.1 What is the portal view?

The portal shows specific information for each user. Different views display information in different ways. By default, ARIS comes with two different views. The Classic view (page 67) and the Default view (page 68). These views are defined in configuration sets that cannot be changed. However, administrators can define multiple modification sets based on these templates.

3.2.1.3.2 What is the structure of the Classic view?

If the administrator provides at least one database you have access to, this view shows all content relevant to you in a clear structure.

- Home (page 36)
- Groups (page 38)

Content filters restrict the information in specific areas of the portal to content that is relevant to you. Content filters can be defined in two ways:

- Content filters can be assigned via role. If a role object is assigned (page 104) in models to an existing user group you are member, the relevant filters are added to the **My content** area automatically.
- You can add filters (page 102) and activate them as content filters (page 105) to further restrict this content.

3.2.1.3.3 What is the structure of the default view?

If you click  **Portal**, you can view all information relevant to you.

If the administrator provides at least one database, you have access to, this view shows all content relevant to you in a clear structure:

- Home (page 36)
- Processes (page 52)
- Organization (page 63)
- IT systems (page 64)

In the default view, only assignments are shown that belong to the current hierarchy, for example, assignments from an object of Value-added chain diagrams (VAC) to process models like EPCs, but no assignments to organizational charts.

Content filters restrict the information in specific areas of the portal to content that is relevant to you. Content filters can be defined in two ways:

- Content filters can be assigned via role. If a role object is assigned (page 104) in models to an existing user group you are member, the relevant filters are added to the **My content** area automatically.
- You can add filters (page 102) and activate them as content filters (page 105) to further restrict this content.

3.2.1.3.4 What is the button bar for?

The button bar contains buttons that directly trigger functionality such as  **Print graphic as PDF**. These buttons are separated by a separator from the buttons for opening or closing bars, such as **Groups** or **Processes** bars and, for example, the  **Comment** and  **Reports** bars.



	Find in model (page 202)
	Create issue in ARIS Risk & Compliance Manager (page 165)
	Submit change request (page 279)
	Propose a document (page 251)
	Inform owner of change (page 172)
	Print graphic as PDF (page 209)
	Share model (page 174)
	Comment (page 118)
	Highlighting (page 206)
	Reports (page 176)
	Properties (page 205)
	Dashboards (page 286)
	Model comparison (page 239)

3.2.1.3.5 Which tiles are available?

In the **Home** (page 36) area, tiles provide quick access to frequently used functionalities. Depending on your license, not all described tiles (page 70) may be available.



VIEW MODELS & DOCUMENTS



MY TASKS

Opens the list of tasks for which you are responsible.



CREATE NEW MODEL

Opens the **Create model** dialog for you to create a model in one of the databases you have access to.



DOWNLOAD CLIENTS

Opens the **Download client** page for you to download a java client of the products the administrator made available.



MY FEED

Opens the  **My feed** area of the  **Collaboration** (page 419) where you have access to your own feed.



ALL COMPANY FEED

Opens the  All company feed (page 421) area of the  **Collaboration** (page 419).



ALL COLLABORATION GROUPS

Activates the  **Find groups** area of the  **Collaboration** (page 419) where you can find new groups (page 421).



MANAGE MODELS & OBJECTS

Opens the **Models & Objects** area of the  **Repository** and enables you to manage models and objects of the databases of the current ARIS server.



MANAGE DOCUMENTS

Opens the **Documents** area of the  **Repository** and enables you to manage the content of ARIS document storage of the current ARIS server.



MANAGE DASHBOARDS & DATA FEEDS

Opens the **Dashboards & Data feeds** area of the  **Repository** where you can manage dashboards and data feeds.



USER SETTINGS

Opens your user settings page where you can edit your data or add a picture of yourself.



ADMINISTRATION

Opens the **Configuration** area where you can manage the current ARIS Connect system.



USER ADMINISTRATION

Opens the **Users** area of the  **User Management** in ARIS Administration where you can administrate the users for the current server.



LICENSE ADMINISTRATION

Opens the  **Licenses** area in ARIS Administration where you can administrate the licenses for the current server.



PROCESS ADMINISTRATION

Opens the  **Process administration** area in ARIS Administration where you can administrate automated processes.

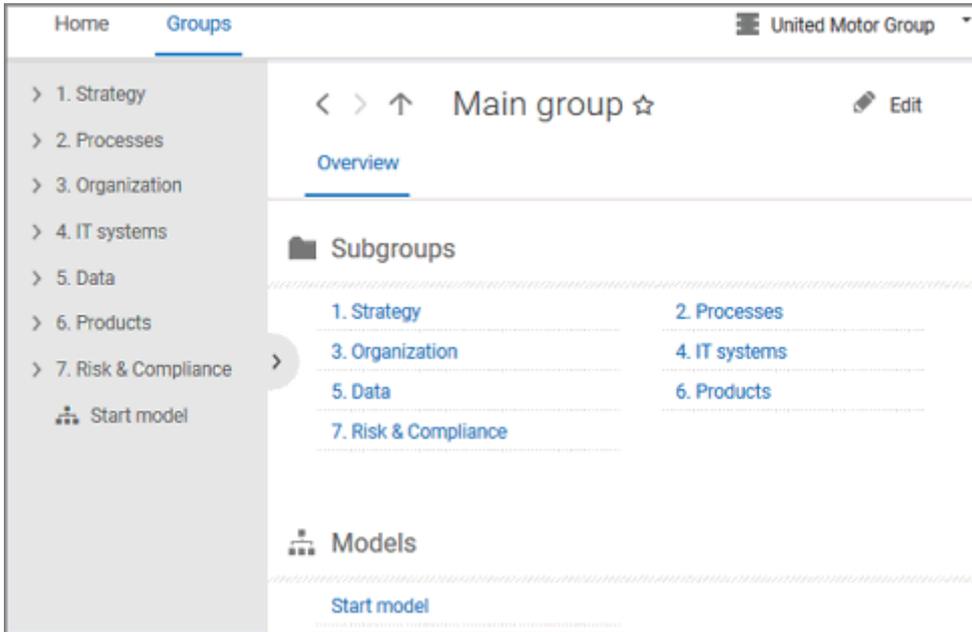


COLLABORATION ADMINISTRATION

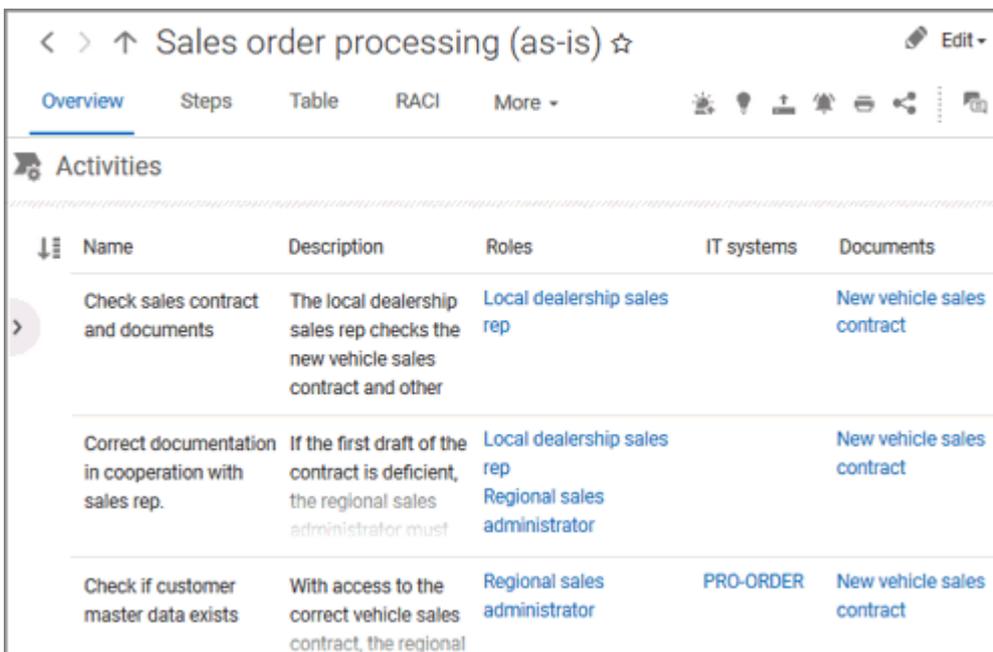
Opens the **Check flagged activities** page of the **Administration** area of the  **Collaboration** (page 419) where you can decide whether content is appropriate or not.

3.2.1.3.6 What is the Overview fact sheet for?

Gives an overview of the item selected, for example, displays variant relationships of the selected item or the content of a selected group.



If you have selected a model, additional headings are shown depending on the context.



Content that can be used to navigate to other content is displayed as links.

3.2.1.3.7 When can UML content be displayed?

You can display UML content in ARIS Connect under the following conditions:

- You use the classic configuration set (page 67).
- The database with UML content you are using has been assigned a filter that allows UML content. This may be the **Entire method** filter or a filter you have defined in which all UML elements are available.
- The database has been published by an administrator. It is therefore available in the  **Portal**.
- You have logged in as a user with the **UML Viewer** function privilege.

3.2.1.3.8 Where is UML content displayed?

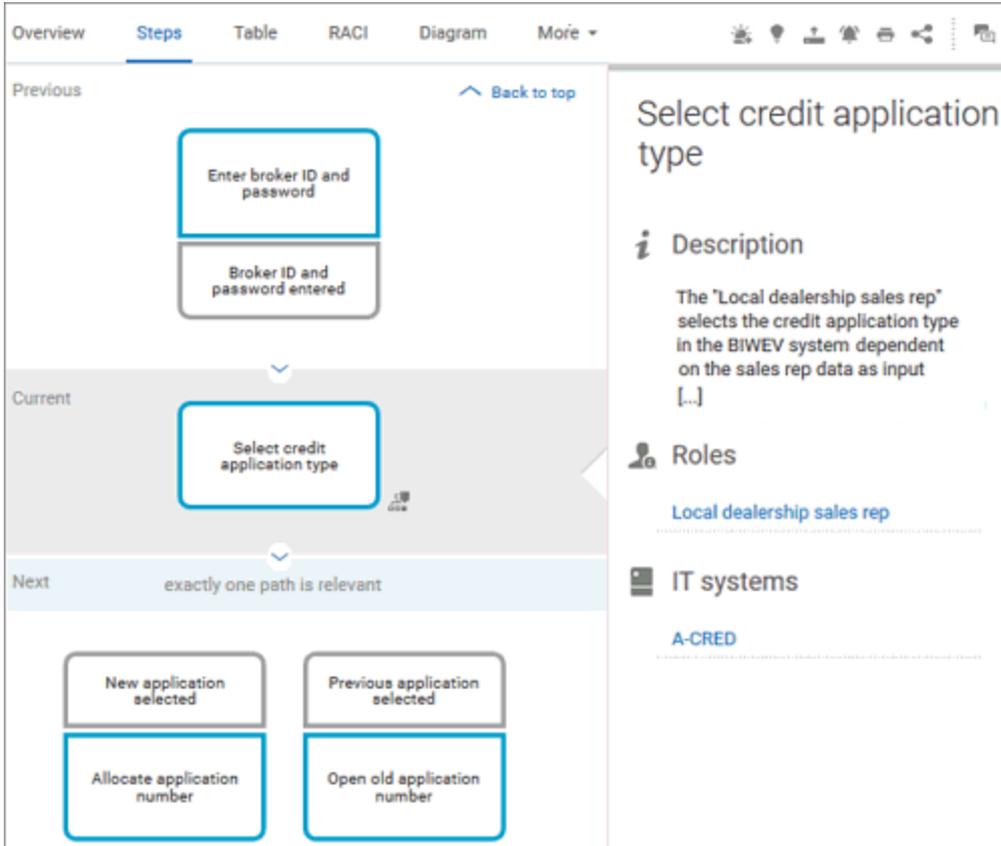
UML content is displayed in the same way as other ARIS content. You can use the groups (page 38) to navigate in the database.

As soon as you select UML content to be displayed, specific UML characteristics are taken into account.

- Thus, UML namespace hierarchies are also displayed together with the group path.
- If you select a UML element, you can display its typical UML-specific properties such as stereotypes and tagged values.
- If you select a diagram, you can of course display it graphically.
- The search also finds UML content.

3.2.1.3.9 What is the Steps fact sheet for?

Transparently displays all steps of a process (EPC) (page 96). Regardless of the process size you can view only the previous, current, and subsequent process steps. For the current step the relevant information is provided in the form of links.



You can easily navigate to the top of the **Steps** fact sheet (page 101) and you can easily navigate between the **Steps** and the **Diagram** fact sheet (page 100).

The following information is provided for operators:

Information	Operator	Symbol
all paths are relevant	AND	
	OR/AND	
	XOR/AND	
one or more paths are possible	AND	
	OR/AND	
	XOR/OR	
exactly one path is relevant	XOR	
	AND/XOR	
	OR/XOR	
	Gateway	
complex decision	Rule	

3.2.1.3.10 What is the Table fact sheet for?

Shows the functions that the process of type **EPC** and **BPMN** contains, as well as the roles assigned to them. In the tables, you can add columns (page 243) and remove added columns (page 243) again.

Overview	Steps	Table ▾				
↓ Functions		Roles				
Call order data		Financial assistant				
Check customer data		Financial assistant				
Change customer data		Financial assistant				
Check order data		Financial assistant Financial clerk				
Change order data		Financial clerk				
Transfer data to invoice		Financial clerk				
Allow discount		Accountant Financial assistant				

You can sort the functions in different ways by clicking the column title.

You can open a matrix (page 244) based on the **Table** fact sheet to clearly display the interrelations between the individual roles and functions.

Overview	Steps	Table	RACI	More ▾				
↓ Functions		Roles						
		Financial assistant	Financial clerk	Accountant				
Call order data		<input checked="" type="checkbox"/>						
Check customer data		<input checked="" type="checkbox"/>						
Change customer data		<input checked="" type="checkbox"/>						
Check order data		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Change order data			<input checked="" type="checkbox"/>					
Transfer data to invoice			<input checked="" type="checkbox"/>					
Allow discount		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		

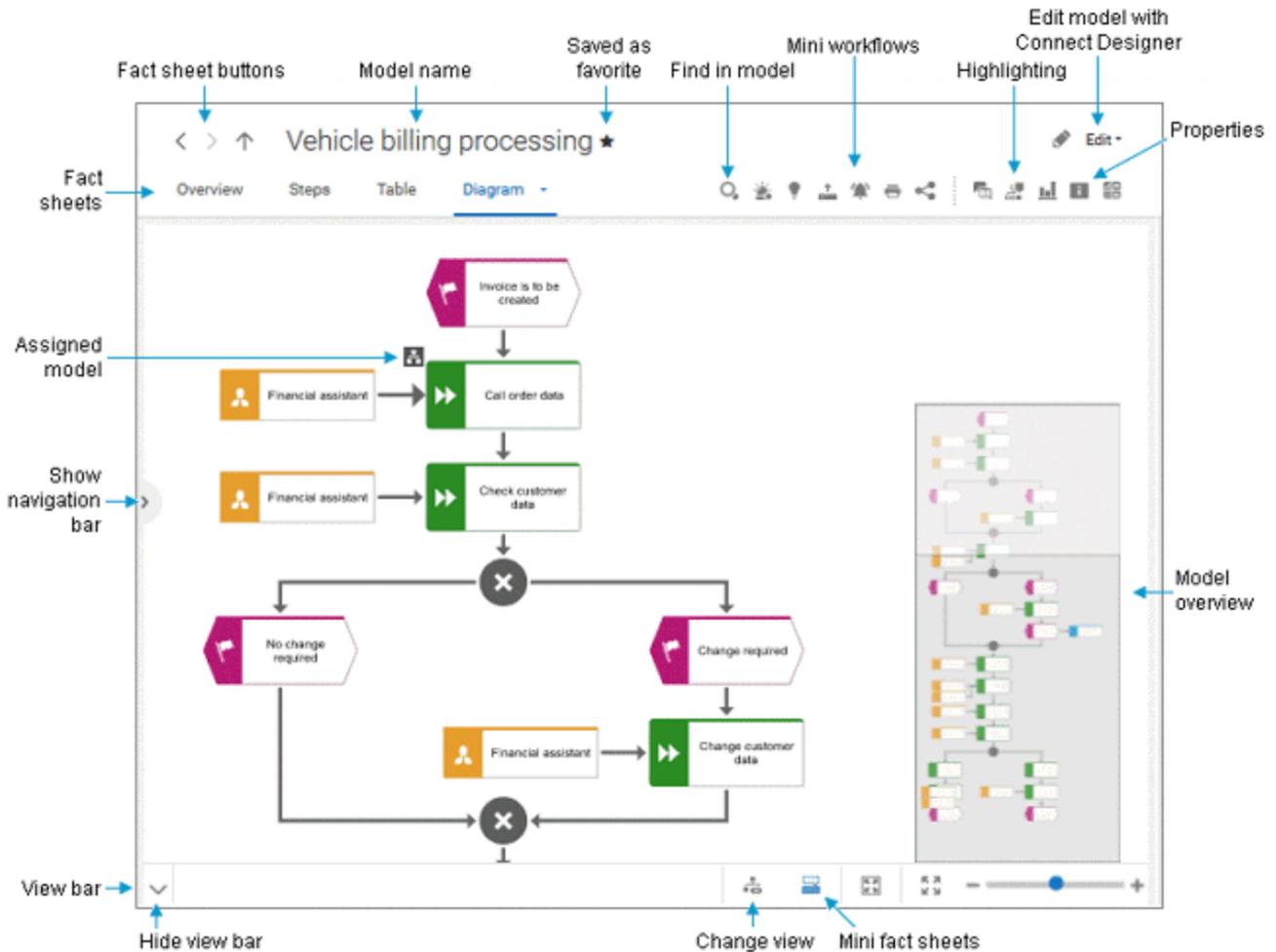
3.2.1.3.11 What is the RACI fact sheet for?

RACI matrices display the activity processes and the associated organizational responsibilities. RACI matrices are displayed only if RACI information is available for this process (page 272). You can sort the functions (page 245) of matrices.

Overview Steps RACI ▾			
↓ Functions ▾	Financial assistant	Financial clerk	Accountant
Call order data	R A C I	R A C I	R A C I
Check customer data	R A C I	R A C I	R A C I
Change customer data	R A C I	R A C I	R A C I
Check order data	R A C I	R A C I	R A C I

3.2.1.3.12 What is the Diagram fact sheet for?

The **Diagram** fact sheet (page 201) graphically displays diagrams. Depending on the diagram type, different functions are available.



You can find model items (page 202) (🔍) in the diagram. Click **i** **Properties** to show the properties of a model or a model item. (page 205) You can highlight objects in the diagram (page 206) (👤) that meet a defined condition. In addition, you can open assigned models (page 207) (📄). You can change the view of the diagram (page 210) (📄) to show the aspects you want to focus on. Using the functions of the view bar you can change the size of appearance (page 203).

3.2.1.3.13 What is the Matrix fact sheet for?

The **Matrix** fact sheet graphically displays models of **Matrix** type.

IT Systems	Databases (DBMS)	Flat file	IBM DB2	IBM DL1	IBM IMS	MS Access	MS SQL Server	Oracle	Oracle Express	SAP DB
A-PLAN										✓
ARIS Process P...										✓
BELEG										
A-CRED										
CEDAT		✓								
COMPET-OO		✓								
Core processes										
EDILE										
Financial services										
GSTAT										

Click **i Properties** to show the properties of a matrix or a matrix item (page 247). Click **Reports** to generate a report (page 176). You can **Submit a change request** (page 279), **Propose a document** (page 251), **Inform owner on change** (page 172), or **Add a comment to the matrix** (page 118).

3.2.1.3.14 What is the Spreadsheet fact sheet for?

The **Spreadsheet** fact sheet graphically displays models of **Spreadsheet** type.

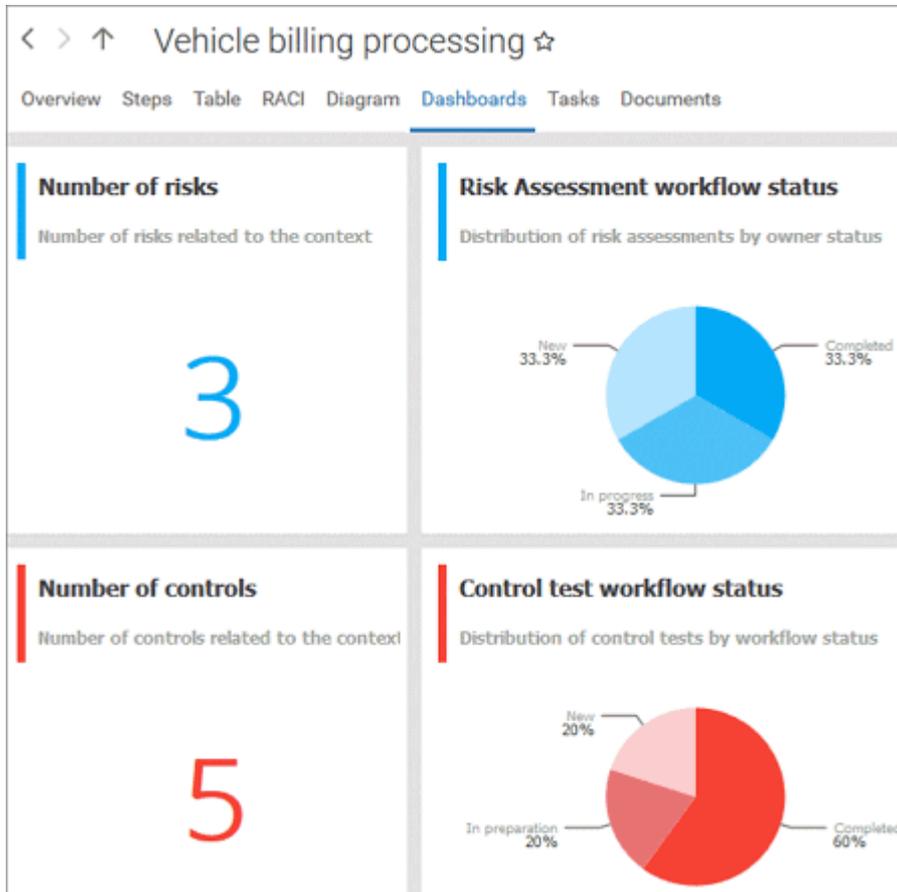
	A	B	C	D	E
1	Basic information				
2	Name	Car loan application (as-is vs. to-be)			
3	Description/Definition	This spreadsheet compares the as-is state of the "Car loan application" process with a possible to-be state.			
4					
5	Status-quo	Car loan application Europe	Avg. total costs	To-be	
6		Settle old credit / send info letter to previous ins	12.000 EUR		Request supplementary documents
7		Forward vehicle registration certificate to back of	12.000 EUR		Check affordability
8		Check for third-party repayment	1.000 EUR		Inform client about rejection
9		Create letter of rejection	10.000 EUR		Inform client about rejection
10		Send letter of rejection / customer documents	10.000 EUR		Create car loan application
11		Send repayment letter to third-party bank	14.000 EUR		Check completeness of loan file
12		Archive credit request data	10.000 EUR		Analyse the file for decision
13		Check availability of vehicle registration certifica	30.000 EUR		Generate new offer
14		Print welcome letter	4.000 EUR		Initiate client contact
15		Archive financing documents	10.000 EUR		Enter initial offer

Click **i Properties** to show the properties of a model or a model item. (page 205) Click **Reports** to generate a report (page 176). You can propose a change request (page 279), propose a document (page 251), inform owner on change (page 172), or add a comment to the spreadsheet (page 118).

3.2.1.3.15 What is the Dashboards fact sheet for?

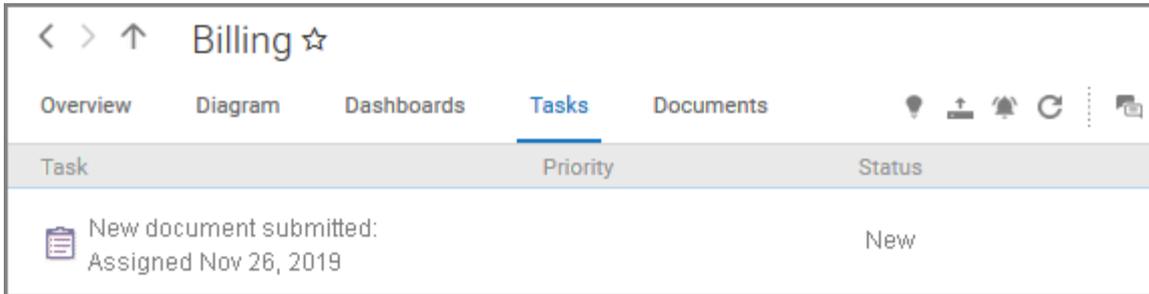
The **Dashboards** fact sheet shows dashboards available for the selected diagram. It is shown to users who have the **ARIS Aware** license (page 21).

Dashboards visualize database internal and database external information. Information can be, for example, runtime information, performance data, and analysis data.



3.2.1.3.16 What is the Task fact sheet for?

Shows your tasks created by mini workflows or Process Governance processes. For editing, selected tasks are opened in  My tasks.



Task	Priority	Status
 New document submitted: Assigned Nov 26, 2019		New

3.2.1.3.17 What is the Executables fact sheet for?

Executables are displayed if you are using ARIS for SAP Solutions and if this function has been configured in the  **Portal**.

Transaction code	Name	Supports	Type
	Create contract	Contract negotiation and completion in ERP Create contract	SAP transaction
	Periodic billing	Contract negotiation and completion in ERP	SAP transaction
	Display contract	Contract negotiation and completion in ERP Inform sales office about contract	SAP transaction
	Change contract	Contract negotiation and completion in ERP	SAP transaction
	Create quotation	Quotation processing in ERP (to-be)	SAP transaction
SDQ1	Expired quotations	Quotation processing in ERP (to-be)	SAP transaction ▶ ▾
SDQ2	Expired quotations	Quotation processing in ERP (to-be)	SAP transaction
SDQ3	Complete quotatio	Quotation processing in ERP (to-be)	SAP transaction

You can start (page 402) the  executable automatically via the default server in each row displaying a Transaction code. Click the  arrow head to display all registered SAP Servers. The default server selected is indicated by a check mark.

16 A08 Solution Manager 7.1

18 S04 Solution Manager 7.2

SAP URL

Logon data

To start the executable, click an SAP Server or a URL. The Login dialog opens.

SAP logon

Client:

User:

Password:

Log on to the SAP system in the current language and the executable starts. The login remains valid until you log out of the portal or enter different login data (page 404). To delete the current SAP logon data, click the ▼ arrow head and then **Reset logon data**. For the next executable start you need to log on to the SAP system again.

If you click an executable on the **Executables** page, such as **SDQ1**, its fact sheet (page 1144) including detailed information is displayed. If documents are available, you will be able to download (page 403) them.

3.2.1.3.18 What is the Documents fact sheet for?

Lists documents assigned to models, for example, by the **Link 1 - Link 4** attributes. The list displays the latest approved version of each document. These documents are stored in ARIS document storage. Click a document to download it. You can open the downloaded document.

Overview Steps Table RACI Diagram Documents ▾			
⏪ ⏩ 1-1 of 1 ⏪ ⏩			
Name	Owner	Last update	Related to
Modeling conventions	John Designer	2019-11-26, 10:25.38	🔗 Vehicle billing processing

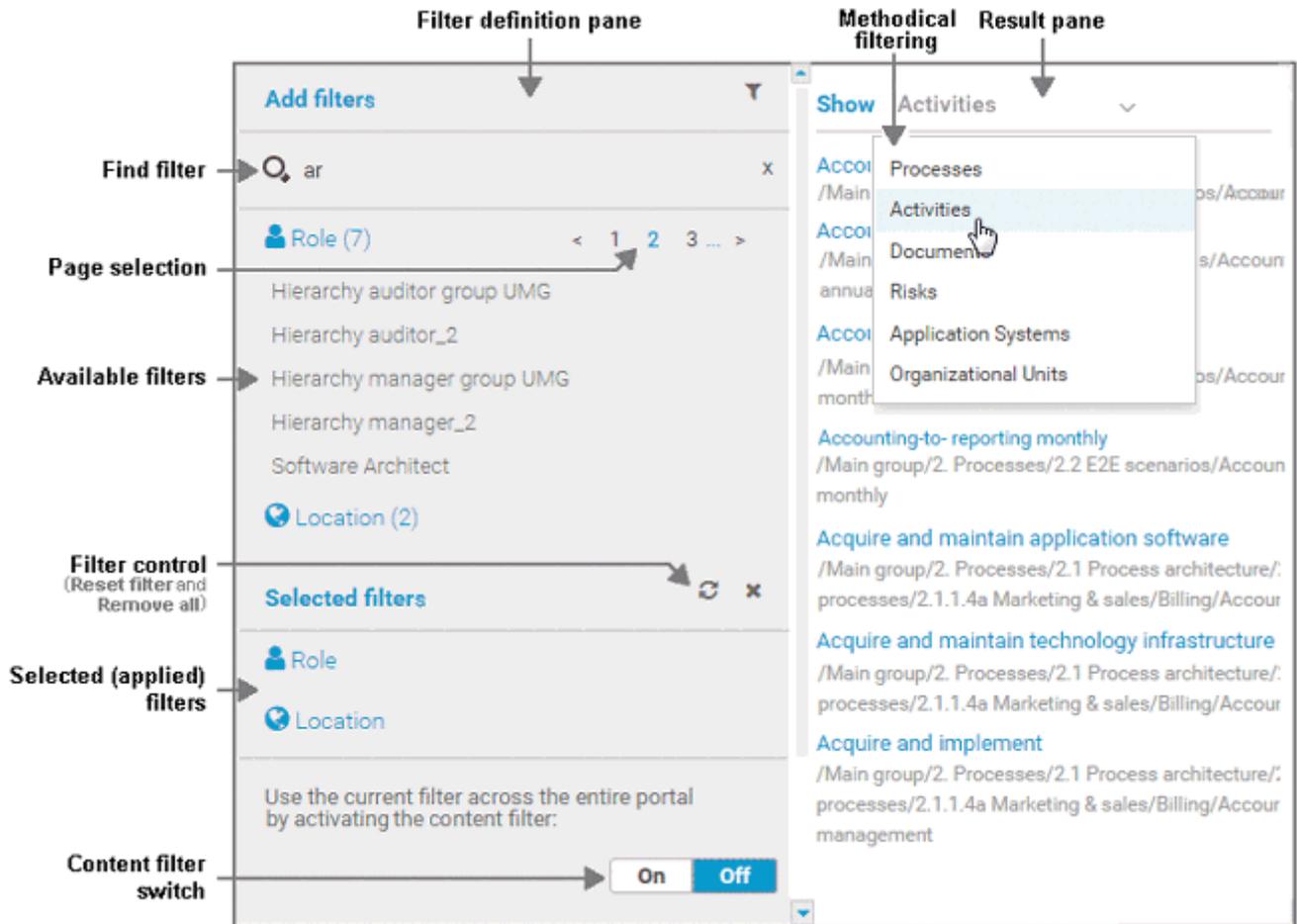
3.2.1.3.19 What is the Confirmations fact sheet for?

Lists the generated confirmation processes (page 1140) and confirmation process schedulers (page 1140) that are not activated or that have not reached the start date yet. To open a confirmation process or confirmation process scheduler, click the relevant name in the list. To define a new confirmation process scheduler, click  **Create confirmation process scheduler**. For detailed information on confirmations, refer to Confirmations (page 144).

Overview Diagram Tasks Documents <u>Confirmations</u>							
K < 1-1 of 1 > H							
Confirmation process	Confirmation process period		Status	Progress			
	Start	End		Open	Accepted	Not completed	
 Confirmation of 'UMG bank' - DACH	-	-	-	0	0	0	
 Confirmation of 'UMG bank' - EMEA	08/05/2019	08/14/2019		2190	139	0	

3.2.1.3.20 What is the structure of the My content area?

If the administrator provides at least one database you have access to, the **My content** area is available. It provides a filter definition pane and a result pane. In the definition pane, you can define filters, refresh the filter result, delete filter definitions, turn on and turn off the defined filters. In the result pane, you can focus on specific aspects. Therefore you can, for example, switch between activities and processes.



In the **Add filters** section, all available filters for the current user are available. The filters assigned to the roles that are modeled for the current user are listed in the **Selected filters** section. You can add individual (page 102) or a number of filters (page 103) to the **Selected filters** section.

If the number of the selected filters is too large to be displayed, the filter category is collapsed and indicated by the number of filters contained. The category can be expanded. If the number of filters takes up more than one page, filters are offered on multiple pages. In that case, a page selection is displayed after the category name to navigate to the relevant pages.

You can remove selected filters (page 106) and selected filters can be reset (page 106), so that only those filters stay active that are assigned to you by role assignment. The **Reset filters** button is only displayed if you are logged in as user to whom a content filter is assigned via roles (page 104).

Selected filters can be used as content filter. That means that in the  **Portal** only the content is shown that is allowed by the selected filters.

Finally you can remove the selected filters as well as the filters that are assigned to you (page 106) by role assignment.

3.2.1.3.21 What function privileges exist for databases?

You can assign function privileges to provide users and user groups with specific functionality and thus control their authorizations across a database. Function privileges for databases are assigned in ARIS Architect on the properties pages of users or user groups.

Attribute formatting

Users with this function privilege can format attributes.

Database backup

Users with this function privilege can back up the database.

Database export

Users with this function privilege can:

- transfer database content to other databases (merge)
- export and import database content.

Database management

Users with this function privilege can:

- edit database properties
- edit database attributes
- create, modify, and delete languages

Database reorganization

Users with this function privilege can reorganize the database.

Font format management

Users with this function privilege can create, change, or delete font formats in the database on the **Administration** tab.

Lock permanently

Users with this function privilege can lock group content, objects, and models during Release Cycle Management. Permanently locked database items are displayed, but they can only be edited by the user who locked them. This user and, in ARIS Architect, system users can remove the lock.

Method changes

Users with this function privilege can change the color or line weight of objects in models by changing the **Fill color**, **Line color**, **Line style**, and **Weight** boxes on the **Format > Representation > Object appearance** page.

As a result, only the appearance of this object occurrence differs from the default appearance defined in ARIS Method.

To change ARIS Method you need the **Configuration administrator** function privilege in ARIS Administration.

Prefix management

Users with the **Prefix management** function privilege can manage database prefixes and change this attribute for all database items for which they have the **Write** access privilege.

Prefixes of a database are managed on the **Administration** tab on the **Identifier** properties page. By assigning a particular prefix to a user, you can identify the users who have created database items.

Show user management

Displays the database items **Users** and **User groups** on the **Administration** tab. Users with this function privilege cannot edit users/user groups.

User management

Displays the database items **Users** and **User groups** on the **Administration** tab.

Users with this function privilege can edit user groups and users who are not system users.

- Assign method filters
- Assign function privileges
- Assign access privileges
- Specify default method filter

Users can only assign privileges which they have themselves.

3.2.1.3.22 What function privileges can be assigned tenant-wide?

Function privileges provide users with specific functions and control their privileges. Additionally the user must be assigned to a license privilege. You can assign the following function privileges to users or user groups.

Tenant-wide function privileges are assigned in ARIS Administration.

Depending on your license, the offered function privileges may vary.

ARCM ADMINISTRATOR

Manage ARIS Risk & Compliance Manager system settings and run data exports/imports.

ARCM SYNCHRONIZATION ADMINISTRATOR

Synchronize databases, models, or groups from ARIS Connect or ARIS to ARIS Risk & Compliance Manager.

ARIS CONNECT ADMINISTRATOR

Specify which version of which database is to be published in the portal, and manage the corporate design.

ANALYSIS ADMINISTRATOR

Back up, restore, and manage the analysis database of a tenant. Import and export queries and ad hoc analyses.

ANALYSIS PUBLISHER

Publish and delete ad hoc analyses and queries for other users. Back up ad hoc analyses and queries.

COLLABORATION ADMINISTRATOR

Manage private groups, flagged posts, announcements and e-mail templates.

COMPONENT ADMINISTRATOR

Add, start, stop, and remove components on the ARIS Cloud Controller server.

CONFIGURATION ADMINISTRATOR

Configure ARIS Design Server or ARIS Connect server, export and import a tenant's configuration files, for example, ARIS filters, templates, and XML structures.

CONFIRMATION ADMINISTRATOR

Manage confirmation processes in ARIS Connect.

DASHBOARD ADMINISTRATOR

Create and manage visual content in ARIS Connect, for example, dashboards.

DATABASE ADMINISTRATOR

Manage tenant databases. System user in all databases.

DOCUMENT ADMINISTRATOR

Manage documents, document versions, folders, and access privileges in ARIS document storage.

IMPERSONATION

Manage data in other tenants using impersonated users and their privileges.

LICENSE ADMINISTRATOR

Use ARIS Administration/User Management to import, export, or delete licenses.

PORTAL ADMINISTRATOR

Manage the portal's corporate design.

PPM USER

Use PPM.

PROCESS GOVERNANCE ADMINISTRATOR

Manage Process Governance processes.

PUBLISHER ADMINISTRATOR

Generate, update, and delete ARIS Publisher exports.

PUBLISHING ADMINISTRATOR

Specify which version of which database is to be published in the portal.

SCRIPT ADMINISTRATOR

Manage report scripts and macros of ARIS Design Server or ARIS Connect Server.

SERVER ADMINISTRATOR

Query and terminate sessions on ARIS Design Server or ARIS Connect Server. Back up and update the system database, and display database statistics and all databases.

SERVICE ADMINISTRATOR

Register external systems and services (for example, external database systems, mail servers, or proxy servers) on the ARIS Cloud Controller server.

TECHNICAL CONFIGURATION ADMINISTRATOR

Configure systems, such as LDAP or SMTP, use ARIS Administration/User Management to import or export configuration files, and manage documents.

TENANT ADMINISTRATOR

Create, back up, restore, and delete tenants on the ARIS Cloud Controller server.

UML VIEWER

View UML content in ARIS Connect.

USER ADMINISTRATOR

Manage users, user groups, and privileges in ARIS Administration/User Management.

3.2.2 Navigate

The following describes the navigation features that you can use to easily access the database contents.

3.2.2.1 Select database

If your administrator has published more than one database, you can select these databases in the  **Portal** to access their content.

Procedure

1. Click the name of the current database that follows the  database symbol. In the standard ARIS Connect views, database selection is located top right of the screen. All published databases are displayed.



2. Click the name of the required database.

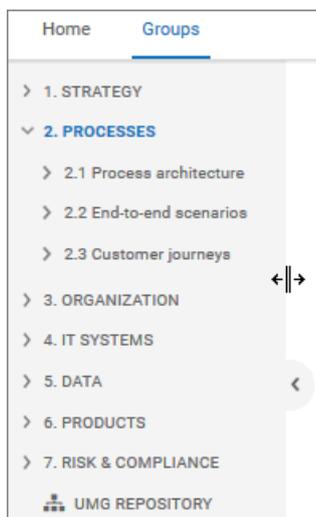
The name of the selected database is displayed. If you start a search, it is performed based on the current database.

For users with **Designer** privileges, the **Recently used models** section of the repository area **Models & Objects** is updated according to the selected database.

3.2.2.2 Navigate in the portal

With the help of hierarchies, administrators control how portal users can quickly navigate to relevant information. These hierarchies map the relationships between superior and subordinate items.

In the **Classic** view, the **Groups** tree for the selected database is available.



You can select a model, for example, **UMG REPOSITORY**, expand groups, for example, **2. PROCESSES**, and access to the group content. You can change the size of the **Groups** tree by clicking the bar border and moving it to the right or left.

And you can hide the **Groups** tree by clicking the right arrow and show it again by clicking the left arrow.



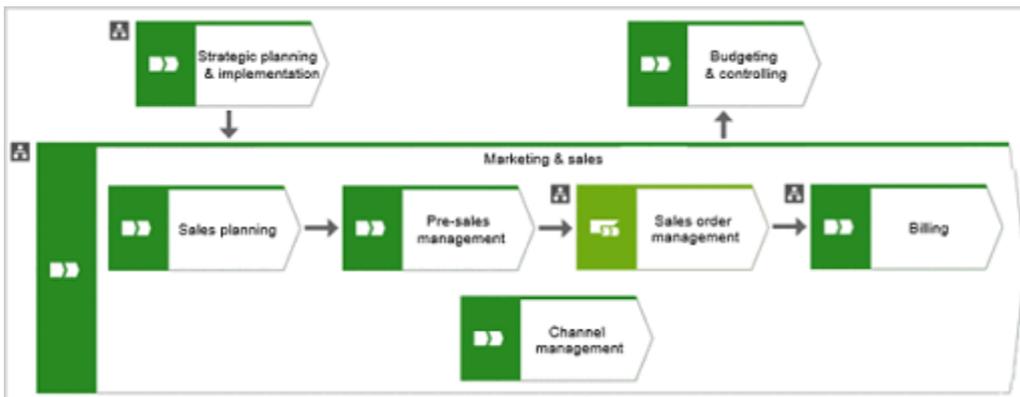
In the following example for the **Default** view, the **Processes**, **Organization**, and **IT systems** hierarchies are defined. In the following example, the **Processes** hierarchy is activated where users have access to all processes of the current database. The fact sheets (page 1144) provide various information about selected processes. When you select a process, the **Overview** fact sheet is activated by default.

The screenshot shows the ARIS Connect Designer interface with the **Processes** tab selected. The navigation menu on the left includes:

- ▼ Billing
 - Vehicle billing processing
 - > Channel management
 - > Customer services
 - > Sales order management (as-...)
 - > Sales planning
 - > Strategic planning
 - Sales order management (m...
- > Sales order management (to-be)
- > Strategic planning
- > Research & development

The main content area displays the selected process: **Vehicle billing processing**. The breadcrumb trail is **Home > Processes > Organization > IT systems > Vehicle billing processing**. The **Overview** fact sheet is active, showing a description: "This process describes how to process the vehicle billing from calling & checking order data up to sending the invoice and printing the confirm receipt". Below the description, the **Variants** section lists **Vehicle billing processing (to-be)**.

If the **Diagram** fact sheet is selected, you can navigate to assigned diagrams (page 207) by clicking an object's  assignment icon, or by double-clicking an object with the  assignment icon.



3.2.2.3 Navigate step by step

You can easily follow the process flow in process models of the **EPC** type. Predecessor and successor as well as the attributes of the selected object are displayed.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Select a process model. You are offered the fact sheets of the process model.
3. Click the **Steps** (page 75) fact sheet. The first event of the process is shown at the top. It has no predecessor; therefore no object is placed in this field. Below, the event's successor is output. To the right, the attributes are shown.
4. Click the successor. The event as a predecessor is moved to the field above, the succeeding object is placed in the middle, and its successors are visible in the lower field. The attributes of this object are now visible.
If event and function precede or succeed each other, they are displayed together.

You navigate through a process step by step.

3.2.2.4 Navigate using a Process interface

You can easily follow the process flow from one process model to another using process interfaces in models of the **EPC** type.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Select a process model that contains an object of **Process interface** type to which the other process model is assigned.
3. Click the **Steps** (page 75) fact sheet.
4. Navigate to the process interface and click it.

The **Steps** fact sheet of the process assigned to the process interface is shown. If you want to navigate back to the **Steps** fact sheet of the previous model, click **< Back** at the top left side of the fact sheet.

3.2.2.5 Navigate using fact sheet buttons

You can scroll between the fact sheets and hierarchy levels visited.



Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Select the groups and models whose content you want to edit. The fact sheets of the selected item are displayed.
3. Click through the relevant fact sheets (page 1144) and complete your tasks. Click on the relevant fact sheets one after the other and complete your tasks.
4. Click **< Back** to browse previously displayed fact sheets and hierarchy levels in backward direction.
5. Click **> Forward** to browse previously displayed fact sheets and hierarchy levels in forward direction.
6. Click **↑ Go up in hierarchy** to navigate to a parent folder or process.

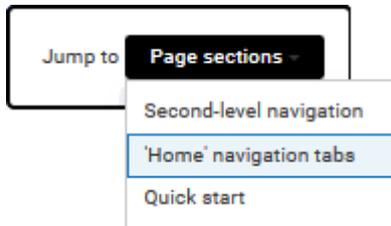
You navigate through fact sheets and through the hierarchy using the fact sheet navigation buttons.

3.2.2.6 Navigate to page sections

You can activate sections of a page using the keyboard.

Procedure

1. Click the page you want to access, for example, **Portal**.
2. Press the **Tab** key.
3. Press the **Arrow down** key.



The sections of the portal are listed.

4. Use the **Arrow down** keys to switch between the sections.
The selected section is highlighted by a frame.
5. Press **Enter** to select the highlighted section.

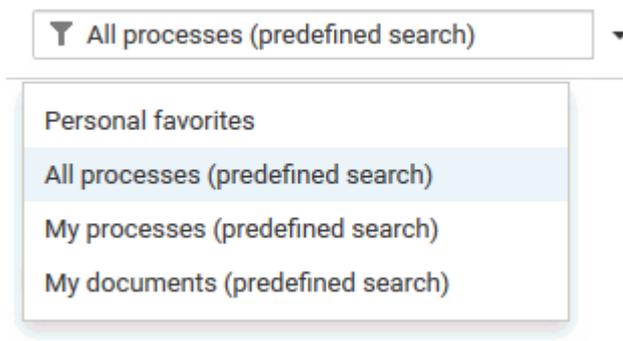
The focus is placed on the selected section and you can navigate through the entries by pressing the **Tab** key.

3.2.2.7 Filter using My Favorites

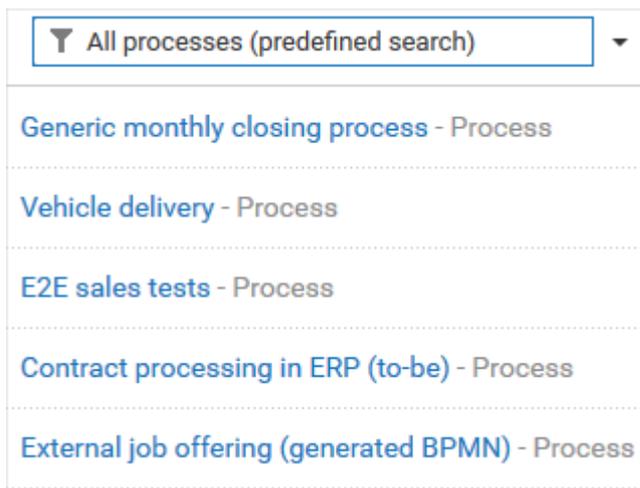
In the portal, you have direct access to all saved filter settings (page 111). The filters output the content of the selected database, while the personal favorites (page 110) of all published databases are listed and can be accessed.

Procedure

1. If you have access to more than one database, select the database (page 94) you want to work with.
2. Click  **My favorites** in **Home** (page 36)
3. Click the  **down arrow** of the **Filter selection** field.



4. Click the context caption to select the relevant filter settings, for example, **All processes (predefined search)**. The content of the selected database is filtered.



If the filter result does not fit on one page, page numbers are displayed behind the **Filter selection** field.

5. Click the page numbers to display the content of the corresponding pages.
6. Click the name of the item. The item opens.

You have filtered database content based on your filter setting and opened one of your favorites using the **Favorites** tab.

3.2.2.8 Switch from Steps to Diagram

For models of type **EPC**, you can switch from the **Steps** fact sheet to the **Diagram (page 79)** fact sheet where the current object symbol is selected.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Steps (page 75)** fact sheet and navigate to the relevant step.
5. Click  **Show in diagram** next to the step.

The **Diagram** fact sheet is opened and the object symbol of the current step is selected. To return to the **Steps** fact sheet, click **Steps**. If you have selected another object in the **Diagram** fact sheet, this object is marked in the **Steps** fact sheet.

3.2.2.9 Switch from Diagram to Steps

For models of type **EPC**, you can switch from the **Diagram (page 79)** fact sheet to the **Steps (page 75)** fact sheet where the current object symbol is selected.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. Select the object symbol of the structurally relevant object (page 1154) that you want to select in the **Steps** fact sheet.
6. Activate the **Steps** fact sheet.

The object you have selected in the **Diagram** fact sheet is marked in the **Steps** fact sheet.

3.2.2.10 Return to the top of the Steps fact sheet

For models of type **EPC**, you can return quickly to the top of the **Steps** fact sheet.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Steps (page 75)** fact sheet and navigate to the relevant step. In the **Steps** fact sheet, at the top right the link  **Back to top** is shown.
5. Click  **Back to top**.

The top of the **Steps** fact sheet is shown.

3.2.2.11 How is a process interface represented in the Steps fact sheet?

You can use process interfaces to navigate (page 97) from one process model of the **EPC** type to another. To do so, you must assign the corresponding process to the process interface.

In the **Steps** fact sheet, a process interface that is placed as the first object in a model is labeled **Previous process**, a process interface that is placed as the last object in a model is labeled **Next process**.



3.2.3 Use filters

You can define content filters (page 102) to restrict the content in the portal, so that only the content is displayed you want to focus on.

Content filters are available only if roles are assigned (page 104) to your user in models and the portal has been configured for the use of role filters.

3.2.3.1 Open My content to manage filters

You can manage your filters in the **My content** (page 87) area.

Procedure

1. Start ARIS Connect.
2. Click **Home** >  **My content**.

The **My content** area opens and you can manage your filters.

3.2.3.2 Add filters

You can add individual filters to the **Selected filters** section, thus making them active.

Procedure

1. In the **Add filters** section, move the mouse pointer over the name of the relevant filter. A **+** plus sign is shown after the name.
2. Click the **+** plus sign.

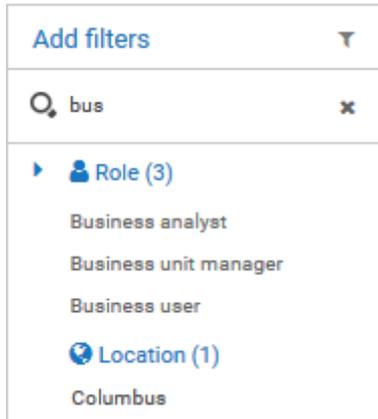
The filter is moved from the category of the **Add filters** section to the appropriate category of the **Selected filters** section and the content of the result pane is adjusted.

3.2.3.3 Add a number of filters

You can add a number of filters to the **Selected filters** section using the find functionality.

Procedure

1. In the **Add filters** section, click the **Type to find a role or location** field.
2. Enter a part of the name of the filters you want to add, e. g. **bus**. The found filters of the category **Role** or **Location** are shown under the appropriate category. The number of filters found is displayed after the category name.



3. Behind **Add filters**, click **Add all** to move all filters found from the **Add filters** section to the appropriate category of the **Selected filters** section.

The filters are moved and the content of the result pane is adjusted.

3.2.3.4 Assign roles for the use of content filters

You can define content filters using role assignment. In this case, these filters are added to the role filters under **Selected filters** of the **My content** (page 87) area.

Prerequisites

- You have the **User administrator** function privilege.
- You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Portal**.
2. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
3. In the navigation, select a diagram containing an occurrence of the relevant role, for example, **Regional sales department specialist**. The fact sheets (page 1144) are shown.
4. Click  **Edit** >  **Edit model**. The model opens in ARIS Connect Designer on a separate tab for editing.
5. Select the relevant **Role** type object in the model.
6. Click  **Details**. The **Details** bar opens.
7. Click the **Properties** tab if it is not activated yet.
8. Add the **User/User group association** attribute if it is not displayed.
9. Move the mouse pointer to the **User/User group association** attribute.
10. Click  **Select user**. The **Select user(s)/user group(s)** dialog opens.
11. Enter the user name in the  **Filter** box.
12. Enable the check box for the user, and click **OK**.
13. Save the changes and close the diagram.

The role has been assigned to the user.

If this user activates (page 105) the content filters, information is restricted according to the role.

3.2.3.5 Activate content filters using the My content area

You can determine that the role filter is used to filter your access to the portal's content.

Procedure

1. Click **Home** >  **My content**.
2. Check if the current filter setting is appropriate. If not, add an individual filter (page 102), add a number of filters (page 103), remove filters (page 106), or reset filter (page 106).
3. Turn the content filter switch on.



The filter is applied to the portal content. A symbol in front of your user name indicates the activated content filter.



3.2.3.6 Activate content filters using the button

You can turn on the content filters using the **Content filters** symbol.

Procedure

1. In front of your user name, click  **Content filters**. The **Content filters** pop-up opens.
2. Click **On**.



The content filters are applied and the portal content restricted. A  red symbol in front of your user name indicates the activated content filter.

3.2.3.7 Deactivate content filters

You can turn off the content filters using the **Content filters** symbol.

Procedure

1. In front of your user name, click  **Content filters**. The **Content filters** pop-up opens.
2. Click **Off**.



The content filters are removed and the portal content is not restricted anymore. A  blue symbol in front of your user name indicates the deactivated content filters.

3.2.3.8 Reset filter

You can reset the filters. The added filters are removed and only the content filters assigned by role stay active. The  **Reset filters** button is only displayed if you are logged in as user to whom a content filter is assigned via roles (page 104).

Procedure

After **Selected filters**, click  **Reset filters**.

All filters except the filters assigned by role assignment are removed and the content of the result pane is adjusted.

3.2.3.9 Remove selected filters

You can remove selected filters to remove their restrictions.

Procedure

1. In the **Selected filters** section, move the mouse pointer over the name of the relevant filter. A cross sign is shown after the name.
2. Click the  cross sign.

The filter is moved from the category of the **Selected filters** section to the appropriate category of the **Add filters** section. The content of the result pane is updated.

3.2.3.10 Remove all filters

You can remove all filters from the **Selected filters** section, the added filters as well as the filters assigned by role assignment (page 104).

Procedure

Behind **Selected filters**, click  **Remove all**.

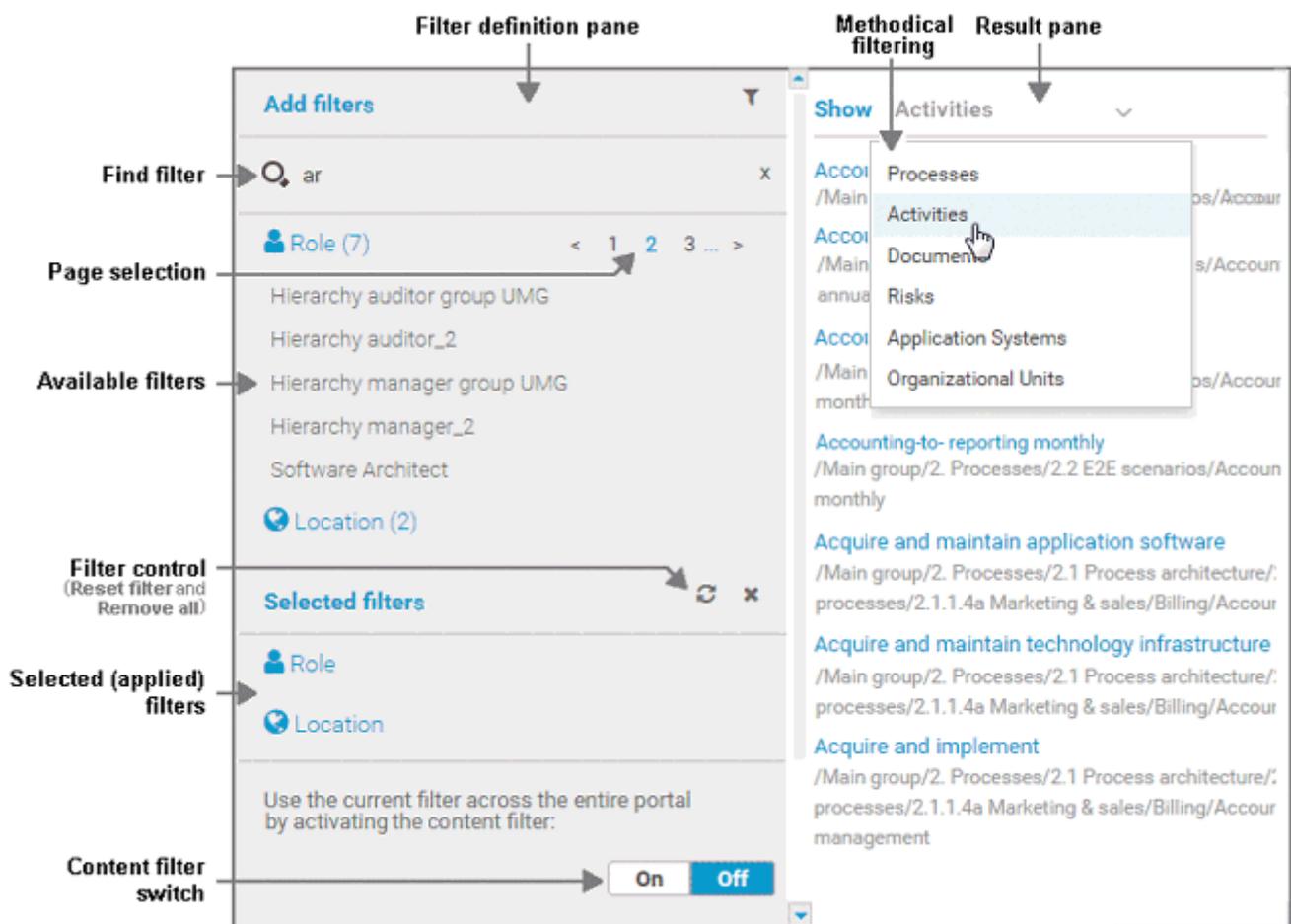
All filters including the filters assigned by role assignment are removed and the content of the result pane is adjusted.

3.2.3.11 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.3.11.1 What is the structure of the My content area?

If the administrator provides at least one database you have access to, the **My content** area is available. It provides a filter definition pane and a result pane. In the definition pane, you can define filters, refresh the filter result, delete filter definitions, turn on and turn off the defined filters. In the result pane, you can focus on specific aspects. Therefore you can, for example, switch between activities and processes.



In the **Add filters** section, all available filters for the current user are available. The filters assigned to the roles that are modeled for the current user are listed in the **Selected filters** section. You can add individual (page 102) or a number of filters (page 103) to the **Selected filters** section.

If the number of the selected filters is too large to be displayed, the filter category is collapsed and indicated by the number of filters contained. The category can be expanded. If the number of filters takes up more than one page, filters are offered on multiple pages. In that case, a page selection is displayed after the category name to navigate to the relevant pages.

You can remove selected filters (page 106) and selected filters can be reset (page 106), so that only those filters stay active that are assigned to you by role assignment. The  **Reset filters** button is only displayed if you are logged in as user to whom a content filter is assigned via roles (page 104).

Selected filters can be used as content filter. That means that in the  **Portal** only the content is shown that is allowed by the selected filters.

Finally you can remove the selected filters as well as the filters that are assigned to you (page 106) by role assignment.

3.2.3.11.2 What are content filters?

Content filters restrict the information in specific areas of the portal to content that is relevant to you. This is controlled in user management by administrators.

You can add filters (page 102) and activate them as content filters (page 105) to further restrict this content. Content filters are available only if roles are assigned (page 104) to your user in models and the portal has been configured for the use of role filters.

WHAT INFORMATION IS NOT FILTERED BY A CONTENT FILTER?

When you open a diagram, all information is displayed unfiltered. You can also navigate using assignments.

Regardless of content filters, assignments are filtered by hierarchy in the views. In the **Classic** view, all assignments are shown, because all assigned models are stored in the group structure.

In the default view, only assignments are shown that belong to the current hierarchy, for example, assignments from an object of Value-added chain diagrams (VAC) to process models like EPCs, but no assignments to organizational charts.

WHAT INFORMATION IS FILTERED BY A CONTENT FILTER?

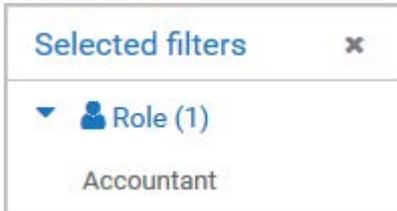
Filtered according to the selected role:

- All steps of the **Steps** fact sheet are displayed if you view processes step by step (page 96), but the detailed information about the satellites is filtered.
- Tables (page 77)
- Fact sheets (page 1144)
- RACI matrices (page 272)
- Search
- Navigation (Groups (page 38) or Processes (page 52))

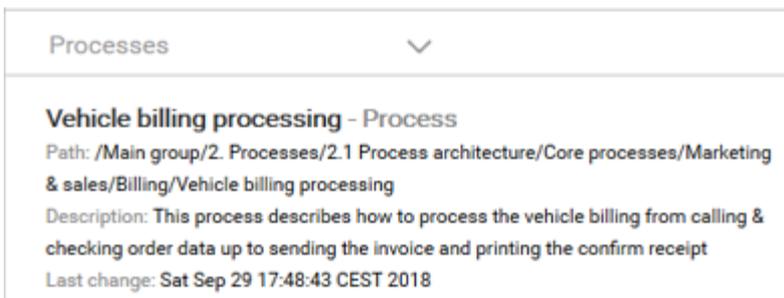
3.2.3.11.3 What is role-based highlighting?

In **My content** (page 87), you can select a role filter to restrict the contents of a database to those items in which the role is involved.

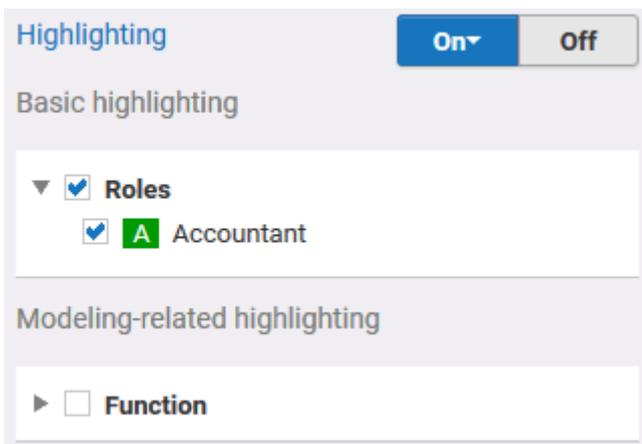
You can, for example, restrict the contents of the database **United Motor Group** to the role **Accountant**.



The model **Vehicle billing processing** is listed.



If you open the fact sheet **Diagram fact (page 79)** and switch on the highlighting (page 206), the default highlighting is set to highlight the role **Accountant**.



You can activate the check boxes for additional roles and/or functions for highlighting (page 238). In this case, the highlighting switches to **User defined**.

3.2.4 Use favorites

Favorites enable you to quickly access database items you often need to work with.

In the **Search** area, you can save filter settings (page 111) and single database items as favorites (page 110). While you can define (page 111) and access the filter settings (page 113) in the Search area, you can access personal favorites and favorites based on filter settings in the Favorites area (page 99) of the portal.

3.2.4.1 Open My favorites

You can open the  **My favorites** area to access your personal (page 110) and predefined favorites.

Procedure

1. Click  **Portal** if it is not activated yet.
2. In the **Home** area, click  **My favorites**.

You opened the  **My favorites** area.

3.2.4.2 Save a model or group as a personal favorite

You can save a model or group as a favorite to access it quickly from the  **My Favorites** area (page 110) of the portal.

Procedure

1. Navigate to the model or group you want to save as a personal favorite.
2. Behind the model or group name, click  **Save as a favorite**.

The star is colored () and the model or group is added to the **Personal favorites** list. The stars of models or groups that you saved as favorites remain colored until you remove them from the **Personal favorites** list (page 111).

3.2.4.3 Remove a personal favorite

You can remove a personal favorite when it is no longer required.

Procedure

1. In the **Home** area, click  **My favorites**.
2. Click the  **down arrow** of the **Filter selection** field.
3. Click **Personal favorites**.
4. Move the mouse pointer over the relevant model or group name.
5. At the end of the line for the model, click  **Remove favorite**.
6. The model or group is removed from the favorites list. Alternatively, you can click the colored star when you have navigated to the relevant item.

3.2.4.4 Save search as a favorite

In the **Search** area, you can save your search settings. Thus, you can search the content based on specific settings at any time.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database (page 94) your search is to be based on.
3. Select the filter criteria to define your search.
4. Click  **Save search query as a favorite**. The corresponding dialog opens.
5. Enter a name.
6. Click **OK**.

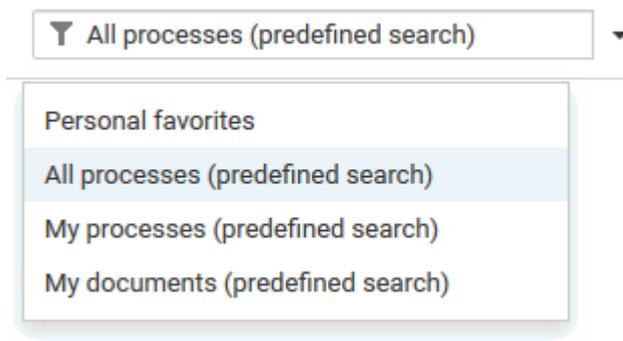
The search settings are saved in the  **My Favorites** area. You can filter the content based on these settings (page 113) at any time from various devices.

3.2.4.5 Filter using My Favorites

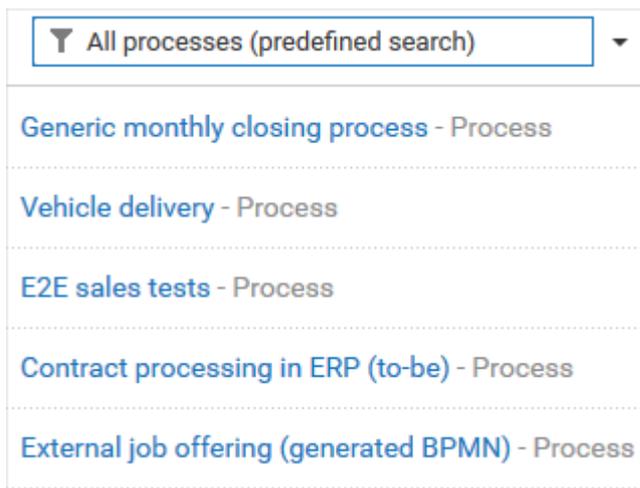
In the portal, you have direct access to all saved filter settings (page 111). The filters output the content of the selected database, while the personal favorites (page 110) of all published databases are listed and can be accessed.

Procedure

1. If you have access to more than one database, select the database (page 94) you want to work with.
2. Click  **My favorites** in **Home** (page 36)
3. Click the  **down arrow** of the **Filter selection** field.



4. Click the context caption to select the relevant filter settings, for example, **All processes (predefined search)**. The content of the selected database is filtered.



If the filter result does not fit on one page, page numbers are displayed behind the **Filter selection** field.

5. Click the page numbers to display the content of the corresponding pages.
6. Click the name of the item. The item opens.

You have filtered database content based on your filter setting and opened one of your favorites using the **Favorites** tab.

3.2.4.6 Use a favorite in the Search area

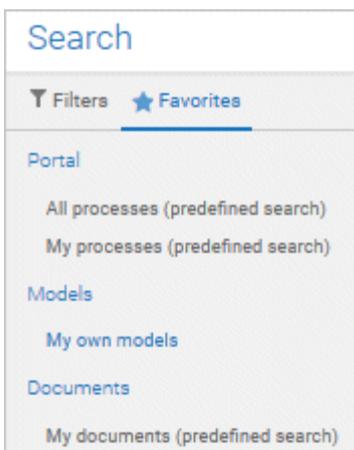
In the **Search** area, you can open a favorite setting to filter the content based on predefined filter criteria.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database (page 94) your search is to be based on.
3. Click **★ Favorites** in the **Filters** bar.



4. Click the favorite setting you want to use as the filter.

The filter criteria of the selected favorite setting are immediately applied and the list of filter results is updated.

3.2.4.7 Use an own favorite setting in the My Favorites area

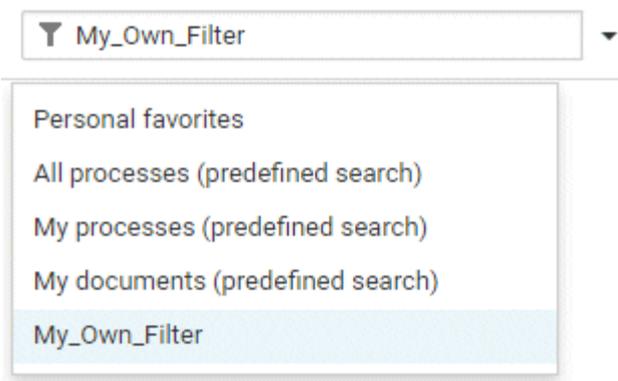
In the **Search** area you can define a filter setting that is used in the **Search** area and in the **My Favorites** area to filter the content based on your own filter criteria.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database (page 94) your search is to be based on.
3. Select the filter criteria to define your search.
4. Click ☆ **Save search query as a favorite**. The corresponding dialog opens.
5. Enter a name.
6. Click **OK**. The favorites settings are saved under ☆ **Favorites** in the **Search** area. In the **Search** area, you can filter the content based on these settings at any time from various devices.
7. Click 🏠 **Portal**.
8. Click ☆ **My favorites**.
9. Click the ▼ **down arrow** of the **Filter selection** field.



10. Click your own filter setting.

Based on your filter setting, the portal content is shown.

3.2.4.8 Delete a filter setting

You can delete a filter setting when you no longer need it. The filter setting disappears from the **Favorites** area of the search and from the **My favorites** area.

Procedure

1. Click **Advanced** in the **Search** field.



2. Click **★ Favorites**.
3. Move the mouse pointer over the favorite setting to be deleted. For user-defined settings, a **Delete** button is displayed to the right of the filter name.
4. Click **Delete**.

The favorite setting is deleted.

3.2.4.9 How are favorites structured in the search?

The ★ **Favorites** area in the **Filters** bar area reflects the saved favorite settings. The favorite settings are structured by captions, for example, **Portal** or **Documents**. The saved favorites are grouped under the captions. Thus, you are able to immediately recognize the contexts of the favorites.

Supplied filters have the addition **(predefined search)** (page 117).

3.2.4.10 What criteria are used for predefined filters?

You can use predefined filters to list processes or documents. If you have the privileges of the role **Designer**, you can also create favorites yourself.

ALL PROCESSES (PREDEFINED SEARCH)

This filter lists all published models of type **EPC** and **BPMN** of the selected database (page 94).

Search Portal 74 matches

Item Process

MY PROCESSES (PREDEFINED SEARCH)

This filter lists all published models of the selected database (page 94) according to one of the following criteria:

- Contains: All models of type **EPC** and **BPMN** whose attribute **Responsible** contains the user name you entered.

Search Portal More than 50 matches

Item Process

Property Responsible Contains ethan.owner

- Is specified: All models of type **EPC** and **BPMN** whose attribute **Responsible** contains a user name at all.

Search Portal 53 matches

Item Process

Property Responsible Is specified

ALL DOCUMENTS (PREDEFINED SEARCH)

This filter lists all documents whose attribute **Owner** contains the user name you entered.

Search Documents More than 100 matches

Property Owner Contains John Designer

3.2.5 Collaborate

The following describes the collaboration features.

3.2.5.1 Comment on portal content

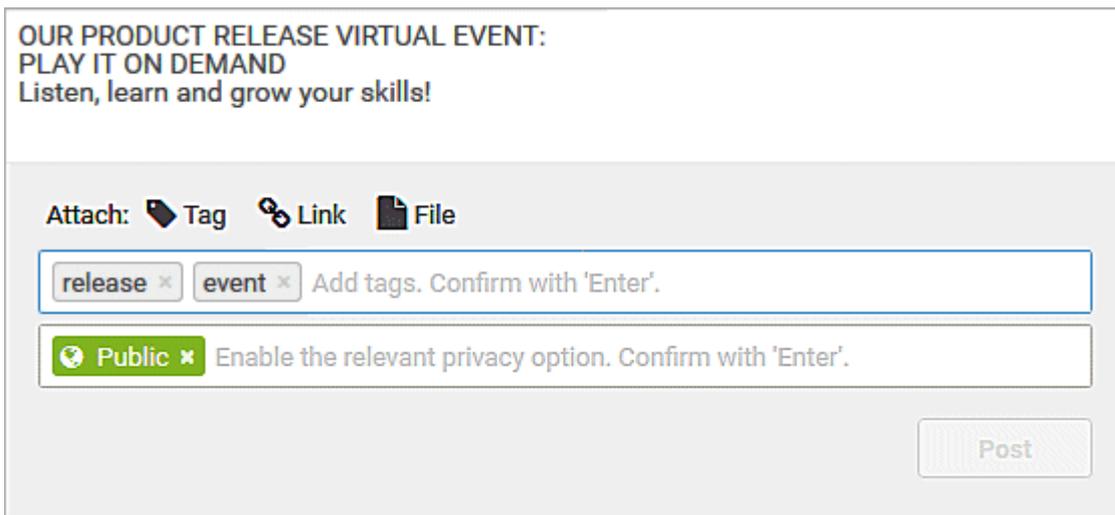
Add comments to models and post information that could be of interest to your colleagues. The following description shows how to post tags, links, and files along with the comment. Of course a comment can also be published without further information.

Prerequisite

You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Navigate to a process.
2. Click  **Comment** in the button bar if the bar is not activated yet.
3. Enter or copy your text into the input box. Up to 250 characters are available. If you also want to add a link, note that the characters in the link are counted towards the 250 available characters.
4. Click  **Tag**.
5. Enter the words to be used as keywords (page 442) in the tag input box, for example, BPM. Alternatively, select an existing tag from the list of tags. It is displayed as soon as you enter a letter that is part of an existing tag. Press **Enter** after each keyword.



OUR PRODUCT RELEASE VIRTUAL EVENT:
PLAY IT ON DEMAND
Listen, learn and grow your skills!

Attach:  Tag  Link  File

release × event × Add tags. Confirm with 'Enter'.

 Public × Enable the relevant privacy option. Confirm with 'Enter'.

Post

6. Click  **Link**.
7. Insert a link to a Web site that contains more detailed information.
8. Click **Add link**. The link is checked and added.
9. Click  **File**. The **Select document** dialog is displayed.
10. Click  **Upload new document** to upload one of your own documents. The corresponding dialog opens.
11. Select the file you want to upload and enter the relevant additional information.

12. Click **Upload**.
13. Enable the check box of the document you want to add to your post.
14. Click **OK**. The document is added to the comment.

Your comment is posted.

3.2.5.2 Follow processes in the portal

Follow processes or other models to be informed about updates in the  **Portal** and in Collaboration.

Procedure

1. Navigate to a process.
2. Click  **Comment** in the button bar if the bar is not activated yet.
3. Click **Follow**.

The content you are following is displayed in the portal under **My activities** and in Collaboration under  **My portal feeds**. To stop following content, click the relevant link, and in the content displayed click **Unfollow**.

3.2.5.3 Request feedback on processes

You can request feedback on processes from other users.

Prerequisite

You have at least the **ARIS Connect Viewer** license privilege.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the model.
6. Click  **Comment** in the button bar if the bar is not activated yet.
7. Enter your comment in the box provided.
8. Click  **Tag**.
9. Enter the words to be used as keywords (page 442) in the tag input box, for example, BPM. Alternatively, select an existing tag from the list of tags. It is displayed as soon as you enter a letter that is part of an existing tag. Press **Enter** after each keyword.

**OUR PRODUCT RELEASE VIRTUAL EVENT:
PLAY IT ON DEMAND**
Listen, learn and grow your skills!

Attach:  Tag  Link  File

release ×
event ×
Add tags. Confirm with 'Enter'.

 Public ×
Enable the relevant privacy option. Confirm with 'Enter'.

10. Click  **Link**.
11. Insert a link to a Web site that contains more detailed information.
12. Click **Add link**. The link is checked and added.
13. Click  **File**. The **Select document** dialog is displayed.
14. Click  **Upload new document** to upload one of your own documents. The corresponding dialog opens.
15. Select the file you want to upload and enter the relevant additional information.
16. Click **Upload**.

17. Enable the check box of the document you want to add to your post.

18. Click **OK**.

The comment is displayed and can be commented on by other users.

All users can select the language to be used for the notification in their profile in ARIS Connect.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.6 My tasks

▪ My tasks

My tasks is used for editing tasks that are provided by Process Governance during process execution. The list of tasks that you are responsible for in terms of processing are displayed. Use the filter (page 128) to limit the list.

▪ Tracking provides an overview of a user's active tasks.

Displays the active tasks that you triggered by starting the process. As soon as a task is completed and the next task in the process is active, the completed task is removed the list.

You have one of the following license privileges: **ARIS Architect with Process Governance**, **ARIS Viewer**, **ARIS Connect Viewer**, or **ARIS Connect Designer**.

Statistics data in the form of charts for human tasks are available in ARIS Connect under **ARIS Administration > Charts > Governance > Human tasks**.

Note: You can watch videos for some procedures in the help. If your browser is unable to open the quick videos within the help, please use a different browser. The videos are also available in ARIS Community (<http://www.ariscommunity.com/help/quick-videos>).

3.2.6.1 Open 'My tasks'

You can use  **My tasks** to edit the tasks assigned to you.

Prerequisite

You have one of the following license privileges: **ARIS Architect with Process Governance**, **ARIS Viewer**, **ARIS Connect Viewer**, or **ARIS Connect Designer**.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal > Home >  My Tasks**.

 **My tasks** opens.

Initially, the tasks to be edited are displayed (status **New** and **Overdue**). If you want to display all tasks, change the filter.

Alternatively, you can use  **Edit tasks** to open  **My tasks**.

3.2.6.2 Edit tasks

Edit the tasks assigned to you. You can complete a task the first time you edit it or continue editing it at a later time, for example, if information you require is not currently available. Initially, the tasks to be edited are displayed (status **New** and **Overdue**). If you want to display all tasks, change the filter. To find out if another user is already editing a task, display (page 128) the **Current editor** column in your list ( **Select columns**).

Prerequisite

If double authentication is enabled in the ARIS Administration configuration (**ARIS Administration > Configuration > Process Governance > Workflow policies > E-signature (double authentication)** and **Enable user name field in e-signature (double authentication)**), you have to reenter the password and username when you complete tasks.

Procedure

1. Move the mouse pointer over the relevant task in the task list. The buttons of the available functions are displayed.
2. Click  **Edit**. The dialog for editing the task opens.
3. Enter the required information and select the relevant options.
4. Click **OK** in the dialog to complete the task. After this, further editing is no longer possible (the status is **Completed**). The button for completing the task may also have a different name because this button can be customized by the modeler. Tasks in status **Completed** can be accessed only in read-only mode.

Click **Save** in the dialog to save the current input and to continue editing the task at a later time (status is **In process**) or delegate it to another user (status is **Delegated**).

Click **Cancel** to discard your changes.

5. Enter your password and user name, if you are requested to do so when finishing the task. The task was edited and has a status (page 132) that corresponds to how it was completed. Alternatively, you can click a task to open it for editing. To display detailed information of a task, select a task in the list, then click  **Details** in the symbol bar.

3.2.6.3 Suspend editing

You can suspend editing of a task and resume editing of the same task at a later time.

Procedure

1. Move the mouse pointer over the relevant task in the task list. The buttons of the available functions are displayed.
2. Click  **Edit**. The dialog for editing the task opens.
3. Edit the task.
4. Click **Save**.

Your current input and selected options are saved. The status of the task is set to **In process**. You can finish editing the task at a later time.

3.2.6.4 Refresh lists of tasks

You can refresh your list of tasks in order to check whether additional tasks have been assigned to you since you logged in.

Procedure

Above the list of tasks ( **My tasks** or  **Tracking**), click  **Refresh**.

The list is updated with any newly assigned tasks.

3.2.6.5 Reset a task

You can reset the status of a task from **In process** to **New**. To find out if another user is already editing a task, display (page 128) the **Current editor** column in your list ( **Select columns**).

Warning

This causes all current input and selected options to be deleted.

Procedure

1. Click the task you want to reset in the task list.
2. Click  **More** >  **Reset**.

The current details are deleted and the status of the task is set to **New**.

3.2.6.6 Display tasks in read-only mode

You can open tasks in read-only mode. This is particularly useful for tasks that cannot be edited, such as tasks with status **Completed**.

You can activate report support on the **Data** tab. If you do so, the data will be read from ARIS by report right before the dialog is displayed and will then be displayed in the dialog when the task is opened for editing. You can dynamically change the displayed name (label) of all elements using a report. If the task is displayed read-only, the report is not executed.

Procedure

1. Move the mouse pointer over the relevant task in the task list. The buttons of the available functions are displayed.
2. Click  **View**.

The task opens in read-only mode.

3.2.6.7 Display task details

You can display additional details of a task, such as its creation date, priority, description, delegation history, etc.

Procedure

1. Click the task for which you want to display additional details.
2. Above the list of tasks, click  **Details**.
3. Click **Delegation history** to see which people the task has been passed on to in the past. Initially, the latest entry is displayed at the top. **Delegation history** is displayed as soon as a task has been delegated once.

Detailed information about the selected task is displayed below the list.

3.2.6.8 Pass on tasks (substitute)

You can pass on your new tasks to a substitute for a specific period of time. This means that you can, for example, have another person complete the tasks assigned to you while you are on vacation. A task can only be passed on to the selected substitute if the status (page 132) of the task is **New**. To find out if another user is already editing a task, display (page 128) the **Current editor** column in your list ( **Select columns**).

Prerequisite

The user to whom the task is passed on is assigned one of the following license privileges: **ARIS Architect with Process Governance** or **wM Integration, ARIS Designer, ARIS Publisher, ARIS Viewer**.

Procedure

1. Click  **Specify substitution**. The corresponding dialog opens.
2. Enable the **Active** check box to activate the substitute immediately or start from a selected start date.
3. Select a **Start date** and **End date** to define the period of time for which you want to be represented by the substitute. After this period has elapsed, the task is automatically re-assigned to the original assignee.

You can specify only one substitution period for all substitutions.

4. Double-click the table row of the user group for which you want to specify a substitute. The **Select user** dialog opens.
5. Enter the first characters of the group, user name, first name, or last name, and click **Find**. If hits exist for the current search, the results are displayed.
6. To select a group or user, select the relevant element. If you select a group, you also need to select a user. Click **OK**. The **Select user** dialog closes.
7. The selected user is entered in the **Executor** column of the **Specify substitution** dialog.
8. To delete a substitution, click the relevant executor in the table, and select **Delete**.
9. Click **OK**.

The options selected for the substitute are applied. Your new tasks are passed on in accordance with these options and their status (page 132) is displayed as **Passed on** in your task list. The substitute receives an automatic notification by e-mail about the duration of the substitution or when the substitution is canceled, if this option is enabled in the ARIS Administration configuration.

3.2.6.9 Delegate tasks

You can delegate a task, that is, pass it on permanently to another executor. To find out if another user is already editing a task, display (page 128) the **Current editor** column in your list ( **Select columns**).

Prerequisites

- A task must have been selected in the list.
- The task must have been assigned to a user group.
- The status of this task is **New** or **In process**.
- The user to whom the task has been transferred belongs to the allowed group (data flow: **Group of allowed delegates**).
- The user to whom the task is passed on is assigned one of the following license privileges: **ARIS Architect** with **Process Governance** or **wM Integration**, **ARIS Designer**, **ARIS Publisher**, **ARIS Viewer**.

Procedure

1. Move the mouse pointer over the relevant task in the task list. The buttons of the available functions are displayed.
2. Click  **More** >  **Delegate**. The **Delegate task** dialog opens.
3. Enter the first characters of the group, user name, first name, or last name, and click **Find**. If hits exist for the current search, the results are displayed.
4. To select a group or user, select the relevant element. If you select a group, you also need to select a user.
5. Optionally, enter a comment, such as a reason or notes for the new executor.
6. Click **Delegate**.

The task is passed on to the selected executor. In the list belonging to the user who has delegated the task, it is displayed with the status (page 132) **Delegated**.

To display detailed information of a task, select a task in the list, then click  **Details** in the symbol bar. Click **Delegation history** to see which people the task has been passed on to in the past. Initially, the latest entry is displayed at the top. **Delegation history** is displayed as soon as a task has been delegated once.

3.2.6.10 Organize and sort lists of tasks

You can specify the columns to be displayed in the task lists. In addition, you can sort the lists in ascending or descending order according to the titles. Thus, you obtain a better overview of your tasks.

Procedure

1. Click  **My tasks** or  **Tracking**.
2. Click  **Select columns** to specify the columns to be displayed in the list. The corresponding dialog opens.
3. Click the required columns in the **Hidden columns** box while holding down the Ctrl or Shift key, and select  **Add**. The columns are transferred to the **Shown columns** box. To remove columns from the **Shown columns** box, click the relevant columns in that box while holding down the **Ctrl** or **Shift** key, and click  **Remove**.
4. Click **OK**.
5. To sort the list in ascending or descending order according to a specific criterion, click in the table header of the column according to which you wish to sort. Depending on the sorting last selected, the icon for ascending sorting () or descending sorting () is shown next to the column name. Click the relevant sorting.

The list is organized according to your settings.

3.2.6.11 Use filter for list of tasks

A filter is provided for restricting the list of tasks to certain items in order to obtain a clearer overview. Initially, the tasks to be edited are displayed (status **New** and **Overdue**). If you want to display all tasks, change the filter.

Procedure

1. Above the list of tasks, click  **Filter**. The **Filter** area is shown.
2. Select the relevant filter criteria, for example, the status **New tasks** and the priority **High**.
3. Click **Filter**.

The list is refreshed automatically. Tasks are only displayed if they match the selected filter criteria.

Alternatively, enter the relevant search term in the **Filter** box above the task list.

3.2.6.12 Delegate, pass on, or edit tasks of another user

You can display and edit the tasks of another user. To find out if another user is already editing a task, display (page 128) the **Current editor** column in your list (🔧 **Select columns**).

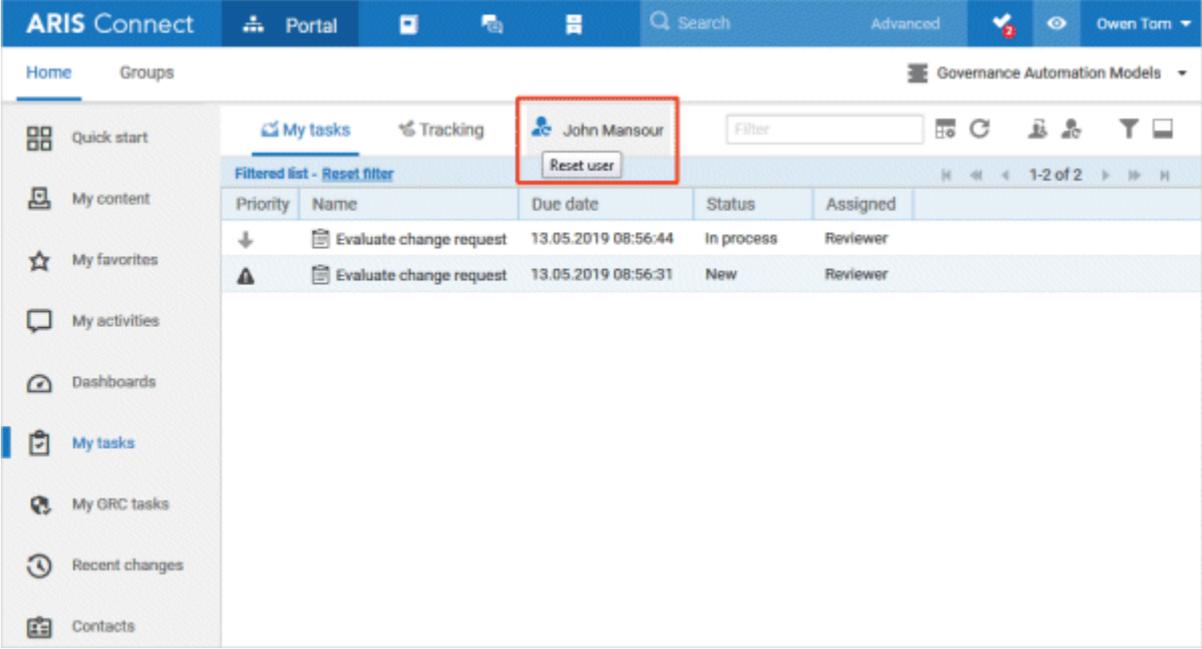
Prerequisite

You have the Process Governance administrator function privilege.

Procedure

1. Click  **Change user**. The corresponding dialog opens.
2. Enter the first characters of the group, user name, first name, or last name, and click **Find**. If hits exist for the current search, the results are displayed.
3. To select a group or user, select the relevant element. If you select a group, you also need to select a user.
4. Click **OK**.

The tasks of the selected user are displayed. Instead of this user, you can now edit (page 123), delegate (page 127) (**Delegate to me** button), or pass on tasks. To return to your user, click  **Reset user**. Statistics data in the form of charts for human tasks are available in ARIS Connect under **ARIS Administration > Charts > Governance > Human tasks**.



The screenshot shows the ARIS Connect user interface. The top navigation bar includes 'ARIS Connect', 'Portal', 'Search', and 'Owen Torn'. The main content area is titled 'Groups' and 'Governance Automation Models'. A user selection dropdown is set to 'John Mansour', with a 'Reset user' button highlighted by a red box. Below this, a table displays a filtered list of tasks:

Priority	Name	Due date	Status	Assigned
↓	Evaluate change request	13.05.2019 08:56:44	In process	Reviewer
⚠	Evaluate change request	13.05.2019 08:56:31	New	Reviewer

3.2.6.13 Display the tasks you started

You can display the active tasks that you triggered by starting the process.

Procedure

1. Click  **Tracking**.
2. Click the task for which you want to display additional details.
3. Above the list of tasks, click  **Details**.

Detailed information about the selected task is displayed below the list.

3.2.6.14 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.6.14.1 What status filters are available for the list of tasks?

A filter is provided for restricting the list of tasks to certain items in order to obtain a clearer overview. (**Filter**) Initially, the tasks to be edited are displayed (status **New** and **Overdue**). If you want to display all tasks, change the filter. The list is refreshed automatically after you select the filter option. Tasks are then only displayed if they match the selected filter criteria.

The following status filters are available:

- **Tasks to be edited**
If you select this filter, only tasks with the status **New**, **In process**, and **Overdue** are displayed.
- **New tasks**
If you select this filter, only tasks with the status **New** are displayed.
- **Tasks in process**
If you select this filter, only tasks with the status **In process** are displayed.
- **Suspended tasks**
If you select this filter, only tasks with the status **Suspended** are displayed.
- **Overdue tasks**
If you select this filter, only tasks with the status **Overdue** are displayed.
- **Completed tasks**
If you select this filter, only tasks with the status **Completed** are displayed.
- **Tasks delegated/passed on**
If you select this filter, tasks are only displayed if their status is **Delegated** or **Passed on**.
- **All tasks**
If you select this filter, all tasks are displayed, regardless of their status.

A corresponding status filter is not provided for every task status (page 132). The status filter is always applied to all tasks.

Alternatively, enter the relevant search term in the **Filter** box above the task list.

3.2.6.14.2 What statuses can tasks have?

Tasks can have the following statuses in **My tasks**:

- **New**
The task has not been edited since it was assigned or it was reset (page 124).
- **In process**
The task was partially edited and the editor then finished editing by selecting **Save** to save the current input and resume editing at a later time.
- **Active**
Tasks to be edited, that is, tasks in the **New** or **In process** state.
- **Overdue**
The specified processing time of the task has expired. If the list contains overdue tasks, the number is displayed in the top bar .
- **Suspended**
The process instance that triggers this human task has been suspended in the process administration.
- **Being edited by another user**
This status is set automatically as long as a task that was assigned to several possible executors is currently being edited by one of them. Tasks with this status are displayed with a gray background in the list.
- **Failed**
The task could not be performed because a problem occurred.
- **Completed**
Editing of the task was completed with **OK**. Further editing is no longer possible. However, you can open the task with a double-click to view details. Tasks with this status are displayed with a gray background and with strikethrough formatting in the list.
- **Passed on**
Editing of the task was passed on from the executor to another user for a specific period of time (page 123).
- **Delegated**
Editing of the task was passed on permanently (page 127) from the original assignee to another user. The task remains in the list of the original assignee with this status.
- **Task assignment failed**
The task was not completed by any executor before its due date. The group of executors contained either no executors or no active executors.

3.2.6.14.3 What statuses can tasks have in Tracking?

The following statuses are possible for tasks:

- **Active**
Tasks to be edited.
- **Suspended**
The process instance that triggers this human task has been suspended in the process administration.
- **Issue_resolution**
A problem occurred during process execution, which the Process Governance administrator must solve in the process administration.
- **Failed**
The task could not be performed because a problem occurred.
- **Completed**
Editing of the task was completed.

3.2.6.14.4 What options are available for exiting the editing of a task?

Several options are available for exiting the editing of a task:

- Click **OK** in the dialog to complete the task. After this, further editing is no longer possible (the status is **Completed**). The button for completing the task may also have a different name because this button can be customized by the modeler. Tasks in status **Completed** can be accessed only in read-only mode.
- Click **Save** in the dialog to save the current input and to continue editing the task at a later time (status is **In process**) or delegate it to another user (status is **Delegated**).
- Click **Cancel** to discard your changes.

Depending on the task, additional buttons for exiting editing may be used in addition to the standard buttons (**Save**, **Cancel**). You can generate these buttons individually when creating dialogs.

Final processing of a task can be linked to entry of the user password to ensure that only authenticated users process tasks. This can also be defined when creating dialogs.

3.2.6.14.5 How to pass on editing of a task to another user

There are two ways to pass on editing of tasks to other users. To find out if another user is already editing a task, display (page 128) the **Current editor** column in your list (🔧 **Select columns**).

SPECIFY A SUBSTITUTE FOR A SPECIFIC PERIOD OF TIME

You can pass on editing of your new tasks to another user for a certain period of time, for example, you can set up a substitute for you while you are on vacation. With this option, tasks are only passed on to the selected user if their status (page 132) is **New**. These tasks are then displayed in your task list with the status **Passed on**.

DELEGATE TASKS

You can pass on certain tasks to another person on a permanent basis, that is, you can delegate (page 127) these tasks. Tasks can only be delegated if their status (page 132) is **New** or **In process**. These tasks are then displayed in your task list with the status **Delegated**.

AUTOMATIC COMPLETION

In some cases, human tasks are automatically set to the **Completed** status without being edited by a user.

Example

A human task was assigned to three users. Only one of them had to complete the task. The first user delegated the task to the second user. The second user completed the task. The third user then delegated the task to the user who already completed the task. The delegated task of the third user is then automatically set to the **Completed** status without being edited by a user.

3.2.6.14.6 How can user accounts be deleted and anonymized?

Users can only be deleted in ARIS Administration. To anonymize Process Governance users according to GDPR (page 1145), use **ARIS Process Governance Command-Line Tool**. For detailed information, refer to the **ARIS Process Governance Command-Line Tool** manual. After anonymization, users and their activities are shown with **Anonymized user** instead of with the user name.

AUTOMATION DATA FLOWS

The Process Governance services can write user specific data to attributes. These attribute values can be anonymized with the help of customized reports in order to meet the requirements of the General Data Protection Regulation (GDPR (page 1145)). Please contact your local Software AG sales organization (<http://www.softwareag.com>).

3.2.6.15 Documents

3.2.6.15.1 Download and edit a document

When editing a task, you can open attached documents for editing.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Select the document you want to edit.
4. Click  **Actions**.
5. Click  **Open document**.
6. Save the document on your hard drive.
7. Navigate to the location where you saved it, open the document, and edit it.
8. Save the document.

You can now upload (page 136) the modified document and move it to ARIS document storage.

3.2.6.15.2 Upload document

You can upload documents. We strongly recommend that you check documents for malicious software before uploading.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Click  **Upload**. The Upload document dialog opens.
4. Click **Upload**.
5. Navigate to the document you want to upload and select the document.
6. If the dialog stipulates that an uploaded document is to be saved permanently in ARIS document storage, select the appropriate location. If this is not the case, this option is not offered and the location cannot be changed.
7. Click **OK**.

The document is uploaded.

3.2.6.15.3 Check out document

You can download (page 142) documents.

Prerequisite

The document is saved in ARIS document storage.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Click  **Actions**.
4. Click  **Check out document**.
5. Select the document you want to download.
6. Specify a local directory on your hard drive.

The document is downloaded and saved locally. The document is also locked in ARIS document storage.

3.2.6.15.4 Remove document

You can remove added documents when editing a task.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Select the document you want to remove.
4. Click  **Remove**.

The document is removed from the list. ARIS document storage is not affected by this action.

3.2.6.15.5 Lock document

You can lock a document in ARIS document storage and thus prevent it from being edited by another user.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Select the document you want to lock.
4. Click  **Actions**.
5. Click  **Lock** in the list.

The selected document is locked for editing by other users.

3.2.6.15.6 Unlock document

If you locked a document to prevent it from being edited by other users you can unlock it again so that other users can work with the document again. A Process Governance administrator can unlock any locked document in ARIS Architect.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Select the document you want to lock.
4. Click  **Actions**.
5. Select  **Unlock** from the list.

Other users can edit the document.

3.2.6.15.7 Display document details

You can view the properties (metadata) of a document.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Select the document whose details you want to display.
4. Click **⋮ Actions**.
5. Click **i Properties** in the list. The **Properties** dialog opens.

The properties (metadata) of the document are displayed, for example, change date, title, and description.

Document details	Versions	Relations	History
File name:	Customer acquisition.pdf		
Path:	ARIS document storage/biks/		
Title:	Customer acquisition		
Current version:	1.0.0		
Revision:	1		
Status:	New		
ID:	58c2f9d9-7bbf-4ae9-8d3a-eb4429e162e2		
File size:	35.4 KB		
Owner:	system		
Locked by:			
Created by:	system		
Created on:	2019.02.20, 12:48:47		
Description:	A model that describes the process of customer acquisition		
List of tags:	acquisition customer epc model		
Link:	Customer acquisition.pdf		
Dashboard data link:	/documents/data/portal/biks/Customer acquisition.pdf?tenantId=default		
Copy to clipboard			

3.2.6.15.8 Edit document properties

You can edit the properties of a document.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Edit the document properties, for example, change the description.
6. Click **OK**.

You have edited the properties of the document.

3.2.6.15.9 Select document owner or responsible

You can edit the properties of a document.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click  **Open properties**.
6. Next to the **Owner** box, click  **Edit**.

The **Select owner** dialog opens. Start typing a user name. User names which contain the string you type are displayed. Select a user and click **OK**.

You can select the person responsible for the document.

3.2.6.15.10 Move document to ARIS document storage

You can move a temporary document to ARIS document storage and thus save it permanently.

Prerequisite

The document is already uploaded as a temporary document.

Procedure

1. Select the task you want to edit in the list.
2. Click **Edit**. The dialog for editing the task opens.
3. Select the document that you want to move to ARIS document storage.
4. Click  **Actions**.
5. Click  **Move to ARIS document storage**.

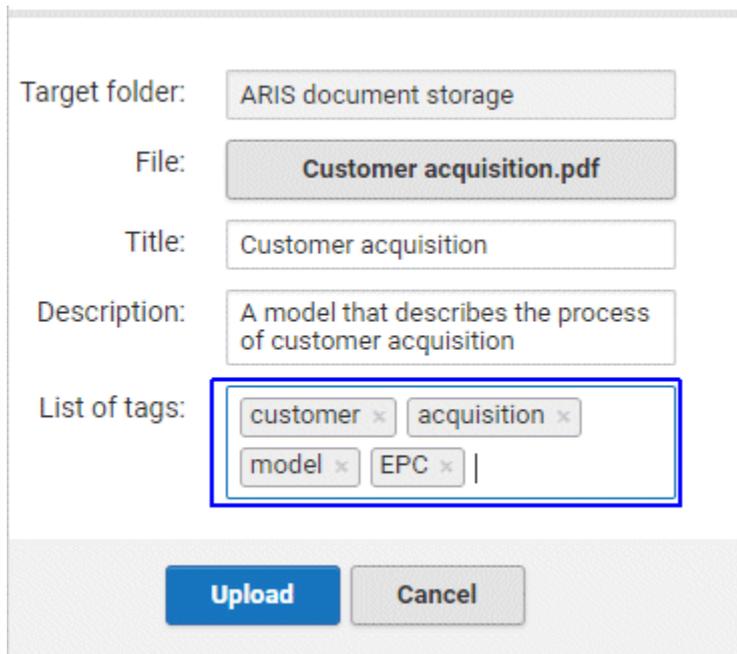
The document is saved permanently in ARIS document storage until it is deleted.

3.2.6.15.11 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.6.15.11.1 Tags

Tags (page 1155) are used to provide additional data of documents. When you upload a document, you can add tags.



The screenshot shows a document upload form with the following fields:

- Target folder:** ARIS document storage
- File:** Customer acquisition.pdf
- Title:** Customer acquisition
- Description:** A model that describes the process of customer acquisition
- List of tags:** customer × acquisition × model × EPC × |

At the bottom of the form are two buttons: **Upload** and **Cancel**.

The tags are also displayed when opening the document details (page 139).

3.2.6.15.11.2 What are temporary documents?

Temporary documents are documents that were not explicitly uploaded to ARIS document storage, but added to the process during process instance runtime, for example, by adding an attachment to an e-mail. They are saved in the system in a particular safe location and are deleted when the process instance is completed.

Temporary documents can be uploaded (page 136) to ARIS document storage to become permanent documents.

3.2.6.15.11.3 What is checking in and checking out?

Checking out means copying a document from the ARIS document storage to a local drive and edit it. The document is locked for other users until it is checked in again.

Checking in means saving the new version in ARIS document storage after editing. The user enters a description of the change list that describes the changes. After checking in the document, another user can check it out again for editing.

3.2.6.15.11.4 Which documents can be found using the full text search?

The full text search can search all kinds of documents, including graphics. The following formats can be searched:

- XML files and documents with an XML-like structure
- Microsoft® Office documents
- Documents in OpenOffice format **OpenDocument** (file extension **.odf**)
- PDF documents
- Documents in electronic publication format (**epub**)
- RTF documents
- Text files
- Compressed formats (such as **zip**); the archive is unpacked and the documents contained are searched.
- Audio formats (such as **mp3**), Metadata will be extracted.
- Graphic formats (such as **jpeg**), Metadata will be extracted.
- Video formats (such as **flv**), Metadata will be extracted.
- Documents in **mbox** format. E-mails are extracted and searched.

3.2.7 Confirmations

With confirmations, a company can prove that users were informed about published ARIS content or related changes, for example, changes in guidelines or processes, and that the employees confirmed to adhere to these. Confirmations can be used, for example, for audits, corporate governance systems, or a quality management system.

3.2.7.1 Define a confirmation process scheduler

You can define confirmation process schedulers (page 1140) on factsheets of objects and models (ARIS Connect items). For detailed information, refer to What is a confirmation process (page 154).

Prerequisite

- You have the **Confirmation administrator** function privilege.
- The **Create confirmation process scheduler** button for **Confirmations** tab is enabled for fact sheets.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Click  **Create confirmation process scheduler**. The dialog opens.
3. Under **Overview**, you can change the suggested name and optionally enter a description.
4. Change the suggested start date, if required.
5. Specify the number of days for the addressees to accept the confirmation.
6. If you want to generate confirmations only once, keep the frequency default **One-off**. In the case of a recurring event, specify the frequency and the recurrence end date.

Assign addressees. To do so, select the relevant users or user groups from the **Suggested items** list, then click **Add**.

If the **Suggested items** list contains many items, so that you cannot see the relevant items, start entering the name of the relevant user or user group into the search box above the box of suggested items. The search results are displayed during your input. Continue entering characters until the relevant users or user groups are displayed. Then, enable the check box of the relevant items and click **Add**. The selected users/user groups are displayed under **Assigned items**. Repeat this until all addressees are assigned. To remove users or user groups from the **Assigned items** box, enable the check boxes of the relevant items in this box, and click  **Remove**.

7. If you want to change the confirmation text, the button label, or add a document, click **Content**. (The default values of the confirmation text and the button label are specified in ARIS Risk & Compliance Manager. For detailed information, refer to the online help of ARIS Risk & Compliance Manager.)
 - a. Change the default confirmation text, if required.
 - b. Change the default button label, if required.

- c. Optionally, assign a document from ARIS document storage () that provides the addressees with detailed information.
8. Click **Save and Close**. Your changes are saved.
9. You are prompted to decide whether or not you want to activate the confirmation process scheduler.

Click **Yes** to activate it now. The confirmations are then generated on the specified start date.

Click **No** to activate the scheduler later (page 147).

The confirmation process scheduler is specified. You can change (page 148) it at any time. After the confirmation process scheduler is activated and the start date has been reached, the confirmation process and the confirmations are automatically generated. The users in charge are notified automatically by e-mail.

You can still edit the confirmation process scheduler (page 146), assign/remove addressees (page 148), or extend the due date (page 149).

3.2.7.2 Edit a confirmation process scheduler

You can edit a confirmation process scheduler. If the confirmation process scheduler is already activated, the changes will take effect for the next confirmation process that is generated.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. In the row of the relevant confirmation process, click  **More**, and then  **Edit scheduler**. The dialog opens.
4. Change the description, the duration, or the recurrence pattern. You can change anything except the name and start date.

Assign additional addressees. To do so, select the relevant users or user groups from the **Suggested items** list, then click **Add**.

If the **Suggested items** list contains many items, so that you cannot see the relevant items, start entering the name of the relevant user or user group into the search box above the box of suggested items. The search results are displayed during your input. Continue entering characters until the relevant users or user groups are displayed. Then, enable the check box of the relevant items and click **Add**. The selected users/user groups are displayed under **Assigned items**. Repeat this until all addressees are assigned.

To remove users or user groups from the **Assigned items** box, enable the check boxes of the relevant items in this box, and click  **Remove**.

5. Click **Content** to change the confirmation text, the button label, or the assigned documents.
6. Click **Save and Close**.
7. If the confirmation process scheduler is not activated yet, you are prompted to decide whether or not you want to activate the confirmation process scheduler.
Click **Yes** to activate it now. The confirmations are then generated on the specified start date.
Click **No** to activate the scheduler later (page 147).

Your changes are saved. After the confirmation process scheduler is activated and the start date has been reached, the confirmation process and the confirmations are automatically generated. The users in charge are notified automatically by e-mail.

3.2.7.3 Activate a confirmation process scheduler

You can activate a confirmation process scheduler later if you did not activate it immediately after definition.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. In the row of the relevant confirmation process, click  **More**, and then  **Activate scheduler**. The dialog opens.
4. Click **Yes** to confirm.

After the confirmation process scheduler is activated and the start date has been reached, the confirmation process and the confirmations are automatically generated. The users in charge are notified automatically by e-mail.

3.2.7.4 Change assigned addressees of a running confirmation process

You can change the users/user groups assigned to a running confirmation process.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. Move the mouse pointer over the relevant confirmation process. The buttons of the available functions are displayed.
4. Click  **Change assigned addressees**. The dialog opens.
Assign additional addressees. To do so, select the relevant users or user groups from the **Suggested items** list, then click **Add**.
If the **Suggested items** list contains many items, so that you cannot see the relevant items, start entering the name of the relevant user or user group into the search box above the box of suggested items. The search results are displayed during your input. Continue entering characters until the relevant users or user groups are displayed. Then, enable the check box of the relevant items and click **Add**. The selected users/user groups are displayed under **Assigned items**. Repeat this until all addressees are assigned.
5. You can also remove assigned user groups/users. To remove users or user groups from the **Assigned items** box, enable the check boxes of the relevant items in this box, and click  **Remove**.
6. Click **Save**.
7. Click **Yes** to confirm.

Your changes are saved. Confirmations are generated for newly assigned addressees. Confirmations of removed addressees are closed. The users in charge are notified automatically by e-mail.

3.2.7.5 Check user groups for new or removed users

You can check if the assignment of users to the user groups assigned as addressees has changed since a process was generated. This is necessary to generate new confirmations and close obsolete confirmations.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. Move the mouse pointer over the relevant confirmation process. The buttons of the available functions are displayed.
4. Click  **Apply addressee changes**. The dialog opens.
5. Click **Yes** to confirm.

Your changes are saved. New confirmations are generated for users who were assigned to the corresponding user groups in the meantime. Confirmations from users who were removed from the corresponding user groups in the meantime are closed. The users in charge are notified automatically by e-mail.

3.2.7.6 Extend the due date of a confirmation process

You can change the due date of a confirmation process.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. Move the mouse pointer over the relevant confirmation process. The buttons of the available functions are displayed.
4. Click  **Extend due date**. The dialog opens.
5. Enter or select the new end date.
6. Click **Save**.

The end date of the confirmation process was changed.

3.2.7.7 Check confirmation status

You can check the status of confirmation processes you initiated.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Click  **Portal** > **Home** >  **Confirmations** (page 155).
2. Use the filter (page 156) to limit the list.
3. Check the confirmation status in the list of confirmation processes, for example, if the process is already generated or how many addressees have already confirmed.
4. Click a process to navigate directly to the related object or model. The **Overview** fact sheet is displayed.
5. Click **Confirmations**.
6. To check who has confirmed and who has not yet confirmed, click the relevant confirmation process. The dialog opens.
 - d. Click **Confirmations**. The addressees are listed with their respective status.
7. Check the status of the confirmations.
8. Click **Close**.

You checked the status of the confirmation processes.

For detailed information on how to display  **Confirmations** in **Home**, refer to the online help (**Manage ARIS Connect > Configure ARIS Connect > Configure Portal > Manage configuration and modification sets > Edit modification set > Edit 'Home' > Add 'Confirmations' component**).

3.2.7.8 Terminate or reopen a confirmation process scheduler/confirmation process

You can terminate a confirmation process scheduler, for example, if you do not want the scheduler to create further confirmation processes. You can terminate a confirmation process, for example, if the open confirmations must be closed because they are redundant or obsolete. You can reopen confirmation process schedulers and confirmation processes again after you terminated them. You cannot reopen a confirmation process that belongs to a terminated confirmation process scheduler. In this case, you must first reopen the confirmation process scheduler.

Prerequisite

You have the **Confirmation administrator** function privilege.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. In the row of the relevant confirmation process, click  **More**, and then  **Terminate scheduler** or  **Terminate process**.
4. Click **Yes** to confirm.

The scheduler/process is terminated. If you terminated a scheduler, no further confirmation process will be created. If you terminated a process, all open confirmations are closed and displayed with  **Not completed status** in lists.

5. To reopen a scheduler/process, click  **More** in the row of the relevant confirmation process, and then  **Reopen scheduler** or  **Reopen process**. Reopen is only available if you terminated the confirmation process scheduler or confirmation process before.
6. Click **Yes** to confirm.

If you reopened a scheduler, confirmation processes will be generated according to the specified conditions. If you reopened a process, the open confirmations from before the termination are also reopened for confirmation by the addressees. The users in charge are notified automatically by e-mail.

3.2.7.9 Retire a confirmation process

The confirmations of terminated processes are still displayed to addressees with the **Expired** status. To remove the expired confirmations, you can retire the relevant confirmation process. The confirmation process cannot be reactivated afterwards.

Prerequisites

- You have the **Confirmation administrator** function privilege.
- There is a terminated confirmation process.

Procedure

1. Open the **Confirmations** fact sheet (page 86) of the relevant object or model.
2. Use the filter (page 156) to limit the list.
3. In the row of the relevant confirmation process, click  **More** and then  **Retire process**.
4. Click **Yes** to confirm.

The confirmation process is displayed with the  **Retired** status in the list. The confirmations of the retired confirmation process are no longer displayed to addressees when they open the database item.

3.2.7.10 Edit confirmations

You receive a notification when a new confirmation task is available for you.

Prerequisite

You have the required privileges in ARIS Connect.

Procedure

1. Open the notification.
2. Click the link in the e-mail.
3. If you are not logged in to ARIS Connect your browser opens and the login page is displayed. Log in to ARIS Connect.
4. **ARIS Connect** opens and the relevant item is displayed.
5. Check the information provided to you, for example, download the document.
6. Click the confirmation button, for example, **Confirm**. However, the button can also have a different label, such as **Accept**.

You confirmed that, for example, you read and understood the information. The **Confirmed** status is displayed next to the item name.

Alternatively, edit your confirmations in your GRC tasks list (**page 163**) (**Home >  My GRC tasks**). From there, you can navigate directly to the ARIS item with the open confirmation and edit it as described above.

To display your confirmations of this item, click **Confirmed**, or **Partly confirmed** next to the header of the database item.



Your confirmations of this item are listed. In the row of the relevant confirmation, move the mouse pointer behind the status (page 158) icon and click ** Show details**.

3.2.7.11 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.7.11.1 What is a confirmation process?

A confirmation process is automatically generated by the confirmation process scheduler (page 1140) at the specified start date. With confirmations, a company can prove that users were informed about published ARIS content or related changes, for example, changes in guidelines or processes, and that the employees confirmed to adhere to these. Confirmations can be used, for example, for audits, corporate governance systems, or a quality management system.

Users who have the **Confirmation administrator** function privilege can create, edit, activate, terminate, and reopen confirmation process schedulers.

You can define confirmation process schedulers (page 1140) on factsheets of objects and models (ARIS Connect items). After the confirmation process scheduler is activated and the start date has been reached, the confirmation process and the confirmations are automatically generated. As in large companies often several thousand confirmations must be generated, the generation is performed by a technical server task that is specified in the system configuration of ARIS Risk & Compliance Manager

(**arcm.config.schedule.job.generator.confirmationprocess**). The server task is usually executed at night. For detailed information on how to configure server task schedules, refer to the online help of ARIS Risk & Compliance Manager.

The users in charge are notified automatically by e-mail. The users assigned to confirmation processes, the addressees, then confirm the published information. All users and user groups in ARIS Connect can be assigned as addressees. As soon as all addressees have accepted their confirmations, the confirmation administrator is notified that the confirmation process was completed. If not all addressees have accepted their confirmation by the due date, all open confirmations are closed and set to **Not completed** status and the confirmation administrator receives a notification with the number of accepted and not completed confirmations.

Confirmations can have the status open, accepted, and not completed.

3.2.7.11.2 What is the Confirmations fact sheet for?

Lists the generated confirmation processes (page 1140) and confirmation process schedulers (page 1140) that are not activated or that have not reached the start date yet. To open a confirmation process or confirmation process scheduler, click the relevant name in the list. To define a new confirmation process scheduler, click  **Create confirmation process scheduler**. For detailed information on confirmations, refer to Confirmations (page 144).

Overview Diagram Tasks Documents <u>Confirmations</u>							
K < 1-1 of 1 > H							
Confirmation process	Confirmation process period		Status	Progress			
	Start	End		Open	Accepted	Not completed	
 Confirmation of 'UMG bank' - DACH	-	-	-	0	0	0	
 Confirmation of 'UMG bank' - EMEA	08/05/2019	08/14/2019		2190	139	0	

3.2.7.11.3 What information does the Confirmations tile in 'Home' contain?

Shows an overview of the confirmation process (page 1140) you initiated. Check the confirmation status in the list of confirmation processes, for example, if the process is already generated or how many addressees have already confirmed. Click a process to navigate directly to the related object or model.

3.2.7.11.4 How to use filters for confirmations and GRC tasks

These filter options are initially available:

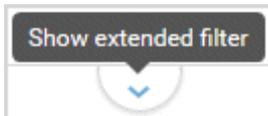
In the upper left corner of the filter area the name of the filter in use is displayed.

FILTERING BY KEYWORDS

To filter the list by a keyword, enter it into the field, then press **Return** to apply the filter. The filtering is case-sensitive and only the text displayed in the list is considered. To discard the filter result and redisplay the full list, remove the keyword, then press **Return** to reset the filter.

EXTENDED FILTER

- Click **Show extended filter** to display additional filter options and the filter attributes.

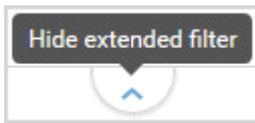


- Filter attributes**
Select the relevant attribute values or enter attribute values into the input fields.
Example: Status = Active
- Save/Save as**
Save filter configurations for reuse by creating your individual filter.
- Rename**
Change the name of your individual filter.
- Delete selected**
Delete the selected individual filter.
- Reset**
Remove your filter settings and redisplay the complete list.

- **Apply**

Filter the list according to your filter settings.

- Click **Hide extended filter**, to make more space for the list.



3.2.7.11.5 Which statuses are available for Confirmation Management?

CONFIRMATION PROCESS SCHEDULER

-  **In preparation**
Status when the confirmation process scheduler was defined, but not activated yet.
-  **Activated**
Status when the confirmation process scheduler was activated.

CONFIRMATION PROCESS

-  **Active**
Is automatically set as soon as the start date of the confirmation process scheduler was reached and the confirmation process was generated.
-  **Finished**
Is automatically set as soon as the end date of the confirmation process was reached or the process was terminated.
-  **Retired**
Is automatically set as soon as the confirmation process was retired.

CONFIRMATION

-  **Open**
Initial status after a confirmation was generated.
-  **Accepted**
Is automatically set as soon as the addressee accepted the confirmation.
-  **Not completed**
Is automatically set as soon as the end date of the confirmation process was reached and the confirmation was not accepted by that time, or if the confirmation was closed because the confirmation process was terminated.

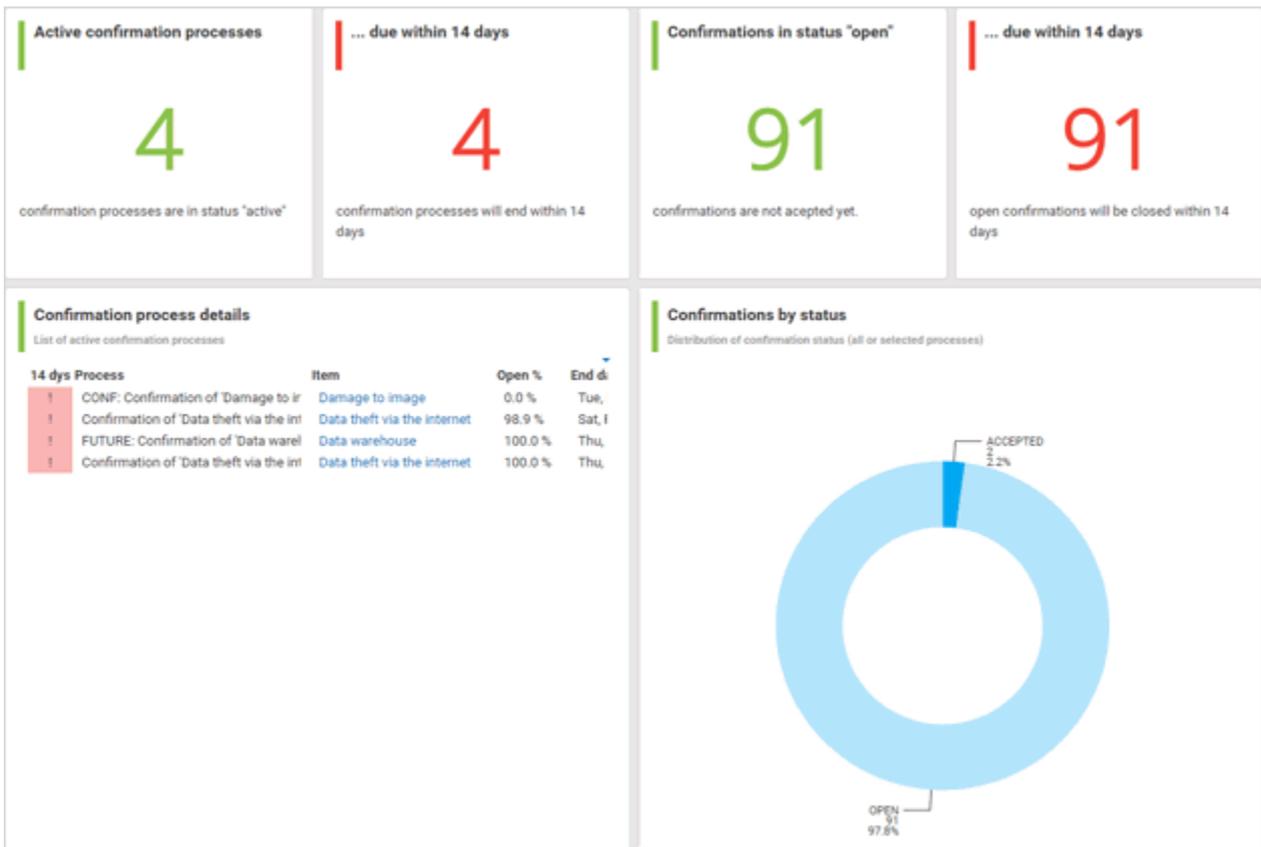
3.2.7.11.6 What contains the 'Confirmation management' dashboard?

You can find the **Confirmation management** dashboard in  **Portal** > **Home** >  **Dashboards**. If not available, refer to the **Confirmation Management Dashboard Installation Guide**.

The **Confirmation management** dashboard uses data from ARIS Risk & Compliance Manager. This dashboard provides an overview of different indicators and objects of the current user's confirmation processes as well as the related confirmations. The **Confirmation management** dashboard contains the following charts:

Chart	Content
Active confirmation processes	Displays the number of confirmation processes of the current user with the Active status.
Processes due within 14 days	Displays the number of confirmation processes of the current user with the Active status that are due within the next 14 days.
Confirmations in status 'Open'	Displays the number of confirmations with the Open status that are related to the confirmation processes of the current user with the Active status.
Confirmation due within 14 days	Displays the number of confirmations with the Open status that are related to the confirmation processes of the current user with the Active status that are due within the next 14 days.
Confirmation process details	<p>Displays details of the confirmation processes of the current user with the Active status:</p> <ul style="list-style-type: none"> ▪ 14 days Displays an exclamation mark (!) if the process is due within the next 14 days. ▪ Process Shows the name of the confirmation process. ▪ Item Shows the name of the ARIS item that is related to the confirmation process. To open the item, click the name. ▪ Open % Shows the percentage of confirmations with the Open status that are related to the confirmation process. ▪ End date Shows the end date of the confirmation process.
Confirmations by status	Displays the distribution by status of assigned confirmations of all confirmation processes or the selected confirmation process.

Example



3.2.8 Compliance

The following describes the compliance features.

3.2.8.1 Synchronize ARIS Risk & Compliance Manager

You can transfer GRC-relevant master data objects from an ARIS database to ARIS Risk & Compliance Manager, for example, risks or survey tasks from ARIS Connect.

Objects and models are only included in the synchronization if the **Synchronize ARCM** attribute (AT_AAM_EXPORT_RELEVANT) is set to **true**. For detailed information on the **Synchronize ARCM** attribute, refer to the **ARCM - Modeling Conventions** guide.

The ARIS database whose content is used to synchronize data with an environment of ARIS Risk & Compliance Manager is specified in the environment of ARIS Risk & Compliance Manager. The data of an ARIS database can be synchronized with multiple ARIS Risk & Compliance Manager environments, but an ARIS Risk & Compliance Manager environment can receive data from only one ARIS database. For detailed information, refer to the online help in ARIS Risk & Compliance Manager.

Note that a synchronization cannot be undone.

Prerequisite

- The ARIS Connect integration is enabled in ARIS Risk & Compliance Manager ( **Administration > General > System management > Environments > <Environment name> > ARIS Connect integration settings > ARIS Publisher integration**).
- You have the required privileges in ARIS Connect.
- The ARIS database used for this export must be the one specified in ARIS Risk & Compliance Manager ( **Administration > Environments > <environment name> > Overview**).
- The **Transfer GRC data** report for ARIS Connect is enabled (**ARIS Architect > ARIS >  Administration > Evaluations > Reports > ARIS Risk & Compliance Manager > Transfer GRC data > General > Available in ARIS Connect**) and specify the user groups whose members have access to the script (**Transfer GRC data > Restrict access**). By default this report is disabled, because you need extensive knowledge to run this report. For detailed information on how to manage scripts, refer to the ARIS Architect online help (**ARIS Configuration and Administration > Manage scripts**).
- By default the synchronization can be started in ARIS Connect on fact sheets of risks and survey tasks. You can specify the database items for which the script can be started (**ARIS Architect > ARIS >  Administration > Evaluations > Reports > ARIS Risk & Compliance Manager > Transfer GRC data > Restrict access > Context**).

Procedure

1. In ARIS Connect, open the overview fact sheet of the item from which you want to start the synchronization.

2. Click  **Reports**. The **Reports** bar opens.
3. Click the drop-down list box to display the list of available reports.
4. Click **Transfer GRC data**.
5. Click **Start**.
6. Select the ARIS Risk & Compliance Manager environment to which the data is to be transferred. If no environment is displayed or if you want to use another environment than the one displayed, you must specify the database in the environment of ARIS Risk & Compliance Manager ( **Administration > Environments > <environment name> > ARIS database**). If several environments are specified for the database, select the relevant environment.
7. To verify whether the changes that would occur due to the transfer are correct and executed without errors, first simulate the synchronization, before you synchronize the data. To do so, enable **Simulate synchronization** and **Click OK**. Otherwise, skip this step.

The simulation is performed. Click **Download result** and open the log file. If errors occurred, resolve them. Then repeat steps 2 - 9.
8. To start the synchronization, click **OK**.

The relevant master data objects are now transferred to ARIS Risk & Compliance Manager. To check the synchronization result, open the log file.

3.2.8.2 Open data from ARIS Connect in ARIS Risk & Compliance Manager

You can open risks and hierarchies from ARIS Connect in ARIS Risk & Compliance Manager.

Prerequisite

- The ARIS Connect integration is enabled in ARIS Risk & Compliance Manager.
- You have a role in ARIS Risk & Compliance Manager that allows you to open risks and/or hierarchy elements.
- You have the **ARIS Risk & Compliance Manager Contribute** or **ARIS Risk & Compliance Manager Operate** license privilege.
- You have the required privileges in ARIS Connect.

Procedure

1. In ARIS Connect, open the overview from which you want to display objects in ARIS Risk & Compliance Manager.
2. Click  **Open in ARIS Risk & Compliance Manager**.

The selected element is opened in ARIS Risk & Compliance Manager.

3.2.8.3 Edit GRC tasks

Display an overview of your current ARIS Risk & Compliance Manager tasks and confirmations in ARIS Connect. For detailed information on how to work on tasks in ARIS Risk & Compliance Manager, refer to ARIS Risk & Compliance Manager online help.

Prerequisites

ARIS Risk & Compliance Manager tasks

- The ARIS Connect integration is enabled in ARIS Risk & Compliance Manager.
- You have a role in ARIS Risk & Compliance Manager that allows you to edit objects.
- You have the **ARIS Risk & Compliance Manager Contribute** or **ARIS Risk & Compliance Manager Operate** license privilege.
- You have the required privileges in ARIS Connect.

Confirmations

You have the required privileges in ARIS Connect.

Procedure

1. Click **Home** >  **My GRC tasks**. Your tasks are displayed.
2. Use the filter (page 156) to limit the list.
3. Click the relevant task.

The dialog for editing the task opens. ARIS Risk & Compliance Manager tasks are displayed in ARIS Risk & Compliance Manager. Confirmations are displayed in ARIS Connect.

Enter the required information and select the relevant options.

3.2.8.4 Show risk assessments from ARIS Risk & Compliance Manager in ARIS Connect

You can generate risk assessments in ARIS Connect.

Prerequisite

- The ARIS Connect integration is enabled in ARIS Risk & Compliance Manager.
- You have the **Risk owner** role in ARIS Risk & Compliance Manager.
- You have the **ARIS Risk & Compliance Manager Contribute** or **ARIS Risk & Compliance Manager Operate** license privilege.
- You have the required privileges in ARIS Connect.

Procedure

1. In ARIS Connect, open the risk for which you want to show the assigned risk assessments.
2. Click **Risk assessments**. The list of risk assessments is displayed in ARIS Connect.
3. Click the ID of the relevant risk assessment.

The risk assessment form is displayed below the list.

To open (page 162) the risk assessment in ARIS Risk & Compliance Manager, click  **Open in ARIS Risk & Compliance Manager**.

3.2.8.5 Create issue in ARIS Risk & Compliance Manager

You can generate an issue in ARIS Risk & Compliance Manager to analyze and monitor a problem relating to a particular object. It is possible to assign several objects of different object types to an issue. You can generate issues for functions (processes and controls), organizational units, application system types, risks and risk categories.

Prerequisite

- The ARIS Connect integration is enabled in ARIS Risk & Compliance Manager.
- You have a role in ARIS Risk & Compliance Manager that allows you to create issues.
- You have the **ARIS Risk & Compliance Manager Contribute** or **ARIS Risk & Compliance Manager Operate** license privilege.
- You have the required privileges in ARIS Connect.

Procedure

1. In ARIS Connect, open the overview from which you want to create an issue in ARIS Risk & Compliance Manager.
2. Click  **Create issue in ARIS Risk & Compliance Manager**.
3. The Issue form is displayed in ARIS Risk & Compliance Manager.
4. Edit the mandatory fields.
 - a. Enter the **Name** for the issue.
 - b. Enter the **Description** of the issue.
 - c. Enter a description of the **Remediation measure**.
 - d. Enter the date by which the issue is to be remediated (**Remediation planned before**) (becomes a mandatory field as soon as the **Release** creator status is selected).
 - e. Assign an **Issue owner** and an **Issue reviewer** (becomes a mandatory field as soon as the **Release** creator status is selected).
5. Edit the optional fields.
 - a. Enable **Financial details** to display the attributes for categorizing financial incidents.
 1. Select the **Business line level 2**. Level 1 is set automatically as a result.
 2. Select the **Incident type level 2**. Level 1 is set automatically as a result.
 3. Select the **Incident cause classification level 2**. Level 1 is set automatically as a result.
 4. Specify the expected loss.
 5. Select a currency. If a currency is specified at the system or environment, it is displayed here automatically, but can be changed.
 - b. To describe the incident in greater detail, add reference **documents**.
 - c. Insert a remark.

- d. Use **Assignments** to assign the hierarchy elements that can be affected by the incident.
6. Assign an issue owner/issue reviewer.
 - a. In the Issue owner or Issue reviewer row, click  **Create assignment**. The list of assignable users opens.
 - b. Click  **Create assignment** in the row of the relevant user. The list closes.
 - c. Click  **Save**.
 7. Click  **Save**.
 8. Click **OK**.

Your entries are saved. An issue was generated for the selected objects and added to the **My generated issues** list in ARIS Risk & Compliance Manager. The users in charge are notified automatically by e-mail.

3.2.8.6 Create incident in ARIS Risk & Compliance Manager

You can create an incident for certain objects to analyze and describe a trigger that can harm the organization or lead to a loss. By default, you can create incidents in ARIS Connect for functions, processes, systems, organizational units, risks, risk categories and documents.

Prerequisite

- The ARIS Connect integration is enabled in ARIS Risk & Compliance Manager.
- You have a role in ARIS Risk & Compliance Manager that allows you to create incidents.
- You have the **ARIS Risk & Compliance Manager Contribute** or **ARIS Risk & Compliance Manager Operate** license privilege.
- You have the required privileges in ARIS Connect.

Procedure

1. In ARIS Connect, open the overview from which you want to create an incident in ARIS Risk & Compliance Manager.
2. Click  **Create incident in ARIS Risk & Compliance Manager**.
3. Depending on your assignments to owner groups and environments in ARIS Risk & Compliance Manager, you are asked to select the relevant owner group and environment.
4. Click **OK**. The **Incident** form is displayed in ARIS Risk & Compliance Manager.
5. If the object from which you create the incident is available in ARIS Risk & Compliance Manager, the object is automatically assigned to the corresponding assignments (hierarchies). Otherwise, copy the ARIS Connect URL of the object to the description field.
6. Edit the mandatory fields (*) and the optional fields.
7. Select the owner status.
8. Click  **Save**. Your entries are saved and the status is automatically set to **In progress**. If you want to continue editing the incident at a later point in time, keep the status **In progress**. If you want to finish editing the incident, select the status **Closed**.
9. If you changed the status, save your entries again ()
10. Click  **Save**. You are prompted to specify how you want to proceed.
11. Click the relevant option.
12. Click **OK**.

The incident is created. The incident is displayed to the assigned incident reviewer group for review in the **Incidents** list. The users in charge are notified automatically by e-mail. If you created the incident as a loss owner the incident is displayed only in the **Assignment between loss and incident** list and can be assigned to a loss. If you did not change the reviewer group in charge when creating the incident, you are responsible for reviewing the incident yourself as incident reviewer. (The loss owner group to which you are assigned is automatically assigned to the incident as the reviewer).

3.2.8.7 How to use filters for confirmations and GRC tasks

These filter options are initially available:



In the upper left corner of the filter area the name of the filter in use is displayed.

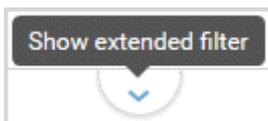
FILTERING BY KEYWORDS

To filter the list by a keyword, enter it into the field, then press **Return** to apply the filter. The filtering is case-sensitive and only the text displayed in the list is considered. To discard the filter result and redisplay the full list, remove the keyword, then press **Return** to reset the filter.

EXTENDED FILTER



- Click **Show extended filter** to display additional filter options and the filter attributes.

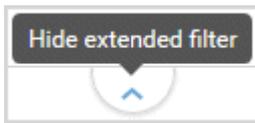


- Filter attributes**
Select the relevant attribute values or enter attribute values into the input fields.
Example: Status = Active
- Save/Save as**
Save filter configurations for reuse by creating your individual filter.
- Rename**
Change the name of your individual filter.
- Delete selected**
Delete the selected individual filter.
- Reset**
Remove your filter settings and redisplay the complete list.

- **Apply**

Filter the list according to your filter settings.

- Click **Hide extended filter**, to make more space for the list.



3.2.9 Use models

The following describes how you can use mini workflows (page 276) and how to create and edit models from the portal.

3.2.9.1 Create model

As a user with **Designer** privileges, you can create and edit models quickly and easily. Many users use event-driven process chains (EPC) or Business Process Model and Notation (BPMN) version 2.0. The basics for these modeling techniques can be found in EPC in ARIS ([../../../../../../../../abs/help/en/documents/6 Using ARIS/61 Beginner/EPC cheat sheet.pdf](#)) and in BPMN 2.0 in ARIS ([../../../../../../../../abs/help/en/documents/6 Using ARIS/61 Beginner/BPMN cheat sheet.pdf](#)).

Prerequisites

- You have the **ARIS Connect Designer** license privilege.
- The classic configuration set or modification set based on it is selected for the portal.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click  **Create new model** on the **Quick start (page 70)** area. The corresponding dialog opens.
4. Enter a name for the new model in the **Model name** box.
5. Click the **Model type** box and enter part of the model type name. All model types are displayed whose names contain the term you entered.
6. Select the required model type. The **Target** area displays the database and group names. This is where the new model will be stored.
7. Click the  group icon next of the **Groups** box.
8. If more than one database is provided, select the relevant database.
9. Navigate to the group where you want to save the model.
10. Click **OK**. The **Select target group** dialog is closed.
11. Click **OK**. The **Select target group** dialog closes.
12. Check your input.
13. Click **OK**. The **Create model** dialog closes.

The model is created based on the preset template and opens in a new tab.

3.2.9.2 Edit models

You can edit models in ARIS Connect.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the name of the model you want to edit.
6. Click  **Edit** >  **Edit model**. The model opens in ARIS Connect Designer on an individual tab.
7. Make the required changes.
8. Click  **Save**.

Your changes are saved in the model.

3.2.9.3 Inform owner of change

You can inform the model owner of model changes you have made in the portal (page 254). The process owner is automatically determined by the attribute **Person responsible**.

Prerequisite

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the items and change the relevant attributes (page 254). Depending on the attributes, various editing options (page 266) are available.
5. In the button bar (page 69), click  **Inform owner of change**. The **Inform of change** dialog opens.
6. Insert a change description
7. Click **Submit**. The **Information** dialog opens.
8. Enable the **Do not show this message again** check box if you do not want to be informed again by the dialog when executing the mini workflow more than once during the current session.
9. Click **OK**.

The process owner receives an e-mail containing the information you entered. If he submits the human task, you will be informed via e-mail.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.9.4 Print graphic as PDF

In the  **Portal**, you can print the graphic of the current model as PDF.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. In the button bar (page 69), click  **Print graphic as PDF**. The **Select output options** dialog opens.
5. Specify your settings.
6. Click **OK**. After the report is generated, the **Print graphic as PDF** dialog opens.
7. Click **Download result**. Using the following dialog, open the file in a PDF viewer or save it.

In the  **Portal**, you have printed the graphic of the current model as a PDF.

To the left of the user name, the  **Reports notification** is inserted. Click the notification icon and  **Export graphic as PDF** to download the result again. The result is also listed on the **Reports** bar. If you select the **Diagram** fact sheet, you can open the **Reports** bar and download the printed model graphic as a PDF.

3.2.9.5 Share model

You can share models with other users.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the model you want to send to another user.
6. In the button bar (page 69), click  **Share** >  **Share model**. The corresponding dialog opens.
7. Select the user you want to share the model with.
8. Enable **Send copy to me** to receive a copy of the message, if required.
9. You can also enter a subject and a comment.
10. Click **Send**.

The selected user receives an e-mail containing the information you entered and a link to the corresponding model.

All users can select the language to be used for the notification in their profile in ARIS Connect.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.9.6 Copy view code

You can copy the code of the views **Overview**, **Steps**, and **Diagram** to embed them, for example, in a wiki or in Microsoft® SharePoint.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the model you want to send to another user.
6. Activate the **Overview**, **Steps**, or **Diagram** view.
7. Click  **Share**.
8. Under `</>` **Copy current view code**, click  **Copy to clipboard**.

The view code is copied to the clipboard. If you insert the view code as html in a wiki page, the connection to ARIS Connect is established and the view is loaded.

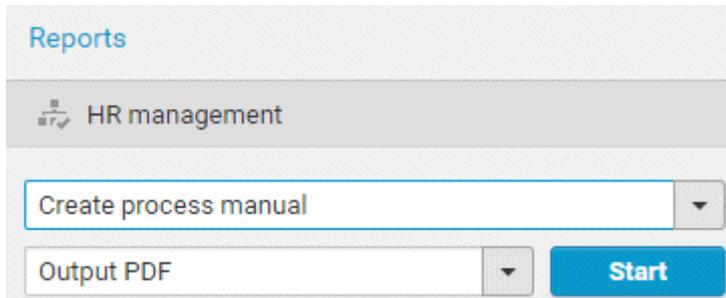
3.2.9.7 Generate report

You can start various reports (page 1152) in the  **Portal**.

Depending on the selected elements, reports are offered that provide a plausible evaluation for this context.

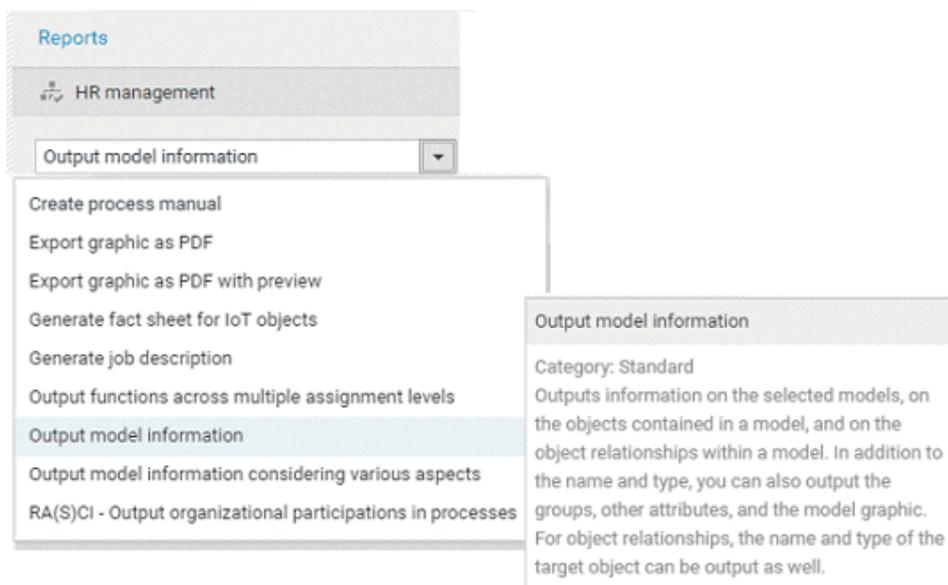
Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
3. Navigate (page 94) to the relevant group.
4. Select the model for which you want to create a report.
5. Activate the **Diagram (page 79)** fact sheet.
6. Click  **Reports**. The **Reports** bar opens showing the name of the item for which the report is to be generated.

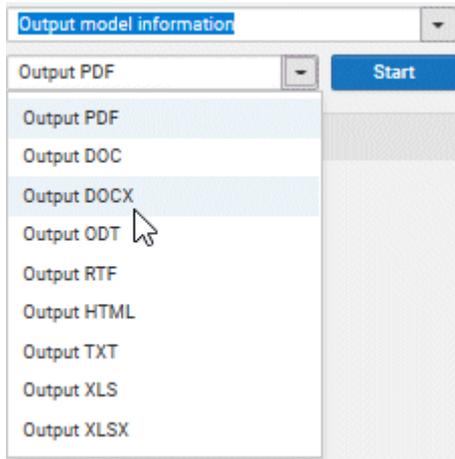


All reports you can generate for the selected model are displayed.

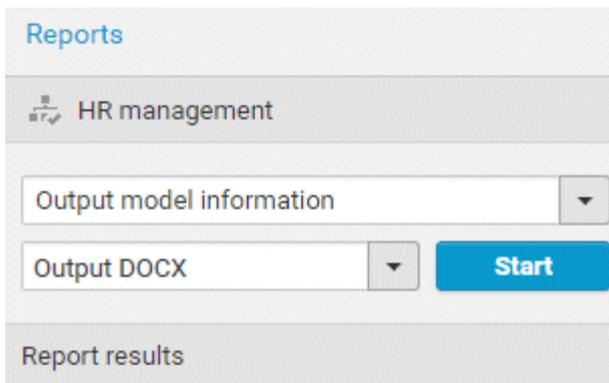
7. Click the ▼ down arrow next to the report name.
8. Select the relevant report. A report description is displayed.



9. Select the output format (page 200), for example, **Output DOCX**.



10. Click **Start**.
11. Depending on the report selected, a dialog with options is displayed. Specify your settings and click **OK**. The report is generated and a progress bar is displayed. After the report is complete, it is displayed in the **Report results** link list for downloading, and a dialog opens.
12. If you want to download the report immediately, click **Download result**.
13. If you want to download the report result later, click the **Download report** link in the **Report results** link list.



Output model information (DOCX)
Model: HR management - Value-added chain
diagram

[Download](#)

You have created a report. Only information you are authorized to view is included.

3.2.9.7.1 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.9.7.1.1 What reports are available?

The Evaluation bar provides various standard reports. Depending on the model type you have opened or the object type you have selected, the reports offered may vary because only the reports related to the corresponding model or object type are displayed.

Script administrators can make additional reports available in ARIS Architect.

3.2.9.7.1.1.1 Analyze classification

USE

This analysis classifies all objects of a type according to the selected attribute. You can use this to test the consistency of your processes and analyze process-relevant factors in a flexible manner.

If you start the analysis for models, for example, to compare an actual process with a target process, the analysis is automatically limited to functions. To examine other objects, select the relevant objects and run the analysis for the selection. Make sure that you only select objects of one type.

In this way, you can classify all process contents according to your own criteria. For example, you can find out quickly and easily whether your process steps include mainly value adding or non-value adding activities. You can also determine the degree to which your processes are automated. The parameters derived from this can be used as a basis for comparison.

For example, you can identify

- whether your target process has improved relative to the actual process based on your target parameters, or
- which process variants come closer to achieving your objective (for example, achieving the objective of the Collections department process in the Private customer business segment compared with the Business customer business segment).

This analysis evaluates all possible aspects, for example, including

- IT systems
 - How many piloted systems are used?
 - How many systems are scheduled to be shut down soon?
- Risks
 - How many risks with a high probability of occurrence exist, as opposed to risks with a low probability of occurrence?

If you run this analysis in a Publisher export, the **Assessment of value added** attribute is automatically evaluated.

CONTEXT

- Models
- Objects of one type

OUTPUT

The analysis is summarized in an Excel workbook. The number of worksheets varies depending on whether you are analyzing models or objects.

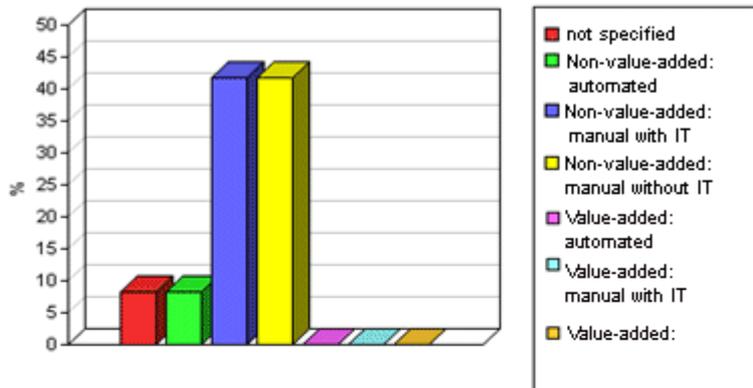
The following example is based on an analysis of the **Purchase order processing (actual)** and **Purchase order processing (target)** models. The **Assessment of value added** attribute is evaluated separately for each model. In this case, one worksheet is output with a table and one with charts.

TABLE

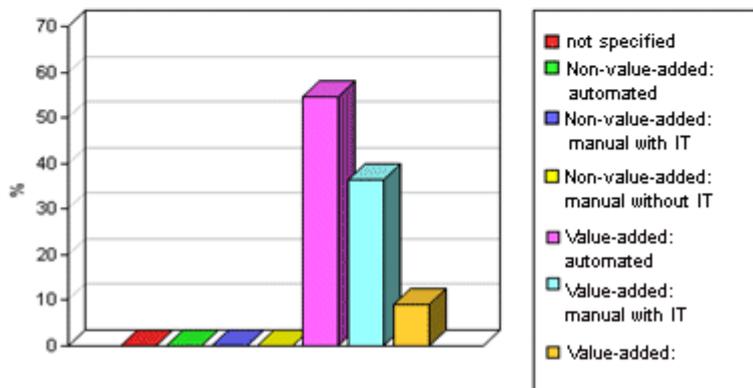
Analysis: Evaluate assessment of value added				
Created: 5/25/09 11:21 AM				
Server: horus.me.corp.ids-scheer.com				
Database: DemoDB-United Motors Group				
User: system				
File: Report0.xls				
Analyze classification				
Models:				
1.) United Motors Group\2. Processes\Process Architecture\Core Processes\Marketing & Sales (As Is Processes)\Sales order management (As Is)\Sales order processing\Sales order processing (As Is) (EPC)				
1.) United Motors Group\2. Processes\Process Architecture\Core Processes\Marketing & Sales (As Is Processes)\Sales order management (To Be)\Sales order processing\Sales order processing (To Be) (EPC)				
Attribute: Assessment of value added	1. Model		2. Model	
	Number	Percent	Number	Percent
Analyzed functions	12	100	11	100
not specified	1	8,33	0	0
Non-value-added: automated	1	8,33	0	0
Non-value-added: manual with IT	5	41,67	0	0
Non-value-added: manual without IT	5	41,67	0	0

CHARTS

1) United Motors Group\2. Processes\Process architecture\Core processes\Marketing&Sales (as-is processes)\Sales order management\Sales order processing\Sales order processing (as-is) (EPC)



1) United Motors Group\2. Processes\Process architecture\Core processes\Marketing&Sales (to-be processes)\Sales order management\Sales order processing\Sales order processing (to-be) (EPC)



CONTEXT

- Models
- Objects of one type

OUTPUT FORMAT

- XLS
- XLSX

3.2.9.7.1.1.2 Create infographic for persona

USE

This report outputs an infographic that visualizes all persona-related data you have specified. The following information is evaluated and displayed:

Lukas Andrews



Age	32
Job title	Software Engineer
Family status	married
Location	Saarbruecken
Customer segment	Family

"The Best Things in Life Are Free"

About

Lukas has been interested in technology for many years. As a software engineer he makes a living with programming innovative mobile apps. But his highest priority is the well-being of his family. For him, a car needs to be both functionally well designed and has enough space that the entire family can drive into holidays.

Personally, he owns many electronic gadgets. Generally, he is sensitive to cost but can get carried away if he sees an innovative solution.

Personality

- conscientious
- detail oriented
- humorous
- playful

Goals

- save money for buying a house
- get promoted in his company
- exercise his favorite sport more often: Climbing

Frustrations

- reading manuals
- services that are overly time consuming
- sharing his personal data to unknown entities





In order for the report to be run and for it to deliver meaningful results, make sure that the following attributes are specified for **Persona** objects:

Attribute	Example
Name	Lukas Andrews
Description/Definition	<p>This text is shown beneath the About topic.</p> <p>Lukas has been interested in technology for many years. As a software engineer he makes a living with programming innovative mobile apps. But his highest priority is the well-being of his family. For him, a car needs to be both functionally well designed and have enough space to accommodate the entire family for holiday trips.</p> <p>Personally, he owns many electronic gadgets. Generally, he is sensitive to cost but can get carried away if he sees an innovative solution.</p>

The following attributes must be specified for the **Customer Experience Management** attributes:

Attribute	Example
Age	32
Family status	married
Location	Saarbruecken
Job title	Software Engineer
Personality	<ul style="list-style-type: none"> ▪ conscientious ▪ detail oriented ▪ humorous ▪ playful
Frustration	<ul style="list-style-type: none"> ▪ reading manuals ▪ services that are overly time consuming ▪ sharing his personal data to unknown entities
Goals	<ul style="list-style-type: none"> ▪ save money for buying a house ▪ get promoted in his company ▪ exercise his favorite sport more often: Climbing
Quote	The Best Things in Life Are Free

You can link images either in the **Customer Experience Management** attribute type group or in the **ARIS document storage attribute** type group.

Customer Experience Management attribute	ARIS document storage attribute	Image/position
Portrait image link	ARIS document storage Link 1	Portrait; at the top
Descriptive image Link 1	ARIS document storage Link 2	Electronic gadgets; image on the left.
Descriptive image Link 2	ARIS document storage Link 3	Climbing; image in the center.
Descriptive image Link 3	ARIS document storage Link 4	Family; image on the right.

Some content is only shown in the infographic if the **Persona** object is related to a **Customer segment** object. The **belongs to** relationship is evaluated.

In this example, the **Family** Customer segment is shown because the **Lukas Andrews** Persona occurs in a Customer segmentation map and this **Persona** object is related to the **Family** Customer segment object.



CONTEXT

Object of **Persona** type

OUTPUT FORMAT

- DOC
- DOCX
- RTF
- ODT
- PDF

3.2.9.7.1.1.3 Create process manual

USE

This report outputs all data from the selected processes up to the selected assignment level.

CONTEXT

Models of type:

- BPMN process diagram (BPMN 2.0)
- BPMN process diagram (BPMN 1.x)
- E-Business scenario diagram
- EPC
- EPC (material flow)
- EPC (column display)
- EPC (horizontal table display)
- EPC (table display)
- EPC (row display)
- Industrial process
- Office process
- Process schedule
- UML Activity diagram
- PCD
- PCD (material flow)
- Value-added chain diagram

OUTPUT FORMAT

- PDF
- DOC
- DOCX
- ODT
- RTF

3.2.9.7.1.1.4 Export graphic as PDF

USE

This report exports a model graphic as a PDF file.

CONTEXT

Models

OUTPUT FORMAT

PDF

3.2.9.7.1.1.5 Generate job description

USE

Generates a job description for each selected organizational element and considers all processes and functions involved.

The following information can be output for each function:

- Organizational elements of the functions
- Data
- IT
- Improvement potential

If you start the report for models, only the modeled items are included. If you start the report for objects, all relevant object definitions are evaluated.

By default, the **carries out** connection is evaluated for the **Executing** relationship. The following connections are included for the **Participating** relationship:

- has consulting role in
- is IT responsible for
- is technically responsible for
- must be informed about
- must be informed on cancelation
- must inform about result of

Script administrators can change the content of the output.

If you output functional weak points, all information is output as for the job description. However, the selected organizational unit is listed along with all organizational units.

CONTEXT

MODELS OF TYPE

- EPC
- FAD
- Office process
- VACD

OBJECTS OF TYPE

- Group
- Organizational unit
- Organizational unit type
- Person
- Role

- Location
- Position
- System organizational unit
- System organizational unit type

OUTPUT FORMAT

- DOC
- XLS
- PDF
- DOCX
- ODT

3.2.9.7.1.1.6 Output functions across multiple assignment levels

USE

Outputs the following information for the selected models:

- Functions across multiple assignment levels
- Functions across multiple assignment levels according to ISO certification

The model attributes, the group, and the model graphic are output for the models, while the standard items are output additionally in the case of an evaluation according to ISO certification.

THE FOLLOWING INFORMATION IS OUTPUT FOR EACH MODEL EVALUATED

- Chapter number
- Model name
- Model type
- Function to which the model is assigned.
- Name of the group in which the model is saved.
- Specified model attributes
- Functions of the model are described in the order in which they are created within a partial path in the model. For each function, the chapter number and the name of the function are output.
- Model graphic (optional)
- Model type of the assigned models to be evaluated (optional)

Functions that occur in multiple models are only described once. Each subsequent occurrence in the report output contains a reference to this description.

ASSIGNED MODELS ARE HANDLED AS FOLLOWS

- All functions with assignments are determined.
- If an assigned model is a function allocation diagram, the evaluation is performed in the same way as for associations within the selected model.
- From the set of remaining assignments, select one to be examined in more detail. You can choose your own prioritization, for example, based on the model type. In turn, all functions are analyzed for the assigned model.

You have the option of restricting the report output by specifying the assignment level to be analyzed in detail. For each assignment outside this range, the report output shows only the model name and type.

OUTPUT

The output is created as text incorporating tables for the model and object information and is divided into chapters. The **REPORT1** to **REPORT4** styles are used for chapter headings. This enables you to create tables of contents in the output documents.

At the first level, the output is structured based on the models you have selected. The structural level is increased by one if the assigned model is a model with control flow. For all other assigned models, the structural level remains unchanged.

The descriptions of the functions in a model can be sorted numerically, alphabetically, by symbol type, or topologically. If you select numerical sorting, the functions in a model should be numbered. The numbering of a function uses the number specified in the **Type 1** attribute type in the **Function type** attribute type group.

The attributes, relationships, and assigned models for which the types can be determined are evaluated. Like selected models, the assigned models are evaluated up to a configurable structural level.

If you selected the topological sort criterion, the report output may contain additional information depending on the model class of the model in question.

The following table provides an overview of the model classes in question and the resulting special features of the output with topological sorting:

Model class	Special feature
Directed graph with associations	Beginning and end of process, as well as start and end of path.
Hierarchy	Chapter numbers of functions reflect the position of the object in the model hierarchy.
Central object type	If the model described is a function allocation diagram, the structural level in the report output is not increased. The allocations are described at the level of the object to which the model is assigned.
Process selection matrix	The scenarios in a process selection matrix and the processes assigned to them are evaluated in the same way as function trees, with the scenario taking on the function of the root. Main processes are not included.

CONTEXT

Model

OUTPUT FORMAT

- PDF
- DOC
- DOCX
- ODT
- RTF
- HTML

3.2.9.7.1.1.7 Output functions with connected objects

USE

Outputs the model attributes, the model graphic, and the functions including the objects connected to them for the selected process models.

Optionally, you can select the following connected objects:

- Organizational elements
- Executing organizational elements
- Data elements (input/output data)
- Supporting application systems

You can specify the evaluation direction between the functions and the connected objects. In addition, you can also evaluate assigned function allocation diagrams.

CONTEXT

Models of type:

- EPC (event-driven process chain)
- EPC (column display)
- EPC (horizontal table display)
- EPC (table display)
- EPC (material flow)
- EPC (row display)
- Industrial process
- Office process
- PCD (process chain diagram)
- PCD (material flow)
- UML Activity diagram
- VACD (value-added chain diagram)

OUTPUT FORMAT

- RTF
- PDF
- HTML
- TXT
- DOC

3.2.9.7.1.1.8 Output model information

USE

Outputs information about the selected models, the objects contained in the model, and the relationships of the objects in the model. Apart from name and type, the groups, additional attributes, and model graphic can also be output.

For object relationships, you can also output the name and type of the target object.

CONTEXT

Models

OUTPUT FORMAT

- RTF
- PDF
- HTML
- TXT
- DOC
- XLS

3.2.9.7.1.1.9 Output model information considering various aspects

USE

Outputs model information including group structure as an Excel table.

A worksheet is created for each aspect. The worksheet lists all models in which the relevant aspect occurs.

The following aspects can be output:

- Data
- IT
- Organizational elements
- Targets/KPIs
- Products/Services
- Risks
- Others

For each aspect, the related functions can be listed, as well. Individual or integrated evaluations can be carried out for function allocation diagrams (FAD). For integrated evaluations, the functions from the FAD are integrated in the model.

CONTEXT

Models and groups

OUTPUT FORMAT

- XLS
- XLSX

3.2.9.7.1.1.10 Output object information

USE

Outputs the relationships and target objects at definition level for the selected objects. Optionally, you can output the groups and the attributes for both the source and target objects.

The output is in table format.

CONTEXT

Object

OUTPUT FORMAT

- RTF
- PDF
- HTML
- DOC
- XLS
- XLSX
- DOCX
- ODT

3.2.9.7.1.1.11 Output occurrences of objects

USE

The occurrences in models are listed for the selected object definitions.

CONTEXT

Object

OUTPUT FORMAT

- RTF
- PDF
- HTML
- TXT
- DOC
- DOCX
- ODT
- XLS
- XLSX
- XML

3.2.9.7.1.1.12 Process manual (example)

USE

This report script is a sample created in ARIS Architect in the design view. It shows how to create report scripts in ARIS Architect without having programming knowledge.

CONTEXT

Objects

OUTPUT FORMAT

- PDF
- DOC
- DOCX
- ODT
- RTF

3.2.9.7.1.1.13 RA(S)CI - Output organizational participations in processes

USE

This report supplies information on which organizational elements participate in the activities (functions) of a process and in what manner. Organizational responsibilities and participations are output in a matrix.

The report returns plausible results if your processes and the organizational responsibilities for the individual activities conform to the modeling conventions required.

RA(S)CI stands for **R**esponsible, **A**ccountable, (**S**upportive), **C**onsulted, **I**nformed.

By default, this report does not return any **Supportive** information. To output this information, your script administrator must set the **g_brasci** variable to **true**.

The matrix shows which organizational unit participates in activities of a process and in what manner:

- **Responsible** indicates the person who assumes execution responsibility. It shows who is responsible for performing an activity and who actually performs it, but also who assumes the disciplinary responsibility.
- **Accountable** indicates the person who is ultimately answerable for the correct and thorough completion of a task. This may be the person in charge of managing the costs, that is, the person assuming project budget responsibility. The **decides on** and **accepts** connections are evaluated to identify this responsibility.
- **Consulted** indicates the person who has a consulting role. This organizational unit - typically a group of subject matter experts - is asked for advice prior to a final decision being made or a final action being taken.
- **Informed** indicates the person who must be informed. It indicates who is kept up to date on the progress or completion of a task.

In the RACI matrix, RACI data is displayed under the following conditions:

- The connections are used in the selected process model.
- The connections are used in a function allocation diagram that is assigned to a function of the selected process model.

The result of the report is an Excel workbook containing several tables. Each process model included creates a table. The first table consists of a full list of the functions and organizational units of the process models included.

Process steps	Function	Financial assistant	Financial clerk	Accountant
Vehicle billing (as-is)	Allow for discounts	R		I
Vehicle billing (as-is)	Call order data	R, A		
Vehicle billing (as-is)	Change customer	R		
Vehicle billing (as-is)	Change order data		R	
Vehicle billing (as-is)	Check customer data	R		
Vehicle billing (as-is)	Check order data	R	R	
Vehicle billing (as-is)	Enter payment type		R	
Vehicle billing (as-is)	Have customer	R		
Vehicle billing (as-is)	Print invoice		R	
Vehicle billing (as-is)	Send invoice		R	I
Vehicle billing (as-is)	Transfer data to		R	

CONTEXT

- Individual process
- List of processes
- Process hierarchy

OUTPUT FORMAT

- XLS

3.2.9.7.1.1.14 EPC-to-BPMN transformation

USE

Transforms a model of type **EPC** into a to a diagram of type **Enterprise BPMN collaboration diagram** or **BPMN collaboration diagram (BPMN 2.0)** depending on the option selected. You can select which diagram type the transformation should generate. If the report is run from a context containing multiple models of type **EPC**, a report with detailed transformation results is generated for each of the models.

CONTEXT

Groups, Models

OUTPUT FORMAT

- RTF
- PDF
- HTML
- DOC
- DOCX
- XLS
- XSLX
- ODT

3.2.9.7.1.2 What output formats exist?

You can change the output format on the **Reports** or **Semantic checks** tab of the **Evaluation** bar by clicking the down arrow. The selection of output formats may be restricted based on the report or semantic check. Possible output formats are:

PDF

DOC

DOCX

ODT

RTF

HTML

TXT

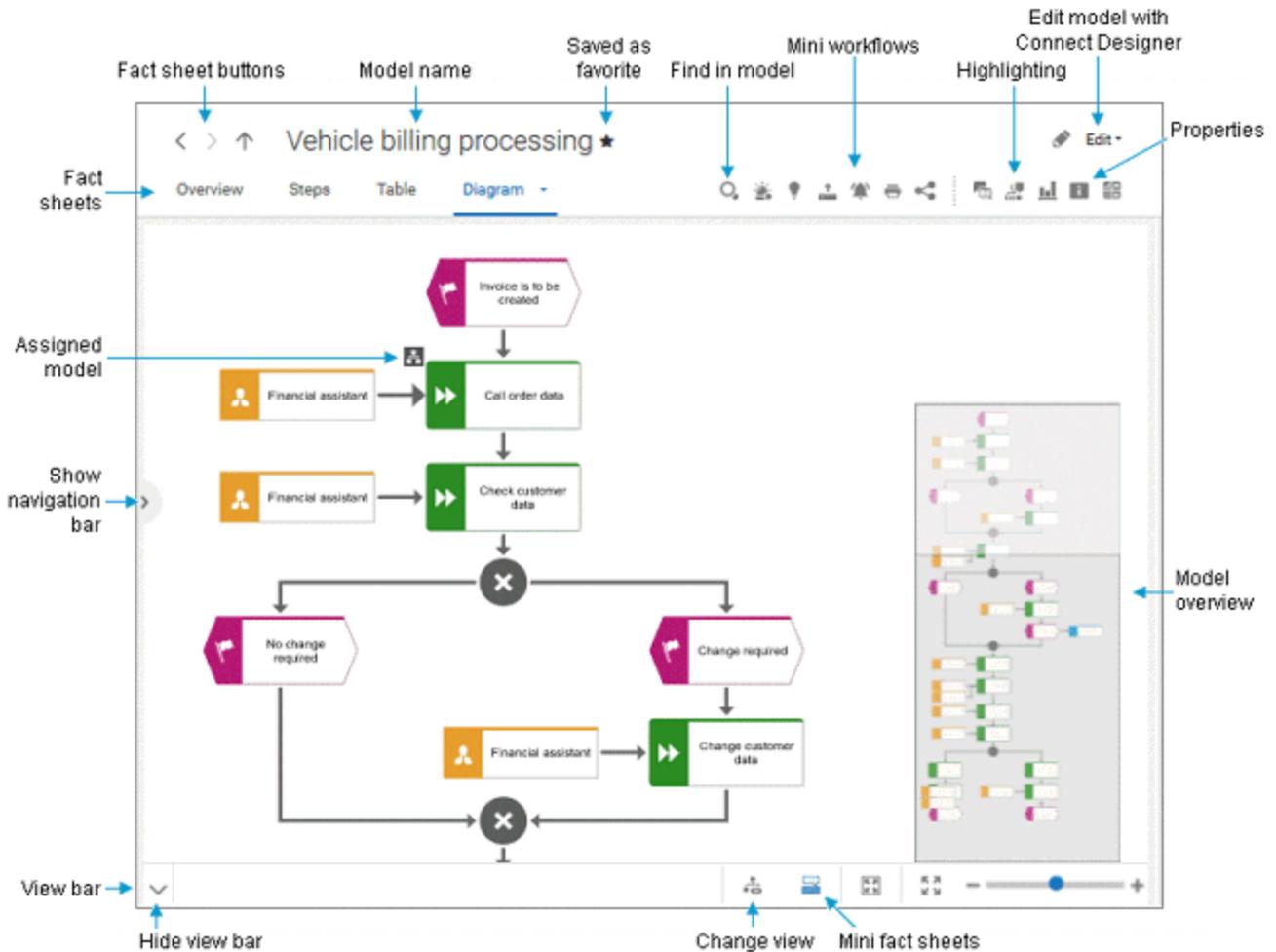
XLS

XLSX

XML

3.2.9.8 Diagram fact sheet

The following describes how to use the **Diagram** fact sheet. It displays information about the selected model and its model elements. You can decide which information you want to display



You can find model items (page 202) () in the diagram. Click  **Properties** to show the properties of a model or a model item. (page 205) You can highlight objects in the diagram (page 206) () that meet a defined condition. In addition, you can open assigned models (page 207) (). You can change the view of the diagram (page 210) () to show the aspects you want to focus on. Using the functions of the view bar you can change the size of appearance (page 203).

3.2.9.8.1 Find in model

In the **Diagram** fact sheet (page 201), you can quickly find the required model items.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. In the button bar (page 69), click  **Find in model**. The input box opens.
6. Enter the term contained in the name of the model items you want to find. The first number indicates the item selected in the diagram and the second number the total number of items found.

job	4/5	^	▼
-----	-----	---	---

The finding identified by the first number in the search field is highlighted red in the model, the others yellow.

Click  **Next** to highlight the next finding in red. The numbers in the search field are adjusted. Click  **Previous** to highlight the previous finding in red. The numbers in the search field are adjusted.

3.2.9.8.2 Use the view bar

In the **Diagram** fact sheet (page 201), you can adjust the display of a model.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet. The view bar is positioned at the bottom.
5. Click  **Full screen view** to enlarge the model to the whole display range.
6. Click  **Exit full screen** to show the model in the previous display range again.
7. Click  **Fit to window** to fit in the whole model into the display range.
8. Move the slider to enlarge or reduce the display size of the model.



9. Click  **Change view** to select a specific view (page 210) of process models.
10. On the left, click the  arrow down to hide the view bar.
11. On the left, click the  arrow up to view the view bar again.

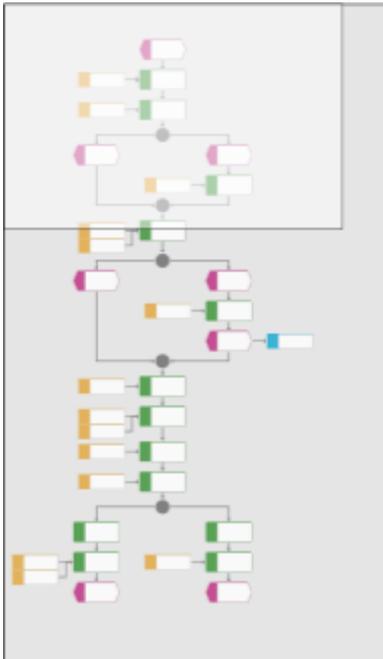
You have adjusted the display of the model in the **Diagram** fact sheet.

3.2.9.8.3 Navigate using the Diagram fact sheet

You can use the model overview to navigate to different areas of a model.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet. The **Diagram** fact sheet shows the model. The model overview is placed at the bottom right. The light gray area of the model overview shows the visible area of the model. When you change the resolution of the model (page 203), the size of the light gray area also changes.



5. Click the light gray area and hold down the mouse key.
6. Drag the mouse pointer in the direction of the model section you want to bring into the visible area.
7. Release the mouse button when the relevant model section is visible.

You have navigated to the relevant model section.

3.2.9.8.4 Show properties

In the **Diagram** fact sheet (page 201), you can display the properties of the model or of model items.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. Click **i Properties**. The **Property** bar opens and the **Attributes** tab is activated.

Attributes More ▾	
Attribute	Attribute value
Name	Organizational chart
Time of generation	Jul 17, 2018 11:17:17 AM
Creator	w.becker
Status	Released
Last change	Sep 29, 2020 5:48:52 PM
Type	Organizational chart
Last user	system
Person responsible	peter.process

If you have selected an object, the attributes for that object are displayed. Click **More** to view related objects or occurrences. The model properties are shown if no object is selected.

6. Click **More > Relationships** to show the related object of the selected object. The types of the connections and the names of the related objects are shown.
7. Click **More > Related models** to show the related models of the selected object. The occurrences of the selected object in the current and other models are displayed. If a model contains more than one occurrence of the selected object, you can select them directly or using arrows to the left or to the right.



You have used the **Property** bar.

3.2.9.8.5 Switch highlighting on

You can highlight model items to focus on aspects to be monitored (page 232). This example illustrates highlighting of a process model in the default view (page 49).

Prerequisites

The highlighting is configured for the model you have selected.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram** (page 79) fact sheet.
5. Click  **Highlighting**. The **Highlighting** bar is opened. There are various criteria with criterion indicators sorted in different categories.
6. Click  **On** in the **Highlighting** bar.
7. Open the relevant category and activate the check boxes of the criteria you want to be highlighted. To highlight all criteria of a category, activate the category check box.

- ▼ **Roles**
 - A** Accountant
 - F** Financial assistant
 - F6** Financial clerk

The model items that meet the selected highlighting criteria are colored and marked by the criterion indicator. The highlighting of process models remains active until you change the view or switch the highlighting off (page 225).

3.2.9.8.6 Open assignment

In **Diagram** fact sheet (page 201), you can quickly open diagrams assigned to objects. Assigned models contain detailed information on the object that the models are assigned to, for example.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet. Assignment icons are displayed next to objects with assigned models.
5. Click the relevant  assignment icon, or double-click the object at which the relevant  assignment icon is shown.

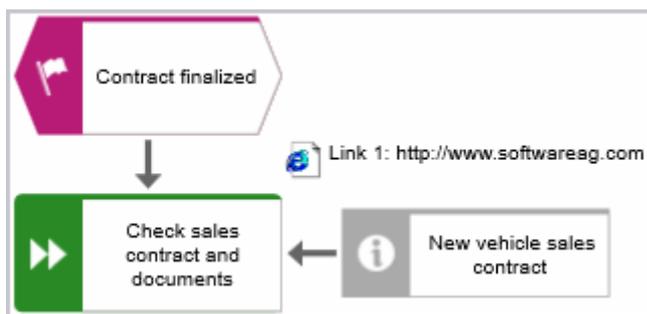
If only one diagram is assigned, it is opened directly. If more than one diagram is assigned, they are offered for selection in a dialog.

3.2.9.8.7 Open placed link attributes

In **Diagram** fact sheet (page 201), you can open placed link attributes.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram** fact sheet. The diagram is displayed in the **Diagram** fact sheet together with all placed link attributes.



5. Click the relevant link attribute.

The link opens. This is how you can easily open a text document or a new e-mail with the e-mail recipient entered, for example.

3.2.9.8.8 Print the graphic of the current model

In the  **Portal**, you can print the graphic of the current model as PDF.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. In the button bar (page 69), click  **Print graphic as PDF**. The **Select output options** dialog opens.
5. Specify your settings.
6. Click **OK**. After the report is generated, the **Print graphic as PDF** dialog opens.
7. Click **Download result**. Using the following dialog, open the file in a PDF viewer or save it.

In the  **Portal**, you have printed the graphic of the current model as a PDF.

To the left of the user name, the  **Reports notification** is inserted. Click the notification icon and  **Export graphic as PDF** to download the result again. The result is also listed on the **Reports** bar. If you select the **Diagram** fact sheet, you can open the **Reports** bar and download the printed model graphic as a PDF.

3.2.9.8.9 Change view

In the **Diagram** fact sheet (page 201), you can change the view of process models. Depending on the modeling content, views can have the same result despite different criteria. If a view based on the current option settings cannot be generated, the indication **No diagram available** is shown in the modeling area.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. At the bottom, click  **Change view**. The view options (page 212) are shown. The view options displayed depend on the type of the model. The view options of model type **EPC**, for example, differ from those of a model of type **Enterprise BPMN collaboration** or of type **Customer journey map**.
6. Click the options (page 212) to change the view of the model. Based on the options, the model view is adjusted.
7. To close the **Change view** bar, click in the modeling area.

As long as the view options are active, the  **Change view** icon is colored in red and the selected view is indicated. You can reset the changed view (page 210).

3.2.9.8.10 Reset a changed view

In the **Diagram** fact sheet (page 201), you can determine that models are displayed according to criteria you have selected (page 210). If you want to see the model without restrictions, you can reset all criteria.

Procedure

1. At the bottom, click the red colored  **Change view** icon if the view options (page 212) are collapsed.
2. Click  **Reset to default** to the right of the title **Views**.
3. To close the **Change view** bar, click in the modeling area.

The model is displayed in the default view. It is displayed without restrictions and the  **Change view** icon is not colored anymore.

3.2.9.8.11 Switch on the mini fact sheet display

In the **Diagram** fact sheet (page 201), you can switch on the mini fact sheet display to display mini fact sheets for objects (page 219) you move the mouse pointer over or select.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Activate the **Diagram** (page 79) fact sheet.
4. At the bottom, click  **Show mini fact sheets**.  **Show mini fact sheets** is colored and the Message **Mini fact sheets activated** is displayed.

If you move the mouse pointer over an object or select it, a mini fact sheet is displayed. Click  **Show mini fact sheets** again, if you want to disable the mini fact sheet display.

3.2.9.8.12 Show Mini fact sheets

In the **Diagram** fact sheet (page 201), you can display mini fact sheets for selected objects (page 219) if you have turned on the display of mini fact sheets (page 211).

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Move the mouse pointer over an object or click an object.
 - If you move the mouse pointer over an object, the mini fact sheet is displayed if the mouse pointer remains on the object.
 - If you click an object, the mini fact sheet is displayed until you click in the modeling area.

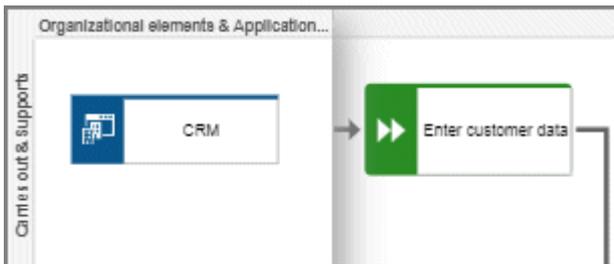
The mini fact sheet is displayed. Among other things, you can copy text content to the clipboard,  go to the **Overview** fact sheet of the object, or jump to the **Overview** fact sheet of an object whose link is placed in the fact sheet.

3.2.9.8.13 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.9.8.13.1 What is the special feature for the Diagram fact sheet navigation?

The first row or column of a swimlane model remains visible even if the model content is moved (page 204). If the content is moved next to the first row or column so that it is no longer visible, a shaded separator appears. In the example graphic, the content next to the first column was moved to the invisible area.



3.2.9.8.13.2 Which view options are available?

You can change the view (page 210) of all model types. For every model type at least the layout options **Horizontal** and **Vertical** are available.

The view options displayed depend on the type of the model. The view options of model type **EPC**, for example, differ from those of a model of type **Enterprise BPMN collaboration** or of type **Customer journey map**.

Group and **Layout** options can be combined with the selected view. If a view based on the current option settings cannot be generated, the indication **No diagram available** is shown in the modeling area.

VIEWS

RESET TO DEFAULT (↺)

Turns off all previous view settings and displays the model in its originally layout, in other words, how it is actually modeled. All model items, structurally relevant objects (page 1154) and satellites (page 1153), are shown.

LEAN

Displays only the structurally relevant objects (page 1154) of a model. Satellites (page 1153) are hidden.

If you have determined **Details**, **Group by**, or **Layout** options the presentation of the model is adjusted accordingly.

PEOPLE VIEW

Besides the structurally relevant objects (page 1154), all objects of the following types are displayed.

- Internal person
- External person
- Position
- Role

IT SYSTEM VIEW

Besides the structurally relevant objects (page 1154), all objects based on the **Application system type** are displayed.

- Application system type
- IT system
- IT software
- IT block

SWIMLANE VIEW

Displays the whole model, but restructured in rows and columns. If row and column labels exist, the rows and columns are labeled.

If you have determined **Details**, **Group by**, or **Layout** options the presentation of the model is adjusted accordingly.

EXTENDED PROCESS VIEW

Displays the entire process (page 217) across model boundaries by arranging the structurally relevant objects (page 1154) of the process from left to right and the satellites (page 1153) above and below them.

The options of **Details**, **Group by**, and **Layout** are disabled and cannot be selected.

DETAILS

SELECT/DESELECT ALL

You can show all details at a time (enable the check box) or hide all details at a time (disable the check box).

ROLES

You can show (enable the check box) and hide (disable the check box) objects based on the **Roles** object type.

If no object of this type exists in the model, the option button is disabled.

PERSONS

You can show (enable the check box) and hide objects (disable the check box) based on the **Persons** object type, namely the objects **Internal person** and **External person**.

If no object of this type exists in the model, the option button is disabled.

POSITIONS

You can show (enable the check box) and hide objects (disable the check box) based on the **Positions** object type.

If no object of this type exists in the model, the option button is disabled.

DOCUMENTS

You can show (enable the check box) and hide objects (disable the check box) based on the **Information carrier** object type, such as **Document**, **Test documentation**, and **Folder**.

If no object of this type exists in the model, the option button is disabled.

TERMS

You can show (enable the check box) and hide objects (disable the check box) based on the **Technical term** object type.

If no object of this type exists in the model, the option button is disabled.

IT SYSTEMS

You can show (enable the check box) and hide objects (disable the check box) based on the **Application system type** type, such as **Application system type**, **IT system**, and **IT software**.

If no object of this type exists in the model, the option button is disabled.

CAPABILITIES

You can show (enable the check box) and hide objects (disable the check box) based on the **Capability** object type.

If no object of this type exists in the model, the option button is disabled.

RISKS

You can show (enable the check box) and hide (disable the check box) objects based on the **Risk** object type.

If no object of this type exists in the model, the option button is disabled.

KPI INSTANCES

You can show (enable the check box) and hide objects (disable the check box) based on the **KPI instances** object type.

If no object of this type exists in the model, the option button is disabled.

GROUP BY

ROLES

Opens the list of connections by which roles can be linked to functions. Enable an option button to group the model items by roles according to the connection you have selected. The previously selected grouping is deactivated. The model items are grouped in a swimlane model (page 1147).

In BPMN diagrams, a separate lane is displayed for each object according to the grouping criterion. Each lane has the name of the object that match the grouping criterion, for example role, position, or IT system.

If no connection of a possible type is used in the model, the corresponding option button is disabled.

The **Group by** switch is turned on. To turn off the grouping, click **Off**.



POSITIONS

Opens the list of connections by which positions can be linked to functions. Enable an option button to group the model items by positions according to the connection you have selected. The previously selected grouping is deactivated. The model items are grouped in a swimlane model (page 1147).

In BPMN diagrams, a separate lane is displayed for each object according to the grouping criterion. Each lane has the name of the object that match the grouping criterion, for example role, position, or IT system.

If no connection of a possible type is used in the model, the corresponding option button is disabled.

The **Group by** switch is turned on. To turn off the grouping, click **Off**.



OTHERS

Provides the **IT system** option button that allows you to group the model items according to objects based on the **Application system type** type (enable the **IT systems** option button). If no **Application system type**, **IT system**, or **IT software** object exists in the model, the option button is disabled.

The model is restructured in a swimlane model (page 1147). The previously selected grouping is deactivated. The model items are grouped in a swimlane model (page 1147).

In BPMN diagrams, a separate lane is displayed for each object according to the grouping criterion. Each lane has the name of the object that match the grouping criterion, for example role, position, or IT system.

The **Group by** switch is turned on. To turn off the grouping, click **Off**.



LAYOUT

HORIZONTAL

Arranges the model items from left to right.

The **Layout** switch is turned on. To turn off the selected layout, click **Off**.



VERTICAL

Arranges the model items top down.

The **Layout** switch is turned on. To turn off the selected layout, click **Off**.



3.2.9.8.13.3 How can comprehensive processes be modeled?

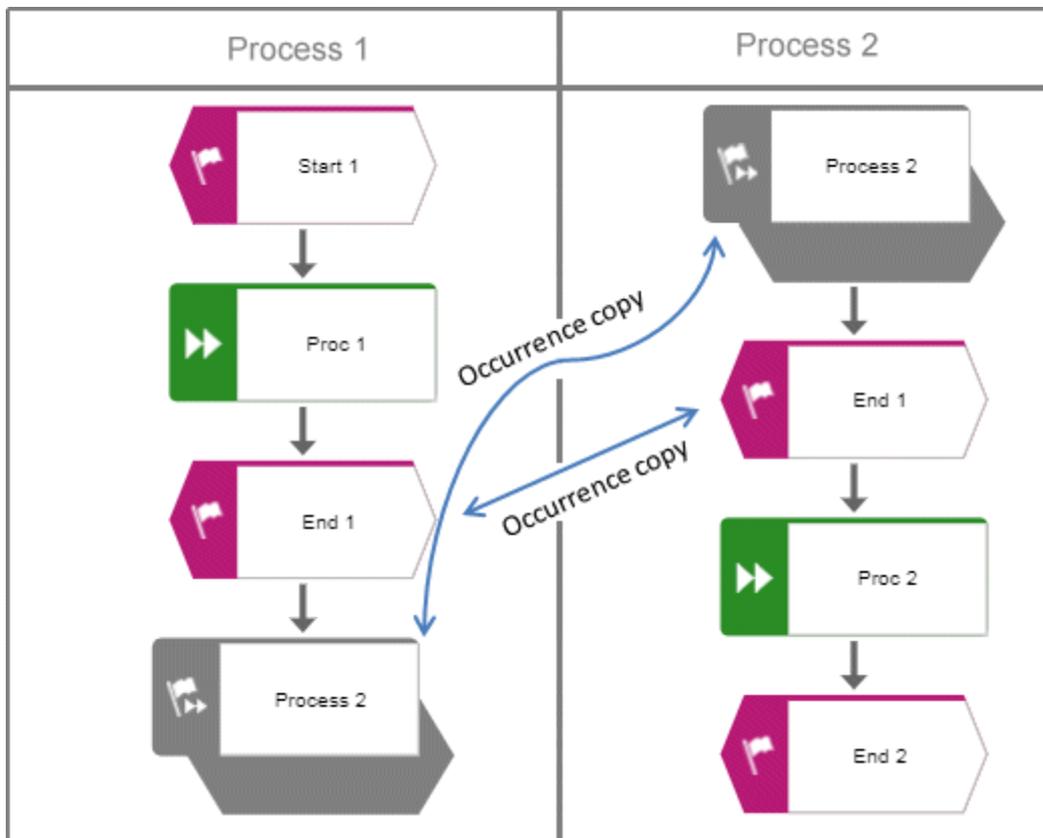
You can use the **Change view** functionality (page 210) in the **Diagram** (page 79) fact sheet to show different views (page 212) on diagrams. This also allows you to choose the model-spanning Extended process view, which displays models that are connected by process interfaces.

To use the benefit of the Extended process view, the models of **EPC** type must be connected according to the following schemes.

PROCESS INTERFACE OCCURRENCE COPY

- Use an occurrence copy (page 1151) of the end event of the first model as start event of the second model.
- In the first model, place a process interface below the end event.
- Copy the process interface of the first model and place its occurrence copy in the second model above the start event.

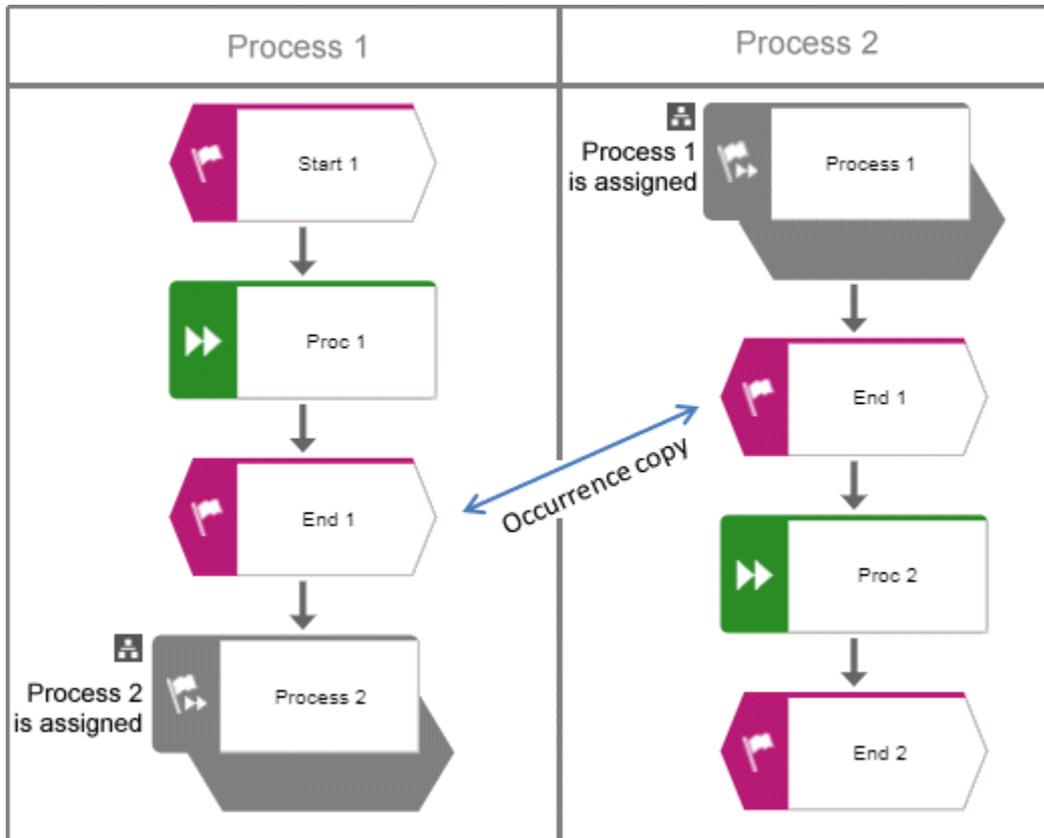
The following graphic shows the connection scheme of the models.



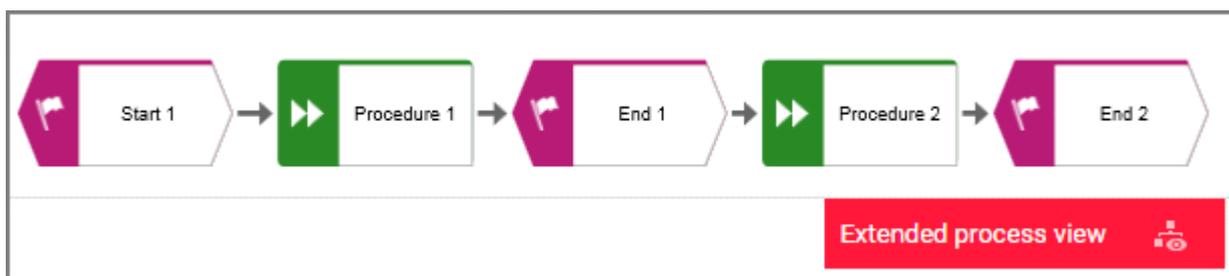
PROCESS INTERFACES WITH ASSIGNED MODELS

- Use an occurrence copy (page 1151) of the end event of the first model as start event of the second model.
- In the first model, place a process interface below the end event and assign the second model (page 1137) to the process interface.
- In the second model, place a process interface above the start event and assign the first model to the process interface.

The following graphic shows the connection scheme of the models.

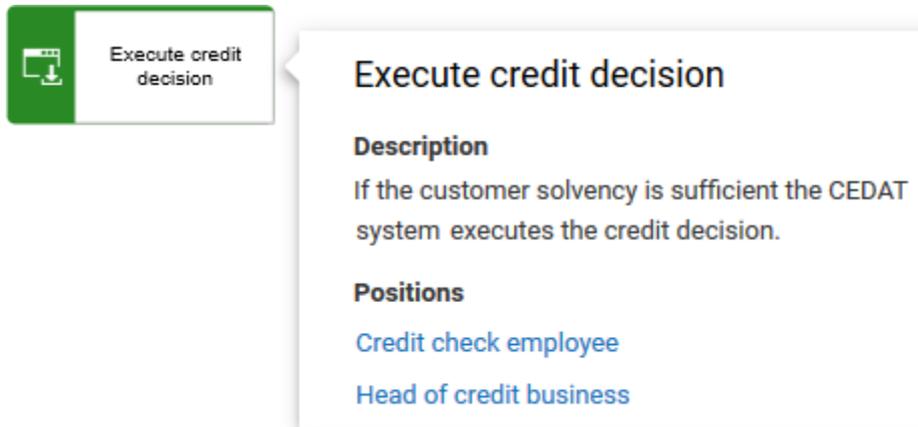


If the **Extended process view** is activated for one of the two models, the following cross-model process is displayed.



3.2.9.8.13.4 For which object types are mini fact sheets displayed?

In the default configuration of the Classic (page 35) and Default (page 49) view, you can display mini fact sheets (page 211). Among other things, you can copy text content to the clipboard,  go to the **Overview** fact sheet of the object, or jump to the **Overview** fact sheet of an object whose link is placed in the fact sheet.



In the default configuration, the mini fact sheets are available for the following object types. The attributes listed below are displayed for an object type if a corresponding attribute value has been entered.

APPLICATION SYSTEM TYPE

- Name
- Description
- Occurrences in business processes. These links are listed under the heading **Used in**.
- Person responsible. Clickable if possible.
- Assignments

DATA OBJECTS

The following attributes are displayed, for example, for objects of type **List** and **Information career**.

- Name
- Description
- Links (clickable)
- Assignments

FUNCTION

The same attributes are displayed as for functions in the **Steps** (page 75) fact sheet.

If, for example, an organizational unit, an application system type and an information carrier are connected to the function, the fact sheet displays the organizational unit under the heading **Departments**, the application system type under **IT systems**, and the information carrier under **Documents**.

PERSON, POSITION, ROLE

- Name
- Description
- Department
- Occurrences in business processes. These links are listed under the heading **Used in**.
- Assignments

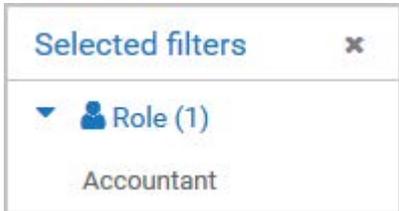
RISK

- Name
- Description
- Probability
- Assessment frequency
- Assignments

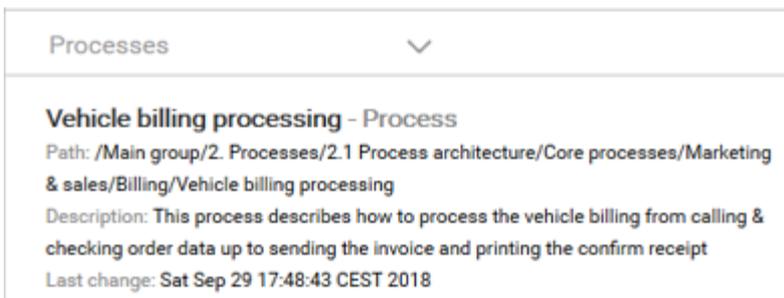
3.2.9.8.13.5 What is role-based highlighting?

In **My content** (page 87), you can select a role filter to restrict the contents of a database to those items in which the role is involved.

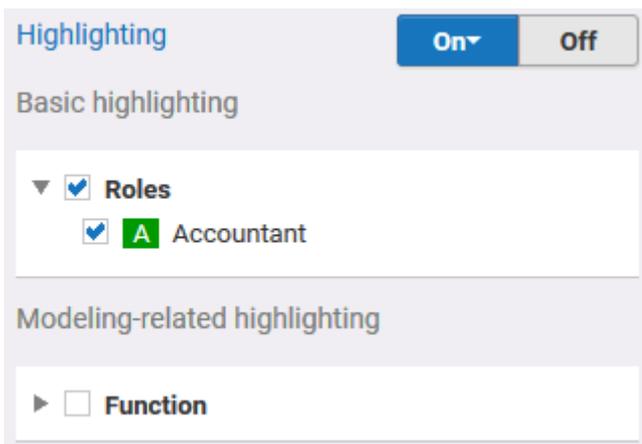
You can, for example, restrict the contents of the database **United Motor Group** to the role **Accountant**.



The model **Vehicle billing processing** is listed.



If you open the fact sheet **Diagram fact (page 79)** and switch on the highlighting (page 206), the default highlighting is set to highlight the role **Accountant**.



You can activate the check boxes for additional roles and/or functions for highlighting (page 238). In this case, the highlighting switches to **User defined**.

3.2.9.9 Highlight model items

You can highlight model items to focus on aspects to be monitored (page 232).

3.2.9.9.1 Switch highlighting on

You can highlight model items to focus on aspects to be monitored (page 232). This example illustrates highlighting of a process model in the default view (page 49).

Prerequisites

The highlighting is configured for the model you have selected.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. Click  **Highlighting**. The **Highlighting** bar is opened. There are various criteria with criterion indicators sorted in different categories.
6. Click  **On** in the **Highlighting** bar.
7. Open the relevant category and activate the check boxes of the criteria you want to be highlighted. To highlight all criteria of a category, activate the category check box.

- ▼ **Roles**
 - A** Accountant
 - F** Financial assistant
 - F6** Financial clerk

The model items that meet the selected highlighting criteria are colored and marked by the criterion indicator. The highlighting of process models remains active until you change the view or switch the highlighting off (page 225).

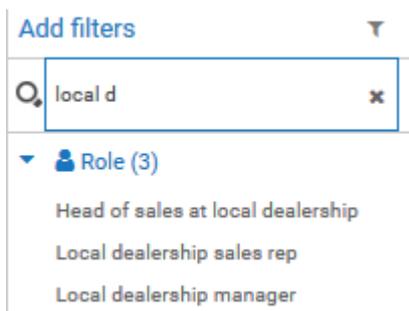
3.2.9.9.2 Switch between default and user-defined highlighting

You can highlight model items to focus on aspects to be monitored (page 232). If you use a view in which the user-defined highlighting is configured, you can switch between default and the user-defined highlighting for process models.

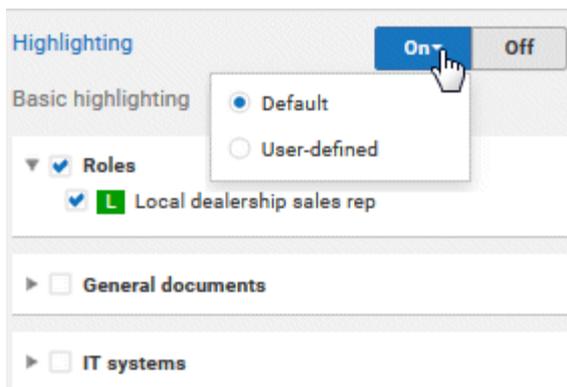
This example illustrates the user-defined highlighting with the **United Motor Group** database.

Procedure

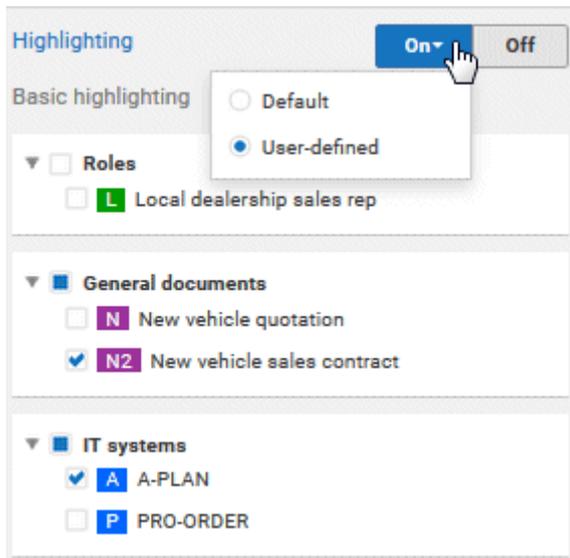
1. Select the **United Motor Group** database (page 94).
2. Click **My content**.
3. In the **Type to find a role or location** field, enter **local d**. Among others, the **Local dealership sales rep** role is listed.



4. Click **Local dealership sales rep**. The role **Local dealership sales rep** is moved to the **Selected filters** area and the processes in which the role occurs are listed.
5. Click the **Contract processing** process. The **Contract processing** fact sheets are displayed.
6. Click the **Diagram** fact sheet.
7. Click  **Highlighting**. The **Highlighting** bar is opened. There are various criteria with criterion indicators sorted in different categories.
8. Click  **On** in the **Highlighting** bar. The **Default** option is enabled and the role **Local dealership sales rep** is enabled for highlighting.



9. Open the relevant category and activate the check boxes of the criteria you want to be highlighted. To highlight all criteria of a category, activate the category check box. The user-defined highlighting is enabled.



You can switch between the default and user-defined highlighting.

If, for example, you open another model via the search, the selected highlighting remains active. In addition, the defined highlighting is saved and used when you open the specific model and switch on the highlighting again.

The model items that meet the selected highlighting criteria are colored and marked by the criterion indicator. The highlighting of process models remains active until you change the view or switch the highlighting off (page 225).

3.2.9.9.3 Switch highlighting off

If you have switched highlighting on (page 206), it remains active for as long as you stay in the view or until you switch highlighting off.

Prerequisites

The highlighting is configured for the model you have selected.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. Click  **Highlighting**. The **Highlighting** bar is opened.
6. Click **Off** in the **Highlighting** bar.

The coloring and marks of the model items are removed.

3.2.9.9.4 Highlight the happy and/or exception path

You can highlight the happy path and/or the exception path.

This description is based on the standard configuration. Please note that your system may be configured differently, so that different attributes and values are relevant.

Prerequisites

The highlighting for the happy path (page 228) and/or exception path (page 228) is defined for the model you have selected.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. Click  **Highlighting**. The **Highlighting** bar is opened. There are various criteria with criterion indicators sorted in different categories.
6. Click **On** in the **Highlighting** bar.
7. Open the **Process paths** category and enable the **HP** check box to highlight the happy path (page 235).
8. Open the **Process paths** category and enable the **EX1** check box to highlight the exception path (page 236).
9. Enable the check box of the **Process paths** category to highlight both the happy path and the exception path (page 237).

You have highlighted the happy path and/or the exception path.

3.2.9.9.5 Highlight IT systems, general documents, roles

You can highlight items of the categories **IT systems**, **General documents**, and **roles**.

This description is based on the standard configuration. Please note that your system may be configured differently, so that different attributes and values are relevant.

Prerequisite

The relevant objects are inserted (page 233) in the selected model.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Diagram (page 79)** fact sheet.
5. Click  **Highlighting**. The **Highlighting** bar is opened. There are various criteria with criterion indicators sorted in different categories.
6. Click **On** in the **Highlighting** bar.
7. Activate the check box of the **IT systems** category to highlight Application system objects (page 238) contained in the model.
8. Activate the check box of the **General documents** category to highlight Information carrier objects (page 238) such as **Document**, **Bar code**, and **Folder** contained in the model.
9. Activate the check box of the **Roles** category to highlight Role objects together with connected functions (page 238) contained in the model.

You have highlighted items of the categories **IT systems**, **General documents**, and **Roles**.

3.2.9.9.6 Define the happy path

You can define in a model which path is the best way to perform a process. This path will be highlighted (page 235) if you highlight the happy path **HP** of the category **Process paths**.

This description is based on the standard configuration. Please note that your system may be configured differently, so that different attributes and values are relevant.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Open the relevant model for editing.
2. For each connection that connects the objects of the respective model path, enter the value **HAPPY_PATH** in uppercase for the **Remark/Example** attribute.
3. Save your model.

The happy path for highlighting is defined.

3.2.9.9.7 Define the exception path

You can define in a model which path is the exceptional case to perform a process. This path will be highlighted (page 236) if you highlight the exception path **Ex1** of the category **Process paths**.

This description is based on the standard configuration. Please note that your system may be configured differently, so that different attributes and values are relevant.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Open the relevant model for editing.
2. For each connection that connects the objects of the respective model path, enter the value **EXCEPTION_1** in uppercase for the **Remark/Example** attribute.
3. Save your model.

The exception path for highlighting is defined.

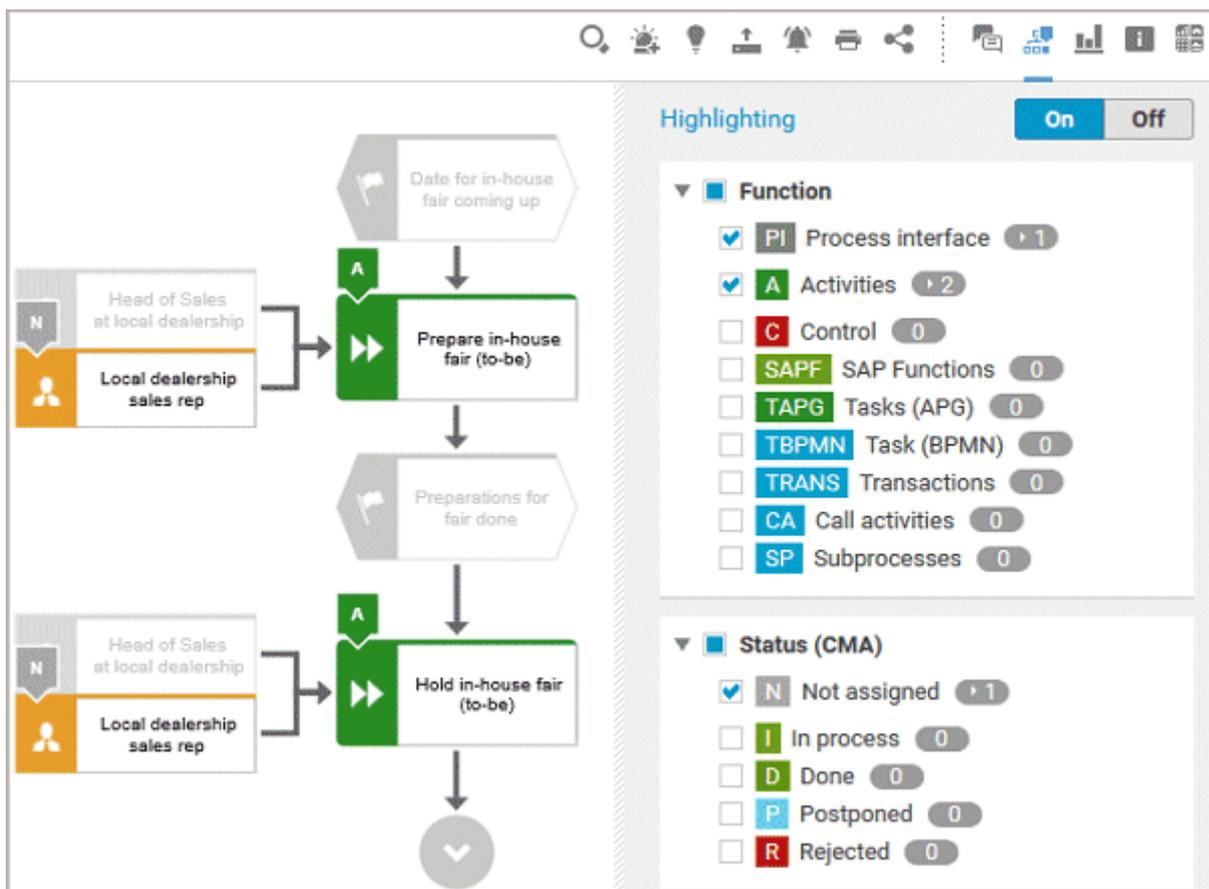
3.2.9.9.8 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

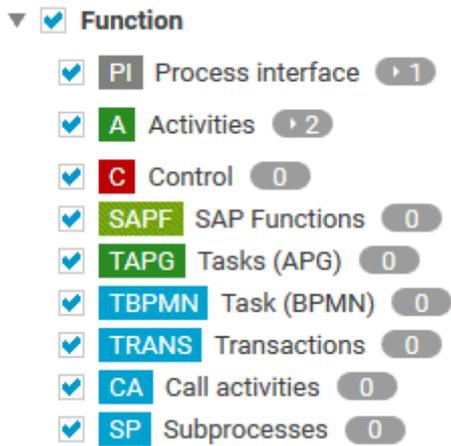
3.2.9.9.8.1 What is highlighting?

Highlighting is the visual emphasis of model content. If you have switched highlighting on (page 206), model items are colored and marked by criterion indicators based on the criteria you selected.

This description is based on the standard configuration. Please note that your system may be configured differently, so that different attributes and values are relevant.



If you switched highlighting on, all highlighting categories such as **Function** and **Status (CMA)** are listed. You can expand the categories to show its criteria. Furthermore, you can activate the check box of every single criterion.

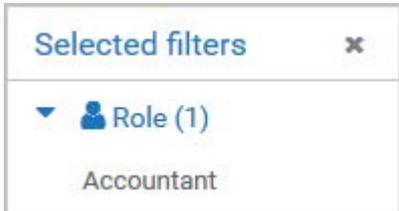


Every criterion has a criterion indicator that is shown in the model if the criterion is activated. Activities, for example, have the criterion indicator **A**. In the **Highlighting** bar, the number of occurrences is displayed behind the criteria. In the image above, activities occur twice (criterion indicator **A**), objects with the Change Management status **Not assigned** (criterion indicator **N**) only once. Note that in the example above, two object symbols have the **N** criterion indicator, although **1** is shown for the **Not assigned** criterion. The reason for this is that these object symbols are occurrence copies of one and the same object.

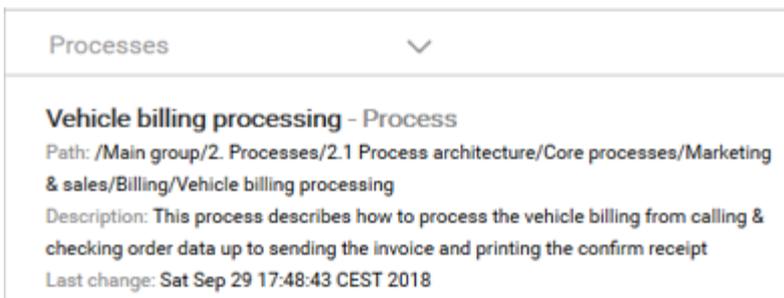
3.2.9.9.8.2 What is role-based highlighting?

In **My content** (page 87), you can select a role filter to restrict the contents of a database to those items in which the role is involved.

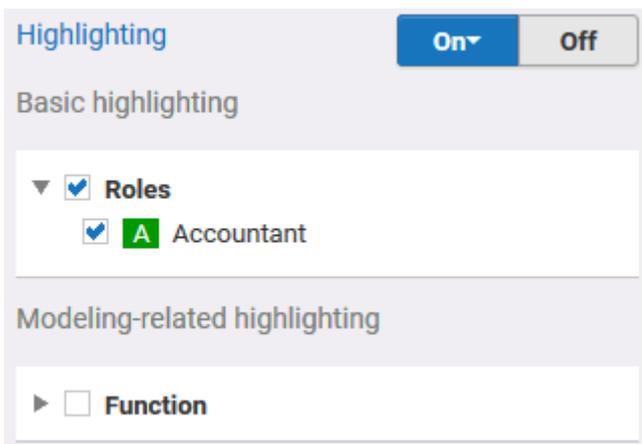
You can, for example, restrict the contents of the database **United Motor Group** to the role **Accountant**.



The model **Vehicle billing processing** is listed.



If you open the fact sheet **Diagram fact (page 79)** and switch on the highlighting (page 206), the default highlighting is set to highlight the role **Accountant**.



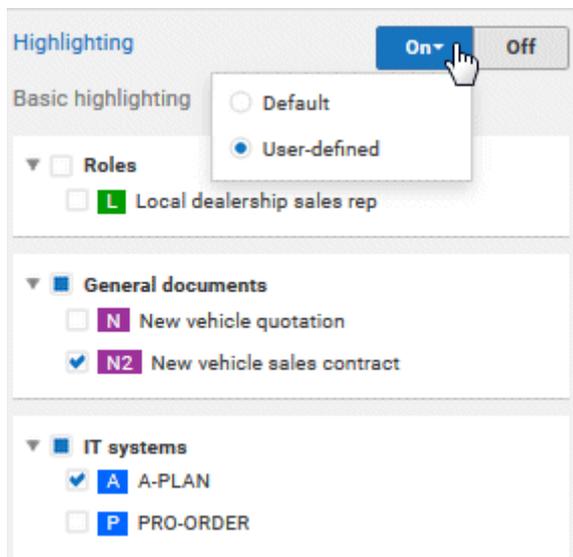
You can activate the check boxes for additional roles and/or functions for highlighting (page 238). In this case, the highlighting switches to **User defined**.

3.2.9.9.8.3 What are default and user-defined highlighting?

When default highlighting is configured or filter-based highlighting is enabled and defined (page 223), a menu is added to the **On** button to switch between standard and user-defined highlighting.

- Default highlighting: The activated criteria are predefined criteria of the configuration or the activated filter (page 223). These criteria are automatically disabled when a user selects other criteria.
- User-defined: Selection by the user. This state is automatically activated after a user selects criteria. The user selection is saved and can be recalled.

If you use a view in which the user-defined highlighting is configured, you can select own criteria to be highlighted. Then you can switch between default and user-defined highlighting (page 223).



If default highlighting is not configured, the **On** button has no menu.

The selected highlighting, default or user-defined, remains active. If, for example, you open another model via the search, the selected highlighting remains active. In addition, the defined highlighting is saved and used when you open the specific model and switch on the highlighting again.

3.2.9.9.8.4 Which models, items, and values are relevant for highlighting?

This description is based on the standard configuration. Please note that your system may be configured differently, so that different attributes and values are relevant.

HAPPY PATH AND EXCEPTION PATH

You can use the following model types to define and highlight the happy path and the exception path (page 226):

- EPC
- EPC (column display)
- EPC (horizontal table display)
- EPC (instance)
- EPC (material flow)
- EPC (row display)
- EPC (table display)
- BPMN collaboration diagram (BPMN 2.0)
- BPMN process diagram (BPMN 2.0)
- Enterprise BPMN collaboration diagram
- Enterprise BPMN process diagram

The value for the happy path is HAPPY_PATH, the values for the exception paths are EXCEPTION_1 to EXCEPTION_4. Values are case-sensitive, so that only correctly written values are considered for the highlighting.

IT SYSTEMS AND INFORMATION CARRIERS

You can highlight items of the It systems and General documents categories (page 238) in the following models.

All objects of type **Application system**, **Application system type**, **IT software**, and **IT system** are grouped under the **IT systems** category.

All objects of type **Information carrier**, such as **Document**, **Bar code**, **Folder**, and **Letter**, are grouped under the **General document** category.

- EPC
- EPC (column display)
- EPC (horizontal table display)
- EPC (instance)

- EPC (material flow)
- EPC (row display)
- EPC (table display)

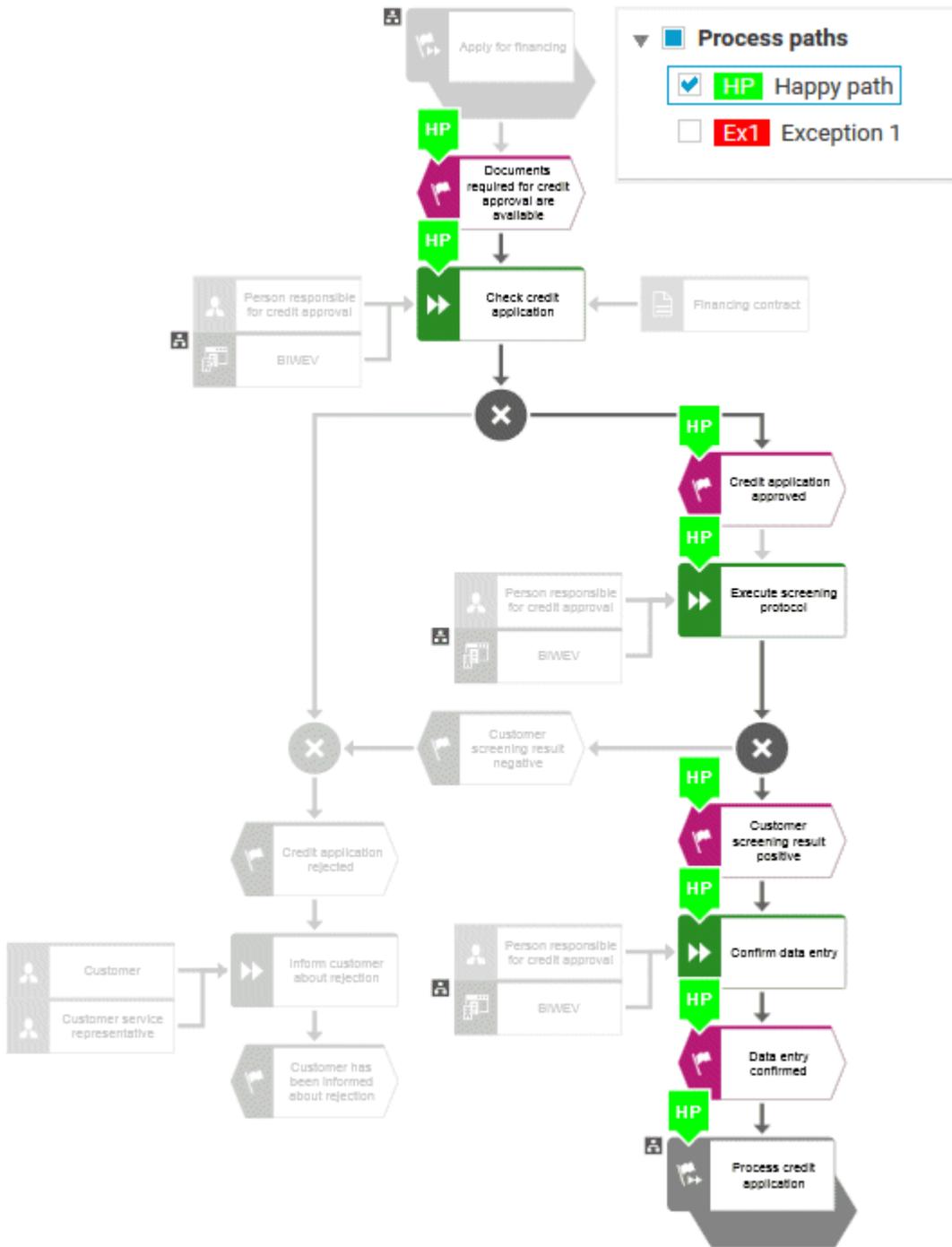
ROLES AND FUNCTIONS

You can highlight roles (page 238) in the following models. When you highlight a role, the executed function and the connection between the two objects are highlighted in addition to the role. If the role is assigned in an assigned Function allocation diagram (FAD) and is not visible in the current model, only the connected function is highlighted.

- EPC
- EPC (column display)
- EPC (horizontal table display)
- EPC (instance)
- EPC (material flow)
- EPC (row display)
- EPC (table display)
- BPMN collaboration diagram (BPMN 2.0)
- BPMN process diagram (BPMN 2.0)
- Enterprise BPMN collaboration diagram
- Enterprise BPMN process diagram

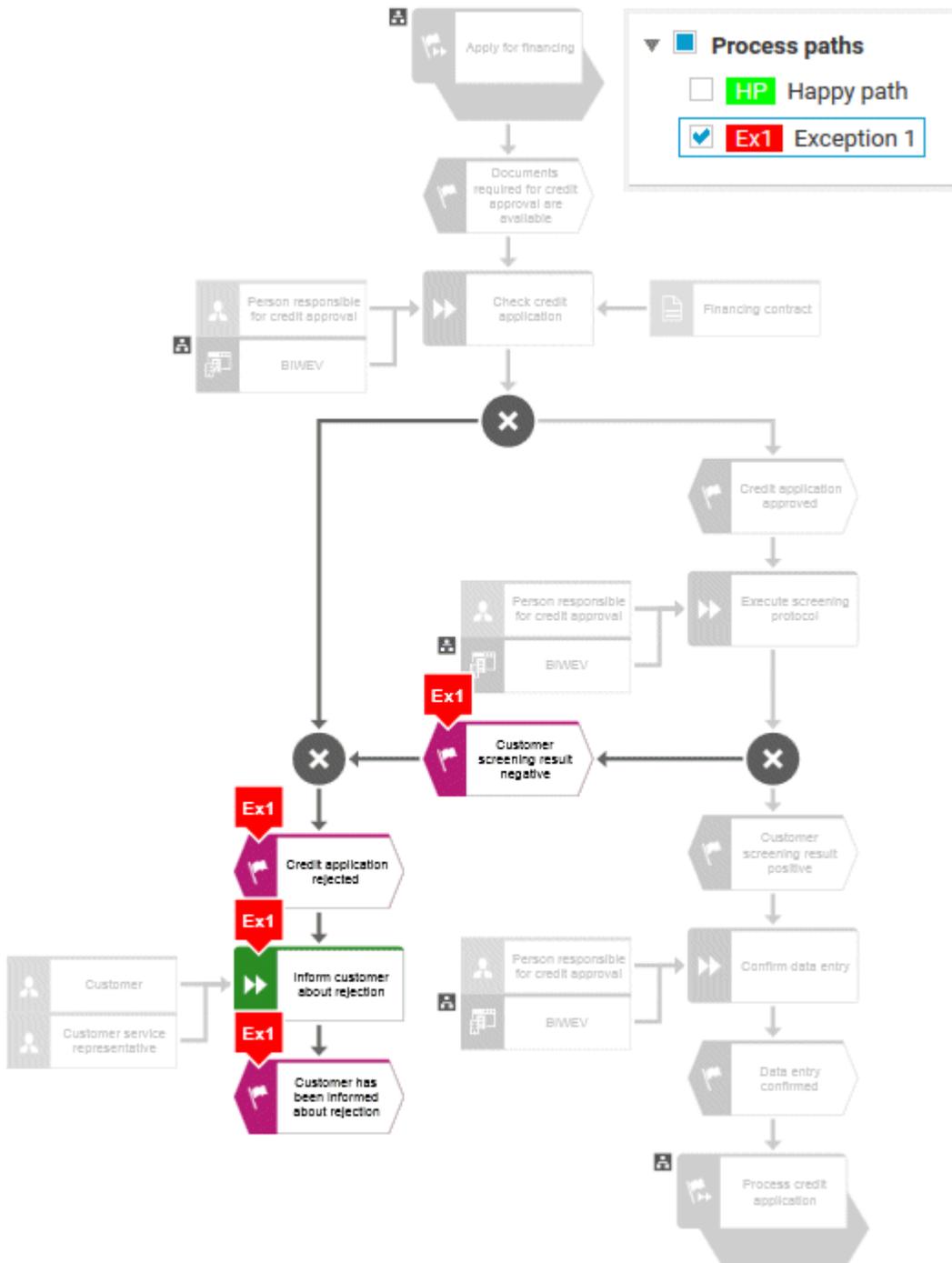
3.2.9.9.8.5 How is the happy path highlighted?

The happy path is highlighted.



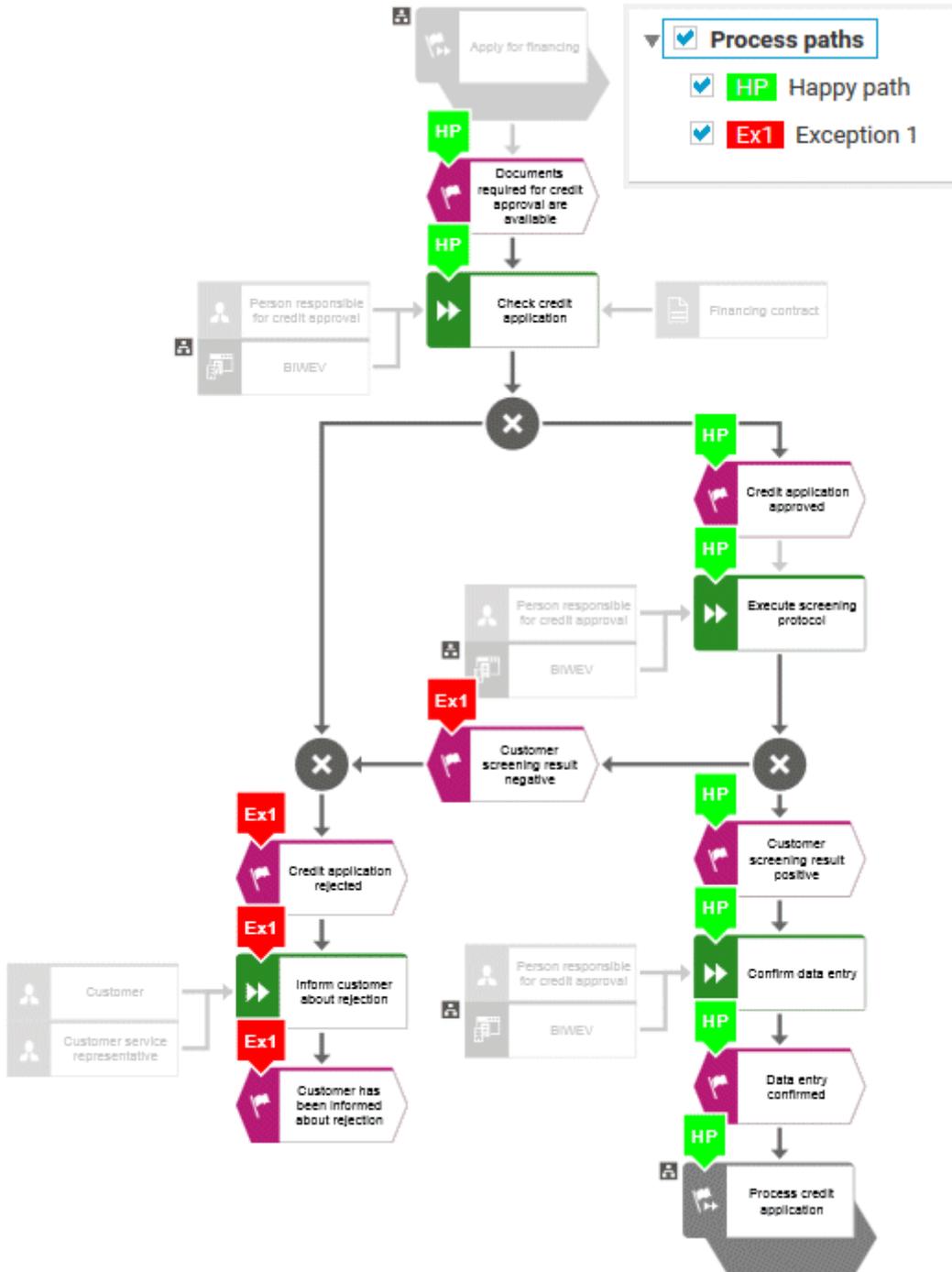
3.2.9.9.8.6 How is the exception path highlighted?

The exception path is highlighted.



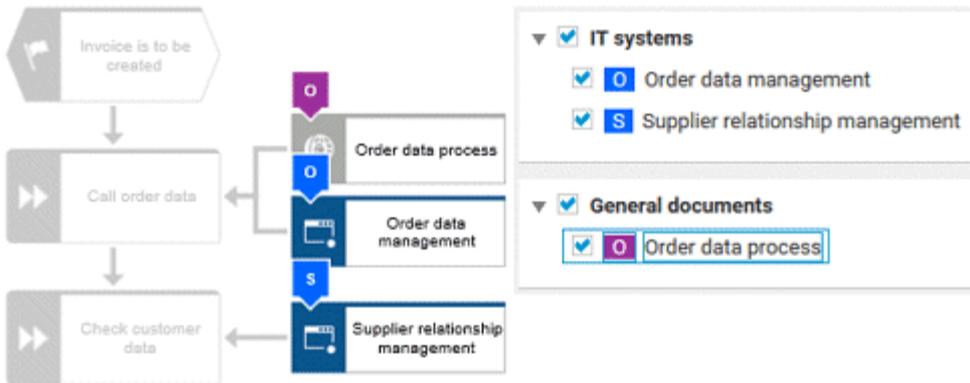
3.2.9.9.8.7 How are the happy path and exception path highlighted?

The happy path and the exception path are highlighted.



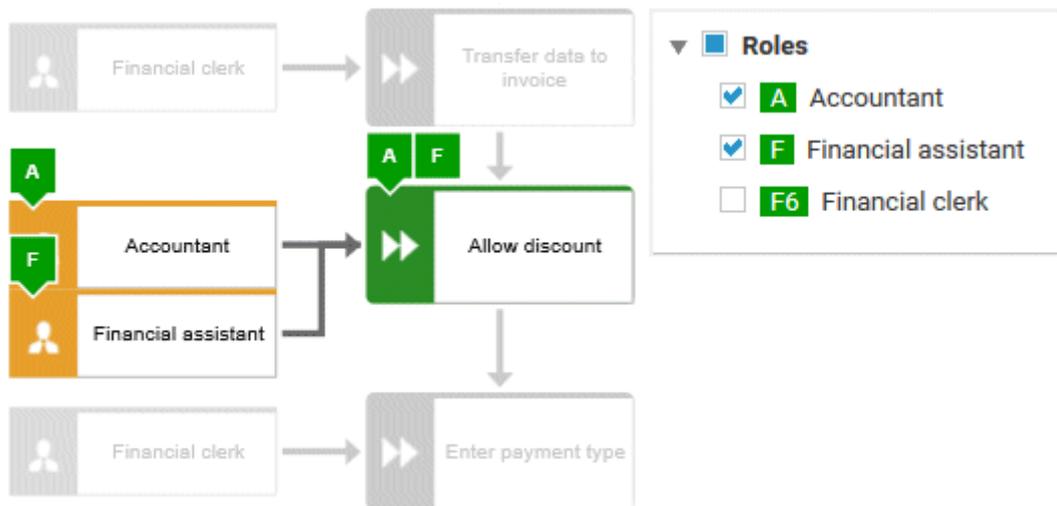
3.2.9.9.8.8 How are IT systems and general documents highlighted?

IT systems (**Application system** and **Application system type** objects) and general documents (**Information carrier** objects) are highlighted.



3.2.9.9.8.9 How are roles and functions highlighted?

Roles and functions are highlighted.



3.2.9.10 Compare model versions

If model comparison is enabled in your configuration set, you can compare model versions of one database or of models versions stored in different databases.

3.2.9.10.1 Compare model versions

You can compare model versions.

Prerequisite

The database in use is versionable and contains versions.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
3. Navigate to the group where the relevant model is stored.
4. Select the model. The fact sheets (page 1144) are shown.
5. Click the **Diagram** fact sheet.
6. Click  **Model comparison** in the button bar (page 69). The Model comparison bar is opened. Differences found are listed in the **Model comparison** bar and displayed directly in the model.

You have compared a model with its version. You can change the criteria (page 242) to be compared.

Version models

3.2.9.10.2 Control the model comparison for versions

You can specify which differences are listed in the **Model comparison** bar and displayed in the model.

Prerequisite

You have performed a model comparison (page 239).

Procedure

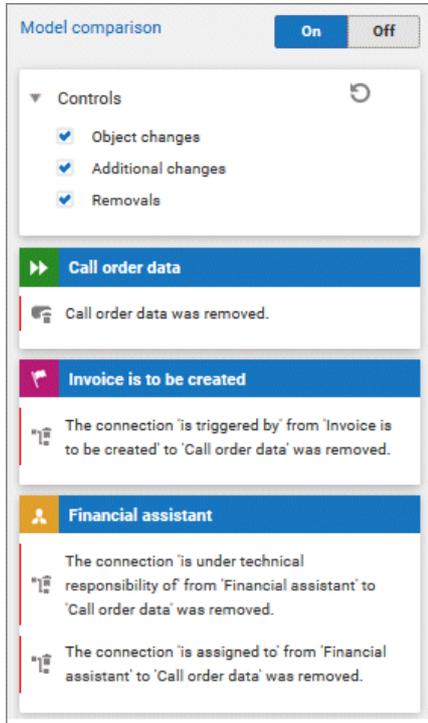
1. Enable or disable the comparison of individual criteria (page 242) in the **Controls** area. The model display and the list of differences are updated immediately.
2. If you want to use the default setting again, click  **Restore defaults** in the **Controls** area.
3. Click the  **Controls** arrow to collapse the area to get more space for the list of differences..
4. Click a specific object in the comparison model (page 1139) to display its differences to the visible area of the list of differences.
5. Scroll to a difference in the list of differences and click the object. The object with its differences is highlighted and in the model the object is selected and moved to the visible area.

You have used the **Model comparison** to display specific differences.

Version models

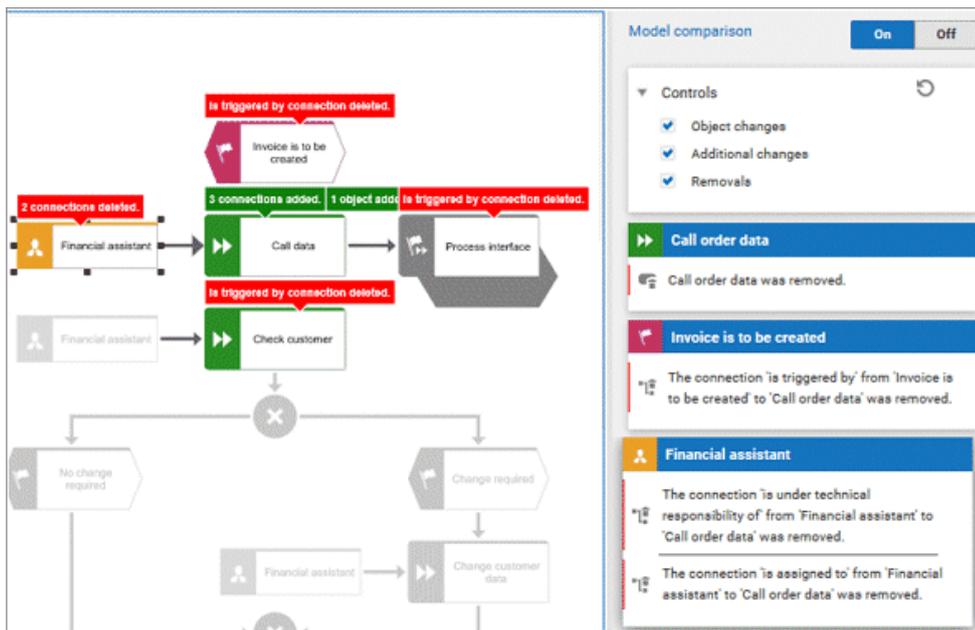
3.2.9.10.3 How are differences in highlighted in the differences list?

The differences displayed (page 242) in the **Model comparison** bar depend on the selected controls and the selected item.



The differences are described.

Select the object whose differences you want to see in detail.



The difference description in the differences bar is moved to the left to highlighting it, in this example, **Financial assistant**.

3.2.9.10.4 Which differences can be found for versions?

Depending the configuration used, you can display a comparison of the following criteria for the compared models.

OBJECT CHANGES

Displays which objects have been changed in the original model.

Examples for object changes:

- The names of objects have been changed.
- The attributes of objects have been added or deleted.

ADDITIONAL CHANGES

Displays additional differences between the original model and the comparison model.

Examples for additional changes:

- Objects have been added.
- Connections have been added.

REMOVALS

Displays items removed from the original model in the list of differences.

3.2.9.10.5 What kind of model comparison possibilities are there?

With an **ARIS Connect Viewer** license (page 21), you can compare model versions (page 239) within a published database or between published databases. Model versions are compared in the **Diagram** fact sheet (page 79) of the Portal.

With an **ARIS Connect Designer** license (page 21), you can also compare model variants, that is, the master model with the model variant, or the model variant with the master model.

Model variants are compared using the **Variants** tab of the  **Repository**.

3.2.9.11 Table fact sheet

The following describes the use of table fact sheet that are available for process models, such as EPC and BPMN processes.

3.2.9.11.1 Open a table

You can open a table for a process model to list the functions and their roles.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. Activate the **Table** fact sheet (page 243).

You opened a table. You can sort the functions (page 245) or open the matrix (page 244).

3.2.9.11.2 Add a column to a table

You can add columns to a table. As long as you navigate in the fact sheets (page 1144) view, added columns are displayed. All added columns will be removed automatically when you leave the fact sheet view, for example, when you select another model in the group structure.

Procedure

1. Activate the **Table** fact sheet (page 243).
2. Click  **Add column**. The available columns are shown.
3. Click the column name of the column you want to add.

You added a column.

3.2.9.11.3 Remove a column from a table

You can delete columns from a table that you have added before. As long as you navigate in the fact sheets (page 1144) view, added columns are displayed. All added columns will be removed automatically when you leave the fact sheet view, for example, when you select another model in the group structure.

Procedure

1. Activate the **Table** fact sheet (page 243).
2. Move the mouse cursor over the column header of the column you want to remove.
3. Click **✕ Remove** after the column title.

The column is removed without confirmation prompt.

3.2.9.11.4 Open the matrix of a table

You can open a matrix based on the **Table (page 77)** fact sheet to clearly display the interrelations between the individual roles and functions.

Procedure

1. Activate the **Table** fact sheet (page 243).
2. Click  **Matrix**. The interrelations between the individual roles and functions are transparently displayed.
3. Click  **Add column** to extend the table. You can delete added columns at any time.

You have opened a matrix based on the **Table** fact sheet.

3.2.9.11.5 Add a column to a matrix

You can add columns to a matrix. As long as you navigate in the fact sheets (page 1144) view, added columns are displayed. All added columns will be removed automatically when you leave the fact sheet view, for example, when you select another model in the group structure.

Procedure

1. Activate the **Table** fact sheet (page 243).
2. Click  **Matrix**.
3. Click  **Add column**. The available columns are shown.
4. Click the column name of the column you want to add.

You added a column.

3.2.9.11.6 Remove a column from a matrix

You can delete columns from a matrix that you have added before. As long as you navigate in the fact sheets (page 1144) view, added columns are displayed. All added columns will be removed automatically when you leave the fact sheet view, for example, when you select another model in the group structure.

Procedure

1. Activate the **Table** fact sheet (page 243).
2. Click  **Matrix**.
3. Move the mouse cursor over the column header of the column you want to remove.
4. Click  **Remove** after the column title.

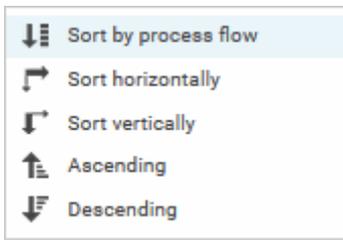
The column is removed without confirmation prompt.

3.2.9.11.7 Sort functions of fact sheets

You can sort the functions of fact sheets (page 1144), for example, of the Table (page 77) or RACI (page 78) fact sheet.

Procedure

1. Activate the **Table** fact sheet (page 243).
2. Click the column title  **Functions**. The sort options are displayed.



3. Click the relevant sort option. The functions are resorted.

You have re-sorted the functions.

3.2.9.12 Use matrix models

You can display a matrix model in ARIS Connect.

In a model of the **Matrix model** type, you can represent object connections. You can use existing objects or create new objects. You can conveniently select objects from the entire database. You can view all existing connections.

AREAS OF USE

- Assessment of the degree to which markets are opened up, displayed in a table (business segment matrix)
- Representation of technical and disciplinary structures and their dependencies
- Representation of hierarchies
- Quick and clear management of connections between objects
- Specify connections easily and efficiently, and create models later using model generation

3.2.9.12.1 Display a matrix model in ARIS Connect

You can display a matrix model in ARIS Connect.

Prerequisite

You have at least the **ARIS Connect Viewer** license privilege.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Click **Groups**.
3. Navigate to the group containing the relevant model.
4. Click the name of the matrix model.
5. Click the **Matrix** fact sheet to display the matrix model.

The matrix model is displayed.

3.2.9.12.2 Show properties

In the **Matrix** fact sheet (page 80), you can display the properties of the model or of model items.

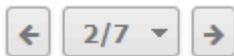
Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the matrix model. The fact sheets (page 1144) are shown.
4. Activate the **Matrix** fact sheet.
5. Click **i Properties**. The **Property** bar opens and the **Attributes** tab is activated.

Attributes More ▾	
Attribute	Attribute value
Name	Organizational chart
Time of generation	Jul 17, 2018 11:17:17 AM
Creator	w.becker
Status	Released
Last change	Sep 29, 2020 5:48:52 PM
Type	Organizational chart
Last user	system
Person responsible	peter.process

If you have selected an object, the attributes for that object are displayed. Click **More** to view related objects or occurrences. The model properties are shown if no object is selected.

6. Click **More > Relationships** to show the related object of the selected object. The types of the connections and the names of the related objects are shown.
7. Click **More > Related models** to show the related models of the selected object. The occurrences of the selected object in the current and other models are displayed. If a model contains more than one occurrence of the selected object, you can select them directly or using arrows to the left or to the right.



You have used the **Property** bar.

3.2.9.12.3 Display use of connections for a matrix model in ARIS Connect

You can obtain information about the connections used in a matrix model.

Procedure

1. Open a matrix model in ARIS Connect. (page 246)
2. Place the mouse cursor over a connection cell.

The relevant connection (page 249) used in the matrix model is displayed as a tooltip. If the two object symbols are connected with more than one connection, a list of connections is displayed.

3.2.9.12.4 Show/Hide hierarchies in a matrix model in ARIS Connect

You can show or hide hierarchies in a matrix model.

Procedure

1. Open a matrix model in ARIS Connect. (page 246)
2. Click the arrow next to the object symbol, for example the ► **Right arrow**, to expand or collapse the hierarchy. The hierarchy is shown or hidden accordingly.

The hierarchy is shown or hidden.

Location Organization		Europe	Frankfurt	Bratislava	St. Petersburg	America	Asia
		▶	▶	▶	▶	▶	▶
▶ UMG America							
▶ UMG Asia							
▶ UMG Europe		✓	✓	✓			

3.2.9.12.5 How are connections displayed?

In general, check marks indicate existing connections between objects in the matrix model. An asterisk indicates that there is more than one connection between two objects. The following display options are also available:

INDICATION OF THE DIRECTION OF THE CONNECTION

In the matrix model, a small arrow indicates the direction of a connection.

	Indicates the direction from an icon placed in the column header to an icon placed in the row header.
	Indicates the direction from an icon placed in the row header to an icon placed in the column header.

INDICATION OF ABBREVIATIONS

If an abbreviation is defined, this abbreviation is displayed instead of the check mark.

3.2.9.12.6 How to control the matrix using the keyboard

You can control the matrix using the keyboard:

Shortcut	Selection	Action
+ key	Matrix	Zooms in the matrix.
- key	Matrix	Zooms out the matrix.
0	Matrix	Set zoom to 100 %
Home	Matrix	Scrolls to first cell of a column but does not change the selection
End	Matrix	Scrolls to last cell of a column but does not change the selection
Page up	Matrix	Scrolls page-wise up but does not change the selection
Page down	Matrix	Scrolls page-wise down but does not change the selection
Shift + Page up	Matrix	Scrolls page wise-left but does not change the selection
Shift + Page down	Matrix	Scrolls page-wise right but does not change the selection
Arrow keys	Matrix	Moves to the next/previous symbol in arrow direction.
Enter	Cell	Collapses or expands hierarchically grouped objects
Space	Cell	Collapses or expands hierarchically grouped objects
Backspace	Cell	Deletes the selected cells.

3.2.10 Use documents

ARIS document storage enables you to propose documents or to submit a change request for a document. You can use further functionality in the repository.

3.2.10.1 Propose a document to a model

You can submit new documents on ARIS Connect content that is evaluated by the person responsible for the content and that may be linked to the contents.

Prerequisite

- You have at least the **ARIS Connect Viewer** license.
- The **Person responsible** document attribute must be specified for the relevant document with a user name that exists in user management.
- The person responsible must have the **ARIS Connect Viewer** or **ARIS Connect Designer** license.

Procedure

1. Open a model to edit or create a new model.
2. Click  **Propose document**. The **Submit new document** dialog opens.
3. Select the documents you want to submit.
4. Select the target folder.
5. Click **OK**.
6. Click **Send**.

The person responsible for the contents receives an e-mail and a task is generated. If the person responsible accepts the task, he can display the properties of the document. The properties contain a link and he can download the relevant document to check it. The person responsible can accept or reject the document and complete the task. He can now add the document to the model or object.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.10.2 Submit a change request for a document

You can send change requests for documents to the document manager for documents in ARIS Connect.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Open (page 171) the model that contains the document you want to submit a change request for.
4. Click **Diagram** if not enabled yet.
5. Click  **Edit** >  **Edit model**.
6. Click  **Properties**.
7. Activate the **Documents** tab.
8. Select the document for which you want to submit a change request.
9. Click  **Submit change request**. The corresponding dialog opens.
10. Enter a title and a description for your request.
11. Select the priority with which the request is to be handled.
12. Click **Send**.

You will automatically receive a confirmation notification.

The document manager receives the change request by e-mail with a link to the relevant document and a link to edit the associated task.

Once the document manager has processed the request, the applicant receives a message by e-mail.

If the change request is accepted, the person who is to implement the changes receives an e-mail including a link to the associated task in  **My tasks** and the information added. After processing and approval - or rejection -, the applicant receives an e-mail including the information that the change requests have been implemented - or rejected.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.10.3 What is ARIS document storage?

ARIS document storage is a repository where documents can be stored temporarily or permanently to use them, for example, to specify objects and models and as a basis for displaying dashboards.

Access restriction on folder level is possible in ARIS document storage.

The documents saved there can be used during runtime of an executable process, for example, attached to an e-mail.

All file formats are allowed for documents.

Temporary documents are deleted automatically after the executable process is terminated.

Permanent documents are kept until they are deleted explicitly.

You can work with documents in the repository or in the portal (page 251).

3.2.11 Contribute as a viewer

You can change values of specific model types and objects (page 263), create new or reuse existing items (page 255), as well as delete items (page 257) in the  **Portal**.

Please note that the description is based on the sample configuration supplied with the **Classic** view of ARIS Connect. In your installation other items may have been configured to be editable and the editing options for items may be different.

3.2.11.1 Change values of items

You can change values of items (page 263) in the  **Portal**.

Prerequisites

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- The **Workspace** database content was published for versionable databases.
- You have at least the **Write** access privilege for the items you want to edit.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Click  **Edit** >  **Contribute**. Edit mode (page 262) is enabled.
5. Navigate (page 94) to the required model based on a model type that you, as a contributor, can change (page 263).
6. On the **Overview** fact sheet, select the item you want to edit.
7. Change the relevant attribute. Depending on the attribute, various editing options (page 266) are available.
8. Confirm your changes.

Your changes are saved.

Text formatting is ignored and cannot be assigned. If you are expected to enter numbers, the field is colored red (page 266) if you do not enter a numerical value.

3.2.11.2 Create or reuse items in a table

In the portal, you can create new or reuse existing items.

The following description refers to items in a table (page 266). It uses the example of an object of the **Risk** type.

Prerequisites

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- The **Workspace** database content was published for versionable databases.
- You have at least the **Write** access privilege for the items you want to edit.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Click  **Edit** >  **Contribute**. Edit mode (page 262) is enabled.
5. Navigate (page 94) to the required model based on a model type that you, as a contributor, can change (page 263).
6. On the **Overview** fact sheet, select the item you want to edit.
7. Click the object to which you want to assign additional roles. To add objects of the **Role** type to the **Groups** table, you can select a risk from the sample configuration supplied.
8. In the **Activities** area, click the  **plus sign**. The input box opens.
9. Enter the name of the role.
If a role with the same name already exists, it is offered to you for selection. In addition, this name is listed with **(new item)** added to it.
10. To create a new role and assign the risk to it, click the entry with **(new item)** added to it. To reuse an existing role and assign the risk to it, click the other entry.
11. Click  **Change**. A completion message is displayed.

The new role was created (page 271) and added to the list, or the existing role will be reused. If you selected a role to which the risk was already assigned, no new entry is added to the table.

3.2.11.3 Create or reuse items in a list

In the  **Portal**, you can create new or reuse existing items.

The following description refers to items in a list (page 266). It uses the example of an application system type diagram.

Please note that new items you may have created are added to the diagram. At the same time, a new layout is automatically generated for the diagram. As a consequence, the arrangement of items in the diagram may differ from the original arrangement. If required, a user with the **ARIS Connect Designer** license privilege can adapt the layout of the diagram in ARIS Connect Designer.

Prerequisites

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- The **Workspace** database content was published for versionable databases.
- You have at least the **Write** access privilege for the items you want to edit.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Click  **Edit** >  **Contribute**. Edit mode (page 262) is enabled.
5. Navigate (page 94) to the required diagram and select it.
To add objects of the **Application system type** type to the **Subordinate IT systems** area, you can select an application system type diagram from the sample configuration supplied, for example.
6. Activate the **Overview** fact sheet if it is not activated yet.
7. Click the **Subordinate IT systems** edit box. Existing objects are displayed one next to the other and the option **Insert item** is shown.
8. Enter the name of the required application system type.
If an application system type with the same name already exists, it is offered to you for selection. In addition, this name is listed with **(new item)** added to it.
9. To create a new application system, click the entry with **(new item)** added to it.
To reuse an existing application system type, click the other entry.
10. Enter other names for additional application system types.
11. Click  **Change**. A confirmation prompt is shown listing all new application system types for confirmation.
12. Click **OK**.

New application system types (page 271) are added to the list, or existing application system types will be reused. Occurrences of new application system types are placed in the diagram window.

3.2.11.4 Delete items from tables

In the portal, you can delete items from tables.

The following description refers to items in a table (page 266). It uses the example of an object of the **Risk** type.

Prerequisites

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- The **Workspace** database content was published for versionable databases.
- You have at least the **Delete** access privilege for the items you want to delete.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Click  **Edit** >  **Contribute**. Edit mode (page 262) is enabled.
5. Navigate (page 94) to the required diagram and select it.
6. Click the object whose associated item you want to delete. To delete objects of the **Role** type from the **Groups** table, you can select a risk from the sample configuration supplied.
7. In the **Groups** area, click  **Delete** for the role from which you want to remove the risk assignment. A confirmation prompt is shown.
8. Click **OK** to confirm the prompt if you really want to delete the assignment to the role.

The assignment to the role is then deleted. If the assignment was represented as a connection in diagrams, this connection will be deleted from these diagrams. Definitions are retained in the database.

3.2.11.5 Delete items from lists

In the  **Portal**, you can delete items from lists and thus from diagrams.

The following description refers to items in a list (page 266). It uses the example of an application system type diagram.

Prerequisites

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- The **Workspace** database content was published for versionable databases.
- You have at least the **Delete** access privilege for the items you want to delete.

Warning

Please note that the deletion of items affects the layout of diagrams. Due to the delete operation, a new layout is automatically generated for the current diagram. As a consequence, the arrangement of items in the diagram may differ from the original arrangement. If required, a user with the **ARIS Connect Designer** license privilege can adapt the layout of the diagram in ARIS Connect Designer.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Click  **Edit** >  **Contribute**. Edit mode (page 262) is enabled.
5. Navigate (page 94) to the required diagram and select it. To delete objects of the **Application system type** type from the **Subordinate IT systems** area, you can select an application system type diagram from the sample configuration supplied, for example.
6. Activate the **Overview** fact sheet if it is not activated yet.
7. Click the edit box in the **Subordinate IT systems** area. Existing objects are displayed one next to the other with a delete sign (x) added to them.
8. Click the delete sign for the application system types you want to delete from the diagram.
9. Click  **Change**. A confirmation prompt is displayed listing all application system types to be deleted.
10. Click **OK**.

The application system types are deleted from the list, and also from the application system type diagram together with their connections. Definitions are retained in the database.

3.2.11.6 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.11.6.1 What is ARIS Viewer Contribution?

If you have both the **ARIS Connect Viewer** and **Contribution** license privilege, you are able to change items and values for the following predefined items in the  **Portal**. 'Predefined' means that these items and their values were configured to be editable in the program by default.

This means that not all items of the following model and object types can be changed. Only those can be changed that were designed to be editable by the underlying concept and were set up accordingly by the configuration.

Please note that this is a sample configuration, which means that other items may have been configured to be editable in your installation.

MODEL TYPES

- Application system type diagram
- BPMN collaboration diagram (BPMN 2.0)
- BPMN process diagram (BPMN 2.0)
- Business controls diagram
- Enterprise BPMN collaboration diagram
- Enterprise BPMN process diagram
- EPC
- EPC (material flow)
- EPC (column display)
- EPC (table display)
- EPC (horizontal table display)
- EPC (row display)
- Function allocation diagram
- Organizational chart
- Process schedule
- Risk diagram
- KPI allocation diagram

OBJECT TYPES

- Application system
- Application system class
- Application system type
- Cluster/Data model
- Entity type
- Event
- Technical term
- Function
- Information carrier
- KPI instance
- Class
- Lane
- List
- Message
- Organizational unit
- Participant
- Person
- Risk
- Risk category
- Role
- Location
- Position
- System organizational unit
- System organizational unit type
- Test definition

ATTRIBUTES

ARIS Viewer Contribution enables you to edit attributes (page 266) that are based on the following base types:

- Boolean
- Value
- Floating point number domain
- Integer domain
- Floating point number
- Integer
- Date
- One-liner
- Multi-line text
- Link/File

Text formatting is ignored and cannot be assigned. If you are expected to enter numbers, the field is colored red (page 266) if you do not enter a numerical value.

Please note that combined attributes and Binary Large Object (BLOB) attributes are not supported.

3.2.11.6.2 Requirements for Contribution

For a user to be able to work with ARIS Viewer Contribution the following requirements must be met:

- The user has the **ARIS Connect Viewer** and **Contribution** license privileges.
- The **Workspace** database content was published for versionable databases.
- The user has at least the **Write** access privilege for the group content of the database to be edited. Deleting items requires the **Delete** access privilege.
- The administrator has activated the Classic view (page 67), Default view (page 68), or a view derived from these views.

3.2.11.6.3 How to identify whether the edit mode is active

The edit mode is displayed in the header.

If it is not active:

For users with **Contribution** license, only **Edit** is displayed:

 **Edit**

Clicking  **Edit** enables the edit mode.

For users with **ARIS Connect Designer** license, the **Edit** symbol is extended by a down arrow:

 **Edit** ▾

Clicking  **Edit** >  **Contribute** enables the edit mode.

If the edit mode is active, this is shown in the header:

Edit mode  **Exit edit mode**

Clicking  **Exit edit mode** disables the edit mode.

The availability of various edit boxes (page 266) is another clear indication that the edit mode is active.

3.2.11.6.4 Which items are you allowed to change using the Contribution privilege?

If you have both the **ARIS Connect Viewer** and **Contribution** license privilege, you are able to change items and values for the following predefined items in the  **Portal**. 'Predefined' means that these items and their values were configured to be editable in the program by default.

This means that not all items of the following model and object types can be changed. Only those can be changed that were designed to be editable by the underlying concept and were set up accordingly by the configuration.

Please note that this is a sample configuration, which means that other items may have been configured to be editable in your installation.

MODEL TYPES

- Application system type diagram
- BPMN collaboration diagram (BPMN 2.0)
- BPMN process diagram (BPMN 2.0)
- Business controls diagram
- Enterprise BPMN collaboration diagram
- Enterprise BPMN process diagram
- EPC
- EPC (material flow)
- EPC (column display)
- EPC (table display)
- EPC (horizontal table display)
- EPC (row display)
- Function allocation diagram
- Organizational chart
- Process schedule
- Risk diagram
- KPI allocation diagram

OBJECT TYPES

- Application system
- Application system class
- Application system type
- Cluster/Data model
- Entity type
- Event
- Technical term
- Function
- Information carrier
- KPI instance
- Class
- Lane
- List
- Message
- Organizational unit
- Participant
- Person
- Risk
- Risk category
- Role
- Location
- Position
- System organizational unit
- System organizational unit type
- Test definition

3.2.11.6.5 Which attributes are you able to edit?

ARIS Viewer Contribution enables you to edit attributes (page 266) that are based on the following base types:

- Boolean
- Value
- Floating point number domain
- Integer domain
- Floating point number
- Integer
- Date
- One-liner
- Multi-line text
- Link/File

Text formatting is ignored and cannot be assigned. If you are expected to enter numbers, the field is colored red (page 266) if you do not enter a numerical value.

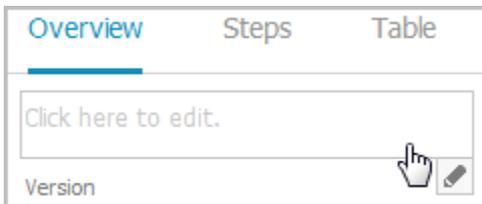
Please note that combined attributes and Binary Large Object (BLOB) attributes are not supported.

3.2.11.6.6 Which editing options are available?

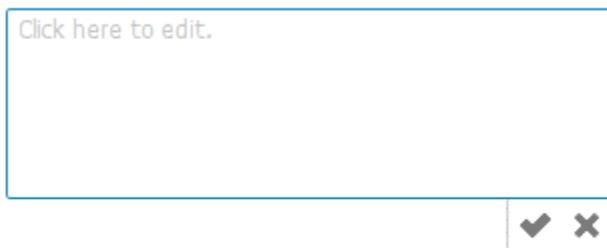
Depending on the attribute (page 265), various editing options are available.

EDIT BOX

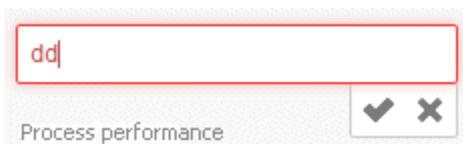
If the edit mode is active (page 262), moving the mouse pointer over an editable property will open the edit box. If no value has been specified yet (page 254), the hint **Click here to edit.** is displayed:



Clicking in the field will open it for editing:



The field indicates whether or not the input corresponds to the type expected. If an entry differs from the type expected, the field is displayed with a red border:



If the entry is correct, the field is displayed without a special characteristic:



SELECT USER(S)

If you want to select a user, you will be offered a list of the users logged in to the system for you to select in a dialog, for example, for the **Responsible** attribute:

User name	Name
<input type="checkbox"/> cljo	Johnson Clifford
<input type="checkbox"/> conjwo	Wojciech John
<input type="checkbox"/> erjo	Erlendson John-Michael
<input type="checkbox"/> jfg	Grimmette John
<input type="checkbox"/> jjohnson	Johnson Joni
<input type="checkbox"/> jku	Kucinich John
<input type="checkbox"/> jobr	Bradford John
<input type="checkbox"/> jobu	Burgon John
<input type="checkbox"/> john mansour	John Mansour

DATE INPUT

You can enter dates using the calendar. It opens when you click in the edit box:

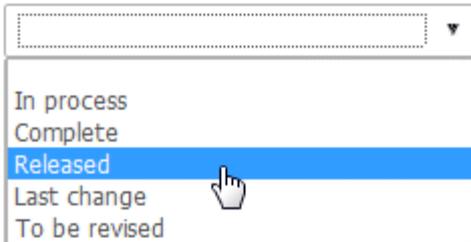
Mon	Tue	Wed	Thu	Fri	Sat	Sun
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DROP-DOWN LIST BOX

For attributes that require the entry of specific values or of Boolean attributes, you can select the appropriate entry, for example, for the **Model status** attribute:

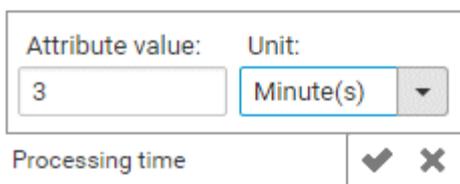
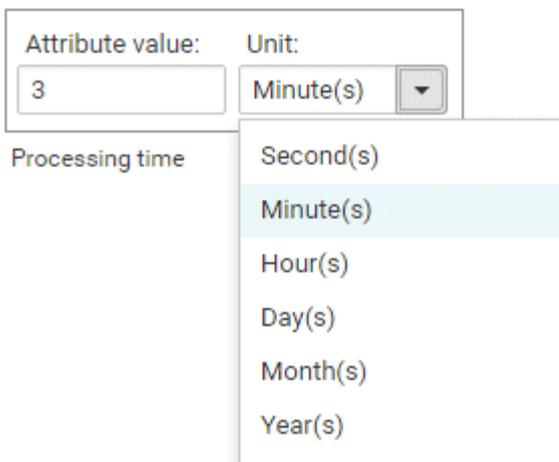


Clicking in the field will offer possible values for selection:



COMBO BOX

You can use a combo box to edit composite attributes. This makes it possible, for example, to assign values to a unit.

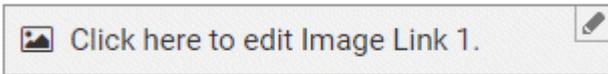


LINK ATTRIBUTE BOXES

You can use link attribute boxes to link images, videos, documents, and external pages to the current item.

Click here to edit Image Title 1.

Click here to edit Image Description 1.



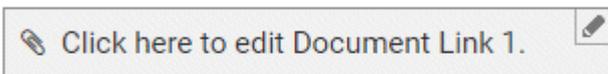
Click here to edit Video Title 1.

Click here to edit Video Description 1.



Click here to edit Document Title 1.

Click here to edit Document Description 1.



Click here to edit External page Title 1.

Click here to edit External page Description 1.



If you click in the title, description, or link row of a link attribute, the appropriate edit field opens and you can enter the relevant details.

CREATE AND REUSE OBJECTS

TABLE

Existing objects are listed in a table. Additional information is displayed in the individual rows:

Name	Role
Risk manager group Finance	Risk manager_3
Risk owner group Finance	Risk owner_3
Risk reviewer group Finance	Risk reviewer_3

You can add individual objects to the table (page 255) or remove objects from the table (page 257).

LIST

Existing objects are displayed in a list:

Collaboration system	Loan processing system
Reporting system	Revision data information system

You can create new or reuse existing objects. It is possible to add multiple items at once. Click in the field and enter the names for the required items. Once your input is complete, click ✓

Change:

Subordinate IT systems	
Revision data information system x	Loan
Loan (new item)	✓
Loan processing system	x

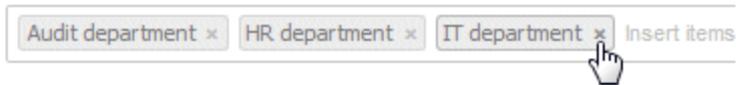
DELETE OBJECTS

You can delete objects from tables (page 257) and lists (page 258):

TABLE

▲ Name	Role	
Risk manager group Finance	Risk manager_3	✕

LIST



3.2.11.6.7 Where to save new items

When a new item is created by a user with the **Contribution** license privilege, its definition is saved to the **Contribution** subgroup of the main group.

Contribution is further divided into other groups. For example, functions are saved to **Contribution/Activities**, while organizational units will be stored under **Contribution/Departments**.

Any group that does not yet exist in the database is automatically created.

3.2.12 Use RACI matrix

Using the RACI matrix you can represent and analyze responsibilities that exist within a process. RACI is short for **R**esponsible, **A**ccountable, **C**onsulted, and **I**nformed.

The matrix shows which organizational unit participates in activities of a process and in what manner:

- **Responsible** indicates the person who assumes execution responsibility. It shows who is responsible for performing an activity and who actually performs it, but also who assumes the disciplinary responsibility.
- **Accountable** indicates the person who is ultimately answerable for the correct and thorough completion of a task. This may be the person in charge of managing the costs, that is, the person assuming project budget responsibility. The **decides on** and **accepts** connections are evaluated to identify this responsibility.
- **Consulted** indicates the person who has a consulting role. This organizational unit - typically a group of subject matter experts - is asked for advice prior to a final decision being made or a final action being taken.
- **Informed** indicates the person who must be informed. It indicates who is kept up to date on the progress or completion of a task.

If you use the corresponding objects and connections in the process models, these can be evaluated by means of the RACI matrix, which is output in ARIS Connect.

3.2.12.1 Create process model for RACI matrix

You can model processes that can be evaluated as a RACI matrix.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Create a process model (page 274).
2. Use objects (page 274) and connections that can be evaluated by the RACI matrix.
3. Save the process.

You have modeled a process for which the relevant responsibilities can be represented using a RACI matrix (page 273).

3.2.12.2 Display RACI matrix

A RACI matrix displays the activities of a process and the associated organizational responsibilities.

Procedure

1. Click  **Portal** if it is not activated yet.
2. If your administrator has published multiple databases, select the required database by clicking the current database name next to the  database symbol and then clicking the name of the relevant database.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Show the  **Navigation** bar if it is not visible yet.
5. In the  **Navigation**, open the group in which the required process (page 274) is stored.
6. Click the name of the process for which you want to display the RACI matrix. The **RACI** fact sheet is shown.
7. Click **RACI**.

The RACI matrix is displayed for the process model you have selected. The functions of the process are arranged in rows, the organizational elements are arranged in columns. In the portal, process participations are displayed by default as a RACI matrix in Classic view (page 38) and Default view (page 52). You can configure the representation as RASCI matrix. Please contact your local Software AG sales organization (<http://www.softwareag.com>).

You can use the RA(S)CI - Output organizational participations in processes (page 197) report to output the RACI matrix in Microsoft® Excel format from an open process model. By default, this report does not return any **Supportive** information. To output this information, your script administrator must set the **g_bRASCI** variable to **true**.

3.2.12.3 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.12.3.1 Which diagrams can be used for a RACI matrix?

A RACI matrix can be based on the following diagrams:

- EPC (API name **MT_EEPC**)
- EPC (column display) (API name **MT_EEPC_COLUMN**)
- EPC (material flow) (API name **MT_EEPC_MAT**)
- EPC (row display) (API name **MT_EEPC_ROW**)
- EPC (table display) (API name **MT_EEPC_TAB**)
- EPC (horizontal table display) (API name **MT_EEPC_TAB_HORIZONTAL**)
- BPMN collaboration diagram (BPMN 2.0) - (API name **MT_BPMN_COLLABORATION_DIAGRAM**)
- BPMN process diagram (BPMN 2.0) (API name **MT_BPMN_PROCESS_DIAGRAM**)
- Enterprise BPMN collaboration diagram (API name **MT_ENTERPRISE_BPMN_COLLABORATION**)
- Enterprise BPMN process diagram (API name **MT_ENTERPRISE_BPMN_PROCESS**)
- Function allocation diagram (API name **MT_FUNC_ALLOC_DGM**). This model must be assigned to a function.
- Value-added chain diagram (API name **MT_VAL_ADD_CHN_DGM**)

3.2.12.3.2 Which objects can be used for a RACI matrix?

The following objects are evaluated by a RACI matrix:

- Function (API name **OT_FUNC**)
- Group (API name **OT_GRP**)
- Organizational unit (API name **OT_ORG_UNIT**)
- Organizational unit type (API name **OT_ORG_UNIT_TYPE**)
- Person (API name **OT_PERS**)
- Role (API name **OT_PERS_TYPE**)
- Position (API name **OT_POS**)

3.2.12.3.3 Which connections can be used for a RACI matrix?

The following connections between organizational elements and functions are evaluated by the RACI matrix:

RESPONSIBLE (R)

- carries out (API name: CT_EXEC_1)
- carries out (API name: CT_EXEC_2)

ACCOUNTABLE (A)

- decides on (API name: CT_DECD_ON)
- decides on (API name: CT_DECID_ON)
- accepts (API name: CT_AGREES)

CONSULTED (C)

- is technically responsible for (API name CT_IS_TECH_RESP_1)
- is technically responsible for (API name CT_IS_TECH_RESP_3)
- has consulting role in (API name CT_HAS_CONSLT_ROLE_IN_1)
- has consulting role in (API name CT_HAS_CONSLT_ROLE_IN_2)

INFORMED (I)

- must be informed about (API name: CT_MUST_BE_INFO_AB_T_1)
- must be informed about (API name: CT_MUST_BE_INFO_AB_T_2)
- must be informed on cancellation (API name: CT_MUST_BE_INFO_ON_CNC_1)
- must be informed on cancellation (API name: CT_MUST_BE_INFO_ON_CNC_2)

If RA(S)CI was set, the following connections are additionally available:

SUPPORTIVE (S)

- contributes to (API name CT_CONTR_TO_1)
- contributes to (API name CT_CONTR_TO_2)

3.2.13 Use Mini workflows

Mini workflows are some work steps that have to be processed from different people. The flow of the work steps is based on the information provided by the content.

If, for example, a change request for a model is submitted, the request is sent via e-mail to the person who is extracted from the **Person responsible** attribute of the relevant model. In  **My tasks**, the request is entered as task. There, the Person responsible can assess if the change should be made.

3.2.13.1 Edit models

You can edit models in ARIS Connect.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the name of the model you want to edit.
6. Click  **Edit** >  **Edit model**. The model opens in ARIS Connect Designer on an individual tab.
7. Make the required changes.
8. Click  **Save**.

Your changes are saved in the model.

3.2.13.2 Ask for model approval

Ask the person in charge to approve the models you changed so that the changed models can be made available to all users.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the name of the model you want to edit.
6. Click  **Edit** >  **Edit model**. The model opens in ARIS Connect Designer on an individual tab.
7. Make the required changes.
8. Click  **Save**.
9. Click  **Collaboration** if it is not activated yet.
10. Click  **Request approval**. The **Confirmation** dialog opens for you to confirm that the model changes are to be saved and the model is to be reopened read-only.
11. Click **OK**. The model reopens read-only and the **Request approval** dialog is displayed.
12. If required, select a person in charge to approve the model if the **Person responsible** attribute has not been specified at the model.
13. Enter a comment to explain the approval request.
14. Click **Send**. A completion message is displayed.
15. Click **OK**.

The person responsible receives an e-mail with the relevant information and a link to the associated task in  **My tasks**. If the person responsible approves the changes, the model is automatically published and the current version is provided.

Until then, only you and other modelers can view your changes.

All users can select the language to be used for the notification in their profile in ARIS Connect.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.13.3 Share model

You can share models with other users.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the model you want to send to another user.
6. In the button bar (page 69), click  **Share** >  **Share model**. The corresponding dialog opens.
7. Select the user you want to share the model with.
8. Enable **Send copy to me** to receive a copy of the message, if required.
9. You can also enter a subject and a comment.
10. Click **Send**.

The selected user receives an e-mail containing the information you entered and a link to the corresponding model.

All users can select the language to be used for the notification in their profile in ARIS Connect.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.13.4 Submit change request

You can send change requests for models to the person responsible.

Prerequisites

- You have at least the **ARIS Connect Viewer** license privilege.
- The **Person responsible** model attribute must be specified for the relevant model with a user name that exists in the user management.
- The models are saved in a versionable database.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the model for which you want to submit a change request.
6. In the button bar (page 69), click  **Submit change request**. The corresponding dialog opens.
7. Enter a title and a description for your request.
8. Select the priority with which the request is to be handled.
9. Add any relevant documents, graphics, etc. that could be used as a basis for editing.
10. Click **Send**. A completion message is displayed.
11. Click **OK**.

The person responsible receives the change request by e-mail with a link to the relevant model and a link to edit the associated task in  **My tasks**.

Once the person responsible has processed the request, the applicant receives a message by e-mail.

As soon as the first change request is made, the **ARIS Connect Governance Inbox** database is automatically created in ARIS. It contains a Requirements inbox for each person responsible with a model of the **Requirements tree** type. An object of the **Requirement** type is created for each change request. As the process continues, the realization status of the object is automatically changed depending on which status the person responsible has selected (**Approve**, **Reject**). This enables all change requests to be monitored in the **ARIS Connect Governance Inbox** database.

All users can select the language to be used for the notification in their profile in ARIS Connect.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.13.5 Request feedback on processes

You can request feedback on processes from other users.

Prerequisite

You have at least the **ARIS Connect Viewer** license privilege.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Click the model.
6. Click  **Comment** in the button bar if the bar is not activated yet.
7. Enter your comment in the box provided.
8. Click  **Tag**.
9. Enter the words to be used as keywords (page 442) in the tag input box, for example, BPM. Alternatively, select an existing tag from the list of tags. It is displayed as soon as you enter a letter that is part of an existing tag. Press **Enter** after each keyword.

**OUR PRODUCT RELEASE VIRTUAL EVENT:
PLAY IT ON DEMAND**
Listen, learn and grow your skills!

Attach:  Tag  Link  File

release × event × Add tags. Confirm with 'Enter'.

 Public × Enable the relevant privacy option. Confirm with 'Enter'.

10. Click  **Link**.
11. Insert a link to a Web site that contains more detailed information.
12. Click **Add link**. The link is checked and added.
13. Click  **File**. The **Select document** dialog is displayed.
14. Click  **Upload new document** to upload one of your own documents. The corresponding dialog opens.
15. Select the file you want to upload and enter the relevant additional information.
16. Click **Upload**.

17. Enable the check box of the document you want to add to your post.

18. Click **OK**.

The comment is displayed and can be commented on by other users.

All users can select the language to be used for the notification in their profile in ARIS Connect.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.13.6 Inform owner of change

You can inform the model owner of model changes you have made in the portal (page 254). The process owner is automatically determined by the attribute **Person responsible**.

Prerequisite

- You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.
- When using Microsoft® Internet Explorer version 8, the compatibility mode must be disabled.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the items and change the relevant attributes (page 254). Depending on the attributes, various editing options (page 266) are available.
5. In the button bar (page 69), click  **Inform owner of change**. The **Inform of change** dialog opens.
6. Insert a change description
7. Click **Submit**. The **Information** dialog opens.
8. Enable the **Do not show this message again** check box if you do not want to be informed again by the dialog when executing the mini workflow more than once during the current session.
9. Click **OK**.

The process owner receives an e-mail containing the information you entered. If he submits the human task, you will be informed via e-mail.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.2.14 Execute processes

The following describes the execution of processes.

3.2.14.1 Start governance process

You can start governance processes from the portal.

Prerequisite

The  **Start governance process** function is provided only if an executable process is available, and if the item for which the governance process is to be started is defined as the execution context.

Procedure

1. Navigate to the process or object for which you want to start the governance process.
2. Click  **Start governance process**. If multiple processes are available, they are displayed for selection.
3. Select the relevant executable process.

The executable process is started for the selected item.

3.2.15 Show dashboards

If you have an ARIS Aware license (page 288), you can view the dashboards for which you have been granted privileges. default

You can use the product ARIS Aware as visualizing component of ARIS Connect. Using ARIS Aware enables you to combine information from many sources and visualize data as KPIs by means of dashboards. ARIS Aware supports users in various departments across the enterprise by providing dashboards for evaluating a wide variety of data. It improves the transparency of the business and enables you to make the best decisions based on reliable data analyses.

What users see and what they can do in ARIS Aware depends on their user role.

ARIS Aware is equipped default dashboards for common scenarios in the context of business process management, including:

- Center of Excellence (CoE) (page 301)
- Collaboration (page 379)
- Customer Experience Management (CXM) (page 327)
- Business Strategy (page 386)
- Enterprise Architecture Management (page 351)
- Governance Risk and Compliance Management (page 392)
- General Data Protection Regulation (GDPR) (page 401)
- Portal usage (page 339)
- Process Performance Management (page 363)
- SAP Solutions data (page 296)

For some dashboards the **Business Strategy**, the **Enterprise Architecture Management** or the **ARIS for SAP® Solutions** extension packs are required.

If made available, the default dashboards can also display your own data. Default dashboards can be extended and customized according to the individual requirements of a company.

3.2.15.1 Show the Dashboards fact sheet

You can show dashboards (page 1143) for various items. The following example is based on predefined standard dashboards that are contained in the supplied **United Motor Group** database and the Classic view (page 35).

Prerequisite

- The supplied database **United Motor Group** is published.
- Dashboards (page 1143) are configured for the items selected.

Procedure

1. In the  **Portal**, select (page 94) the **United Motor Group** database.
2. Click **Groups**. The Group tree opens.
3. Click **2. Processes > 2.1 Process architecture >  Enterprise process map**. The **Overview** fact sheet of the **Enterprise process map** model opens. Click the **Dashboards** fact sheet. The model's dashboards are shown. You can switch between the Process Change Management (page 320) and the Local Maturity (page 313) dashboards.
4. Now click **Core processes > Marketing & sales > Billing >  Vehicle billing processing**. The **Overview** fact sheet of the **EPC** model opens.
5. Click the **Dashboards** fact sheet. The GRC dashboard is shown.

You have shown different standard dashboards.

3.2.15.2 Show dashboard in a sidebar

You can show dashboards (page 1143) in a sidebar. The following example is based on predefined standard dashboards that are contained in the supplied **United Motor Group** database and the Classic view (page 35).

Prerequisite

- The supplied database **United Motor Group** is published.
- Dashboards (page 1143) are configured for the items selected.

Procedure

1. In the  **Portal**, select (page 94) the **United Motor Group** database.
2. Click **Groups**. The Group tree opens.
3. Click **2 Processes > 2.1 Process Architecture > Core processes > Marketing & sales > Billing >  Vehicle billing processing**. The **Overview** fact sheet of the **EPC** model opens.
4. Click the **Diagram** fact sheet.
5. Click  **Dashboards** in the button bar (page 69).

The **Dashboard** sidebar opens and shows the Local maturity level (page 313) dashboard.

3.2.15.3 Show system dashboards

You can show dashboards that give you information about the **ARIS Connect** system and its contents. The content of the dashboards depends in part on whether and which database has been published and selected.

Prerequisite

Dashboards (page 1143) are configured for the system.

Procedure

1. Click  **Portal**. The Home (page 36) area is activated.
2. Click  **Dashboards**. The system dashboards are available.

You can select dashboards that displays information about the system and its contents.

3.2.15.4 Show dashboard on a separate tab

You can show a dashboard on a separate tab of the web browser.

Prerequisite

Dashboards (page 1143) are configured for the system.

Procedure

1. Open a system dashboard (page 287), a dashboard of the Dashboards fact sheet (page 286) or of the sidebar (page 286).
2. Move the mouse pointer over the dashboard. The  **On separate tab** icon appears.
3. Click  **On separate tab**.

A new tab containing the dashboard opens.

3.2.15.5 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.15.5.1 What is ARIS Aware (dashboards)?

You can use the product ARIS Aware as visualizing component of ARIS Connect. Using ARIS Aware enables you to combine information from many sources and visualize data as KPIs by means of dashboards. ARIS Aware supports users in various departments across the enterprise by providing dashboards for evaluating a wide variety of data. It improves the transparency of the business and enables you to make the best decisions based on reliable data analyses.

What users see and what they can do in ARIS Aware depends on their user role.

ARIS Aware is equipped default dashboards for common scenarios in the context of business process management, including:

- Center of Excellence (CoE) (page 301)
- Collaboration (page 379)
- Customer Experience Management (CXM) (page 327)
- Business Strategy (page 386)
- Enterprise Architecture Management (page 351)
- Governance Risk and Compliance Management (page 392)
- General Data Protection Regulation (GDPR) (page 401)
- Portal usage (page 339)
- Process Performance Management (page 363)
- SAP Solutions data (page 296)

For some dashboards the **Business Strategy**, the **Enterprise Architecture Management** or the **ARIS for SAP® Solutions** extension packs are required.

If made available, the default dashboards can also display your own data. Default dashboards can be extended and customized according to the individual requirements of a company.

3.2.15.5.2 What are the areas relevant to ARIS Aware?

You can use ARIS Aware to create dashboards and data feeds, store data, read data, configure dashboards, and show dashboards.

The following describes the data collection using reports. There are also other ways of collecting data, for example, using data files that are manually uploaded to ARIS document storage.

CREATE DASHBOARDS AND DATA FEEDS

You can create and connect dashboards and data feeds. Dashboards and data feeds are stored on the server you defined.

STORE DATA

Database information to be compiled for dashboard display is gathered by different reports. For some reports parameters can be specified. These parameterized reports are to be started frequently using report schedules. This keeps the dashboards up to date. The scheduled reports themselves trigger related reports. Each report collects specific pieces of information. The results are stored in ARIS document storage as XML report output files. These pieces of information are formed into dashboards. That is why dashboards correlate very closely to the set of executed reports.

READ DATA

Data to be displayed in a dashboard is loaded from the ARIS document storage database and combined with ARIS attributes extracted from the XML files that are stored in the ARIS document storage database as well.

CONFIGURE DASHBOARDS

Dashboards can be configured for different items to be shown in different views in the ARIS Connect portal and in Collaboration.

SHOW DASHBOARDS

Dashboards can be shown in different views in the  **Portal** and collaboration. You can use the supplied database United Motor Group to show various dashboards (page 286).

3.2.15.5.3 What are demo dashboards?

If made available, demo dashboards can be used in the **United Motor Group demo database**. Demo dashboards use static data for demonstration purposes only. You can use the demo dashboards to learn about usage and functionality of related charts (page 291).

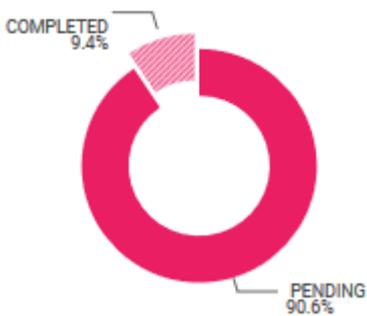
3.2.15.5.4 What functionality can charts have?

Dashboards provide multiple charts that can provide functionality. For example, values can be filtered to adjust the chart accordingly, or elements of a diagram can be separated to focus on them.

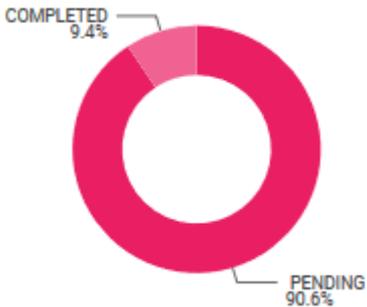
The functionality available depends on how dashboards and charts are configured. The following description shows examples of the functionality that can be available. The list considers the charts of the delivered default dashboards of the **United Motor Group** database.

SEPARATE OR SELECT DIAGRAM ELEMENT

You can click a chart element to separate and select it. The coloring is changed. If it can be separated, it will be isolated.

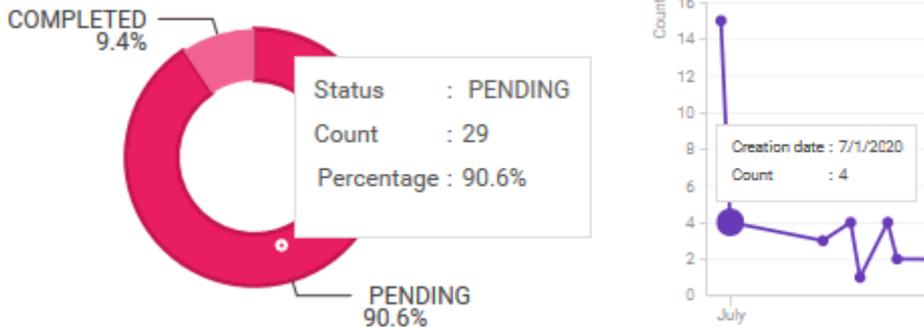


Click in the chart background to reintegrate the separated chart element.



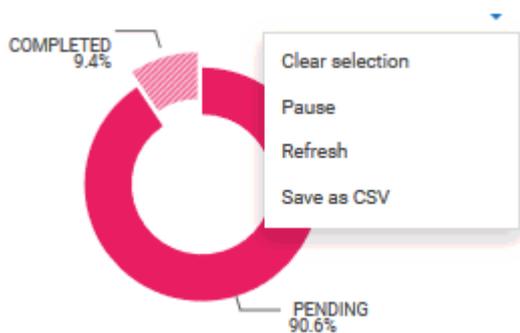
DISPLAY INFORMATION

Move the mouse pointer over a chart element to get detailed information. Depending on the chart type, the chart element for which the information is displayed is indicated by a dot or enlarged.



USE THE CHART MENU

A ▼ down arrow indicates that a chart menu is available for a chart. To open the chart menu, click the ▼ down arrow.



CLEAR SELECTION

Click **Clear selection** to reintegrate or deselect the chart element.

PAUSE

Click **Pause** to interrupt data reception for the chart. Click **Resume** to allow data reception for the chart again.

REFRESH

Click **Refresh** to update the chart with the current data.

SAVE AS CSV

Click **Save as CSV** to save the data of the chart to a **Comma Separated Values** file. You can use this file to pass the chart data to other applications.

FILTER CHART VALUES

You can filter chart values, for example, by period or quantity.

all times

- all times
- 2017-03-18
- 2017-03-17
- 2017-03-16
- 2017-03-15
- 2017-03-14

COMPLEX FILTERING

You can limit the values for all charts of a dashboard simultaneously using the filter panel.

Date

10/11/2020

30/10/2019

Task

Task name: onboarding

Task status: ACTIVE

Priority: HIGH

Context

Item Name: []

Database: []

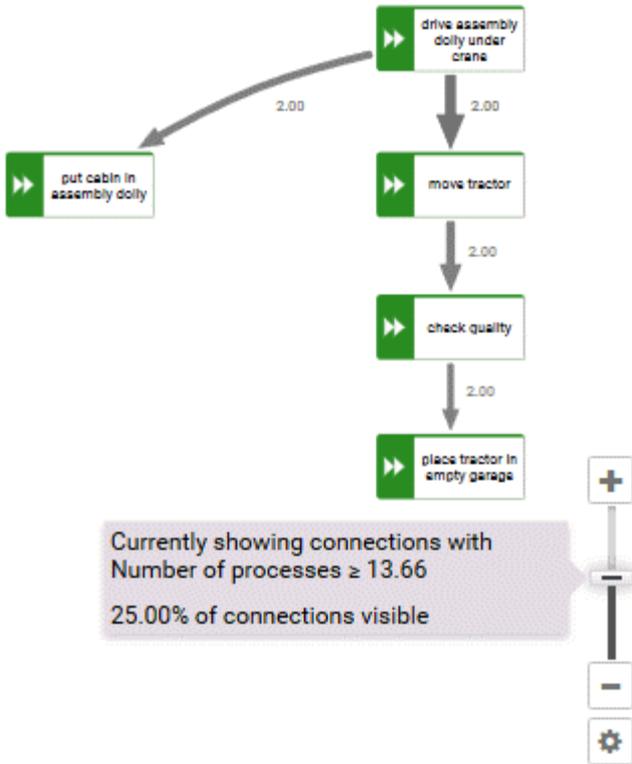
SORT LIST ENTRIES IN ASCENDING AND DESCENDING ORDER

You can click the column headers to sort entries in ascending and descending order. The order is indicated by an arrow. The up arrow shows the ascending order, the down arrow the descending order.

Owner ↑	Owner ↓
Architecture, Amy	Process, Peter
Compliance, Tom	Owner, Ethan
Owner, Ethan	Compliance, Tom
Process, Peter	Architecture, Amy

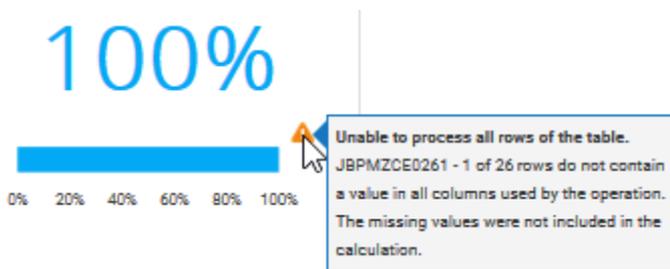
DYNAMIC ADJUSTMENT OF THE CONNECTION DISPLAY

You can use the slider to adjust the connections displayed and thus reduce or enlarge the amount of displayed objects. If connections are faded out or displayed, the corresponding objects are also faded out or displayed.



WARNING DISPLAY

If no complete values required to display the correct result can be collected, a warning icon is displayed. Move the mouse pointer over the warning icon for detailed information.



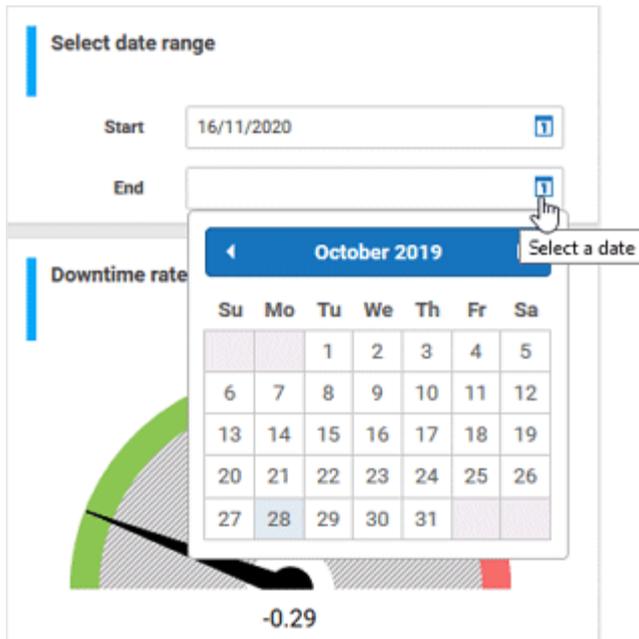
THRESHOLD DISPLAY

You can display the current value and the threshold to which the value is compared.



DATA RANGE SELECTION

You can select a data range to restrict the data displayed to a specific time period.



3.2.15.5.5 What default dashboards are available?

ARIS Aware offers many default dashboards. The predefined dashboards contain charts or tables that show the results of various visual analyses. For demonstration purposes, you can display demo dashboards. These dashboards are available in the **United Motor Group** demo database. If made available, the default dashboards can also display your own data. Default dashboards can be extended and customized according to the individual requirements of a company.

3.2.15.5.5.1 Dashboards using ARIS for SAP Solutions data

Available dashboards (page 1143) based on ARIS for SAP® Solutions.

3.2.15.5.5.1.1 SAP - Synchronization status (side-by-side)

This dashboard gives an aggregated overview of the SAP synchronization progress based on the SAP functions contained in models related to the given context and on the corresponding SAP IDs.

AVAILABILITY

This dashboard is available on the **Dashboards** fact sheet of the **Sales order processing (to-be)** process model (EPC) in the **United Motor Group** demo database.

CHARTS

PROGRESS OF SAP SYNCHRONIZATION

This chart provides an overview of the progress of an SAP synchronization process in %.

The progress is visualized by a progress bar. This bar shows the percentage of modeled SAP functions for which synchronization is already complete. The progress is calculated as the ratio of the number of SAP functions that have already been synchronized to the total number of synchronization-relevant SAP functions related to the given context. Synchronized SAP functions are contained in assigned models and the **SAP ID** attribute is specified for them. In contrast, no SAP ID exists for SAP functions that have not yet been synchronized.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

Data feed

- SAP - Synchronization progress
- SAP - Object information

Calculation

Ratio of the number of SAP functions for which the **SAP ID** attribute is specified to the total number of SAP functions related to the given context.

SAP functions already synchronized

This chart lists the names of all synchronization-relevant SAP functions for which SAP synchronization is already complete.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

Data feed

SAP - Object information

Calculation

Checks the SAP functions that are contained in subordinate models related to the context and lists all functions whose **SAP function type** and **SAP ID** attributes are specified.

SAP FUNCTIONS NOT YET SYNCHRONIZED

This chart lists the names of all synchronization-relevant SAP functions for which SAP synchronization has not yet been performed.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

Data feed

SAP - Object information

Calculation

Checks the SAP functions that are contained in subordinate models related to the context and lists all functions whose **SAP function type** attribute is specified, but whose **SAP ID** attribute is not specified.

FUNCTIONS NOT RELATED TO SAP

This chart lists the names of all functions that are contained in subordinate models related to the context, but are not related to SAP.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

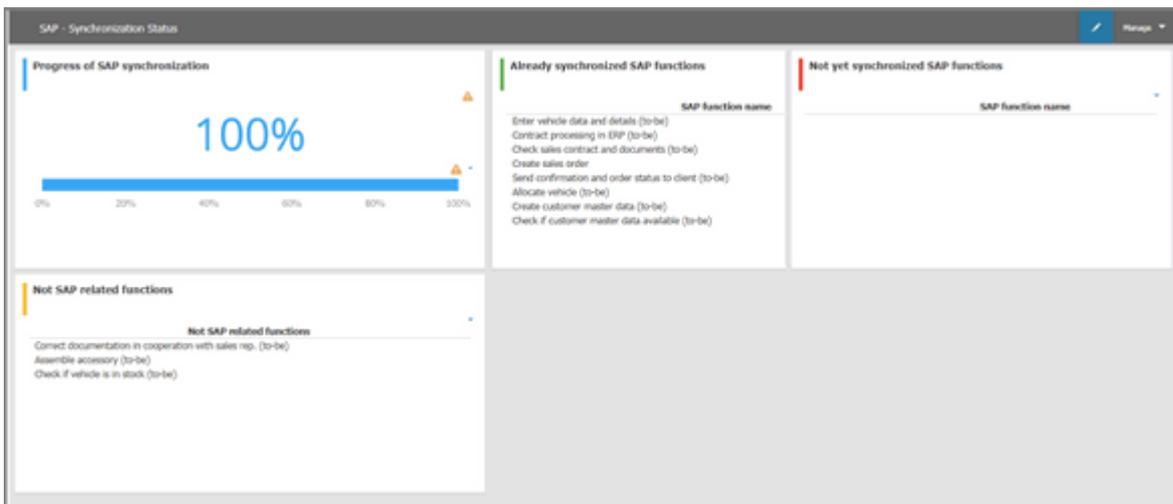
Data feed

SAP - Object information

Calculation

Checks the functions that are contained in subordinate models related to the context and lists all functions whose **SAP function type** attribute is not specified.

EXAMPLE



3.2.15.5.5.1.2 SAP - Function details (side-by-side)

This dashboard visualizes all SAP items that are assigned to SAP functions.

AVAILABILITY

This dashboard is available on the **Dashboards** fact sheet of the **Sales order processing (to-be)** process model (EPC) in the **United Motor Group** demo database.

CHARTS

ASSIGNED SAP DOCUMENTS

Lists all SAP documents that are related to an SAP function.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

Data feed

SAP - Object information

Calculation

Collects all documents that are related to the context and are connected to functions using the **provides input for** connection type. The possible context is a process model or an activity.

ASSIGNED SAP EXECUTABLES

Lists all executables that are related to an SAP function.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

Data feed

SAP - Object information

Calculation

Collects all executables related to the context. The possible context is a process model or an activity. Executables are **Screen** objects whose **Transaction code** and **Transaction type** attributes are specified. These **Screen** objects occur in related models and are connected to an SAP function.

ASSIGNED SAP COMPONENTS

Lists all application systems that are related to an SAP function.

Report configurable?

Yes

Data source

ARIS Architect:

Report: Export item data to tables. For this report, the **SAP objects to processes** value set must be used for execution.

Report configurable?

Yes

Data feed

SAP - Object information

Calculation

Collects all application systems related to the context. The possible context is a process model or an activity. Relevant application systems are **Application system** objects whose **SAP component** attribute is specified. These **Application system** objects are contained in related models and are connected to an SAP function.

EXAMPLE

The screenshot displays the 'SAP - Function Details' window with three main sections:

- Assigned SAP documents:** Contains one entry: 'Training video "Create Sales Order"'. The column header is 'SAP document name'.
- Assigned SAP transactions:** A table with two columns: 'SAP transaction name' and 'Transaction code'.

SAP transaction name	Transaction code
Create sales order	VA01 (Create sales order)
Periodic billing	V.07 (Periodic billing)
Display contract	VA43 (Display contract)
Collective processing for quotations	VA26 (Collective processing for quotations)
Display quotation	VA23 (Display quotation)
Create contract	VA41 (Create contract)
Allocate material	CS07 (Customer overview)
Change contract	VA42 (Change contract)
Create customer (centrally)	XD01 (Create customer (centrally))
- Assigned SAP components:** Contains one entry: 'SAP_2_ERP_MYARIS00'. The column header is 'SAP component'.

3.2.15.5.5.2 Dashboards using Center of Excellence (CoE) data

Here you can find information about Center of Excellence dashboards (page 1143) delivered by default. Consequently, the dashboards provide information about leadership and best practice for the focus area business concept via Business Process Modeling.

These dashboards are only available if the Portal is based on the **default** configuration set or a related modification set.

3.2.15.5.5.2.1 CoE - Aggregated maturity - (side by side)

The dashboard shows an aggregated view of all process models based on hierarchy of models in the ARIS Connect configuration. That is, starting with the top-level model, for example, a value-added chain diagram, and ending with the process model of the lowest level, for example, an EPC of level 4. The progress of models that are at a lower level of the hierarchy is weighted with 70 % by default.

AVAILABILITY

This dashboard is shown on the **Diagram** fact sheet of value-added chain diagrams.

CHARTS

AGGREGATED MODELING PROGRESS

Overview of the mandatory properties that have already been specified.

Data source

ARIS Architect:

Report: CoE - Aggregated maturity level

Report configurable?

Yes

Data collection

Context - process model:

Collection of all processes in the hierarchy starting from the top level model, for example, Value-added chain, down to the last level process model, for example, Level 4 EPC, and aggregated evaluation of all mandatory properties.

Data feed

CoE - Aggregated maturity level

Calculation

Aggregated progress of the mandatory attributes calculated for all process models in the hierarchy. The calculation is based on the mandatory attributes to be maintained, for example, person responsible, validity date etc. Hereby, the progress of the subordinate result (children in the hierarchy) is weighted with 70% by default.

MANDATORY PROPERTIES SUMMARY

Shows all mandatory properties and lists the number of properties that have not been specified.

Data source

ARIS Architect:

Report: CoE - Aggregated maturity level

Report configurable?

Yes

Data collection

Context - process model:

Collection of all mandatory properties in the hierarchy.

Data feed

CoE - Mandatory attributes

Calculation

Aggregation of the mandatory properties in the hierarchy level.

MODEL AGE (PERCENT DISTRIBUTION)

Shows the aggregated age distribution of process models (how long process models have remained unchanged) based on the **Last change** property.

Data source

ARIS Architect:

Report: CoE - Aggregated maturity level

Report configurable?

Yes

Data collection

Context - process model

Collection of the **Last change** property for all process models in the hierarchy.

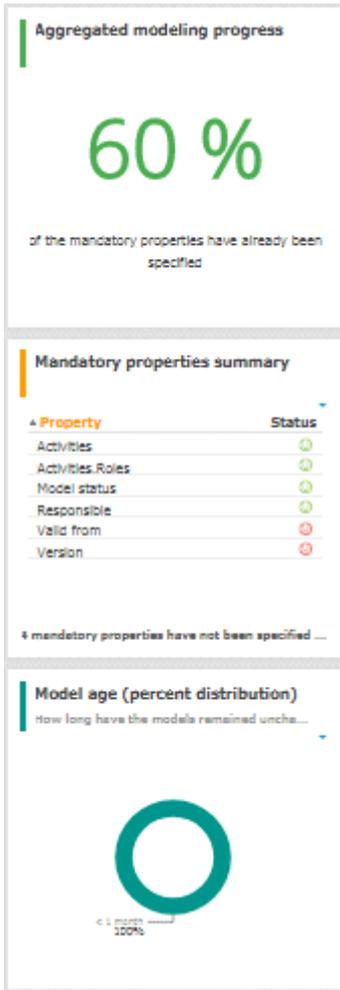
Data feed

CoE - Model age

Calculation

Aggregation of the **Last change** property in the hierarchy level.

EXAMPLE



3.2.15.5.5.2.2 CoE - Aggregated maturity level (overview)

The dashboard shows an aggregated view of all process models based on hierarchy of models in the ARIS Connect configuration. That is, starting with the top-level model, for example, a value-added chain diagram, and ending with the process model of the lowest level, for example, an EPC of level 4. The progress of models that are at a lower level of the hierarchy is weighted with 70 % by default.

AVAILABILITY

This dashboard is shown for value-added chain diagrams in the dashboard sidebar of the **Overview** fact sheet.

CHARTS

AGGREGATED MODELING PROGRESS

Overview of the mandatory properties that have already been specified.

Data source

ARIS Architect:

Report: CoE - Aggregated maturity level

Report configurable?

Yes

Data collection

Context - process model:

Collection of all processes in the hierarchy starting from the top level model, for example, Value-added chain, down to the last level process model, for example, Level 4 EPC, and aggregated evaluation of all mandatory properties.

Data feed

CoE - Aggregated maturity level

Calculation

Aggregated progress of the mandatory attributes calculated for all process models in the hierarchy. The calculation is based on the mandatory attributes to be maintained, for example, person responsible, validity date etc. Hereby, the progress of the subordinate result (children in the hierarchy) is weighted with 70% by default.

AGGREGATED MODEL COUNT FOR CURRENT PROCESS

Shows how many processes are modeled in the corresponding hierarchy level.

Data source

ARIS Architect:

Report: CoE - Aggregated maturity level

Report configurable?

No

Data collection

Context - process model:

Collection and count of all processes in the hierarchy.

Data feed

CoE - Number of process models

Calculation

Aggregated number of processes in the hierarchy level.

MODEL RELEASE STATUS

Shows the aggregated release progress considering the aggregated value of the property

Model status.

Data source

ARIS Architect:

Report: CoE - Aggregated maturity level

Report configurable?

Yes

Data collection

Context - process model:

Collection of all processes in the hierarchy considering the aggregated value of the property

Model status.

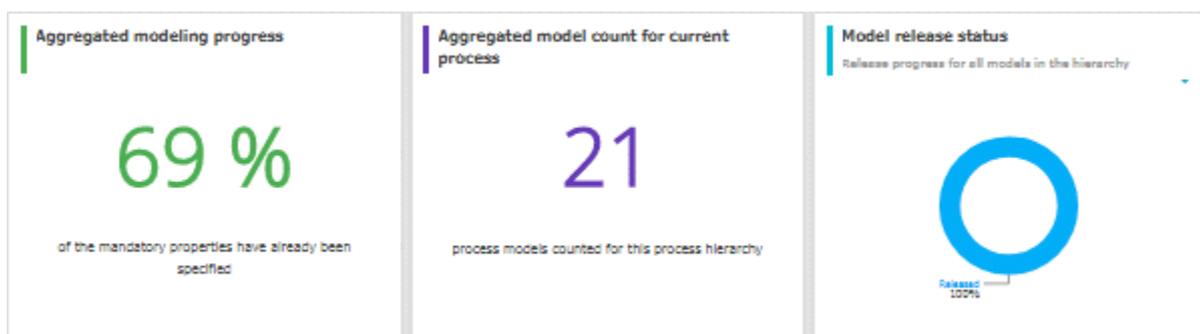
Data feed

CoE - Model status

Calculation

Aggregation of the property **Model status** in the hierarchy level.

EXAMPLE



3.2.15.5.5.2.3 CoE - Global maturity level

This dashboard provides different types of information on all process models and organizational charts within a database.

AVAILABILITY

ARIS Connect >  Portal > Home >  Dashboards

CHARTS

VALIDITY DATE STATUS

Overview of validity date statuses for models. Shows when models will expire based on the value that was specified for the **Validity** attribute.

Data source

ARIS Architect:

Report: CoE - Local and global maturity level

Report configurable?

Yes

Data collection

Context - database:

Collection of all models of the database, and evaluation and grouping of their validity dates into the following categories:

- **undefined**: no validity date is maintained
- **next 5 days**: validity date is next week
- **next 14 days**: validity date is within the next two weeks
- **next 30 days**: validity date is within the next 30 days
- **later**
- **expired**: validity date is in the past

Data feed

CoE - Validity date

Calculation

Collection of all models of the database, and evaluation and grouping of their validity dates into the following categories:

- **undefined**: no validity date is maintained
- **next 5 days**: validity date is next week
- **next 14 days**: validity date is within the next two weeks
- **next 30 days**: validity date is within the next 30 days
- **later**
- **expired**: validity date is in the past

VALIDITY DATE OVERVIEW

Lists the process models and organizational charts in a table and shows the expiration status for each model based on the value of the **Validity** attribute.

Data source

ARIS Architect:

Report: CoE - Local and global maturity level

Report configurable?

Yes

Data collection

Context - database:

Collection of all models of the database and evaluation and grouping their validity dates.

Data feed

CoE - Validity date

Calculation

Collects the values of the **Validity** attribute for every model in a table.

MOST SHARED MODELS

Shows the top-7 most shared models.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of the number of all instances of the **Share model** mini workflow.

Data feed

CoE - Process Instances (Share)

Calculation

Collection of the number of all instances of the **Share model** mini workflow and display of the top seven models which are the most frequently selected context of the mini workflow.

OWNERS WITH THE MOST MODEL RESPONSIBILITY

Shows the seven responsible people with the most process models in their responsibility (maintained as **Person responsible** attribute value for these models).

Data source

ARIS Architect:

Report: CoE - Local and global maturity level

Report configurable?

Yes

Data collection

Context - database:

Collection of all models in the database and evaluation of their process owners.

Data feed

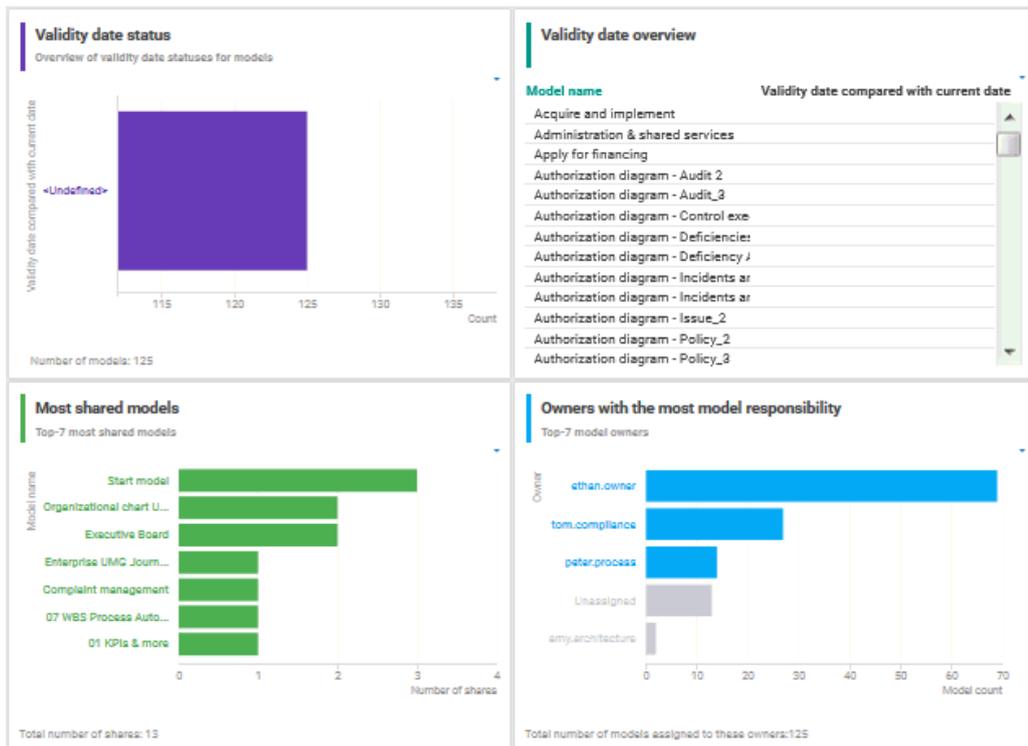
CoE - Process Owners

Calculation

Collection of all models in the database and evaluation and count of the most frequent process owners maintained as **Person responsible** attribute value.

By default the top 7 owners with the most models are shown. This can be configured.

EXAMPLE



3.2.15.5.5.2.4 CoE - Human tasks management

This dashboard shows overall governance information about the human tasks submitted via Process Governance

AVAILABILITY

ARIS Connect >  Portal > Home >  Dashboards

CHARTS

TOTAL NUMBER OF HUMAN TASKS

Shows the total number of human tasks regardless of the Process Governance process they belong to. For example, it includes the human tasks belonging to the  **Submit change request** and  **Inform owner of change** mini workflow, but also the ones from custom APG workflows.

The **CoE - Human tasks** dashboard can be filtered based either on database and model context, or on task-related information such as status and priority.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

No

Data collection

Context - APG:

Collection of the number of all human tasks in APG.

Data feed

CoE - Process Instances and Human Tasks

Calculation

Collection of the number of all human tasks in APG.

HUMAN TASKS OVER TIME

Shows the timeline of the human tasks based on their creation date.

The **CoE - Human tasks** dashboard can be filtered based either on database and model context, or on task-related information such as status and priority.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

No

Data collection

Context - Process Governance:

Collection of the creation date of all human tasks in Process Governance.

Data feed

CoE - Process Instances and Human Tasks

Calculation

Collection of the creation date of all human tasks in Process Governance.

HUMAN TASK DETAILS

Lists all human tasks including specific details such as priority, creation date, status, and participant.

The **CoE - Human tasks** dashboard can be filtered based either on database and model context, or on task-related information such as status and priority.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

No

Data collection

Context - APG:

Collection of all human tasks in Process Governance and their details.

Data feed

CoE - Process Instances and Human Tasks

Calculation

Collect all human tasks in Process Governance and display the details:

- **Human task name** (as it appears in  **My tasks**)
- **Human task priority** (HIGH, LOW, NORMAL)
- Creation date of the human task
- Human task status (ACTIVE or COMPLETED)
- Human task participant (the user to whom the human task is assigned)
- Item (the selection context for this human task, for example, the model for which the change request has been submitted or for which approval has been initiated)
- Description (the human task description as it appears in  **My tasks**)
- Database (in which the workflow has been started to which the human task belongs)

EXAMPLE

Date

From

To

Task

Task name

Task status

Priority

Context

Item Name

Database

Total number of human tasks

34

Number of completed human tasks: 5

less than 30
 more than 50

Human tasks over time

Month	Count
July	15
July	4
August	3
August	4
August	1
August	2
September	2
October	2
November	2
December	2
2017	2
February	2
March	1

Human task details

Human task	Priority	Creation date	Status	Participant	Item	Description	Database
Realize change request for model [Spare parts	NOR!	2016-06-30	COMPLET	Owner, Eth:	Spare parts & acce:	please adapt	United Motor
Change request for model [Spare parts & acces	NOR!	2016-06-30	COMPLET	Owner, Eth:	Spare parts & acce:	please adapt	United Motor
Change request for model [Enterprise process	NOR!	2016-06-30	COMPLET	Owner, Eth:	Enterprise process	Please adapt to the cu	United Motor
Realize change request for model [Enterprise p	NOR!	2016-06-30	COMPLET	Owner, Eth:	Enterprise process	Please adapt to the cu	United Motor
Change request for model [Product Overview] F	NOR!	2016-06-30	COMPLET	Owner, Eth:	Product Overview	please change	United Motor
Change request for model [Organizational char	NOR!	2016-06-30	ACTIVE	Process, Pe	Organizational char	please adapt	United Motor
Change request for model [Executive Board] Mi	NOR!	2016-07-18	ACTIVE	Process, Pe	Executive Board	pls adapt	United Motor
Change request for model [Operational manag	NOR!	2016-07-14	ACTIVE	Owner, Eth:	Operational manag	pls add missing parts	United Motor
Change request for model [Complaint manag	NOR!	2016-07-14	ACTIVE	Owner, Eth:	Complaint manag	is outdated, please ad	United Motor
Change request for model [Organizational char	NOR!	2016-06-30	ACTIVE	Process, Pe	Organizational char	please remodel	United Motor
Change request for model [Document check] S	NOR!	2016-06-30	ACTIVE	Complianc:	Document check	please enhance	United Motor
Change request for model [Customer services]	NOR!	2016-07-15	ACTIVE	Owner, Eth:	Customer services	pls add	United Motor
Change request for model [UMG Bank] Please c	HIGH	2017-03-10	ACTIVE	Process, Pe	UMG Bank	Please check	United Motor

3.2.15.5.5.2.5 CoE - Local maturity level

This dashboard is shown for selected process models and organizational charts.

AVAILABILITY

This dashboard is shown for process models (EPCs) in the dashboard sidebar of the **Diagram** fact sheet and on the **Dashboard** fact sheet of value-added chains.

CHARTS

TOTAL NUMBER OF CHANGE REQUESTS

Shows the total number of change requests submitted for a specific model using the  **Submit change request** mini workflow.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - model:

Collection of the number of all change requests started on the context of this model.

Data feed

CoE - Process Instances (Change Request)

Calculation

Calculation of the number of change requests for which this model was the selected context (by default using the  **Submit change request** mini workflow).

MANDATORY SEMANTIC CHECKS

Shows the result of the **Mandatory semantic checks** semantic check as a symbol.

Data source

ARIS Architect:

Report: CoE - Local and global maturity level

Report configurable?

Yes

Data collection

Context - model:

Collection of the result of the configured semantic check.

Data feed

CoE - Local maturity - Conventions

Calculation

Collection of the result of the configured semantic check - by default the **Mandatory semantic check** semantic check with the result **SUCCESSFUL** or **FAILED**.

MANDATORY ATTRIBUTES

Identifies the number of mandatory properties specified and compares it with the total number of mandatory properties. The default mandatory attributes include **Model status**, **Person responsible**, **Version**, **Validity**, and **Activities**.

Data source

ARIS Architect:

Report: CoE - Local and global maturity level

Report configurable?

Yes

Data collection

Context - model:

Collection of the statuses of the mandatory attributes - whether they are maintained or not.

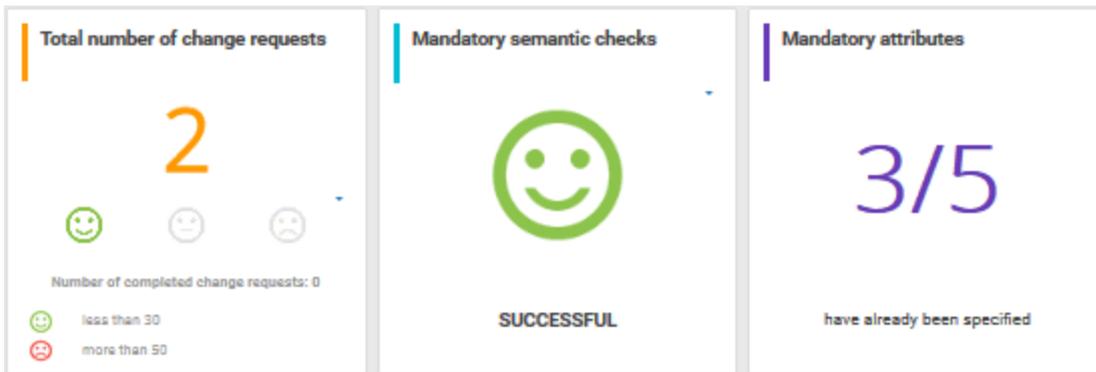
Data feed

CoE - Local maturity - Conventions

Calculation

Collection of the statuses of the mandatory attributes - whether they are maintained or not.

EXAMPLE



3.2.15.5.5.2.6 CoE - Portal usage

Dashboard that gives an overview of the use of the models in the ARIS Connect portal.

AVAILABILITY

ARIS Connect >  Portal > Home >  Dashboards

CHARTS

MODELS WITH ASSIGNED CHANGE REQUESTS

Shows models with the most assigned pending change requests.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances and Human Tasks (Change Request)

Calculation

Collection of all instances of the  **Submit change request** mini workflow for models (by default) which are in the RUNNING status and evaluation of their context (the models for which the change requests have been started). Display of the top 7 of these models.

MODEL OWNERS WITH ASSIGNED CHANGE REQUESTS

Model owners with the most assigned pending change requests.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances and Human Tasks (Change Request)

Calculation

Collection of all instances of the  **Submit change request** mini workflow for models (by default) which are in the RUNNING status and evaluation of the number of requests per owner (the responsible person for the model for which the change request has been submitted).

Display of the top 7 process owners. The ID of the workflow to be considered can be configured.

MODELS WITH ASSIGNED APPROVAL REQUESTS

Models with the most assigned pending approval requests.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances and Human Tasks (Change Request)

Calculation

Collection of all instances of the  **Submit change request** mini workflow for models (by default) which are in the RUNNING status and evaluation of the number of requests per owner (the responsible person for the model for which the change request has been submitted). Display of the top 7 process owners. The ID of the workflow to be considered can be configured.

MOST SHARED MODELS

Shows the top-7 most shared models.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of the number of all instances of the **Share model** mini workflow.

Data feed

CoE - Process Instances (Share)

Calculation

Collection of the number of all instances of the **Share model** mini workflow and display of the top seven models which are the most frequently selected context of the mini workflow.

MOST FOLLOWED MODELS

The top seven most followed models in Collaboration.

Data source

ARIS models in Collaboration

Data feed

Collaboration – Most followed ARIS content

MOST COMMENTED MODELS

The top seven most commented models in Collaboration.

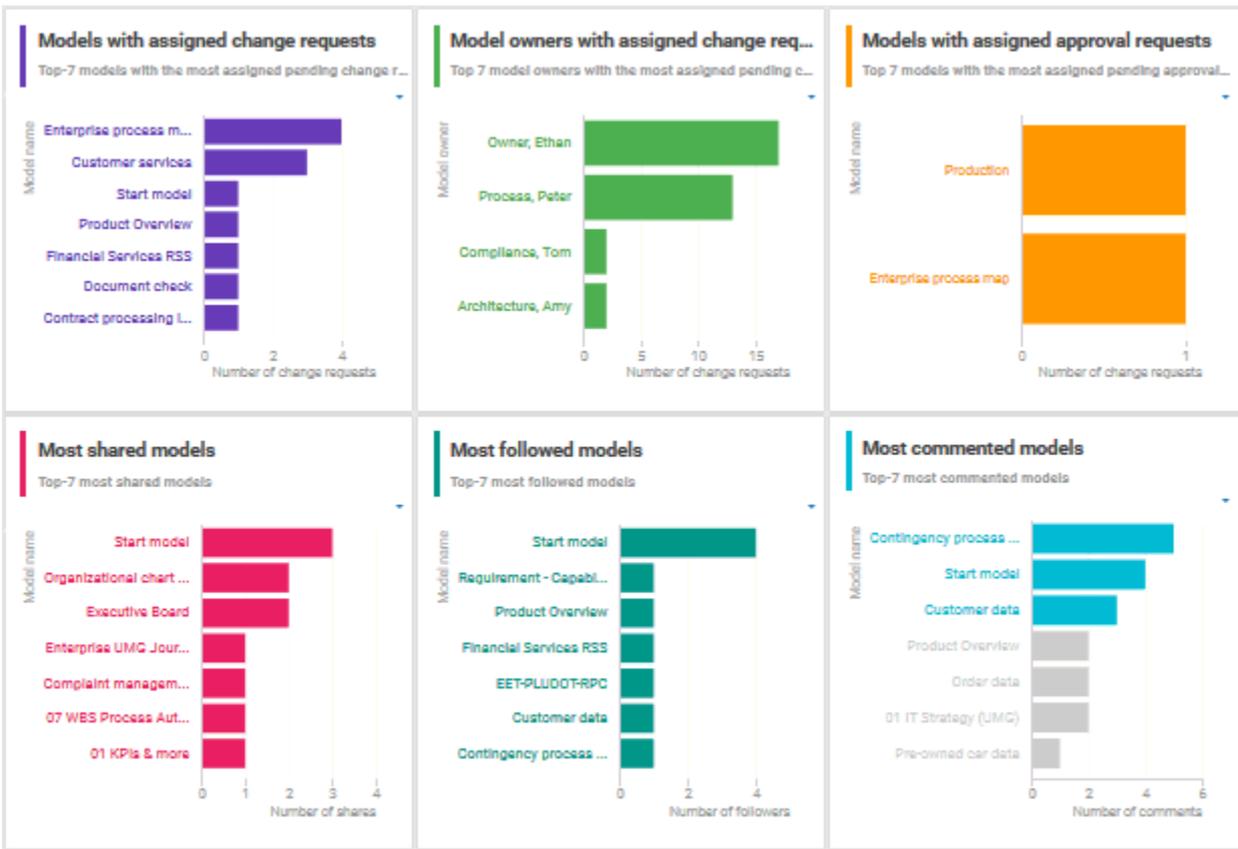
Data source

ARIS models in Collaboration

Data feed

Collaboration – Most commented ARIS content

EXAMPLE



3.2.15.5.5.2.7 CoE - Process change management

The dashboard shows governance information based on Process Governance.

AVAILABILITY

ARIS Connect >  Portal > Home >  Dashboards

CHARTS

STATUS OF CHANGE REQUESTS FOR MODELS

Shows the processes with change requests in the PENDING and COMPLETED status. This is based on the  **Submit change request** mini workflow.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all process instances of  **Submit change request** mini workflow and grouping them into the following categories:

- PENDING (running change requests)
- COMPLETED (realized change requests)

Data feed

CoE - Process Instances (Change Request)

Calculation

Collection of the number of all instances of  **Submit change request** mini workflow (by default) and grouping them by status PENDING or COMPLETED. The ID of the workflow to be considered can be configured.

CHANGE REQUEST COUNT IS

Shows the change requests submitted for models with the  **Submit change request** mini workflow within the last 3 months.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of the number of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances (Change Request)

Calculation

Collection of the number of all instances of the  **Submit change request** mini workflow for models (by default). The ID of the workflow to be considered can be configured.

MODEL CHANGE REQUESTS OVER TIME

Shows the change requests submitted within the last 3 months.

Timeline of the change requests over time based on the assignment date of the  **Submit change request** mini workflow for models.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of the assignment date of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances (Change Request)

Calculation

Collection of the assignment date of all instances of the  **Submit change request** mini workflow for models (by default) and count per date. The ID of the workflow to be considered can be configured.

MODELS WITH ASSIGNED CHANGE REQUESTS

Shows models with the most assigned pending change requests.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances and Human Tasks (Change Request)

Calculation

Collection of all instances of the  **Submit change request** mini workflow for models (by default) which are in the RUNNING status and evaluation of their context (the models for which the change requests have been started). Display of the top 7 of these models.

MODEL OWNERS WITH ASSIGNED CHANGE REQUESTS

Model owners with the most assigned pending change requests.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances and Human Tasks (Change Request)

Calculation

Collection of all instances of the  **Submit change request** mini workflow for models (by default) which are in the RUNNING status and evaluation of the number of requests per owner (the responsible person for the model for which the change request has been submitted).

Display of the top 7 process owners. The ID of the workflow to be considered can be configured.

STATUS OF CHANGE REQUESTS AND CHANGE REQUEST DETAILS

Shows both the Status of change requests as well as Change request details. Both charts depend on each other.

Data source

ARIS Architect:

Report: CoE - Governance

USE

This report provides the evaluation algorithms for the following **Center of Excellence** use cases:

- Maturity level
- Mandatory properties

It is invoked by the **CoE - Aggregated maturity level** report and is not intended to be started by users.

Report configurable?

Yes

Data collection

Context - APG:

Collection of all instances of the  **Submit change request** mini workflow for models.

Data feed

CoE - Process Instances and Human Tasks (Change Request)

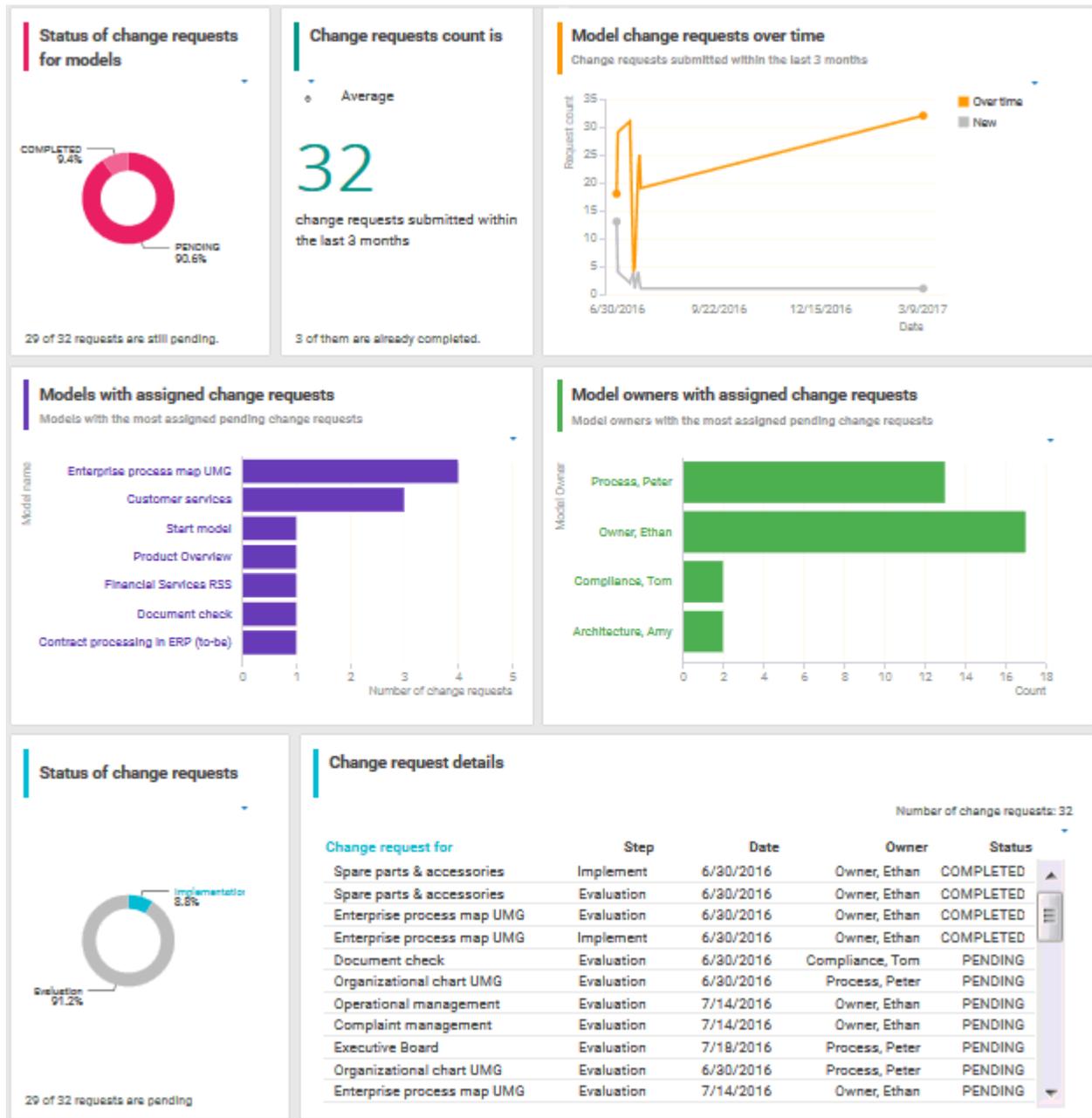
Calculation

Collection of all instances of the  **Submit change request** mini workflow for models (by default) and display of the details:

- The name of the model for which the change request has been submitted.
- The current active step in the mini workflow
(evaluation step: change request not yet evaluated or
realization step: change request has been evaluated and is now being realized).
- The assignment date of the change request (start date of the process instance).
- The owner of the human task - the person to whom this task has been assigned.
- The change request status (RUNNING or COMPLETED).

The ID of the workflow to be considered can be configured.

EXAMPLE



3.2.15.5.5.3 Dashboards using Customer Experience Management (CXM) data

Available dashboards (page 1143) using content that is retrieved from Customer Experience Management (CXM)-related models.

Since Customer Experience is based on expectations, experiences and attitudes, ABC offers the possibility to model personas (page 1152) and create their infographics (page 409). In this way, target groups can be clearly distinguished from each other and their needs can be addressed.

3.2.15.5.5.3.1 Customer experience

Dashboard providing an overview of how customers experience their interaction with the company during a so-called customer journey. This dashboard includes various charts that illustrate the customer experience from different angles.

AVAILABILITY

This dashboard is shown on the **Dashboards** fact sheet of model of type **Customer journey landscape**.

CHARTS

NUMBER OF AFFECTED INTERNAL PROCESSES

Number of internal processes that include customer touchpoints of the **Pain point**, **Moment of truth**, or **Best practice** type.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Retrieves customer touchpoint data from all customer journeys contained in customer journey maps that are assigned to a selected model of the Customer journey landscape type. Identifies the customer touchpoints of each customer journey map. In addition, the following data is collected:

- checks whether the customer touchpoints have a connection to an internal process.
- counts all customer touchpoints that have a connection to an internal process.
- checks whether the **Pain point** attribute is specified for any of the touchpoints.
- counts the customer touchpoints for which the value of the **Pain point** attribute type is set to **true**.
- checks whether the **Moment of truth** attribute is specified for any of the touchpoints.

- counts the customer touchpoints for which the value of the **Moment of truth** attribute type is set to **true**.
- checks whether the **Best practice** attribute is specified for any of the touchpoints.
- counts the customer touchpoints for which the value of the **Best practice** attribute type is set to **true**.

Data feed

CXM - Analyze customer experience

Calculation

Number of internal processes that include customer touchpoints of the **Pain point**, **Moment of truth**, or **Best practice** type.

PERCENTAGE OF CRITICAL CUSTOMER TOUCHPOINTS

Overview of the percentage of critical customer touchpoints.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

.-

Data feed

CXM - Analyze customer experience

Calculation

Number of customer touchpoints for which the **Moment of truth** attribute type is specified over the aggregated number of customer touchpoints multiplied by 100.

OVERALL CUSTOMER EXPERIENCE

Percent distribution of customer feelings calculated for an entire customer journey landscape.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Data is retrieved from all customer journeys related to a selected model of the **Customer journey landscape** type.

All customer touchpoints contained in the customer journey maps assigned to the selected customer journey landscape are retrieved. The following data is counted:

- All customer touchpoints for which the **Customer feeling** attribute is specified as **Positive**.
- All customer touchpoints for which the **Customer feeling** attribute is specified as **Neutral**.
- All customer touchpoints for which the **Customer feeling** attribute is specified as **Negative**.

Data feed

CXM - Overall customer experience

Calculation

Aggregated number of values (Positive, Neutral, and Negative) retrieved from the **Customer feeling** attribute.

CUSTOMER JOURNEYS LEADING TO A GOOD EXPERIENCE

Top seven customer journeys creating a good customer experience.

Data source

ARIS Architect:

Report: CXM – Analyze customer journeys

This report answers the following questions:

- Which customer journey is the most critical?
- Which customer lifecycle
- Which stage is the most critical?

The report provides various parameters allowing customizing without changing the report code.

OUTPUT

Generates the **CXM_ANALYZE_CUSTOMER_JOURNEYS.XML** document stored in ARIS document storage. The **Analyze customer journeys (TOP 7)** document is stored in this subfolder: ARIS document storage/Dashboarding/<database name; default=United Motor Group>/EA.

The report result is used as input for the **CXM - Analyze customer journeys** data feed. This data feed is related to the **Customer experience** CXM dashboard (page 327).

CONTEXT

Database

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Data is retrieved from all customer journeys related to a selected model of the **Customer journey landscape** type.

All customer touchpoint contained in customer journey maps are retrieved, and all customer touchpoints for which the value of the **Customer feeling** attribute type is set to **Positive** are counted.

Data feed

CXM - Analyze customer journeys

Calculation

Number of customer touchpoints for which the **Customer feeling** attribute type is set to **Positive** over the number of customer touchpoints per customer journey.

CUSTOMER JOURNEYS LEADING TO A BAD EXPERIENCE

Top seven customer journeys creating a bad customer experience.

Data source

ARIS Architect:

Report: CXM – Analyze customer journeys

This report answers the following questions:

- Which customer journey is the most critical?
- Which customer lifecycle
- Which stage is the most critical?

The report provides various parameters allowing customizing without changing the report code.

OUTPUT

Generates the **CXM_ANALYZE_CUSTOMER_JOURNEYS.XML** document stored in ARIS document storage. The **Analyze customer journeys (TOP 7)** document is stored in this subfolder: ARIS document storage/Dashboarding/<database name; default=United Motor Group>/EA.

The report result is used as input for the **CXM - Analyze customer journeys** data feed. This data feed is related to the **Customer experience** CXM dashboard (page 327).

CONTEXT

Database

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Data is retrieved from all customer journeys related to a selected model of the **Customer journey landscape** type.

All customer touchpoints contained in customer journey maps are retrieved, and the customer touchpoints for which the value of the **Pain point** attribute type is set to **true** are counted.

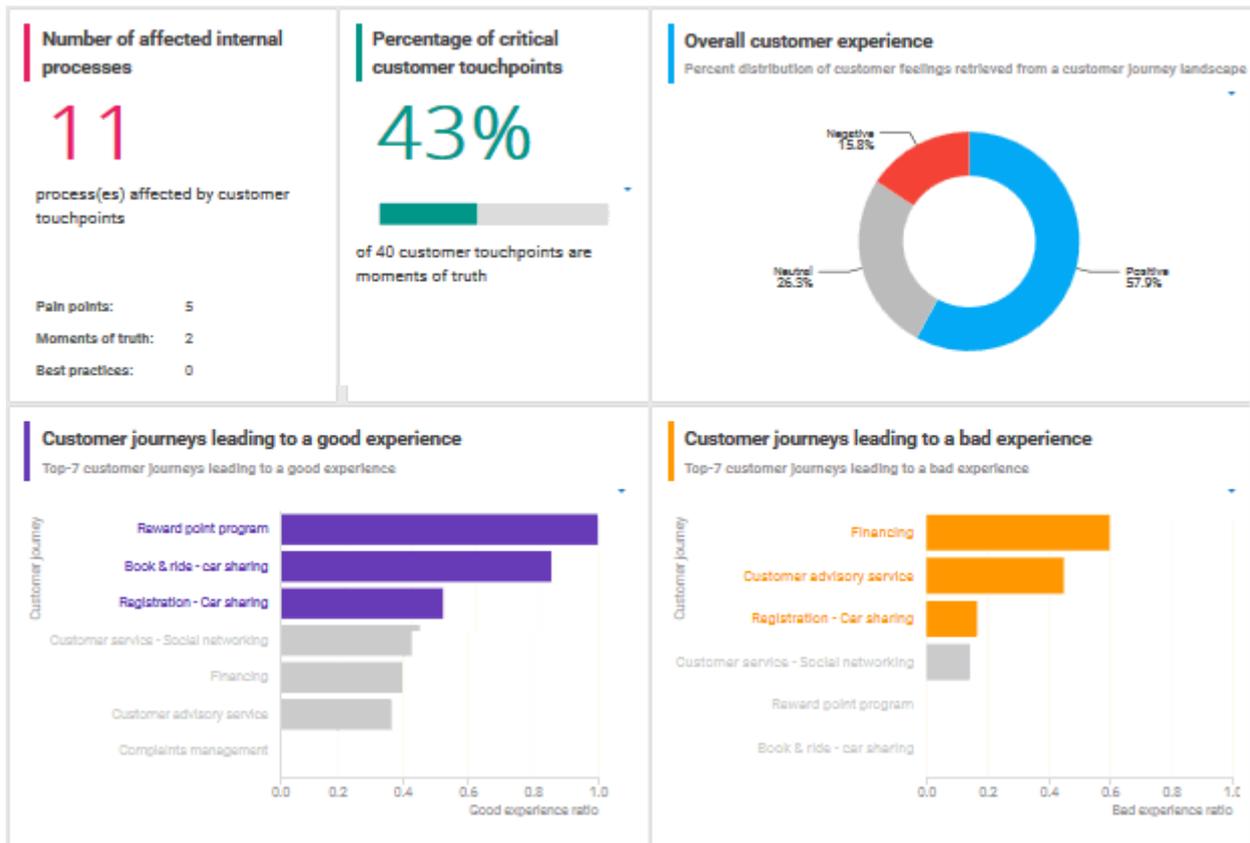
Data feed

CXM - Analyze customer journeys

Calculation

Number of customer touchpoints for which the **Pain point** attribute type is specified over the number of customer touchpoints per customer journey.

EXAMPLE



3.2.15.5.5.3.2 Responsibilities

Customer experience dashboard evaluating business units and channels.

AVAILABILITY

This dashboard is shown on the **Dashboards** fact sheet of model of type **Customer journey landscape**.

CHARTS

BUSINESS UNITS ASSOCIATED WITH GOOD EXPERIENCE

Top seven business units associated with a good customer experience.

Data source

ARIS Architect:

Report: CXM - Responsibility (Ownership)

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Starting from the selected customer journey landscape, all owners specified in the **Ownership** row and their associated customer touchpoints are retrieved from all assigned customer journey maps. Checks whether the **Customer feeling** attribute is specified for any of the customer touchpoints and counts the touchpoints for which the value of the **Customer feeling** attribute type is set to **Positive**.

Data feed

CXM - Responsible owner

Calculation

Good experience ratio: Number of customer touchpoints for which the value of the **Customer feeling** attribute type is set to **Positive** divided by the total number of customer touchpoints.

BUSINESS UNITS ASSOCIATED WITH BAD EXPERIENCE

Top seven business units associated with a bad customer experience.

Data source

ARIS Architect:

Report: CXM - Responsibility (Ownership)

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Starting from the selected customer journey landscape, all owners specified in the **Ownership** row and their associated customer touchpoints are retrieved from all assigned customer journey maps. Checks whether the **Pain point** attribute is specified for any of the customer touchpoints and counts the touchpoints for which the value of the **Pain point** attribute type is set to **true**.

Data feed

CXM - Responsible owner

Calculation

Number of customer touchpoints for which the value of the **Pain point** attribute type is set to **true** divided by the total number of customer touchpoints (bad experience ratio).

CHANNELS ASSOCIATED WITH GOOD EXPERIENCE

Top-7 channels associated with a good customer experience.

Data source

ARIS Architect:

Report: CXM - Responsibility (Channel)

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Starting from the selected customer journey landscape, all channels specified in the **Channel** row and their associated customer touchpoints are retrieved for all assigned customer journey maps. Checks whether the **Customer feeling** attribute is specified for any of the customer touchpoints and counts the touchpoints for which the value of the **Customer feeling** attribute type is set to **Positive**.

Data feed

CXM - Responsibility channel

Calculation

Good experience ratio: Number of customer touchpoints for which the value of the **Customer feeling** attribute type is set to **Positive** divided by the total number of customer touchpoints.

CHANNELS ASSOCIATED WITH BAD EXPERIENCE

Top-7 channels associated with a bad customer experience.

Data source

ARIS Architect:

Report: CXM - Responsibility (Channel)

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Starting from the selected customer journey landscape, all channels specified in the **Channel** row and their associated customer touchpoints are retrieved for all assigned customer journey maps. Checks whether the **Pain point** attribute is specified for any of the customer touchpoints and counts the touchpoints for which the value of the **Pain point** attribute type is set to **true**.

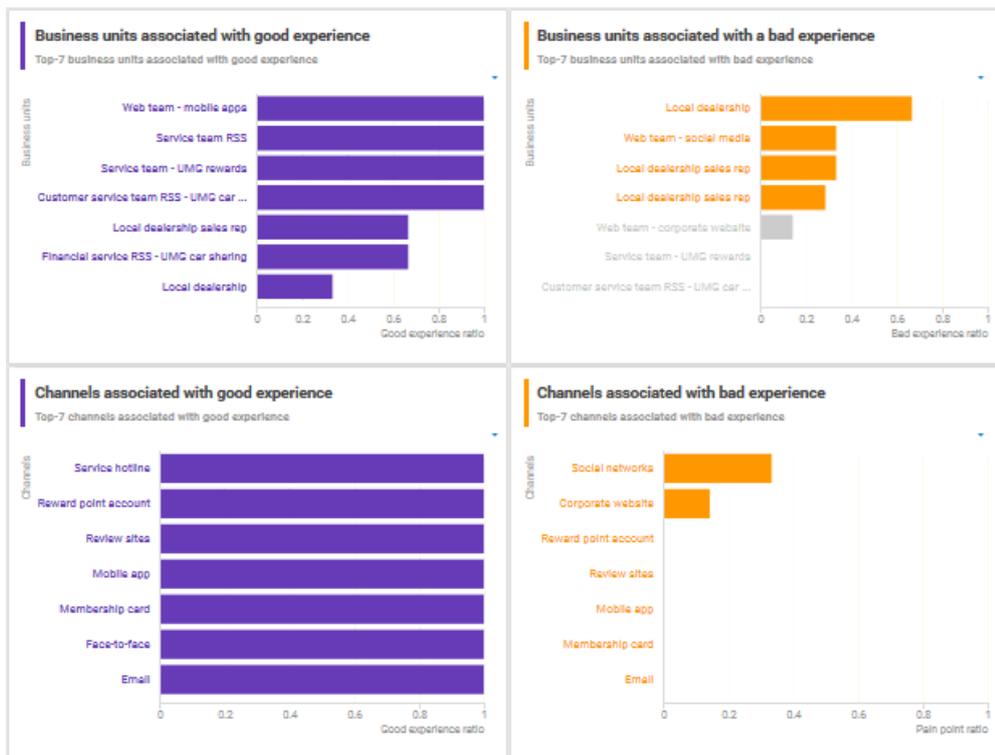
Data feed

CXM - Responsibility channel

Calculation

Number of customer touchpoints for which the value of the **Pain point** attribute type is set to **true** divided by the total number of customer touchpoints (bad experience ratio).

EXAMPLE



3.2.15.5.5.3.3 Customer experience overview

Customer journey map dashboard that evaluates customer touchpoints and retrieves the customer touchpoints with high market potential.

AVAILABILITY

This dashboard is shown for model of type **Customer journey map** in the dashboard sidebar of the **Diagram** fact sheet.

CHARTS

NUMBER OF AFFECTED INTERNAL PROCESSES

Number of internal processes that include customer touchpoints of the **Pain point**, **Moment of truth**, or **Best practice** type.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

Context: **Customer journey landscape** model type.

Retrieves customer touchpoint data from all customer journeys contained in customer journey maps that are assigned to a selected model of the Customer journey landscape type. Identifies the customer touchpoints of each customer journey map. In addition, the following data is collected:

- checks whether the customer touchpoints have a connection to an internal process.
- counts all customer touchpoints that have a connection to an internal process.
- checks whether the **Pain point** attribute is specified for any of the touchpoints.
- counts the customer touchpoints for which the value of the **Pain point** attribute type is set to **true**.
- checks whether the **Moment of truth** attribute is specified for any of the touchpoints.
- counts the customer touchpoints for which the value of the **Moment of truth** attribute type is set to **true**.
- checks whether the **Best practice** attribute is specified for any of the touchpoints.
- counts the customer touchpoints for which the value of the **Best practice** attribute type is set to **true**.

Data feed

CXM - Analyze customer experience

Calculation

Number of internal processes that include customer touchpoints of the **Pain point**, **Moment of truth**, or **Best practice** type.

PERCENTAGE OF NEGATIVE CUSTOMER TOUCHPOINTS

Overview of the percentage of negative customer touchpoints.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

.-

Data feed

CXM - Analyze customer experience

Calculation

Number of pain points divided by the number of customer touchpoints multiplied by 100.

PERCENTAGE OF CRITICAL CUSTOMER TOUCHPOINTS

Overview of the percentage of critical customer touchpoints.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

.-

Data feed

CXM - Analyze customer experience

Calculation

Number of customer touchpoints for which the **Moment of truth** attribute type is specified over the aggregated number of customer touchpoints multiplied by 100.

PERCENTAGE OF POSITIVE CUSTOMER TOUCHPOINTS

Overview of the percentage of positive customer touchpoints.

Data source

ARIS Architect:

Report: CXM - Analyze customer experience

Report configurable?

No

Data collection

-.-

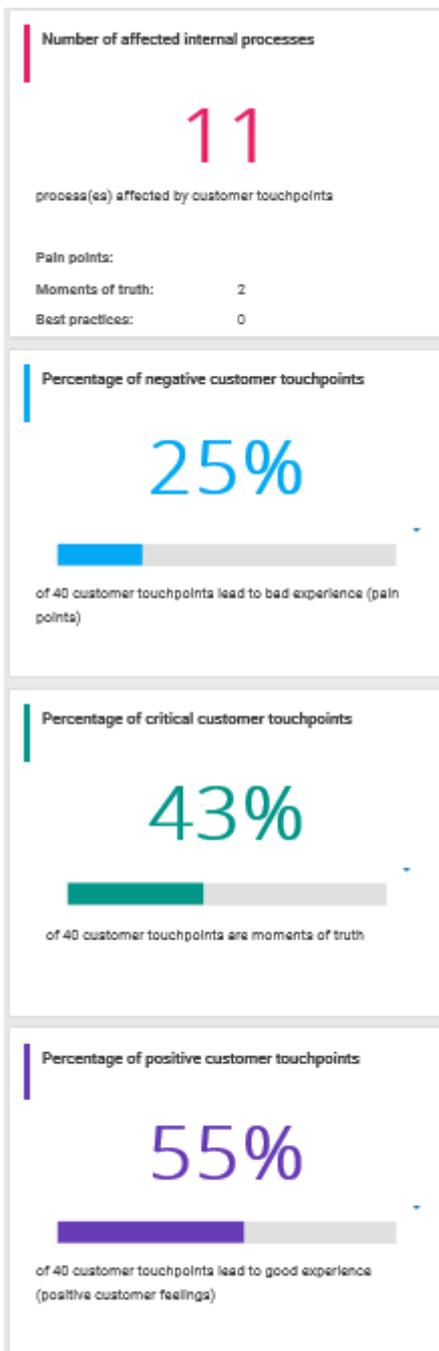
Data feed

CXM - Analyze customer experience

Calculation

Number of customer touchpoints with the value **Positive** set for the **Customer feeling** attribute divided by the number of customer touchpoints multiplied by 100.

EXAMPLE



3.2.15.5.5.3.4 Business driver distribution & social media conversation rate

Customer experience dashboard evaluating business units and channels.

AVAILABILITY

This dashboard is shown on the **Dashboards** fact sheet of model of type **Customer journey landscape**.

CHARTS

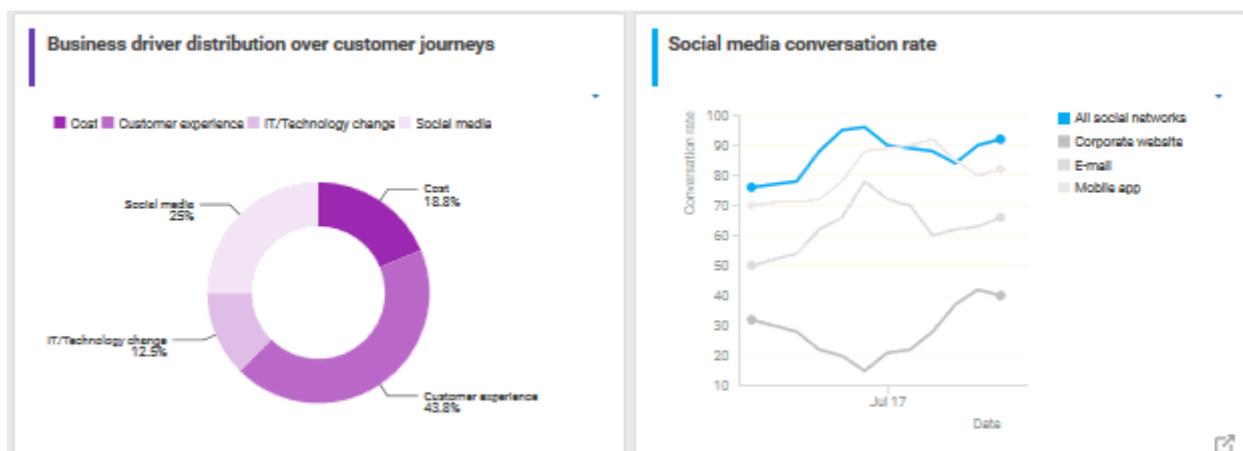
BUSINESS DRIVER DISTRIBUTION OVER CUSTOMER JOURNEYS

Displays the distribution of business drivers, such as **Cost** and **IT/Technology change**, across customer journeys.

SOCIAL MEDIA CONVERSATION RATE

Displays the conversation rate for each medium and the aggregated conversation rate for a specific time period.

EXAMPLE



3.2.15.5.5.4 Dashboards using content that is retrieved by ARIS reports that access Matomo data

Available dashboards (page 1143) using content that is retrieved by ARIS reports that access Matomo data. Matomo is an open-source analytics platform.

3.2.15.5.5.4.1 Publications (Matomo)

Dashboard that includes an overview of the ARIS portal usage. It provides charts that consider various aspects for which you can select different evaluation periods, such as last week, last month, and last year.

AVAILABILITY

ARIS Connect >  **Portal** > **Home** >  **Dashboards**

CHARTS

NUMBER OF VISITS OVER TIME

Shows the number of visits (visits/unique visitors) over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Global portal usage running the Matomo **VisitsSummary** report.

This report creates global portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific **Matomo** reports, and adds ARIS data to them, if required.

The following **Matomo** reports are retrieved:

- **VisitsSummary** report
- **BrowserVersions** report
- **BrowserEngines** report
- **Language** report
- **OsVersions** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

The parameters must be specified according to the required Matomo settings. If the settings are specified several output files are generated.

OUTPUT

Generates several **XML** documents stored in this subfolder: ARIS document storage/Dashboarding/**Matomo**.

The report result is used as input for the Matomo - Technical KPIs (page 346) dashboard.

CONTEXT

Database

Since a context is mandatory for ARIS reports, an ARIS database must be specified as context for this report. However, the database will not be evaluated by the report and it therefore does not matter which database is selected.

Data feed

Matomo - Summary of visits over time

MOST VIEWED ITEM TYPES (E.G., 'PROCESS', 'ROLE')

Top seven item types most viewed over the selected time period, for example, processes.

Data source

ARIS Architect:

Report: Matomo - Database-specific portal usage running the Matomo **CustomDimension** report.

This report creates ARIS database-specific portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific Matomo reports, and adds ARIS data to them, if required.

The following Matomo reports are retrieved:

- **PageTitles** report
- **CustomDimension** report
- **SiteSearchKeywords** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

OUTPUT

Generates several **XML** documents stored in the ARIS document storage/Dashboarding/<database name; default=United Motor Group>/**Matomo** subgroup.

The report result is used as input for the Matomo - Publications (page 339) dashboard.

CONTEXT

Database

Data feed

Matomo - Most viewed item types

MOST VIEWED ITEMS

Top seven items most viewed over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Database-specific portal usage running the Matomo **PageTitles** report.

This report creates ARIS database-specific portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific Matomo reports, and adds ARIS data to them, if required.

The following Matomo reports are retrieved:

- **PageTitles** report
- **CustomDimension** report
- **SiteSearchKeywords** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

OUTPUT

Generates several **XML** documents stored in the ARIS document storage/Dashboarding/<database name; default=United Motor Group>/**Matomo** subgroup.

The report result is used as input for the Matomo - Publications (page 339) dashboard.

CONTEXT

Database

Data feed

Matomo - Most viewed items

MOST SEARCHED KEYWORDS

Top seven of the keywords most searched over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Database-specific portal usage running the Matomo **SiteSearchKeywords** report.

This report creates ARIS database-specific portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific Matomo reports, and adds ARIS data to them, if required.

The following Matomo reports are retrieved:

- **PageTitles** report
- **CustomDimension** report
- **SiteSearchKeywords** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

OUTPUT

Generates several **XML** documents stored in the ARIS document storage/Dashboarding/<database name; default=United Motor Group>/**Matomo** subgroup.

The report result is used as input for the Matomo - Publications (page 339) dashboard.

CONTEXT

Database

Data feed

Matomo - Most searched keywords

MOST VIEWED ITEM TYPES LIST

Top-fifty list of item types most viewed over the selected time period, for example, processes.

Data source

ARIS Architect:

Report: Matomo - Database-specific portal usage running the Matomo **CustomDimension** report.

This report creates ARIS database-specific portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific Matomo reports, and adds ARIS data to them, if required.

The following Matomo reports are retrieved:

- **PageTitles** report
- **CustomDimension** report
- **SiteSearchKeywords** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

OUTPUT

Generates several **XML** documents stored in the ARIS document storage/Dashboarding/<database name; default=United Motor Group>/**Matomo** subgroup.

The report result is used as input for the Matomo - Publications (page 339) dashboard.

CONTEXT

Database

Data feed

Matomo - Most viewed items types

MOST VIEWED ITEMS LIST

List of top fifty items most viewed over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Database-specific portal usage running the Matomo **PageTitles** report.

This report creates ARIS database-specific portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific Matomo reports, and adds ARIS data to them, if required.

The following Matomo reports are retrieved:

- **PageTitles** report
- **CustomDimension** report
- **SiteSearchKeywords** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

OUTPUT

Generates several **XML** documents stored in the ARIS document storage/Dashboarding/<database name; default=United Motor Group>/**Matomo** subgroup.

The report result is used as input for the Matomo - Publications (page 339) dashboard.

CONTEXT

Database

Data feed

Matomo - Most viewed items

MOST SEARCHED KEYWORDS LIST

Top-fifty list of the keywords most searched over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Database-specific portal usage running the Matomo **SiteSearchKeywords** report.

This report creates ARIS database-specific portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific Matomo reports, and adds ARIS data to them, if required.

The following Matomo reports are retrieved:

- **PageTitles** report
- **CustomDimension** report
- **SiteSearchKeywords** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

OUTPUT

Generates several **XML** documents stored in the ARIS document storage/Dashboarding/<database name; default=United Motor Group>/**Matomo** subgroup.

The report result is used as input for the Matomo - Publications (page 339) dashboard.

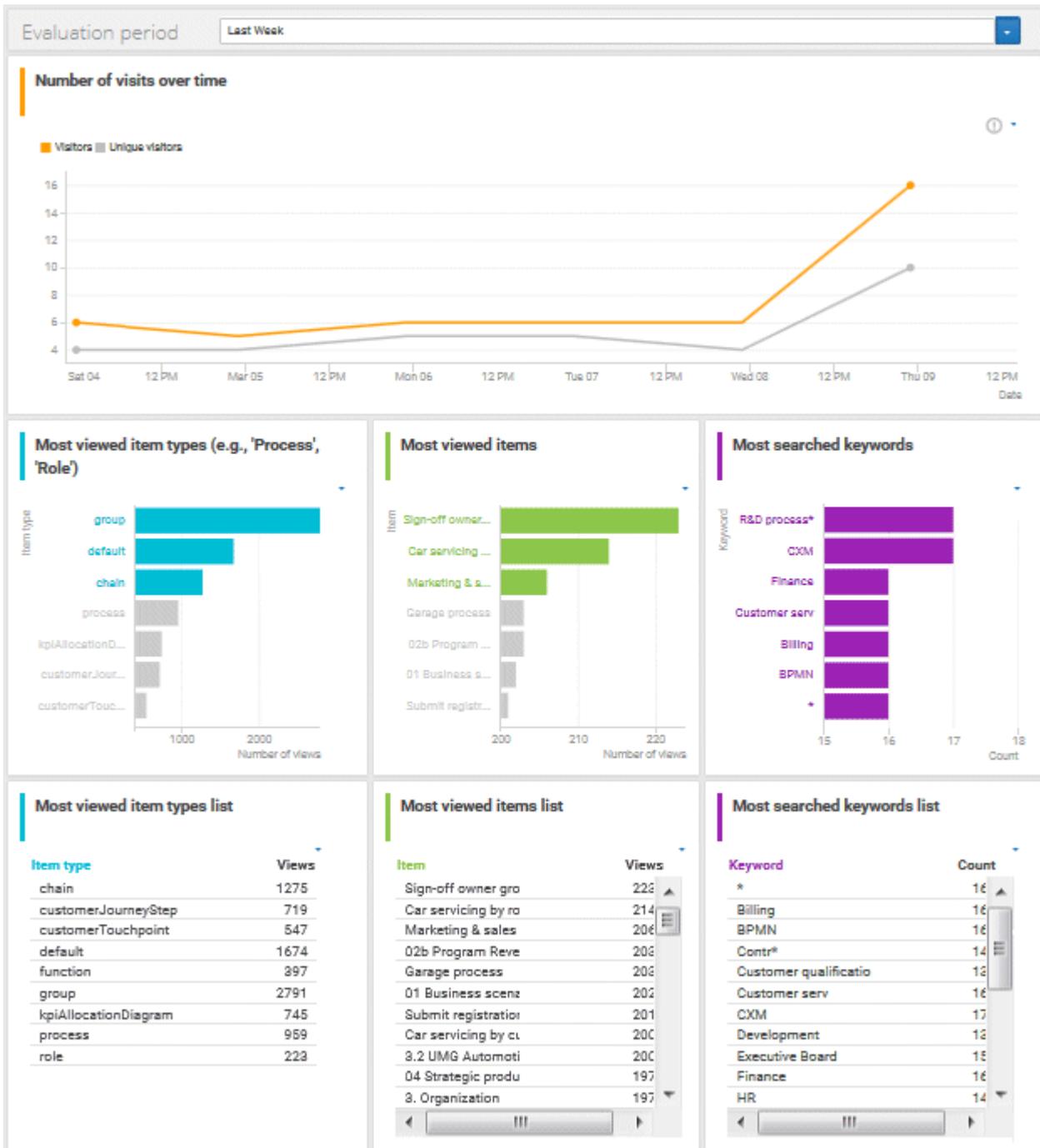
CONTEXT

Database

Data feed

Matomo - Most searched keywords

EXAMPLE



3.2.15.5.5.4.2 Technical KPIs (Matomo)

Dashboard that shows technical KPIs regarding the ARIS usage. It provides charts that consider various technical aspects for which you can select different evaluation periods, such as last week, last month, and last year.

AVAILABILITY

ARIS Connect >  **Portal** > **Home** >  **Dashboards**

CHARTS

PERCENT DISTRIBUTION OF BROWSER ENGINES

Percent distribution of the browser engines used over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Global portal usage running the Matomo **BrowserEngines** report.

This report creates global portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific **Matomo** reports, and adds ARIS data to them, if required.

The following **Matomo** reports are retrieved:

- **VisitsSummary** report
- **BrowserVersions** report
- **BrowserEngines** report
- **Language** report
- **OsVersions** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

The parameters must be specified according to the required Matomo settings. If the settings are specified several output files are generated.

OUTPUT

Generates several **XML** documents stored in this subfolder: ARIS document storage/Dashboarding/**Matomo**.

The report result is used as input for the Matomo - Technical KPIs (page 346) dashboard.

CONTEXT

Database

Since a context is mandatory for ARIS reports, an ARIS database must be specified as context for this report. However, the database will not be evaluated by the report and it therefore does not matter which database is selected.

Data feed

Matomo - Browser engines

MOST USED OPERATING SYSTEMS

Operating systems most used over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Global portal usage running the Matomo **OsVersions** report.

This report creates global portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific **Matomo** reports, and adds ARIS data to them, if required.

The following **Matomo** reports are retrieved:

- **VisitsSummary** report
- **BrowserVersions** report
- **BrowserEngines** report
- **Language** report
- **OsVersions** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

The parameters must be specified according to the required Matomo settings. If the settings are specified several output files are generated.

OUTPUT

Generates several **XML** documents stored in this subfolder: ARIS document storage/Dashboarding/**Matomo**.

The report result is used as input for the Matomo - Technical KPIs (page 346) dashboard.

CONTEXT

Database

Since a context is mandatory for ARIS reports, an ARIS database must be specified as context for this report. However, the database will not be evaluated by the report and it therefore does not matter which database is selected.

Data feed

Matomo - Operating system version

MOST USED BROWSER VERSIONS (LIST)

List of browser versions most used over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Global portal usage running the Matomo **BrowserVersions** report.

This report creates global portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific **Matomo** reports, and adds ARIS data to them, if required.

The following **Matomo** reports are retrieved:

- **VisitsSummary** report
- **BrowserVersions** report
- **BrowserEngines** report
- **Language** report
- **OsVersions** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

The parameters must be specified according to the required Matomo settings. If the settings are specified several output files are generated.

OUTPUT

Generates several **XML** documents stored in this subfolder: ARIS document storage/Dashboarding/**Matomo**.

The report result is used as input for the Matomo - Technical KPIs (page 346) dashboard.

CONTEXT

Database

Since a context is mandatory for ARIS reports, an ARIS database must be specified as context for this report. However, the database will not be evaluated by the report and it therefore does not matter which database is selected.

Data feed

Matomo - Browser version

MOST USED PORTAL LANGUAGES (LIST)

List of portal languages most used over the selected time period.

Data source

ARIS Architect:

Report: Matomo - Global portal usage running the Matomo **Language** report.

This report creates global portal usage statistics. Therefore, it accesses an external Matomo instance that contains a collection of ARIS portal events, retrieves specific **Matomo** reports, and adds ARIS data to them, if required.

The following **Matomo** reports are retrieved:

- **VisitsSummary** report
- **BrowserVersions** report
- **BrowserEngines** report
- **Language** report
- **OsVersions** report

To use the Matomo - Global portal usage and Matomo - Database-specific portal usage reports, make sure to have Matomo installed and configured and the report parameters specified accordingly.

The parameters must be specified according to the required Matomo settings. If the settings are specified several output files are generated.

OUTPUT

Generates several **XML** documents stored in this subfolder: ARIS document storage/Dashboarding/**Matomo**.

The report result is used as input for the Matomo - Technical KPIs (page 346) dashboard.

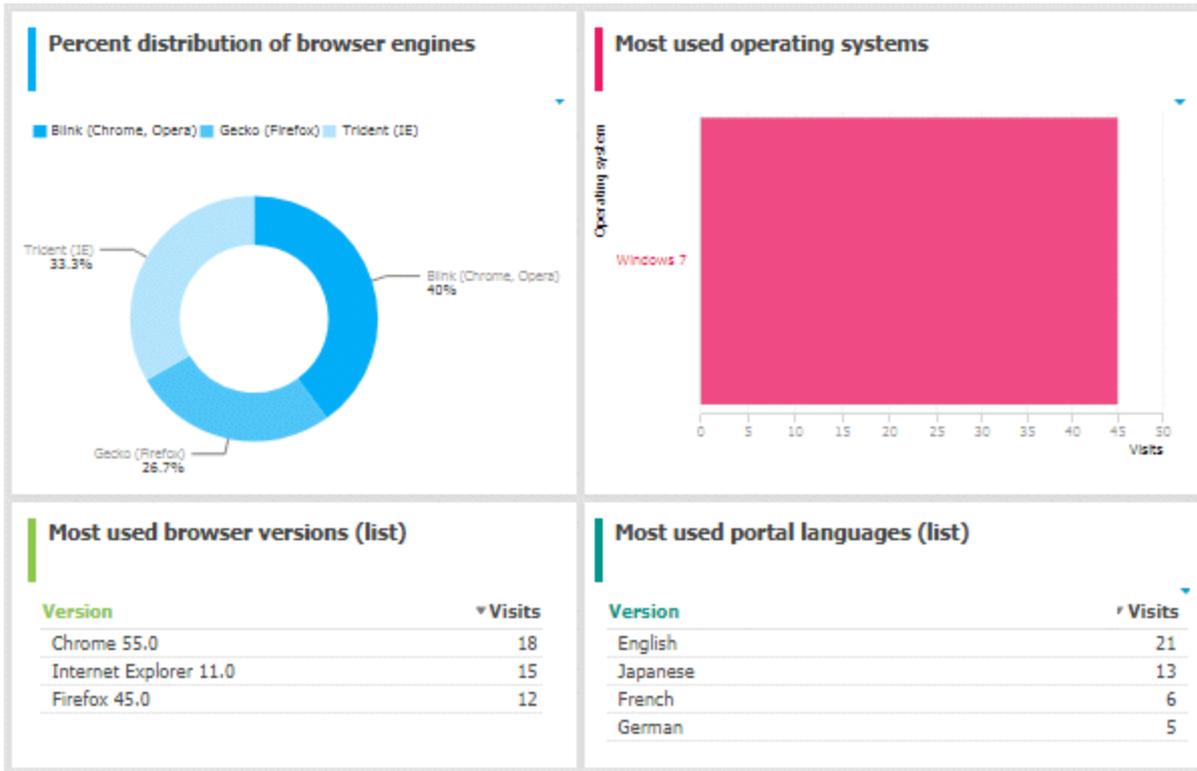
CONTEXT**Database**

Since a context is mandatory for ARIS reports, an ARIS database must be specified as context for this report. However, the database will not be evaluated by the report and it therefore does not matter which database is selected.

Data feed

Matomo - Portal language

EXAMPLE



3.2.15.5.5.5 Dashboards using Enterprise Architecture (EA) data

Available dashboards (page 1143) based on Enterprise Architecture (EA) information.

3.2.15.5.5.5.1 EA dashboard for organizational units

Displays the dashboard for IT systems, that is, for object of type **Application system type**.

AVAILABILITY

This dashboard is shown on the **Dashboards** fact sheet of objects of type **Organizational unit**.

CHARTS

SYSTEMS HAVING EXPIRED

Number of systems that are no longer standard.

Data source

ARIS Architect or ARIS Architect and Alfabet:

- Report: EA - Relations between organizational units and systems
- Report: EA/Alfabet - Systems with lifecycle data

Report configurable?

No

Data feed

- EA - OrgUnit - Systems expired
Uses the **EA - OrgUnit - Systems with lifecycle data** data feed as a sub-feed.
- EA - OrgUnit - Systems with lifecycle data

Calculation

Checks for the **End** attribute to see whether a system has expired.

- System that supports an organizational unit via function or optionally via position or role
or
- System that lies under the responsibility of an organizational role.

SYSTEMS PHASING IN

Number of systems that will become standard within 12 months.

Data source

ARIS Architect or ARIS Architect and Alfabet:

- Report: EA - Relations between organizational units and systems
- Report: EA/Alfabet - Systems with lifecycle data

Report configurable?

No

Data feed

- EA - OrgUnit - Systems phasing in
Uses the **EA - OrgUnit - Systems with lifecycle data** data feed as a sub-feed.
- EA - OrgUnit - Systems with lifecycle data

Calculation

Checks via the **Phase-in phase (start)** attribute if a system is phasing in

- System that supports an organizational unit via function or optionally via position or role
or
- System that lies under the responsibility of an organizational role.

SYSTEMS PHASING OUT

Number of systems used by the selected organizational unit which will be retired within the next twelve months.

Data source

ARIS Architect or ARIS Architect and Alfabet:

- Report: EA - Relations between organizational units and systems
- Report: EA/Alfabet - Systems with lifecycle data

Report configurable?

No

Data feed

- EA - OrgUnit - Systems phasing out
Uses the **EA - OrgUnit - Systems with lifecycle data** data feed as a sub-feed.
- EA - OrgUnit - Systems with lifecycle data

Calculation

Checks via the **Phase-out phase (start)** attribute if a system is phasing out

- System that supports an organizational unit via function or optionally via position or role
or
- System that lies under the responsibility of an organizational role.

SYSTEMS EXPIRING

Number of systems used by the selected organizational unit which will become non-standard within the next twelve months.

Data source

ARIS Architect or ARIS Architect and Alfabet:

- Report: EA - Relations between organizational units and systems
- Report: EA/Alfabet - Systems with lifecycle data

Report configurable?

No

Data feed

- EA - OrgUnit - Standard systems expiring
Uses the **EA - OrgUnit - Systems with lifecycle data** data feed as a sub-feed.
- EA - OrgUnit - Systems with lifecycle data

Calculation

Checks via the **Start** attribute if a system is expiring

- System that supports an organizational unit via function or optionally via position or role
or
- System that lies under the responsibility of an organizational role.

SYSTEM USAGE

Distribution of standard and non-standard systems used by the selected organizational unit.

Data source

ARIS Architect or ARIS Architect and Alfabet:

- Report: EA - Relations between organizational units and systems
- Report: EA/Alfabet - Systems with lifecycle data

Report configurable?

No

Data feed

EA - OrgUnit - Standard vs. non-standard systems)

Uses the **EA - OrgUnit - Systems with lifecycle data** data feed as a sub-feed.

Calculation

Checks via the **Standardization status** attribute if a system used is non-standard

- System that supports an organizational unit via function or optionally via position or role
or
- System that lies under the responsibility of an organizational role.

SYSTEMS COMPARED BY COST AND CRITICALITY

Portfolio of systems used by the selected organizational unit categorized by cost, criticality, and interface count.

Data source

ARIS Architect:

- Report: EA - Relations between organizational units and systems
- Report: EA - Systems with data

This report creates a table listing all IT systems of the database. For each system, various types of information are provided, such as the **Data center costs** and **Criticality** attributes, or the number of interfaces.

The **Enterprise Architecture Management** extension pack is required for ARIS Architect or ARIS Designer.

The report provides various parameters allowing customizing without changing the report code.

OUTPUT

Generates the **EA_SYSTEMS_WITH_DATA.XML** file. The **Systems with data** document is stored within this subfolder: ARIS document storage/Dashboarding/<database name>; default=United Motor Group>/EA.

The report result is used as input for the **EA - Organizational unit - Systems with data** data feed. This data feed is related to the EA dashboard for organizational units (page 351) dashboard.

CONTEXT

Database

Report configurable?

Yes

Data feed

EA - Organizational unit - Systems with data

Calculation

Compares systems via the **Costs per unit** and **Critically** attributes

- System that supports an organizational unit via function or optionally via position or role or
- System that lies under the responsibility of an organizational role.

SYSTEM REPLACEMENT CANDIDATES BY CAPABILITY OVERLAP

Top 7 pairs of systems with the most overlap in capabilities used by the given organizational unit.

Data source

ARIS Architect:

- Report: EA - Relations between organizational units and systems
- Report: EA - Systems redundancies

This report creates a table listing all IT system pairs that have common capabilities. In each pair, **System A** is considered to be the potential replacement for **System B**. For each pair, the capability overlap is shown as a percentage.

The report provides various parameters allowing customizing without changing the report code.

OUTPUT

Generates the **EA_SYSTEM_REDUNDANCIES.XML** file. **The System redundancies in the use of capabilities** document is stored in this subfolder: ARIS document storage/Dashboarding/<database name; default=United Motor Group>/EA.

The report result is used as input for the **EA - System - System redundancies** data feed. This data feed is related, for example, to the EA dashboard for organizational units (page 351) dashboard.

CONTEXT

Database

Report configurable?

Yes

Data feed

EA - System - System redundancies

Calculation

Compares systems regarding their common capabilities.

- System that supports an organizational unit via function or optionally via position or role or
- System that lies under the responsibility of an organizational role.

System A is considered as potential replacement of system B.

OPERATING AND CAPITAL EXPENSES FOR SYSTEMS OVER TIME

Operating and capital expenses for the systems used by the selected organizational unit over time.

Data source

ARIS Architect:

Report: EA/Alfabet - CAPEX/OPEX for organizational units

Report configurable?

Yes

Data feed

EA - OrgUnit - CAPEX/OPEX

Calculation

Lists the capital expenses (CAPEX) and operational expenses (OPEX) over time for all organizational units of the database that also exist in a connected Alfabet system.

EXAMPLE



3.2.15.5.5.2 EA dashboard for IT systems

Displays the dashboard for objects of type **Organizational unit**.

AVAILABILITY

This dashboard is shown on the **Dashboards** fact sheet of objects of type **Application system type**.

CHARTS

MOST SUPPORTED ORGANIZATIONAL UNITS

Based on process support maps, Top-7 organizational units with the highest number of associated processes actively supported by the given system.

Data source

ARIS Architect:

Report: EA - System support

Report configurable?

No

Data feed

EA - System - Supported organizational units

Calculation

Lists all supported objects of **Application system type** object type. These objects are identified using the Process support unit, the Organizational unit, and Function objects connected to the IT system.

SUPPORT DISTRIBUTION BY ORGANIZATIONAL UNIT

Based on process support maps, list of organizational units and the corresponding system support distribution.

Data source

ARIS Architect:

Report: EA - System support

Report configurable?

No

Data feed

EA - System - Supported organizational units

Calculation

Shows the distribution of supported objects of **Application system type** object type. These objects are identified using the Process support unit, the Organizational unit, and Function objects connected to the IT system.

MOST SUPPORTED PROCESSES

Top-7 processes with the highest number of functions actively supported by the given system.

Data source

ARIS Architect:

Report: EA - System support for VACDs

Report configurable?

No

Data feed

EA - System - Supported processes

Calculation

Counts and ranks the systems supported per processes.

Traversing the hierarchy of value-added chain diagrams (VACDs), searches for all functions supporting IT systems. Functions support IT systems if they are connected using the connection type **supports** in event-driven process chains (EPCs) that are assigned to VACDs.

SUPPORT DISTRIBUTION BY PROCESSES

List of processes and the corresponding system support distribution.

Data source

ARIS Architect:

Report: EA - System support for VACDs

Report configurable?

No

Data feed

EA - System - Supported processes

Calculation

Lists the systems supported per processes together with the percentage distribution, based on the rank.

Traversing the hierarchy of value-added chain diagrams (VACDs), searches for all functions supporting IT systems. Functions support IT systems if they are connected using the connection type **supports** in event-driven process chains (EPCs) that are assigned to VACDs.

SYSTEM REPLACEMENT CANDIDATES BY CAPABILITY OVERLAP

Top-7 options for replacing the selected system (as a source or target).

Data source

ARIS Architect:

Report: EA - System redundancies

Report configurable?

No

Data feed

EA - System - System redundancies

Calculation

Compares systems regarding their common capabilities.

OPERATING COSTS BY COST TYPE

Operating expenses for the given IT system by cost type over time.

Data source

ARIS Architect:

Report: EA/Alfabet - System costs

Report configurable?

No

Data feed

EA - System - Costs over time

Calculation

Lists all IT systems of the database that also exist in Alfabet. All cost values are listed per system and year for the various cost types specified.

EXAMPLE



3.2.15.5.5.3 EA dashboard for objectives

Displays the goal accomplishment for objectives across all KPIs and per KPI.

AVAILABILITY

This dashboard is shown for the model types **Strategy diagram** and **Objective diagram** in the dashboard sidebar of the **Diagram** fact sheet.

CHARTS

OBJECTIVES

Shows all objectives in the model and their goal accomplishments over all KPIs.

Data source

ARIS Architect:

- Report: Strategy - Models and objectives
- Report: Strategy - Objectives with data

Report configurable?

No

Data feed

Strategy - Goal accomplishment - Objectives

Calculation

Lists all **Strategy diagram** and **Objective diagram** model types and the objectives contained with their goal accomplishments.

KPIS PER OBJECTIVE

Displays the KPIs of the objective selected in the diagram and their respective values.

Data source

ARIS Architect:

- Report: Strategy - Objectives and KPIs
- Report: Strategy - KPIs with data

Report configurable?

No

Data feed

Strategy - Goal accomplishment - KPIs per objective

Calculation

Lists all objectives including their KPIs whose achievement is calculated based on the Balanced Scorecard methodology.

EXAMPLE

Objectives

Goal accomplishment over all KPIs

▲ **Objective** GA

Achieve annualized sales of 30 bn. €	●
Acquisition of profitable niche play...	●
Align 100% delivery processes ac...	●
Be the future no. 1 premium car s...	●
Design game changing 21st centur...	●
Improve buying experience	●
Improve decision making experience	●
Improve operating margin to 6%	●

KPIs per objective

Goal accomplishment per KPI

▲ **KPI** GA

Cycle time improvement rate	●
Over all error ratio	●
Over all process effectiveness (OPE)	●

3.2.15.5.5.6 Dashboards using ARIS Process Performance Manager data

Available dashboards (page 1143) based on ARIS Process Performance Manager data.

3.2.15.5.5.6.1 Process and Finance KPIs dashboard

Displays an overview of a sample assembly process (manufacturing).

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database on the **Dashboards** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

FINISHED PROCESS INSTANCES

Number of process instances measured by ARIS Process Performance Manager.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances per day (persisted)

Calculation

Counts the number of recorded process instances over the entire period.

PROCESS INSTANCES INCLUDING PRODUCTION FAULTS

Shows the percentage of process instances for which the quality checks (mentioned in the process) failed.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances (persisted)

Calculation

Calculates the percentage of process instances for which the quality checks (mentioned in the process) failed.

NUMBER OF TRACTORS PRODUCED WITHOUT FAULTS

Shows the number of finished process instances over time (on an hourly scale).

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances per hour (persisted)

Calculation

Number of finished process instances over time (on an hourly scale).

TRACTORS SOLD

Shows the overall number of sold tractors without production faults.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances (persisted)

Calculation

Counts the overall number of sold tractors without production faults.

MATERIAL COST PER TRACTOR VARIANT

Shows the average material cost per tractor variant.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM - Cost per tractor variant (persisted)

Calculation

Average sum of the values of all cost attributes in all trace entries of all process instances per variant.

AVERAGE MATERIAL COSTS

Shows the overall average material costs.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data collection

In the side-by-side view: Reacts to the function selection and shows the average cost of the assembled part.

Data feed

PPM - Function details (persisted)

Calculation

Average sum of the values of all cost attributes in all trace entries of all process instances.

REVENUE

Shows the overall revenue over all sold tractors.

Data source

Process Performance Manager favorite persisted for the use case demo.

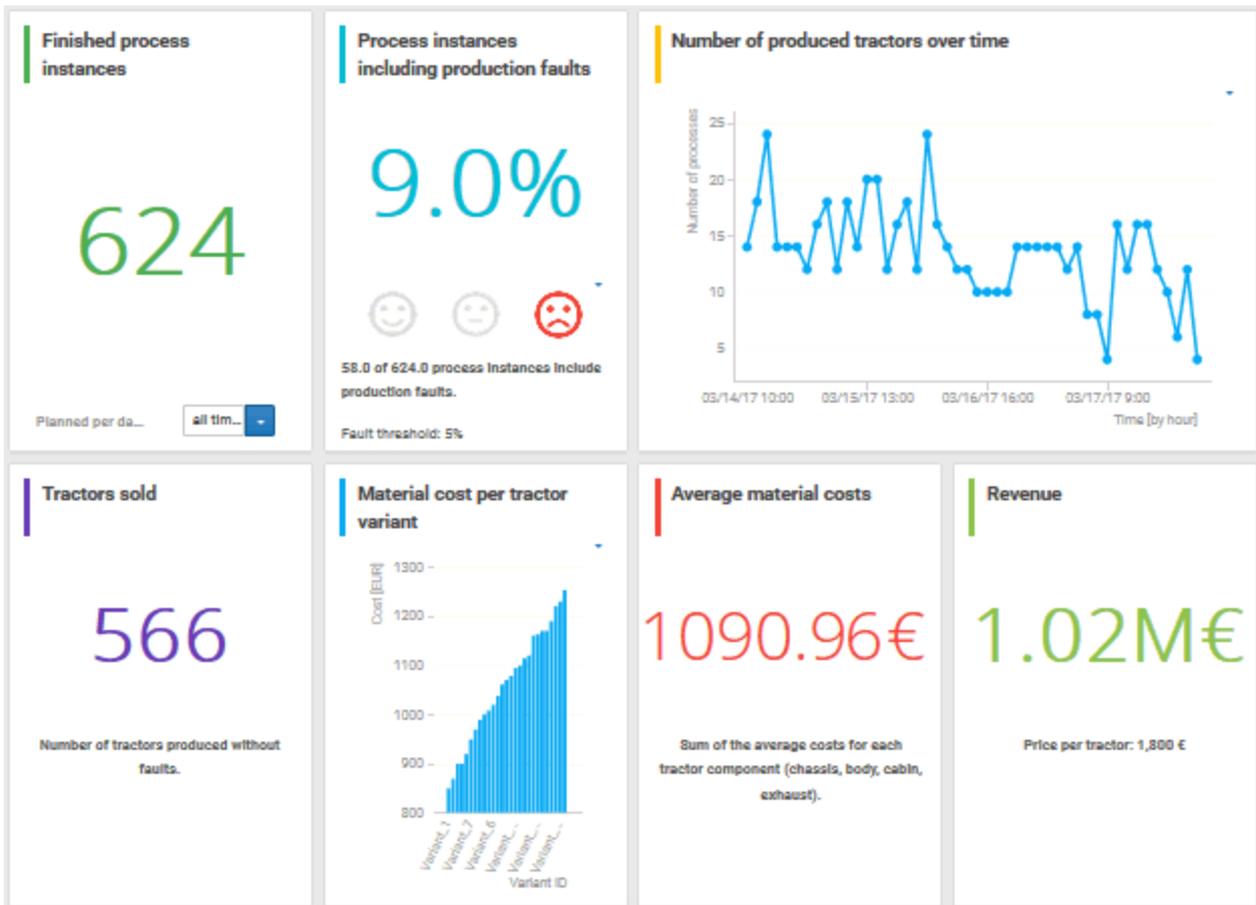
Data feed

PPM instances (persisted)

Calculation

Number of sold tractors multiplied by the price per tractor.

EXAMPLE



3.2.15.5.5.6.2 Process variant comparison

Displays modeled process variants side-by-side.

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database on the **Dashboards** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

PROCESS VARIANT WITH THE SHORTEST CYCLE TIME (MINUTES)

Shows the function flow that describes the process variant with the shortest process cycle time in minutes of all recorded instances.

Data source

PPM instances (persisted)

Data feed

PPM - Workflow with shortest cycle time (persisted)

PROCESS VARIANT WITH THE LONGEST CYCLE TIME (MINUTES)

Shows the function flow that describes the process variant with the longest process cycle time in minutes of all recorded instances.

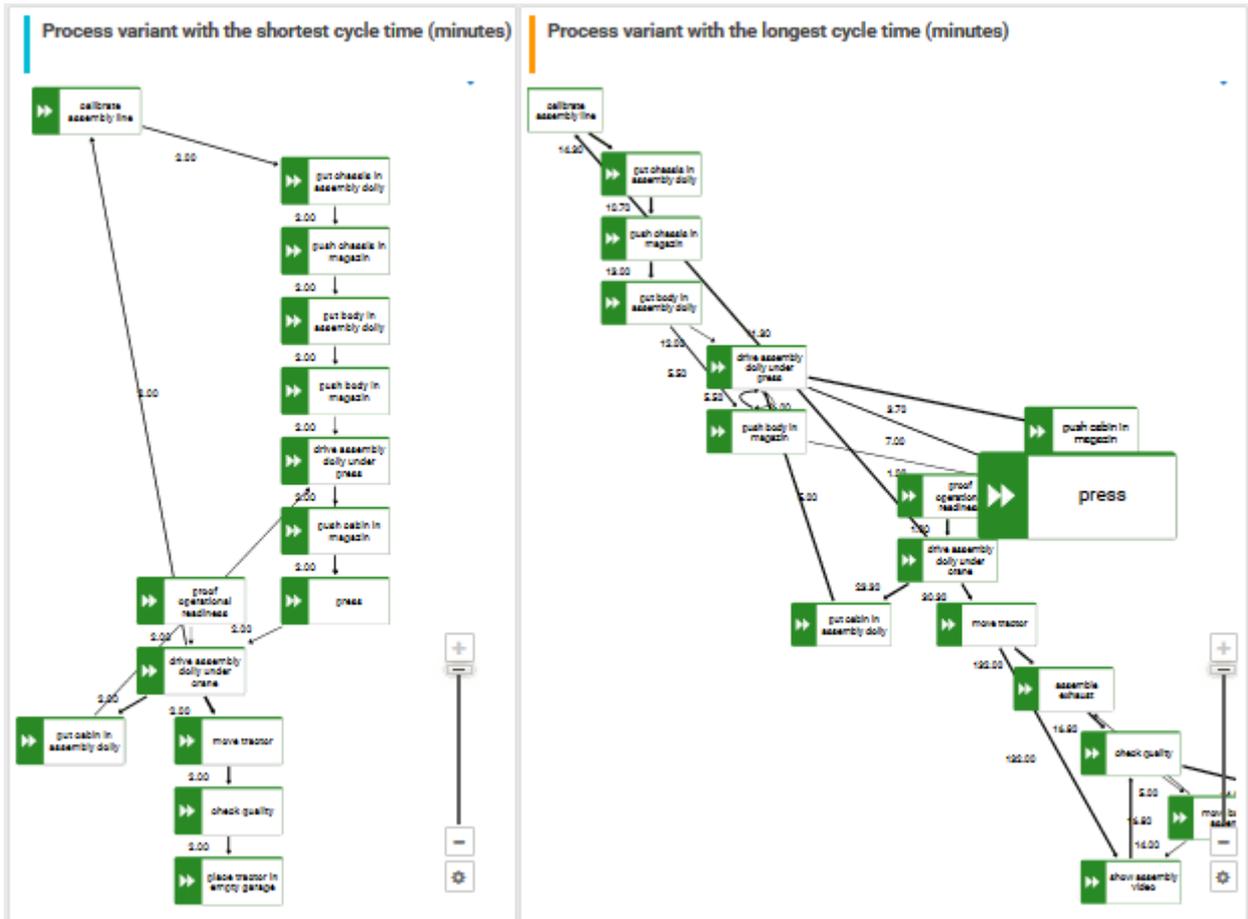
Data source

PPM instances (persisted)

Data feed

PPM - Workflow with shortest cycle time (persisted)

EXAMPLE



3.2.15.5.5.6.3 Performance

Displays financial overview of a sample assembly process (manufacturing).

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database in the dashboard sidebar of the **Diagram** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

FINISHED PROCESS INSTANCES

Number of process instances measured by ARIS Process Performance Manager.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances per day (persisted)

Calculation

Counts the number of recorded process instances over the entire period.

PROCESS INSTANCES INCLUDING PRODUCTION FAULTS

Shows the percentage of process instances for which the quality checks (mentioned in the process) failed.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances (persisted)

Calculation

Calculates the percentage of process instances for which the quality checks (mentioned in the process) failed.

AVERAGE PROCESS THROUGHPUT TIME (MINUTES)

In the side-by-side view: Delivers the average process throughput time over all recorded process instances as well as min./max. values and the planned value.

Data source

Process Performance Manager favorite persisted for the use case demo. Alternatively, regarding planned value, you can use the report **Export item data to tables** report or an individual ARIS query.

Data collection

The KPI reacts to the function selection. If nothing is selected, it presents the average throughput time over all instances. If a function is selected, it presents the average throughput time over all instances that include the function.

Min./Max. values always consider all recorded instances. The planned value is entered in the underlying data feed (this is the case in the example) or is requested from the ARIS repository via report or query.

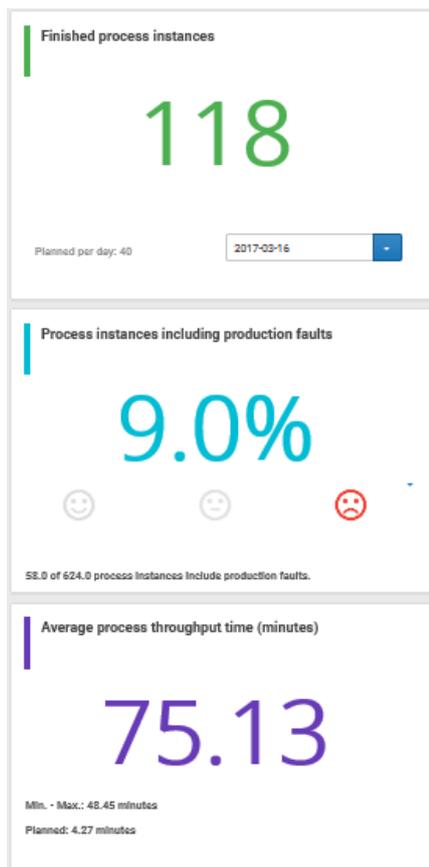
Data feed

PPM instances (persisted)

Calculation

Average sum of the values of all cost attributes in all trace entries of all process instances.

EXAMPLE



3.2.15.5.5.6.4 Finance

Displays financial overview of a sample assembly process (manufacturing).

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database in the dashboard sidebar of the **Diagram** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

AVERAGE MATERIAL COSTS

Shows the overall average material costs.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data collection

In the side-by-side view: Reacts to the function selection and shows the average cost of the assembled part.

Data feed

PPM - Function details (persisted)

Calculation

Average sum of the values of all cost attributes in all trace entries of all process instances.

TRACTORS SOLD

Shows the overall number of sold tractors without production faults.

Data source

Process Performance Manager favorite persisted for the use case demo.

Data feed

PPM instances (persisted)

Calculation

Counts the overall number of sold tractors without production faults.

REVENUE

Shows the overall revenue over all sold tractors.

Data source

Process Performance Manager favorite persisted for the use case demo.

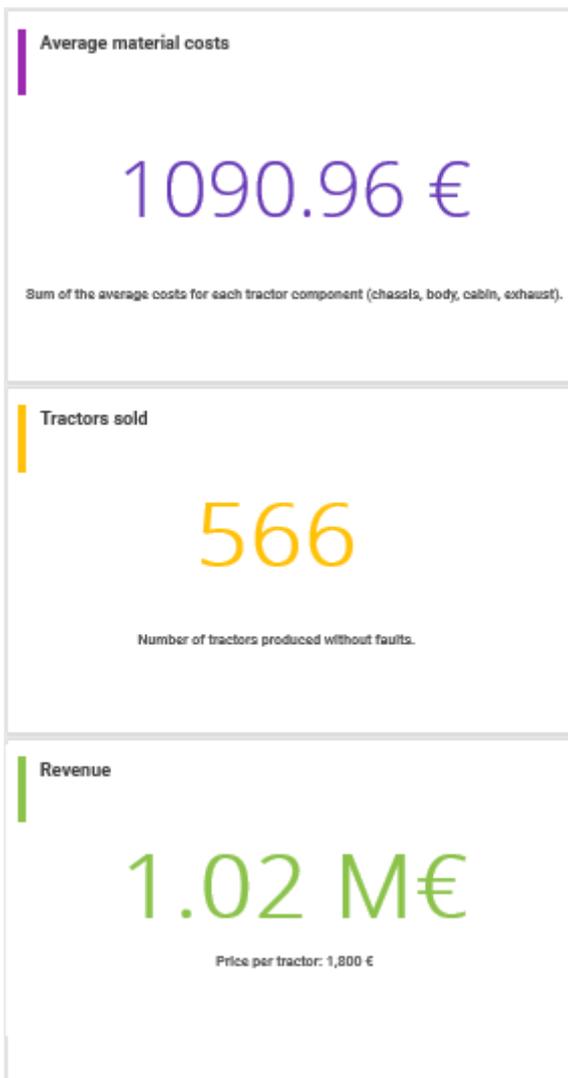
Data feed

PPM instances (persisted)

Calculation

Number of sold tractors multiplied by the price per tractor.

EXAMPLE



3.2.15.5.5.6.5 IoT - Device status (persistent)

Displays the device status of a sample assembly process (manufacturing).

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database in the dashboard sidebar of the **Diagram** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

SELECT DEVICE

Device type and device instance selection to filter the downtime rate.

Data source

Report: Exports item data to tables with the value pair **IoT objects to processes** (Cumulocity API).

Report configurable?

No

Data collection

Context - process model: Collects all IoT device types and device instances (Cumulocity) relevant in the process model.

Data feed

IoT - Object information and **IoT - Devices**

Calculation

-.-

SELECT DATA RANGE

Date selection for selecting a date range to filter the downtime rate.

DOWNTIME RATE [%]

Displays the downtime rate of the selected device type and device instance in the selected date range.

Data source

Report: Exports item data to tables with the value pair **IoT objects to processes** (Cumulocity API).

Report configurable?

No

Data collection

Context - process model: Collects all downtimes of all IoT devices (Cumulocity) relevant in the process model.

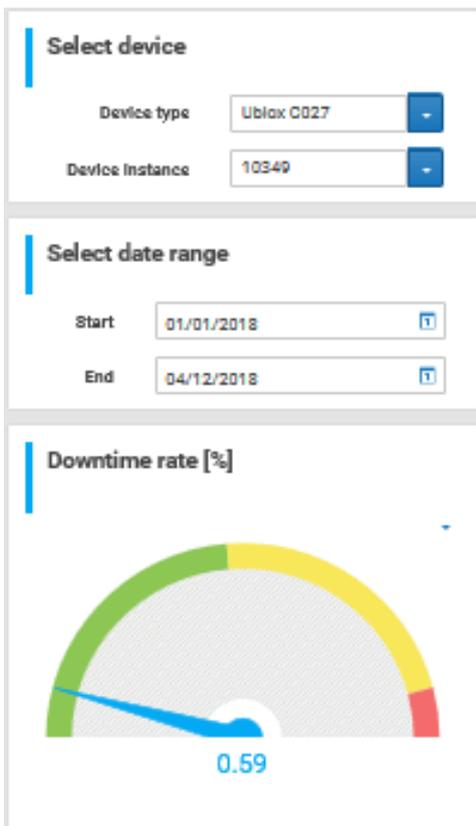
Data feed

IoT - Object information and **IoT - Devices**

Calculation

Aggregates the downtimes of the selected data.

EXAMPLE



3.2.15.5.5.6.6 IoT - Alarm status (persistent)

Displays the alarm status of a sample assembly process (manufacturing).

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database in the dashboard sidebar of the **Diagram** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

SELECT DATA RANGE

Date selection for selecting a date range to filter the dashboard.

CRITICAL IOT ALARMS

Shows the number of critical IoT alarms.

Data source

Report: Exports item data to tables with the value pair **IoT objects to processes** (Cumulocity API).

Report configurable?

No

Data collection

Context - process model: Collects all alarms from all IoT devices (Cumulocity) relevant in the process model.

Data feed

IoT - Device alarms and **IoT - Object information**

Calculation

Counts the number of critical IoT alarms.

IOT ALARMS AT A GLANCE

Provides an overview of all IoT alarms by device and severity.

Data source

Report: Exports item data to tables with the value pair "IoT objects to processes" (Cumulocity API).

Report configurable?

No

Data collection

Context - process model: Collects all alarms from all IoT devices (Cumulocity) relevant in the process model.

Data feed

IoT - Device alarms and **IoT - Object information**

Calculation

Counts the number of IoT alarms by device and severity.

EXAMPLE

Select date range

Start: 01/01/2018

End: 04/12/2018

Critical IoT alarms

4

IoT alarms at a glance

IoT device n...	Severity	# Alarms
Ublox C027	MAJOR	1
Ublox C027	CRITICAL	4

3.2.15.5.5.6.7 IoT project status

Displays the project status of a sample assembly process (manufacturing).

AVAILABILITY

This example dashboard is available for the model **Tractor assembly** in the **United Motor Group** database in the dashboard sidebar of the **Diagram** fact sheet. You will find the model in the group **2. Processes > 2.1 Process architecture > Core processes > Production > Make-to-order > Tractor assembly**.

CHARTS

PROGRESS OF IOT PROJECT IMPLEMENTATION

Gives an overview of how many of the planned IoT resources are already implemented.

Data source

Report: Exports item data to tables with the value pair **IoT objects to processes**.

Report configurable?

No

Data collection

Context - process model/activity/IoT object: Collects all IoT objects that are connected to the context (can be **process model**, **activity**, or **IoT object**). Evaluates whether the attribute **Cumulocity type** is true.

Data feed

IoT - Implementation progress and **IoT - Object information**

Calculation

Ratio of the number of IoT objects whose **Cumulocity type** attribute is true to the total number of IoT objects that relate to the context.

PROCESS COST RATE SINCE IOT PROJECT IMPLEMENTATION

Displays the impact of the IoT implementation on the process costs.

Data source

PPM: Standard private favorite **01 Process cycle time** extended by the process dimension **Time**, filtered by **month** with selected function measure **Process cost rate**.

Report configurable?

No

Data collection

Context - process model: Aggregates the process cost rate measured by PPM.

Data feed

No data feed, direct connection to PPM.

Calculation

Aggregates the process costs over all process instances per month.

PROCESS DURATION SINCE IOT PROJECT IMPLEMENTATION

Shows how the process duration has developed since the implementation of the IoT project.

Data source

PPM: Standard private favorite **01 Process cycle time** extended by the process dimension **Time**, filtered by **month**.

Report configurable?

No

Data collection

Aggregates process duration measured by PPM.

Data feed

No data feed, direct connection to PPM.

Calculation

Aggregates the process duration over all process instances per month.

EXAMPLE



3.2.15.5.5.7 Dashboards using Collaboration

Here you can find information about Collaboration dashboards delivered by default.

3.2.15.5.5.7.1 Collaboration overview

Shows the amount of content and the number of active users, as well as the types of content and user groups in Collaboration.

AVAILABILITY

- **ARIS Connect** >  **Portal** > **Home** >  **Dashboards**
- **ARIS Connect** >  **Collaboration** > **Administration** >  **Dashboards** (only for users with the **Collaboration administrator** function privilege)

CHARTS

CONTENT ADDED OVER TIME

Amount and type of Collaboration content created in the last three months.

Data source

Posts, comments, tags, etc. of Collaboration.

Data feed

Collaboration - Content overview

NUMBER OF ACTIVE USERS OVER TIME

Number of active Collaboration users in the last five days.

Data source

Users of Collaboration who posted and commented on content.

Data feed

Collaboration - Usage overview

NUMERICAL CONTENT TYPE DISTRIBUTION

Percentage distribution of Collaboration content created in the last three months.

Data source

Posts, comments, tags, etc. of Collaboration.

Data feed

Collaboration - Content overview

NUMERICAL GROUP TYPE DISTRIBUTION

Numerical distribution of private and public groups created in Collaboration.

Data source

Private and public groups in Collaboration

Data feed

Collaboration - Largest groups

EXAMPLE



3.2.15.5.5.7.2 Content overview (Collaboration)

Shows the most frequently used Collaboration and ARIS content by users.

AVAILABILITY

- **ARIS Connect** >  **Portal** > **Home** >  **Dashboards**
- **ARIS Connect** >  **Collaboration** > **Administration** >  **Dashboards** (only for users with the **Collaboration administrator** function privilege)

CHARTS

MOST FOLLOWED MODELS

The top seven most followed models in Collaboration.

Data source

ARIS models in Collaboration

Data feed

Collaboration – Most followed ARIS content

MOST COMMENTED MODELS

The top seven most commented models in Collaboration.

Data source

ARIS models in Collaboration

Data feed

Collaboration – Most commented ARIS content

MOST BOOKMARKED POSTS

The top seven most bookmarked posts in Collaboration.

Data source

Posts in Collaboration

Data feed

Collaboration – Most bookmarked posts

MOST LIKED POSTS

The top seven most liked posts in Collaboration.

Data source

Posts in Collaboration

Data feed

Collaboration – Most liked posts

MOST COMMENTED POSTS

The top seven most commented posts in Collaboration.

Data source

Posts in Collaboration

Data feed

Collaboration – Most commented posts

MOST SHARED POSTS

The top seven most shared posts in Collaboration.

Data source

Posts in Collaboration

Data feed

Collaboration – Most shared posts

EXAMPLE



3.2.15.5.5.7.3 Group monitoring (Collaboration)

Shows the most frequently used groups and details of Collaboration groups.

AVAILABILITY

- **ARIS Connect** >  **Portal** > **Home** >  **Dashboards**
- **ARIS Connect** >  **Collaboration** > **Administration** >  **Dashboards** (only for users with the **Collaboration administrator** function privilege)

CHARTS

MOST FOLLOWED GROUPS

The top seven most followed groups in Collaboration.

Data source

Groups in Collaboration

Data feed

Collaboration – Largest groups

GROUPS WITH THE MOST POSTS ADDED

The top seven groups with the most posts in Collaboration.

Data source

Groups and posts in Collaboration

Data feed

Collaboration – Most active groups

MOST COMMENTED GROUPS

The top seven most commented groups in Collaboration.

Data source

Groups and comments in Collaboration

Data feed

Collaboration – Most active groups

PERCENT DISTRIBUTION OF GROUP TYPES

Percentage distribution of private and public groups created in Collaboration.

Data source

Private and public groups in Collaboration

Data feed

Collaboration – Largest groups

GROUP DETAILS

Details of the largest Collaboration groups: group type, number of followers, amount of ARIS content, number of posts, and number of comments. If a group type is selected in the **Percent distribution of group types** chart, the details are filtered according to the selected group type.

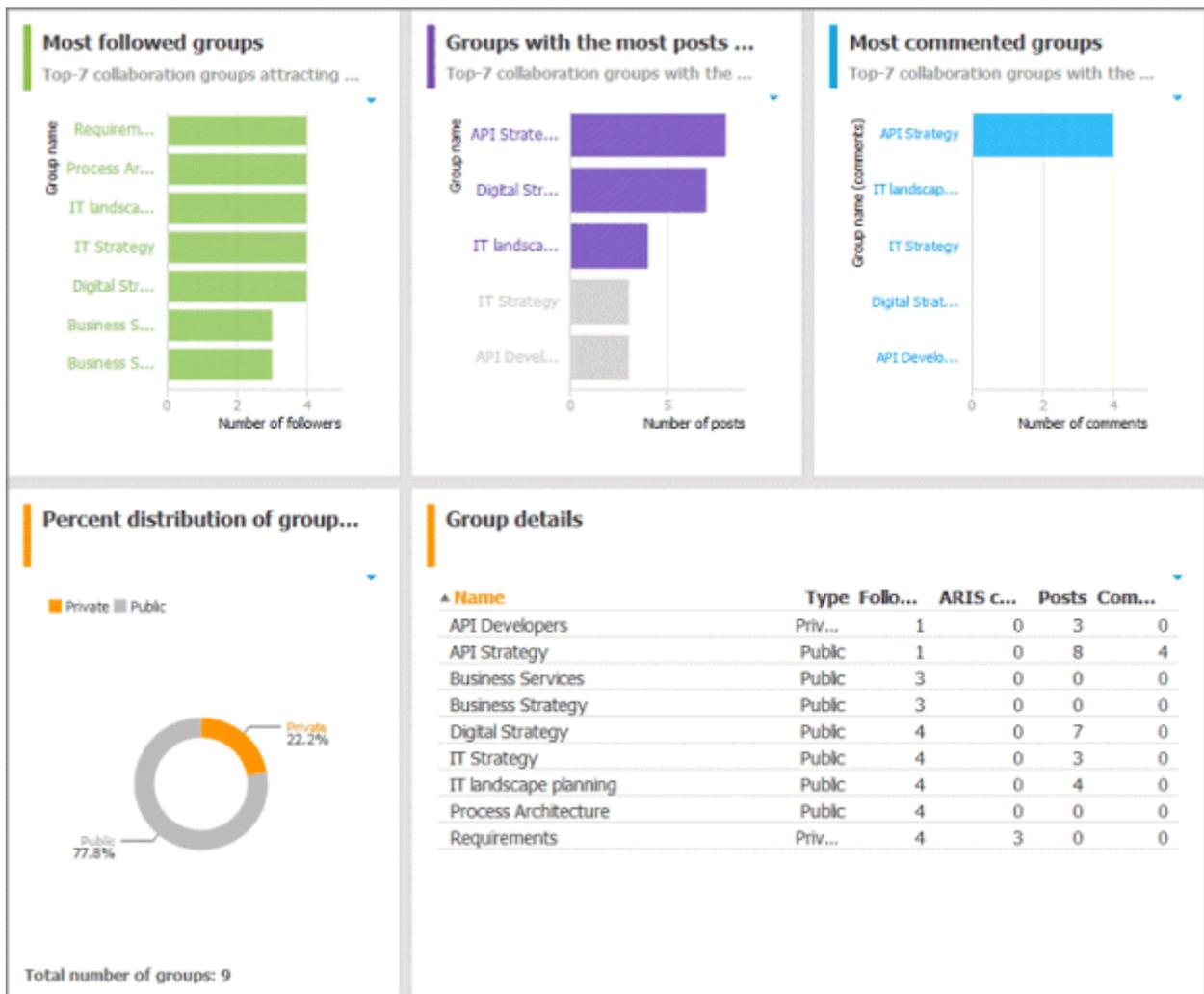
Data source

Private and public groups in Collaboration

Data feed

Collaboration – Largest groups

EXAMPLE



3.2.15.5.5.7.4 Users

Shows details of Collaboration users.

AVAILABILITY

ARIS Connect >  **Collaboration** > **Administration** >  **Dashboards** (only for users with the **Collaboration administrator** function privilege)

CHARTS

USERS GENERATING THE MOST CONVERSATIONS

The top seven users most involved in conversations in Collaboration.

Data source

Users in Collaboration

Data feed

Collaboration – Most active users

MOST FOLLOWED USERS

The top seven most followed Collaboration users.

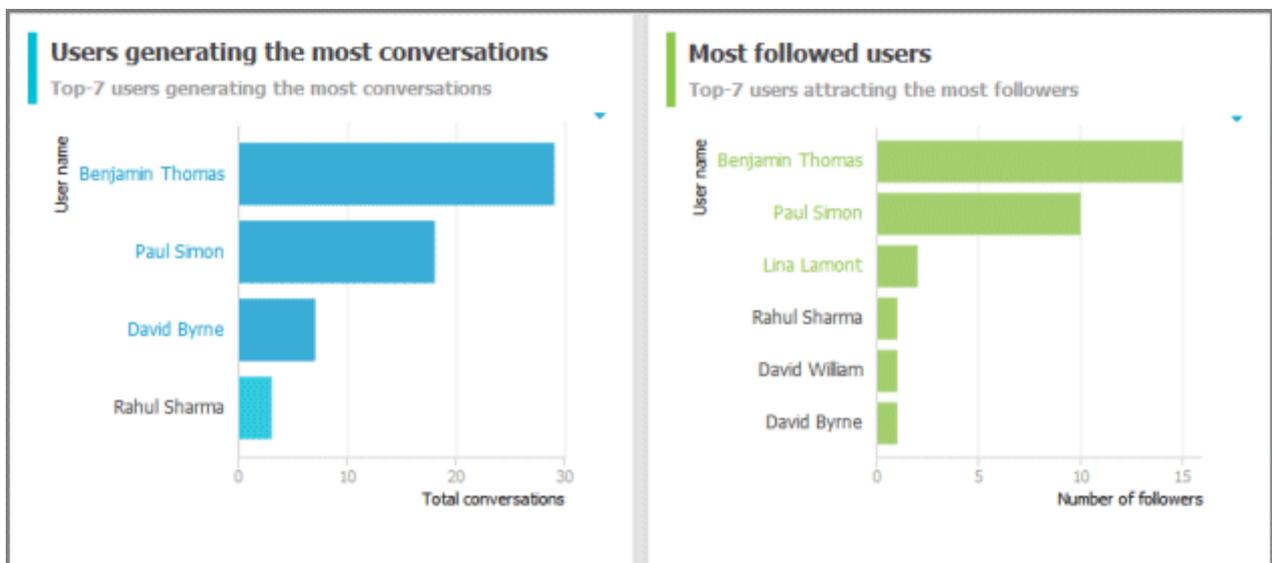
Data source

Users in Collaboration

Data feed

Collaboration – Most followed users

EXAMPLE



3.2.15.5.5.8 Business Strategy dashboards

Here you can find information about Business strategy dashboards (page 1143) delivered by default. Consequently, the dashboards provide information about leadership and best practice for the focus area business concept via Business Process Modeling.

3.2.15.5.5.8.1 Strategy map - Balanced scorecard (BSC)

Dashboard that provides an overview of the aspects of the strategy scorecard. In the **Scorecard perspectives** area, you can filter the input of the charts. The charts are adjusted immediately.

AVAILABILITY

This dashboard is shown on the **Dashboards** fact sheet of models of type **BSC Cause-and-effect diagram**.

CHARTS

FINANCE

Displays the average financial KPI for the selected time period.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

Data collection

Collects all key performance indicators regarding finances.

Data feed

Strategy - UMG strategy balanced scorecard - perspectives

Calculation

The KPI is the result of the planned value and the actual value. The actual value is displayed as a percentage of the planned value.

CUSTOMER

Displays the average customer KPI for the selected time period.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

Data collection

Collects all key performance indicators regarding customers.

Data feed

Strategy - UMG strategy balanced scorecard - perspectives

Calculation

The KPI is the result of the planned value and the actual value. The actual value is displayed as a percentage of the planned value.

PROCESS

Displays the average process KPI for the selected time period.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

Data collection

Collects all key performance indicators regarding the process.

Data feed

Strategy - UMG strategy balanced scorecard - perspectives

Calculation

The KPI is the result of the planned value and the actual value. The actual value is displayed as a percentage of the planned value.

LEARNING & GROWTH

Displays the average **learning & growth** KPI for the selected time period.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

Data collection

Collects all key performance indicators regarding learning & growth.

Data feed

Strategy - UMG strategy balanced scorecard - perspectives

Calculation

The KPI is the result of the planned value and the actual value. The actual value is displayed as a percentage of the planned value.

STRATEGY OBJECTIVES

Displays all objectives of the model **BSC** as well as the achievements and the trend from a Microsoft® Excel spreadsheet.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

Data collection

Collects all the objectives of the **BSC** model and the achievements and trends obtained from a Microsoft® Excel file.

Data feed

Strategy - UMG strategy balanced scorecard - perspectives

Calculation

The KPI is the result of the planned value and the actual value. The actual value is displayed as a percentage of the planned value.

KEY PERFORMANCE INDICATOR

Displays all current and plan values of all **KPIs** or from the scorecard details.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

Data collection

Collects all **KPI** values from the KPIs of the Microsoft® Excel spreadsheet.

Data feed

Strategy - UMG strategy balanced scorecard - perspectives

ACTION PLAN

Shows all initiatives with the responsible roles from selected scorecard details or from selected targets.

Data source

Report: Strategy - BSC Objectives

Report configurable?

No

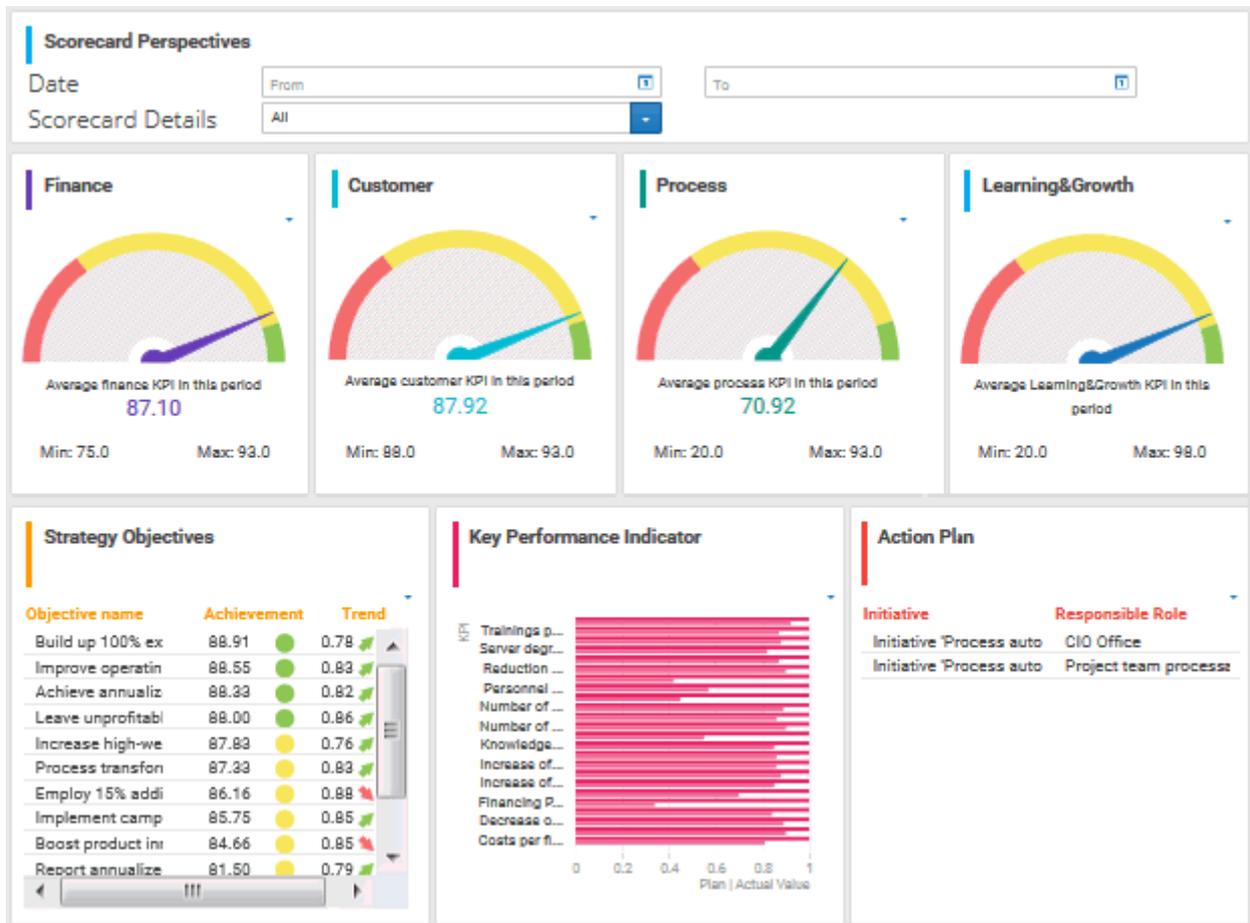
Data collection

Collects all initiatives and responsible roles from the connected models.

Data feed

Strategy - UMG strategy balanced scorecard - initiatives

EXAMPLE



3.2.15.5.5.8.2 Increase of IoT enablement of production processes

Dashboard that displays the IoT enablement of production processes.

AVAILABILITY

This dashboard is shown for the model **Increase IoT enablement in production** of the **United Motor Group** database in the dashboard sidebar of the **Diagram** fact sheet (1. Strategy > 1.1 Business strategy > Business strategy implementation).

CHARTS

PROCESSES OF PRODUCTION

Displays an overview of all processes of production.

Data source

Report: Strategy - IoT objects

Report configurable?

No

Data collection

Collects all processes of production.

Data feed

Strategy - IoT increase

Calculation

.-

INCREASE OF IOT

Indicates whether at least one of the subordinate processes of the selected process is associated with an IoT object. If yes, the smiley is green, if not, the smiley is red.

Data source

Report: Strategy - IoT objects

Report configurable?

No

Data collection

Selected process.

Data feed

Strategy - IoT increase

Calculation

Aggregates the number of the IoT-enabled processes.

PERCENTAGE OF ALL IOT ENABLED PROCESSES

Displays the percentage of IoT-enabled processes.

Data source

Report: Strategy - IoT objects

Report configurable?

No

Data collection

Collects the number of the IoT object of the processes contained in the **Production** group of the **United Motor Group** database (2. Processes > 2.1 Process architecture > Core processes > Production).

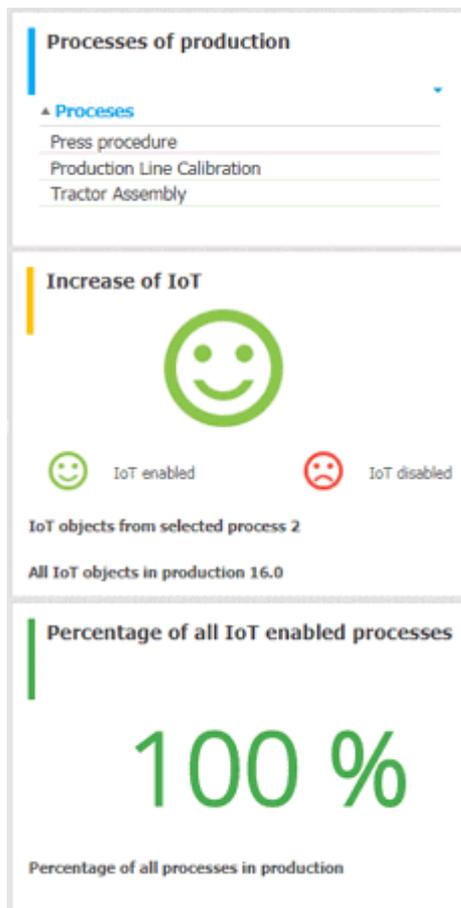
Data feed

Strategy - IoT increase

Calculation

Aggregates the number of the IoT-enabled processes divided by the number of all processes multiplied by 100.

EXAMPLE



3.2.15.5.5.9 Governance, Risk and Compliance (GRC) dashboards

The following GRC dashboards (GRC = Governance, Risk and Compliance) are available: GRC overview, GRC management, and GRC portfolio. The dashboards show an overview of GRC-related objects and workflows, such as risks, controls, or issues. The dashboards use data from ARIS and, if available, from ARIS Risk & Compliance Manager. The dashboards use the **Export item data to tables** ARIS Report in ARIS Architect (**ARIS >  Administration > Evaluations > Reports > Dashboard data**). To update the data, run this report at the database level, select **Dashboard data** category, **Export item data to tables** report, and **GRC management** parameter value set.

3.2.15.5.5.9.1 GRC overview

The **GRC overview** dashboard only uses data from the ARIS database that is filtered by the selected process. Data from ARIS Risk & Compliance Manager is not included. This dashboard gives an overview of different GRC indicators and objects regarding a process item.

AVAILABILITY

By default, it is available for two processes:

- **Sales order processing (as-is)**, (GUID: 0adfca71-2960-11dc-2729-000bcd0cce4e)
- **Generic monthly closing process** (GUID: a55af59c-19cb-4b78-bc41-07fae048a864)

CHARTS

FUNCTIONS WITH RISKS

Displays the number of functions that have risks assigned.

Data source

ARIS

Calculation

Counts the number of functions in the selected process that are connected with risks.

NUMBER OF RISKS

Displays the number of risks assigned to functions.

Data source

ARIS

Calculation

Counts the number of risks in the selected process that are connected with functions.

CONTROL COVERAGE

Displays the percentage of risks that have at least one control assigned.

Data source

ARIS

Calculation

Calculates the percentage of risks in the selected process that are connected with at least one control in relation to the total number of risks in the selected process.

CONTROL TEST COVERAGE

Displays the percentage of risks that have at least one control assigned that is connected to a test definition.

Data source

ARIS

Calculation

Calculates the percentage of risks in the selected process that are connected to at least one control that is connected with a test definition, in relation to the total number of risks in the selected process.

RISK DETAILS

Displays details of each risk assigned to a function:

- **Risk name** (to open the object, click the name)
- **Related function** (to open the object, click the name)
- **Basis of valuation**
- **Data source**

Data source

ARIS

Calculation

Uses the risks calculated in the **Number of risks** chart.

TEST CASE DETAILS

Displays details of each test case assigned to a risk by a control:

- **Test definition name** (to open the object, click the name)
- **Control name** (to open the object, click the name)
- **Test type** (Test of design/Test of effectiveness)

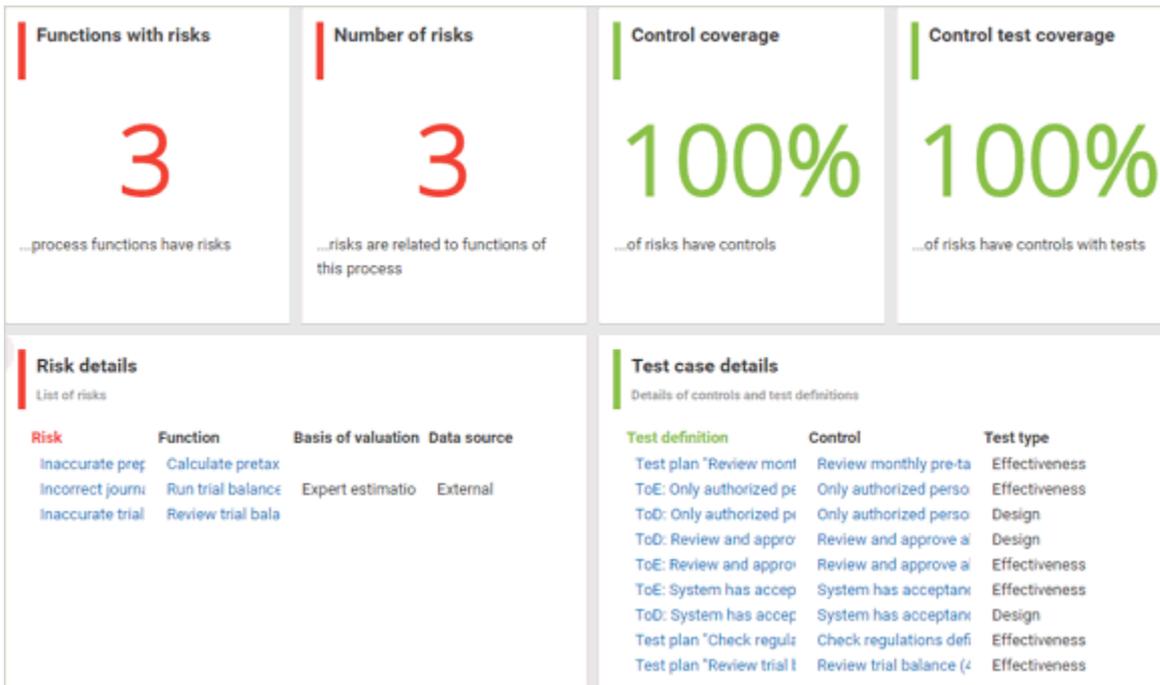
Data source

ARIS

Calculation

Uses the test cases calculated in the **Control test coverage** chart.

EXAMPLE



3.2.15.5.5.9.2 GRC management

The **GRC management** dashboard uses data from ARIS and ARIS Risk & Compliance Manager database filtered by the selected process. This dashboard gives an overview of different GRC indicators and objects regarding a process item. The default installation of the **GRC management** and the **GRC portfolio** dashboards uses static demo data stored in ARIS document storage. The runtime version of these dashboards uses real ARIS Risk & Compliance Manager data. To replace demo data by runtime data, refer to the **GRC dashboard - runtime installation** guide. For detailed information, refer to the ARIS Aware online help, or contact Software AG or the sales partner responsible.

AVAILABILITY

By default, it is available for two processes:

- **Sales order processing (as-is)**, (GUID: 0adfca71-2960-11dc-2729-000bcd0cce4e)
- **Generic monthly closing process** (GUID: a55af59c-19cb-4b78-bc41-07fae048a864)

CHARTS

ASSESSED RISKS

Displays the number of risks assigned to functions that are connected to risk assessments with reviewer status **Completed**.

Data source

ARIS and ARIS Risk & Compliance Manager

Calculation

Counts the number of risks in the selected process that are connected to a function that is at least connected to one completed risk assessment.

OPEN RISK ASSESSMENTS

Displays the number of risk assessments with the status **Open** (= owner status **New** or **In progress**, or owner status **Assessed** or **Assessment not possible** and reviewer status **Unspecified**).

Data source

ARIS and ARIS Risk & Compliance Manager

Calculation

Counts the number of risks in the selected process that are connected to functions that are connected to risk assessments with the status **Open**.

CONTROL TEST COVERAGE

Displays the percentage of controls that have at least one test case assigned.

Data source

ARIS and ARIS Risk & Compliance Manager

Calculation

Calculates the percentage of controls in the selected process that are connected to at least one control test, in relation to the total number of controls connected to risks that are connected to functions in the selected process.

OPEN TEST CASES

Displays the number of test cases with the status **Open** (= owner status **New** or **In progress**, or owner status **Control effective** and reviewer status **Unspecified**).

Data source

ARIS and ARIS Risk & Compliance Manager

Calculation

Counts the number of test cases in the selected process with the status **Open**.

DETAILS OF OPEN RISK ASSESSMENTS

Displays details of each risk assessment with the status **Open**:

- **Risk assessment ID** (to open the object in ARIS Risk & Compliance Manager, click the ID)
- **Risk** name (click the name)
- **Owner status**
- **Reviewer status**

Data source

ARIS and ARIS Risk & Compliance Manager

Calculation

Uses the risk assessments calculated in the **Open risk assessments** chart.

CONTROL TEST RESULT

Displays the owner status of completed test cases that have the reviewer status **Accepted**, or that have the owner status **Not possible** or **Control effective**, or that have the owner status **Not tested** (= closed by system because test was not performed within the testing period).

Test cases with owner status **Not possible**, **Control effective**, and **Not tested** are not reviewed.

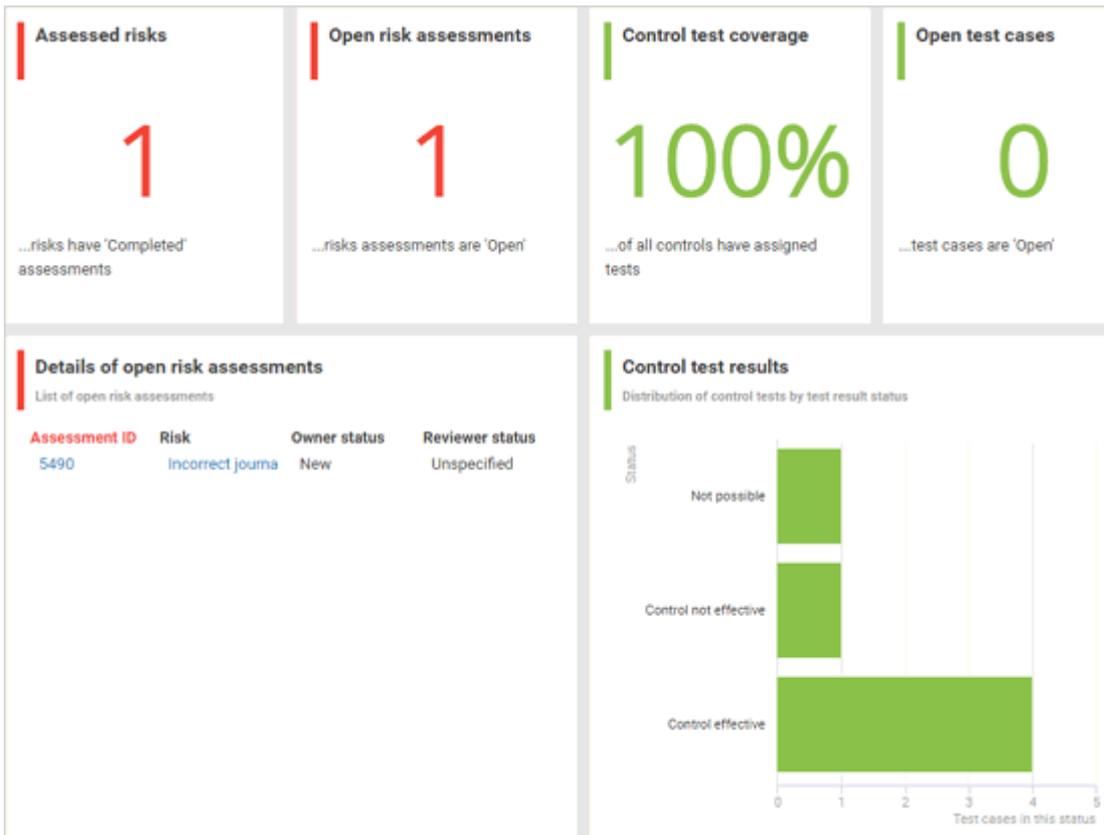
Data source

ARIS and ARIS Risk & Compliance Manager

Calculation

Counts the number of completed test cases in the different status in the selected process.

EXAMPLE



3.2.15.5.5.9.3 GRC portfolio

The **GRC portfolio** dashboard uses data from ARIS and ARIS Risk & Compliance Manager database. This dashboard gives an overview of different GRC indicators and objects regarding a database. The default installation of the **GRC management** and the **GRC portfolio** dashboards uses static demo data stored in ARIS document storage. The runtime version of these dashboards uses real ARIS Risk & Compliance Manager data. To replace demo data by runtime data, refer to the **GRC dashboard - runtime installation** guide. For detailed information, refer to the ARIS Aware online help, or contact Software AG or the sales partner responsible.

AVAILABILITY

By default, it is available for the entire database (**ARIS Connect** >  **Portal** > **Home** >  **Dashboards**).

CHARTS

TOTAL NUMBER OF RISKS

Displays the total number of risks relevant for risk management.

Data source

ARIS

Calculation

Counts the number of risk management-relevant risks in the ARIS database.

CONTROL COVERAGE

Displays the distribution of risks that have at least one control assigned as well as risks without control.

Data source

ARIS

Calculation

Calculates the percentage of risks in the ARIS database that are connected with at least one control in relation to the total number of risk management-relevant risks in the ARIS database.

TOTAL NUMBER OF OPEN GRC ISSUES

Displays the total number of issues with the status **Open** (= owner status **New**, **In progress** or **On hold**, or reviewer status **Unspecified**.)

Data source

ARIS Risk & Compliance Manager

Calculation

Counts the number of issues in the ARIS Risk & Compliance Manager database with the status **Open**.

PRIORITY OF GRC ISSUES

Displays the distribution of issues with the status **Open** according to their priority.

Data source

ARIS Risk & Compliance Manager

Calculation

Calculates the percentage of issues with the status **Open** according to the various priorities in the ARIS Risk & Compliance Manager database.

RISK HEAT MATRIX

Displays all risks with reviewed risk assessment in a matrix. To open a risk assessment, click a bubble.

Data source

ARIS Risk & Compliance Manager

Calculation

Positions all risks with reviewed risk assessment of the selected impact types according to the result of the most recent qualitative risk assessment.

RISK DETAILS

Displays details of each risk from the **Risk heat matrix** chart:

- **Risk name**
- **Assessment date**
- **Impact type**
- **Qualitative risk score**
- **Reduced qualitative risk score**

The list is filtered according to the selected element in the **Risk heat matrix** chart.

Data source

ARIS Risk & Compliance Manager

Calculation

Uses the risk assessments from the **Risk heat matrix** chart.

EXAMPLE



3.2.15.5.5.10 GDPR dashboards

You can find information about GDPR dashboards that are contained in ARIS Accelerators for GDPR in the **ARIS Accelerators for GDPR Installation Guide** and the **ARIS Accelerators for GDPR Use Case** manual.

3.2.15.5.5.11 Confirmation management dashboard

You can find information about the **Confirmation management** dashboard in the **Confirmation Management Dashboard Installation** guide.

3.2.16 Manage SAP Solutions

ARIS for SAP® Solutions is available, if your ARIS administrator has configured the system in ARIS Connect as well as in ARIS Architect. For details see **ARIS for SAP® Solutions** and **ARIS Requirements for SAP® Solutions** on DVD, ARIS Download Center (<https://aris.softwareag.com/>) or Empower (<https://empower.softwareag.com/>).

You can refine and evaluate your business processes in ARIS. This enables you to optimize your business processes.

ARIS video tutorial

Process-Driven SAP Management Explainer, 4 minutes

(<https://resources.softwareag.com/youtube-product-videos-for-uberflip/manage-your-digital-future-support-best-in-class-sap-solutions-with-aris>)

3.2.16.1 Run SAP executable

Run executables in the connected SAP system.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- You are using ARIS for SAP Solutions.
- Your administrator has configured the portal for the use of SAP content.
- Your administrator has register a SAP® Server for ARIS Connect

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate to the relevant model of the **EPC** type, where executables are available.
5. Click **Executables**. You can start the  executable automatically via the default server in each row displaying the related **Transaction code** attribute value. Click the  arrow head to display all registered SAP Servers. The default server selected is indicated by a check mark.
6. Run the executable. The **SAP logon** dialog opens.
7. Enter the number of the SAP client and the user name, and click **OK**. Depending on your browser settings, the **Run SAP executable** dialog opens.
8. Enter the password and click **Log on**.

The executable is run in the current language. The logon remains active until you log out of the portal, enter different logon data, or close the SAP system. To delete the current SAP logon data, click the  arrow head and then **Reset logon data**. For the next executable start you need to log on to the SAP system again.

If you start an executable of the **Fiori application** type for the first time or log out from SAP Fiori® launchpad before you start the executable, the **Start** page is displayed instead of the Fiori app. In this case, start the same executable again.

3.2.16.2 Download SAP documents

You can download SAP documents that are associated with SAP executables.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- You are using **ARIS for SAP® Solutions**.
- Documents are available.
- This function has been configured in the portal.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Open the relevant model.
5. Click **Executables**.
6. Click the relevant executable. The fact sheet opens.
7. Next to the relevant document, click  **Download document**.

The document is downloaded.

3.2.16.3 Start ARIS Online Guide

If your administrator has provided ARIS Online Guide via ARIS Connect, you can open the relevant portal pages from SAP screens using the **F1** key. All executables are shown there in relation to the process. Details are summarized in corresponding fact sheets.

Prerequisites

- This function has been configured in the portal.
- You have configured the help call.

Procedure

Press the **F1** key in the open screen. The corresponding portal page opens (link syntax: `http://<server name:port>/?tcode=<transaction code>#<tenant>/onlineguide`)

All information pertaining to this executable is available on the open page.

3.2.16.4 Reset SAP logon data

Change the logon information for running executables.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- You are using **ARIS for SAP Solutions**.
- This function has been configured in the portal.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Open the model.
6. Click **Executables**.
7. In the last column of an executable, click the ▼ arrow head and then **Reset logon data**.

For the next executable start (page 402) you need to log on to the SAP system again.

3.2.17 SAP Enable Now

The native interface between **ARIS** and **SAP® Enable Now Producer** allows documentation and other knowledge objects, such as simulations and courses, to be quickly and easily added to ARIS process structures.

ARIS processes and substructures can be imported into the SAP® Enable Now Producer, to add learning content. Afterwards, the links to the published learning content can be exported and can be started directly in ARIS from the corresponding process node.

The import process supports common ARIS model types such as **BPMN** and **EPC**. Custom model types can be specified optionally. Process models can be imported as media objects additionally, to use them in learning content.

If you want to use the native interface between **ARIS** and **SAP® Enable Now**, the following prerequisites must be met in ARIS:

Prerequisites

- ARIS Connect Server installation, version **10.0.0.7** or higher.
- ARIS Connect Server extension pack for SAP Enable Now.
- ARIS users who transfer data between ARIS and SAP Enable Now must have:
 - **ARIS for SAP Enable Now** (YCSEN) license privilege,
 - **Read, Write, and Delete (rwd-)** access privilege in the ARIS database and target group that allow users to create models and objects.
 - A method filter that contains all required model, object, and connection types.

For detailed information about configuration and the use of **SAP® Enable Now**, such as **ARIS Import** and **ARIS Export**, refer to the related SAP online help.

Video tutorials are available for registered SAP customers

ARIS Integration with SAP Enable Now

3.2.18 Output information

The following describes different ways to get information.

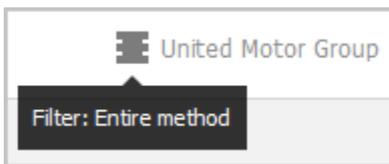
3.2.18.1 Display the current method filter

You can display the method filter that you use for the current database.

Procedure

1. Drag the mouse pointer to the database name with the database symbol at the top right of the screen.
2. Leave the mouse cursor above the  database symbol for a short time.

The filter name is displayed:



3.2.18.2 Print the graphic of the current model

In the  **Portal**, you can print the graphic of the current model as PDF.

Procedure

1. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
2. Navigate to the group where the relevant model is stored.
3. Select the model. The fact sheets (page 1144) are shown.
4. In the button bar (page 69), click  **Print graphic as PDF**. The **Select output options** dialog opens.
5. Specify your settings.
6. Click **OK**. After the report is generated, the **Print graphic as PDF** dialog opens.
7. Click **Download result**. Using the following dialog, open the file in a PDF viewer or save it.

In the  **Portal**, you have printed the graphic of the current model as a PDF.

To the left of the user name, the  **Reports notification** is inserted. Click the notification icon and  **Export graphic as PDF** to download the result again. The result is also listed on the **Reports** bar. If you select the **Diagram** fact sheet, you can open the **Reports** bar and download the printed model graphic as a PDF.

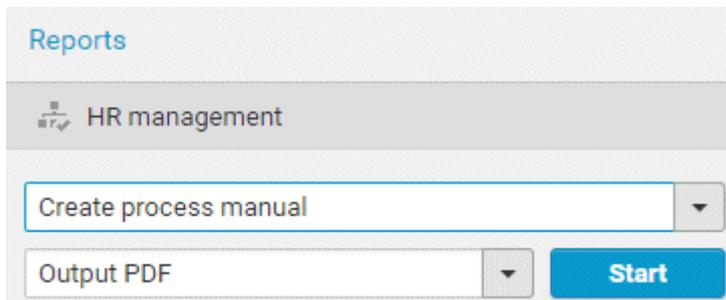
3.2.18.3 Generate report

You can start various reports (page 1152) in the  **Portal**.

Depending on the selected elements, reports are offered that provide a plausible evaluation for this context.

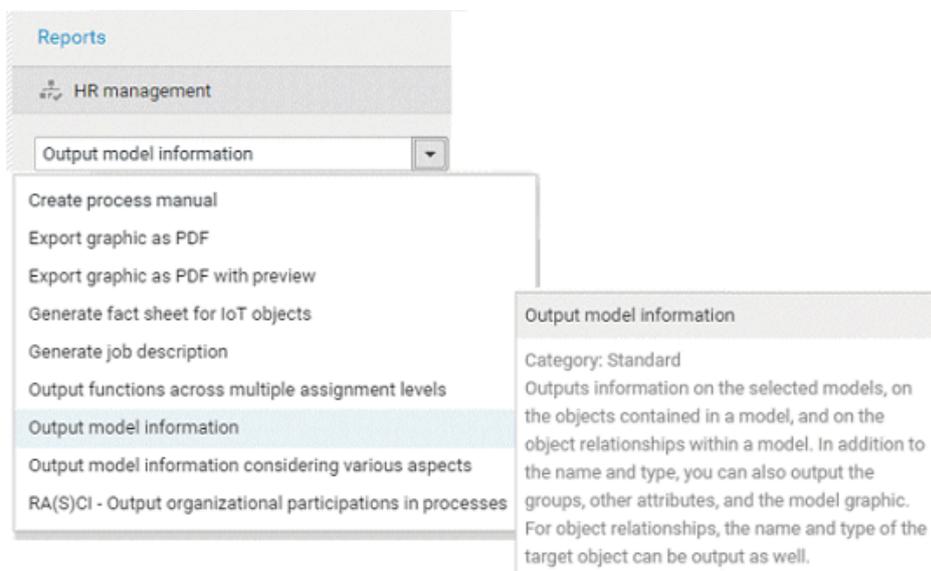
Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
3. Navigate (page 94) to the relevant group.
4. Select the model for which you want to create a report.
5. Activate the **Diagram (page 79)** fact sheet.
6. Click  **Reports**. The **Reports** bar opens showing the name of the item for which the report is to be generated.

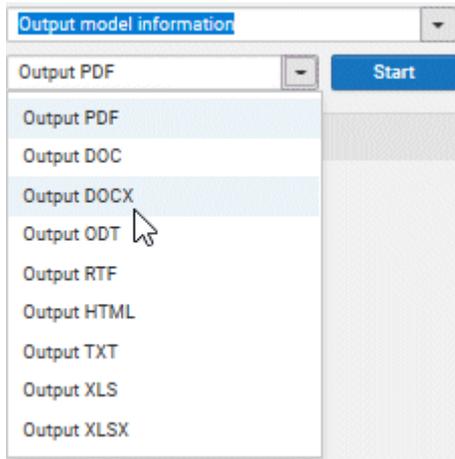


All reports you can generate for the selected model are displayed.

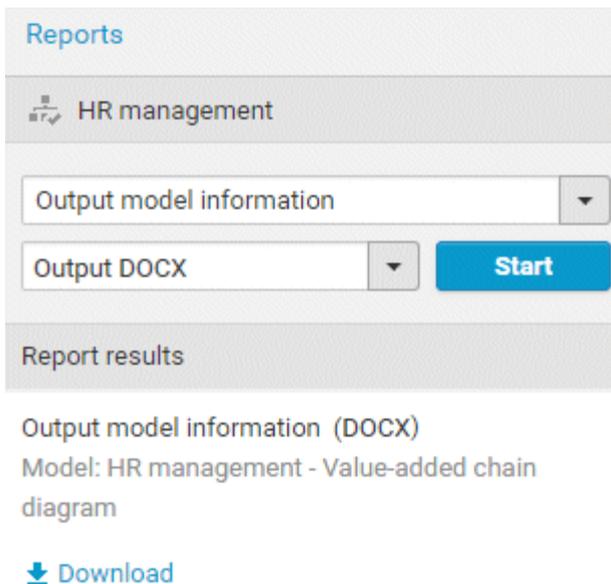
7. Click the ▼ down arrow next to the report name.
8. Select the relevant report. A report description is displayed.



9. Select the output format (page 200), for example, **Output DOCX**.



10. Click **Start**.
11. Depending on the report selected, a dialog with options is displayed. Specify your settings and click **OK**. The report is generated and a progress bar is displayed. After the report is complete, it is displayed in the **Report results** link list for downloading, and a dialog opens.
12. If you want to download the report immediately, click **Download result**.
13. If you want to download the report result later, click the **Download report** link in the **Report results** link list.



You have created a report. Only information you are authorized to view is included.

3.2.18.4 Create infographics

You can create infographics (page 1146) for selected personas (page 1152) (objects of the **Persona** type). You can select an object in a fact sheet (page 1144) of the  **Portal**, in the  **Repository**, or in the open model. Objects of the **Persona** type can be used in models of **Customer segmentation map** and **Matrix model** type.

The following describes how to proceed in the  **Portal**.

Prerequisite

The corresponding attributes of the persona objects must be specified (page 182).

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** (page 38) in the **Classic** view (page 35) or **Processes** (page 52) in the **Default** view (page 49).
4. Navigate (page 94) to the relevant model.
5. Select the model that contains the persona.
6. If you have selected a model of the **Customer segmentation map** type, select the **Diagram** fact sheet. If you have selected a model of the **Matrix model** type, select the **Matrix** fact sheet.
7. Select the relevant **Persona** object in the fact sheet.
8. Click  **Evaluation**. The **Evaluation** bar opens showing the name of the item for which the report is generated.
9. Click the ▼ down arrow next to the currently displayed report name.
10. Select the **Create infographic for persona (page 182)** report.
11. Select the output format (page 200), for example, **Output DOCX**.
12. Click **Start**. After the report is complete, the report is shown in the **Report results** link list for downloading.
13. In the **Report results** link list, click **Download**.

You have created an infographic for a persona. Depending on the attributes entered for the persona, the information graphic provides information about the personality, the goals, the frustrations, etc.

3.2.18.5 Show where object occurrences are used

You can display where occurrences of an object or a connection are used and select the required occurrence using the navigation controls.

Procedure

1. Click  **Quick start** (page 70) in **Home** (page 36).
2. Click  **View models & documents**. Depending on the active configuration set, the navigation area opens, for example, **Groups** or **Processes**.
3. Navigate to the group containing the relevant model.
4. Click the name of the model. The fact sheets (page 1144) of the model open.
5. Click **Diagram**. The **Diagram** fact sheet opens.
6. Select the required object in the **Diagram** fact sheet.
7. Click  **Details**. The **Details** bar opens.
8. Click **More**.
9. Click the **Related models** tab. The occurrences of the selected object are listed. If more than one occurrence exists in the current model, the number of the selected occurrence and the total number of occurrences are displayed next to the object name.
10. Click the left or right arrow to navigate to the next occurrence in the model. The next occurrence is selected and its number updated.
11. To directly select an occurrence, expand the drop-down list and click the occurrence number.
12. To open a model that contains an occurrence of the selected object, click the name of the model in the **In other diagrams** area. The model opens and the first occurrence of the object is selected. If there is no **Diagram** fact sheet for the occurrence, the first fact sheet is shown, for example, **Overview**

In the **In other models** area, all models are displayed to which you have at least read access. You have switched between the occurrences of an object using the navigation controls.

3.2.18.6 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.2.18.6.1 In which order are object occurrences displayed?

You can display where occurrences of an object or a connection are used and select the required occurrence using the navigation controls.

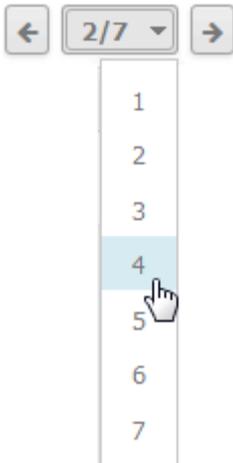
The navigation controls include arrows and a drop-down list:



If you click an arrow, the next occurrence is selected. The order of the occurrences depends on the vertical position of the objects in the model. The occurrence at the top most position is occurrence number 1.

The first number in the drop-down list refers to the occurrence currently selected, the second number represents the total amount of occurrences in a model.

Using the drop-down list, you can directly select a specific object occurrence:



3.2.18.6.2 What are time zone-dependent attributes?

Time zone-dependent attributes are attributes that take the current time zone into account when they are displayed. The values of the attributes are adjusted depending on the time zone in which they are displayed.

Time-zone dependent attributes are:

- Time of generation: AT_CREAT_TIME_STMP
- Last change: AT_LAST_CHNG_2
- Time of last semantic check: AT_TIME_OF_LAST_SEMANTIC_CHECK
- (Internal attribute: AT_TIME_STAMP)

STORING

In the database, these attributes are stored in Greenwich Mean Time (GMT + 0). When the attributes are displayed to users in the attribute editor, designer, **Diagram** fact sheet, etc., they are first converted to the client's local time.

When the values are changed by a user in his local client time zone, the values are internally converted to GMT + 0 and stored in the database.

REPORTS

When a report is started from a client, the client's time zone is transferred to the server. The server converts the time zone-dependent attributes when creating the output.

When a report is run as a scheduled report, no client information is available and no conversion can be performed. Therefore, the time zone-dependent attribute is displayed as if the server were in the GMT + 0 time zone.

REPORT SCRIPT API

You should always use the methods accepting a string as parameter to change the value of time attributes. Example:

```
oDef.Attribute(Constants.AT_SAP_TIME_GEN, 0).setValue("07:12:45;11/19/2018");
```

RECOMMENDATION

We recommend not using **java.util.Date**, especially the **setValue()** methods, which accept a **Date** object as parameter: most of the various constructors of **Date** perform automatic conversion depending on the client's time zone. The conversion of a date into a character string, for example, via **toString()**, also performs a conversion into the client's time zone.

Example

This example assumes that both users are accessing the same server.

A user in Germany creates an object on **Nov. 19 2018 4:12PM**. (Based on his operating system local, the creation time is displayed as **19.11.2018 16:12**.) If another user located in San Francisco looks at the **Time of generation** attribute, the value is not **Nov. 19 2018 4:12PM**, but **Nov. 19 2018 7:12AM**, because San Francisco is 9 hours behind German time.

3.2.18.7 Where can you generate reports?

A report is a script that can be applied to database content.

A report can be used, for example, to collect database content and group it according to specific aspects, output the relationships (page 1152) between database elements, generate comparison tables, or display multiple uses of database items.

It can also be used to change database content, such as entering attribute (page 1138) values or correcting the layout of models (page 1148).

You can generate reports in the repository (page 176) or in ARIS Connect Designer for selected objects or the open model.

3.2.18.8 Generate report for multiple elements

You can generate a report for multiple elements. Depending on the selected elements, reports are offered that provide a plausible evaluation for this context.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the group where the content you want to select is stored.
4. In the detail view, activate the check boxes of the relevant elements.
5. Click  **Reports**. The **Reports** bar opens. The number of items for which the report is generated is shown.
6. Click the drop-down list box to display the list of available reports.
7. Leave the mouse pointer on the name of a report if you want to display its description.
8. Click the name of the relevant report.
9. Click **Start** if you want to output the report in the displayed format (page 200).
To select a different output format, click the **Output format** field and select the format you want to use, for example, **Output PDF**.
10. Click **Start**. The report is created. If the report provides alternatives or requires entries, dialogs are displayed where you can make your settings.
11. When the report is created, the result is listed in the **Reports** bar, and a dialog to download the result opens.
12. Click  **Download result**. Depending on your browser settings, you can specify the download folder or the result is downloaded in the default download folder.
13. To download the result later, click  **Download** in the **Reports** bar.

You have created a report for multiple elements.

3.3 Use the Catalog



The  **Catalog** provides structured data for published databases.

For the selected database, it shows the business processes, roles, documents, and systems in tables. Depending on the selected context such as **Business processes**, **Roles**, **Documents**, and **Systems**, you can list persons responsible, departments, linked business processes, and occurrences in business processes.

You can navigate to the table items (page 417), filter (page 416) the content, and export (page 418) each table completely or the filtered content to a Microsoft® Excel file. With the **ARIS Connect Designer** license or the **ARIS Connect Viewer** License combined with the **Contribution** license (page 21), you can edit attributes (page 417).

Business processes			
Roles Documents Systems			
Name	Description	Responsible	
Acquire and implement	Acquire and implement consists of: ▶ Identify automated solutions ▶ Acquire and maintain application software ▶ Acquire and maintain technology infrastructure	ethan.owner	
Apply for financing	This model describes how to process an application for financing	ethan.owner	
Billing	Billing consists of: ▶ Vehicle billing ▶ Accounts receivable management ▶ Pay cash	ethan.owner	
Billing (to-be)	Billing (to-be) consists of: ▶ Vehicle billing (to-be) ▶ Account receivable management ▶ Pay cash	ethan.owner	

1 2 3 4 5 6 7 8 9 10

Click an entry to navigate. The corresponding fact sheet (page 1144) opens.

3.3.1 Choose items starting with the same letter

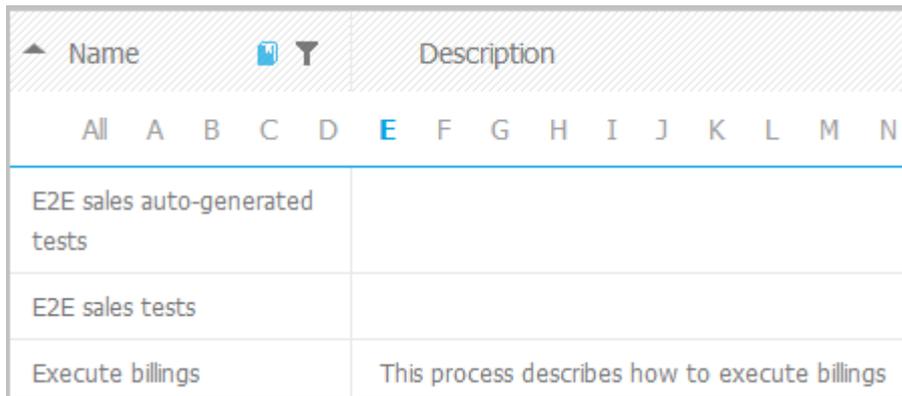
You can reduce the number of items shown in the catalog table. You can define a filter for each column of the table. This example describes how to filter columns of the **Business processes** table.

Prerequisite

Catalog letters can be displayed for the chosen language. If you, e. g., select Japanese it is not possible to display the large amount of letters available.

Procedure

1. Click  **Catalog**.
2. Click  **Catalog letters** in the **Name** cell of the table header. The **Catalog letters** bar opens.



The screenshot shows a table with two columns: 'Name' and 'Description'. The 'Name' column has a filter bar with letters A through N, and the letter 'E' is highlighted. The table contains three rows of data:

Name	Description
E2E sales auto-generated tests	
E2E sales tests	
Execute billings	This process describes how to execute billings

3. Click the relevant letter.

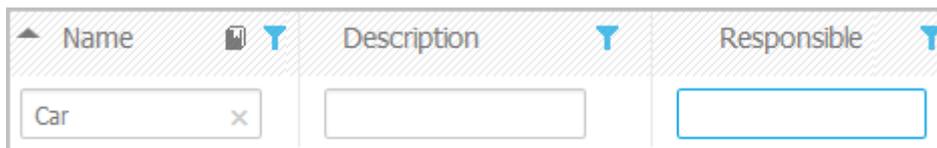
Only items starting with the letter chosen are shown.

3.3.2 Filter catalog items based on name, description, and responsibility

You can reduce the number of items shown in the catalog table. You can define a filter for each column of the table. This example describes how to filter columns of the **Business processes** table.

Procedure

1. Click  **Catalog**.
2. Click  **Filter** in the table header. A text box is available for each column to filter the table.



3. Enter the relevant terms. You can narrow down the search by entering terms in more than one text box.

All items are listed whose attribute content contains a word beginning with the term entered.

3.3.3 Remove catalog filter

You can easily remove the catalog filter.

Prerequisite

You have filtered the catalog content (page 416).

Procedure

Click  **Filter** in the table header. The text boxes to filter the list are closed and all glossary items are shown.

You have removed the catalog filter.

3.3.4 Choose a catalog page

If not all catalog entries fit on one page, you can switch to the page that contains the relevant catalog entry.

Procedure

1. Click  **Catalog**.
2. Click the relevant page number at the bottom of the page.

Car loan application	This process describes the functions necessary to create a car loan application. There are different organizational units involved, such as "Local dealership sales rep", "Credit check employee" and "Credit processing employee". The process is supported by three business services for automatic execution.	ethan.owner
1 2 3 4 5 6 >		

All items of the selected page are listed.

3.3.5 Navigate to an item

You can navigate from the catalog items to the database group in which the item is stored.

Procedure

1. Click  **Catalog**.
2. Click the relevant table.
3. In the **Name** column, click the name of the item to which you want to navigate. In the portal, the fact sheets (page 1144) of the item are displayed. You can navigate to further details by clicking the various fact sheets or items.

To return to the catalog, use the  **Back** fact sheet button (page 97).

3.3.6 Edit attributes

You can edit attributes of catalog items.

Prerequisite

You have the **ARIS Connect Viewer** and **Contribution** license privileges, or the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Catalog**.
2. Click the table that contains the items for which you want to change attributes.
3. Click  **Edit** to enable the edit mode (page 262).

The edit mode is enabled and the attributes can be edited. If no value has been entered for an attribute, the expression **Click here to edit** is displayed. When you select an attribute value, it is enclosed by a frame and you can change it.

3.3.7 Export catalog content to Excel

You can export the content of the selected catalog table to a Microsoft® Excel file.

Procedure

1. Click  **Catalog**.
2. Click the table whose data you want to export. You can select **Business processes**, **Roles**, **Documents**, and **Systems**.
3. You can filter the content (page 416) to be exported or export all items starting with the same letter (page 415). If you do not filter the contents, the entire table is exported.
4. Click  **Export to Excel**. The export is started and you get a corresponding message.
5. Click  **Reports notification** to the left of the user name.
6. Click the result of the export, for example **Roles (XLSX)**. Depending on your browser settings, the export file is opened or saved.

You have exported content from the catalog into a Microsoft® Excel file (page 418).

3.3.8 What data does the catalog export provide?

The Microsoft® Excel file provides exported catalog content (page 418) on **Catalog** and **General** sheets.

Sheet **Catalog** contains the data you selected for export.

Sheet **General** provides the name of the database that contains the data, the time of generation, and the name of the user who initiated the export.

3.4 Collaborate with users



Collaboration is the platform for cooperation across teams. With Collaboration, information can be exchanged faster, knowledge can be shared, and cooperation across borders is improved.

3.4.1 Open Collaboration

Open Collaboration to exchange information, share knowledge, etc.

Prerequisites

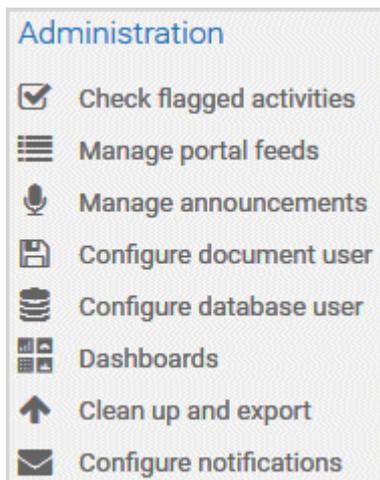
- Collaboration is enabled in ARIS Administration configuration.
- You have at least the **ARIS Connect Viewer** license privilege.
- You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Collaboration**.

Collaboration opens.

As an Collaboration administrator you have several options for managing Collaboration.



3.4.2 Getting started

These five steps are an optimal start to Collaboration.

Prerequisites

- Collaboration is enabled in ARIS Administration configuration.
- You have at least the **ARIS Connect Viewer** license privilege.
- You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Edit (page 420) your user profile.
2. Search (page 421) for groups and people who provide interesting content.
3. Create filters and check (page 428) for new information.
4. Comment on (page 426), share, flag posts, etc.
5. Invite (page 435) others to Collaboration.

You started using Collaboration to exchange information, share knowledge, etc.

3.4.3 Edit your Collaboration user account

Specify your user profile to provide other users with information about your areas of activity and your interests.

Prerequisite

You have at least the **ARIS Connect Viewer** license privilege.

Procedure

1. Click your name on the left, then click **Edit profile** on the right. Your profile page for Collaboration is displayed.
2. Upload a picture in JPG, PNG, or GIF format, with the specified maximum size.
If your user profile in ARIS Administration already includes a picture, it is also displayed in Collaboration. If a different picture is uploaded in ARIS Connect or in Collaboration, it is automatically transferred to the other application.
3. Click **Edit** to specify the trimming and size of the picture for Collaboration.
4. Select the preferred picture trimming by dragging the picture with the mouse.
5. Enlarge (+) or reduce (-) the picture.
6. Click **OK**.
7. Enter the title of your position in the company.
8. Describe your activities.
9. Specify keywords that will enable colleagues looking for particular information or expertise to find you. Use a comma as the separator.
10. Enter your telephone number.

11. Specify whether colleagues should be able to post information (**Allow others to post to my feed**) and submit comments (**Allow others to comment on activities in my feed**) in your feeds. To do this, enable the check box for the relevant option.
12. Click **OK**.

Your profile is changed. The information is now available to other users.

3.4.4 Find users and groups and follow their feeds

Look for colleagues or groups to find interesting contacts and information.

Procedure

1. Enter the name of the user or group in the global **Search** box at the top (see image below). The search results are displayed during your input.
2. Continue entering characters until the relevant user or group is displayed.
3. Click the name you are looking for. The profile of the user or the group is displayed with all posts.
4. For users and public groups, click **Follow**. For private groups, click **Send request**. (Private groups are identified as follows: )

When you follow users, you have access to the posts that they publish in their feeds. In private groups, a coordinator must confirm your request before you are allowed access to this group's posts, comments, etc. In public groups you have immediate access to the group. The feeds you follow are displayed under  **My feed** and the groups you follow under **Groups**. To stop following a user or group, click **Unfollow** in the user or group profile. Users who are following your feeds are displayed under **Followers** in your profile. Users and groups you are following are displayed under **Following** in your profile. Activities of deleted and anonymized users are shown with **Anonymized user**.

Tip

- To find groups, you can also use the group search function (**Groups >  Find groups > All groups**).
- Alternatively, you can find out which groups and feeds another user follows from the user's profile ( **Search > User XY > Following**).
- You can also use the global search to search for keywords, in order to find interesting feeds, users, and groups.



3.4.5 Follow and comment on content in the portal as a user

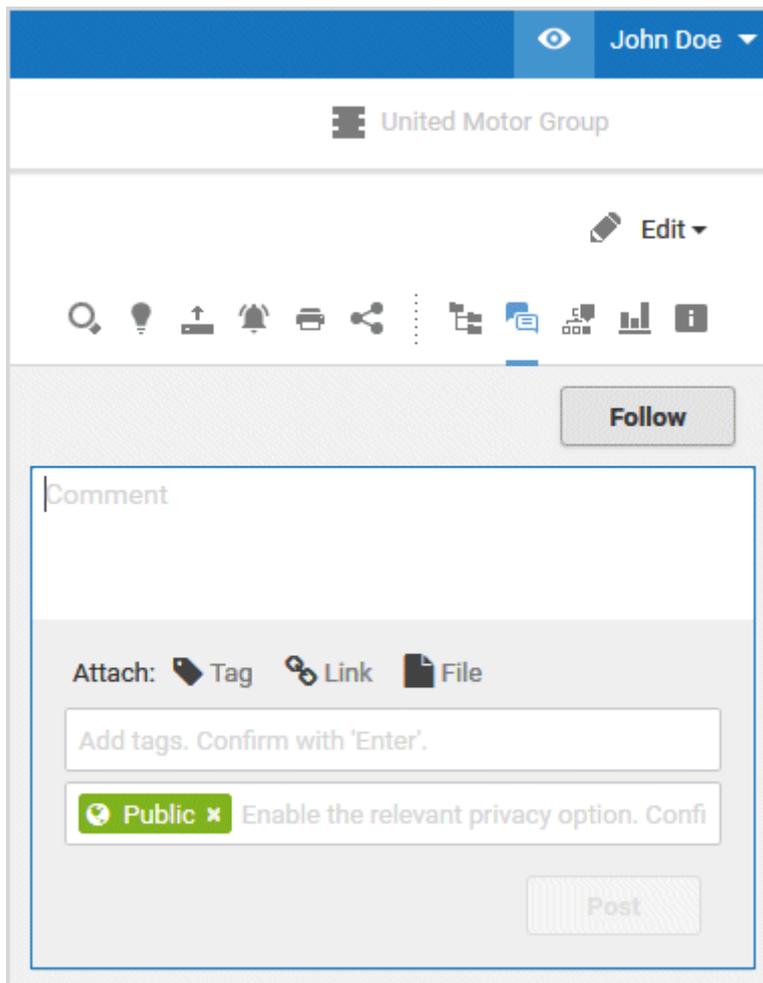
Follow interesting content in the portal to be informed about updates, etc., in Collaboration.

Prerequisite

You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Open the process you want to follow.
2. Click  **Comment** in the bar panel if the bar is not activated yet.



3. Click **Follow**.
4. To comment, write or copy your text into the input box. Up to 2000 characters are available.
5. Click  **Tag**.

6. Enter the words to be used as keywords (page 442) in the tag input box, for example, BPM. Alternatively, select an existing tag from the list of tags. It is displayed as soon as you enter a letter that is part of an existing tag. Press **Enter** after each keyword.

OUR PRODUCT RELEASE VIRTUAL EVENT:
PLAY IT ON DEMAND
Listen, learn and grow your skills!

Attach: Tag Link File

release × event × Add tags. Confirm with 'Enter'.

Public × Enable the relevant privacy option. Confirm with 'Enter'.

Post

7. Click **Link**.
8. Insert a link to a Web site that contains more detailed information.
9. Click **Add link**. The link is checked and added.
10. Click **File**. The **Select document** dialog is displayed.
11. Click **Upload new document** to upload one of your own documents. The corresponding dialog opens.
12. Select the file you want to upload and enter the relevant additional information.
13. Click **Upload**.
14. Enable the check box of the document you want to add to your post.
15. Click **OK**.
16. Click **Post**.

Your comment is posted, and the processes you follow are displayed under **My portal feeds** in Collaboration. To stop following content, click **Unfollow** in the row of the relevant content.

3.4.6 Publish posts

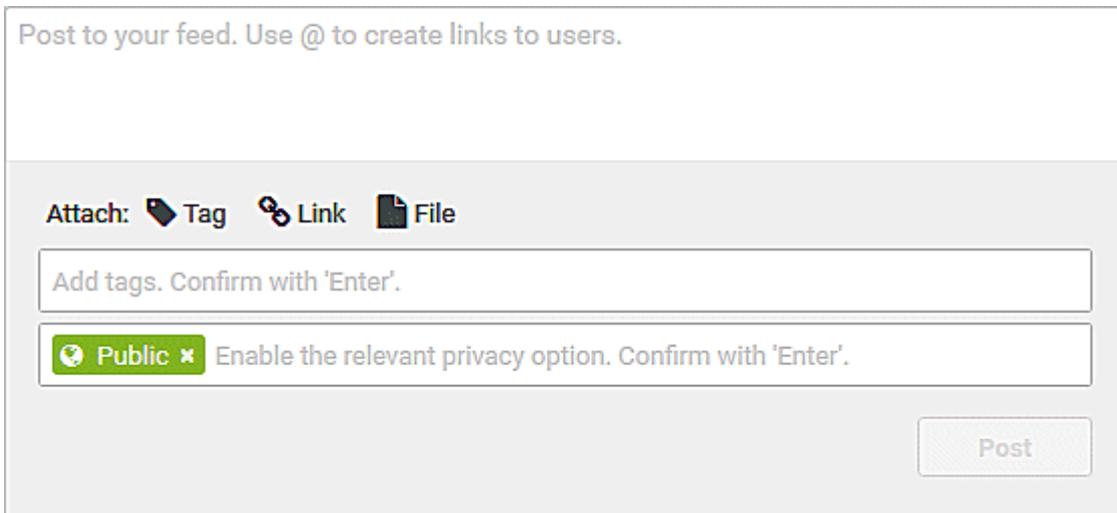
Post information that could be of interest to your colleagues, or start a discussion on a particular topic.

Prerequisite

You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Click  **My feed**, the profile of the relevant user, the relevant group, or  **All company feed**, depending on whether the information is to be displayed only to those users who follow your feeds, only to the members of a certain group, or to all users. If you post information to All company feed, it is possible that your information will not be seen by the relevant users, as some users do not use **All company feed** due to the large number of posts and the associated complexity.
2. Enter or copy your text into the text box. Up to 2000 characters are available.



Post to your feed. Use @ to create links to users.

Attach:  Tag  Link  File

Add tags. Confirm with 'Enter'.

 Public  Enable the relevant privacy option. Confirm with 'Enter'.

Post

3. To create a link to another user in the text, enter an '@' at the relevant point in the text, immediately followed by the name of the user. The search results are displayed during your input.
4. Continue entering characters until the relevant user or group is displayed.
5. Click the name you are looking for.
6. Click  **Tag**.

- Enter the words to be used as keywords (page 442) in the tag input box, for example, BPM. Alternatively, select an existing tag from the list of tags. It is displayed as soon as you enter a letter that is part of an existing tag. Press **Enter** after each keyword.

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Attach: Tag Link File

release × event × Add tags. Confirm with 'Enter'.

Public × Enable the relevant privacy option. Confirm with 'Enter'.

Post

- Click **Link**.
- Insert a link to a Web site that contains more detailed information.
- Click **Add link**. The link is checked and added.
- Click **File**. The **Select document** dialog is displayed.
- Click **Upload new document** to upload one of your own documents. The corresponding dialog opens.
- Select the file you want to upload and enter the relevant additional information.
- Click **Upload**.
- Enable the check box of the document you want to add to your post.
- Click **OK**.
- Select the target group (page 441) by entering the first letters of the relevant group, then select one of the options displayed. By default, a new post is public.
- Click **Post**.

Your post is published. If you published something in your feed, the text is also displayed in the company feeds. If you posted something to another user's feed, this post is also displayed in the company feed and if you are following the other user's feed, this post is displayed in your feed as well. If you published a post in a private group you are a member of, the post is shown only to group members.

To remove the post from your feeds, click **Delete**. Administrators can delete posts made by all users.

3.4.7 Comment on, share, flag posts, etc.

Depending on whether a post is your own or from another user, you can perform different actions.

Prerequisites

- The **Like** button (**Enable Like button**), commenting on (**Create comments**) and sharing content (**Share content**), creating bookmarks (**Create bookmarks**), and flagging posts (**Flag activities**) are enabled in ARIS Administration configuration (**ARIS Administration >  Configuration > Collaboration > General settings**).
- You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Open the page containing the relevant post.
2. Click  **Like** to show other users what interests you. The user who wrote the post receives a notification, if they have the relevant notification setting. The post is also flagged accordingly and added to your filter. To cancel your Like, click  **Unlike**.
3. Click  **Comment** to enter a comment or further information for a post. You can also add a link to a Web site.
4. Click  **Share** to comment on a post by another user and publish it in your own feed. To remove the post from your feeds, click  **Delete**. Administrators can delete posts made by all users.
5. Click  **More > Bookmark** to add a post to your filters, so that you can easily find it again (**Filters >  My bookmarks**). To delete bookmarks, click  **More > Remove bookmark**.
6. Click  **Edit** or  **More > Edit** to change or correct a post or comment you already published. Editing is possible as long as no other user has liked or commented on your post or comment yet.
7. Click  **More > Flag** if you want the Collaboration administrator to review a post you think is inappropriate.

Depending on the selected action, the affected users receive a message by e-mail.

3.4.8 Add documents to posts

You can use documents from ARIS document storage in your posts. Use documents that have already been uploaded to ARIS document storage or upload new documents yourself.

Prerequisite

Using documents from ARIS document storage is enabled in ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **General settings** > **Enable attachments**).

Procedure

1. Add your post (page 424) or comment to the relevant feed ( **My feed**,  **All company feed**, or your group feeds).
2. Click  **File**. The **Select document** dialog is displayed.
3. Click  **Upload new document** to upload one of your own documents. The corresponding dialog opens.
4. Select the file you want to upload and enter the relevant additional information.
5. Click **Upload**.
6. Enable the check box of the document you want to add to your post.

You have added a document to your post.

3.4.9 View notifications and specify settings

Read your internal notifications and specify the situations in which you want to receive a notification about activities in Collaboration as well as the notification frequency.

Procedure

1. Click  **View notifications**. The **Notifications** dialog is displayed. Various filters provide you with a better overview, for example, **All**, **Unread**, **Read**.
2. Click **Change your notification settings** at the bottom of the dialog. Your notification settings are displayed.
3. Specify the situations in which you want to be informed about activities by other users, groups, or portal feeds. In each case, decide whether you want to receive the notification as an internal notification in Collaboration (**In-app**), or as an **E-mail**.
4. Specify the e-mail notification frequency, for example, **Daily digest**. If you do not want to receive e-mail notifications, select **Never** for the relevant situation.
5. Click **OK**.

Your settings are saved. From now on, you will be notified according to your specifications. The time for daily digest e-mail and the day for weekly digest e-mail are defined by the Collaboration administrator.

3.4.10 Define filters

Define custom filters to find interesting posts quickly and easily using keywords or to gain a better overview.

Prerequisite

Creating filters is enabled in ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **General settings** > **Create filter**).

Procedure

1. Click  **Create filter**. The form for creating a filter opens.
2. Select the relevant filter criteria, for example, whether you want all feeds or only feeds you follow to be included in the filter.
3. Enter a name for the filter.
4. Specify the keywords that can be used to find relevant posts. Use a space to separate the keywords.
5. Click **OK**.

The filter is saved and is displayed under **Filters** on the left. Click the filter name to display the posts that contain the specified keywords.

To change a saved filter, click  **Filter XY** >  **Edit filter**. To delete filters that you no longer require, click  **Delete filter**.

3.4.11 Use tags

Use tags to categorize posts using keywords. This enables other users to find posts on interesting topics more easily.

Prerequisite

Create tags and filtering using tags (**Allow filtering (My feed)**, **Allow filtering (Portal)**, and **Allow filtering (My portal feeds)**) are enabled in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **General settings**).

Procedure

1. Add your post (page 424) to the relevant feed ( **My feed**,  **All company feed**, or a group feed).
2. Click  **Tag**.
3. Enter the words to be used as keywords (page 442) in the tag input box, for example, BPM. Alternatively, select an existing tag from the list of tags. It is displayed as soon as you enter a letter that is part of an existing tag. Press **Enter** after each keyword.

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Listen, learn and grow your skills!**

Attach:  Tag  Link  File

release ×
event ×
Add tags. Confirm with 'Enter'.

 Public ×
Enable the relevant privacy option. Confirm with 'Enter'.

4. Click **Post**.

Your post is published. The keywords entered as tags are shown below the post. You can add or delete tags at any time.

3.4.12 Filter feeds by means of tags

Use tags (page 442) to filter feeds using keywords. By default, the search operator for tags is **AND**. It can be changed to **OR** in the ARIS Administration configuration (**ARIS**

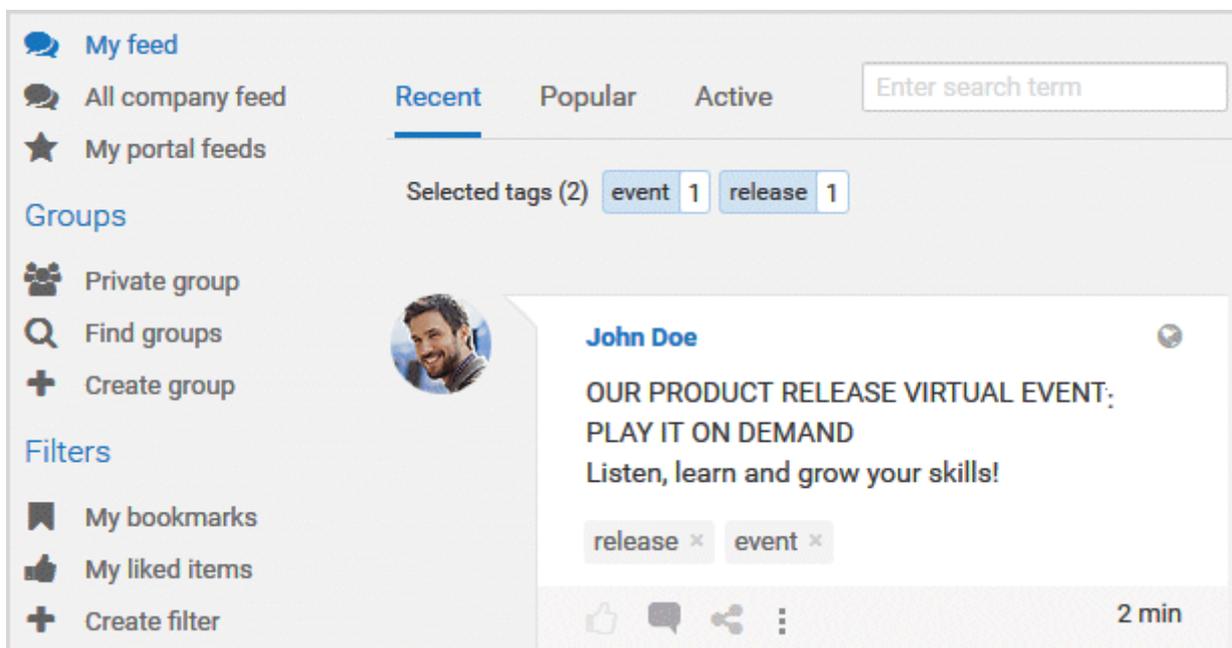
Administration >  **Configuration** > **Collaboration** > **General settings** > **Search operator 'OR' instead of 'AND'**).

Prerequisite

- **Create tags** and filtering using tags (**Allow filtering (My feed)**, **Allow filtering (Portal)**, and **Allow filtering (My portal feeds)**) are enabled in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **General settings**).
- There are tags for the feed.

Procedure

1. Open the relevant feed overview ( **My feed**,  **All company feed**). The tags are displayed above the feeds.
2. Click the tags for which you want to see posts. You can combine multiple tags. Activated tags are indicated in color.



You are shown the posts containing the tags selected.

To reset the filter and to redisplay all posts, click the selected keywords again.

3.4.13 Use hashtags

Use hashtags (page 443) to categorize posts using keywords or topics. This enables other users to find posts on interesting topics more easily.

Procedure

1. Add your post (page 424) or comment to the relevant feed ( **My feed**,  **All company feed**, or your group feeds).
2. Enter the word to be used as a keyword, preceded by a # symbol, for example, #BPM, or enter a sentence. Alternatively, select an existing hashtag from the list.
3. Publish (page 424) the post.

Your post is published and the keyword entered as a hashtag is highlighted in color as a link. Tags are automatically created for hashtags so that they can be used to filter feeds.

If a user clicks the hashtag, all post and comments subsequently entered are displayed on a separate page. A hashtag can be saved as a filter (page 428). You can then use the same hashtag in the filter definition, for example, #BPM.

3.4.14 Find help

In addition to this online help, there are various ways you can find support in Collaboration.

Procedure

Publish a post containing your question and use the hashtag (page 443) **#Help**.

This keyword enables other users to find and reply to your question. Alternatively, contact your system administrator.

3.4.15 Work with groups

3.4.15.1 Create a group

Create your own group if you cannot find any interesting groups or you need a group for your team. Groups enable users to collaborate in a team and to participate in a special interest group or a particular topic.

Prerequisite

- Creating groups is enabled in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **General settings** > **Create group**).
- Collaboration administrators can assign user groups from ARIS Connect to groups in Collaboration if the relevant ARIS Connect user groups are enabled for Collaboration in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **Configure user groups**).

Procedure

1. Click  **Create group**.
2. Enter the name of the group and the short name.
3. Describe the group's interests, so that your group can be found by other users. The best way to do this is to use keywords.
4. If necessary, specify an additional coordinator who will manage the group profile and privileges ( **Add coordinator**).
5. Instead of inviting each user individually to join the group, assign user groups from ARIS Administration. Click **Add user group**. The dialog opens. Enter a search term for the relevant user group, and click **Find**. The search result is displayed.
6. Click the relevant user group in the search result, and click **OK**. The user group from ARIS Administration is assigned to the Collaboration user group.
To remove a user group, click **Delete** in the row of the relevant user group.
7. Enable () **Force sending notifications to the user group members** if you want to override the users' individual notification settings (page 427). This means that group members receive notifications from this Collaboration user group even if they specified **Never** for group notifications.
8. Enable the relevant privacy option (**Public/Private**). After saving the group, you cannot change this option.
9. For private groups, you can follow portal feeds (page 436).
10. Click **OK**. The group is displayed in your groups list.
11. To remove the group from your groups list, click  **Unpin** next to the group's name. This is useful to provide a better overview if you are following a lot of groups.

The group is created. Depending on your decision, the group is displayed or not under **Groups**.

Using tags, other users can find the group and follow its posts. In private groups, only members are able to read the posts. The group's name and description will, however, be visible in search results for non-members, as well.

3.4.15.2 Edit or delete a group

Change the details of a group, if the information is outdated. Delete an unused group, for example, to provide a better overview.

Prerequisite

- You are the coordinator of the group.
- Collaboration administrators can assign user groups from ARIS Connect to groups in Collaboration if the relevant ARIS Connect user groups are enabled for Collaboration in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **Configure user groups**).

Procedure

1. Under **Groups**, click the group that is to be edited.
If the group is not displayed in your groups list because it is unpinned (page 435), click **Find groups** and then the relevant group.
2. Click **Edit group** in the upper right corner. The form is displayed.
3. Change the relevant information, such as name, description, keywords, etc.
4. If necessary, specify an additional coordinator who will manage the group profile and privileges ( **Add coordinator**).
5. Instead of inviting each user individually to join the group, assign user groups from ARIS Administration. Click **Add user group**. The dialog opens. Enter a search term for the relevant user group, and click **Find**. The search result is displayed.
6. Click the relevant user group in the search result, and click **OK**. The user group from ARIS Administration is assigned to the Collaboration user group.
To remove a user group, click **Delete** in the row of the relevant user group.
7. Enable () **Force sending notifications to the user group members** if you want to override the users' individual notification settings (page 427). This means that group members receive notifications from this Collaboration user group even if they specified **Never** for group notifications.
8. For private groups, you can follow portal feeds (page 436).
9. To delete the group, click **Delete group** at the bottom of the form.
10. Click **OK** in both the dialog and the group.

Your changes are saved.

3.4.15.3 Assign user groups from ARIS Administration to a Collaboration group

Instead of inviting each user individually to join the group, assign user groups from ARIS Administration.

Prerequisite

Collaboration administrators can assign user groups from ARIS Connect to groups in Collaboration if the relevant ARIS Connect user groups are enabled for Collaboration in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **Configure user groups**).

Procedure

1. Under **Groups**, click the relevant group.
If the group is not displayed in your groups list because it is unpinned (page 435), click **Find groups** and then the relevant group.
2. Click **Edit group** in the upper right corner. The form is displayed.
3. Click **Add user group**. The dialog opens. Enter a search term for the relevant user group, and click **Find**. The search result is displayed.
4. Click the relevant user group in the search result, and click **OK**. The user group from ARIS Administration is assigned to the Collaboration user group.
To remove a user group, click **Delete** in the row of the relevant user group.
5. Enable () **Force sending notifications to the user group members** if you want to override the users' individual notification settings (page 427). This means that group members receive notifications from this Collaboration user group even if they specified **Never** for group notifications.
6. Click **OK**.

Your changes are saved.

3.4.15.4 Invite other users to join a group

Invite other users to become a member in a specific group.

Procedure

1. Activate the group you want to issue an invitation for.
2. If you are a coordinator of the group, enter the name of the person you want to invite in the **Add colleagues** box.
3. Click **Add**. The user is added as a follower of this group.
4. If you are not a coordinator of the group, enter the name of the person you want to invite in the **Invite colleagues** box.
5. Click **Invite**.

The user receives a notification that they have been invited to join a private group. This user can then request membership of the group (🔍 **Find groups** > **Send request**). If the group coordinator approves (page 437) the request, the user can read the posts, comments, etc., by this group, and can himself post content in the group.

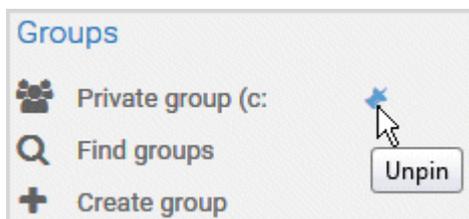
Group coordinators can add more users to a group directly (**Add colleagues**). That user immediately becomes a member of the group and receives the posts, comments, etc., by the group (💬 **My feed**).

3.4.15.5 Unpin and pin your groups

Decide if groups you are following should be displayed or not in your groups list. This is useful to provide a better overview if you are following a lot of groups.

Procedure

1. To remove a group from your list, move the mouse pointer over the group name you want to unpin from the list.
2. Click 🌟 **Unpin**.



The group is removed from the list.

3. To display a group in your groups list, click **Find groups** and then the relevant group. The **group** is displayed.
4. Click 🌟 **Pin** next to the group's name. The group is displayed in your groups list.

Depending on your decision, the group is displayed or not under **Groups**.

3.4.15.6 Follow portal contents as a group

Follow interesting content for private groups in ARIS Connect to be informed about updates, etc., in Collaboration. This enables a private group, for example, a project team, to jointly discuss and edit relevant processes.

Prerequisites

- The group is a private group.
- You are the coordinator of the group.
- The access to portal content is enabled in the ARIS Administration configuration (**ARIS Administration >  Configuration > Collaboration > General settings > Public access to portal feeds**).
- The item from ARIS Connect must be followed as a portal feed in Collaboration.
- You have the required access privilege (page 443) in ARIS Architect.

Procedure

1. Under **Groups**, click the group that is to follow portal feeds.
If the group is not displayed in your groups list because it is unpinned (page 435), click **Find groups** and then the relevant group.
2. Click **Edit group**.
3. Click **Follow portal feeds**. The **Find portal feed** dialog opens.
4. Enter a search term for finding the portal feed. Please ensure that the spelling is correct.
5. Click **Find** or press **Enter**.
6. Click the required portal feed in the search result.
7. Click **OK** in both the dialog and the group.

Using the **Following** button, the group can view the portal feed. Comments, etc., are shown directly in the group. To unsubscribe a group from a portal feed, the group coordinator removes the portal feed from the list of feeds followed by the group (**Group XY > Edit group > Followed portal feeds > Delete**).

Users of the group are notified when the portal feed has changed or comments have been added to it.

3.4.15.7 Edit requests to join private groups as a coordinator

Edit requests for group memberships.

Prerequisite

The group is a private group you are the coordinator of.

Procedure

1. Open the group.
2. Click **Requests** in the upper right corner. The user requests are displayed.
3. For each request, click **Approve** or **Deny**.

If the user was accepted as a group member, the user will be notified accordingly and displayed in the list of followers. If the user was denied membership the user and all other group coordinators receive a corresponding notification.

3.4.15.8 Grant/revoke group users coordinator privileges

Grant additional group members coordinator privileges or revoke them from them.

Procedure

1. Open the private group.
2. Click **Followers**. The members of this group are displayed.
3. In the row for the group member you want to grant/revoke coordinator privileges to/from, click **Grant** or **Revoke**. The button always shows the command that can be executed next, that is, **Revoke** if the user has administrator privileges, and vice versa.

The user is granted coordinator privileges (page 443) or they are withdrawn. The user receives a notification. If a user is granted coordinator privileges all other coordinators of the group receive a notification, as well.

A coordinator can cancel group membership only if another coordinator withdraws the coordinator privileges from the user first.

The **Remove** button removes the user from the group. The **Revoke** button revokes the user's coordinator privileges.

3.4.16 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.4.16.1 Keyboard shortcuts for Collaboration

The following shortcuts are available in Collaboration (page 419).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
End	Moves to the lower entries if they cannot be displayed completely due to the window size or the screen resolution.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
Home	Moves to the upper entries if they cannot be displayed completely due to the window size or the screen resolution.
Tab	<ul style="list-style-type: none"> Opens the navigation for page sections (page 98) if you press Tab immediately after opening the page. Highlights the next control or input box. Jumps from the Comment box to the  Tag,  Link, and  File symbols that you can use to attach tags, links, or files to your comment. It also jumps to the other input fields and to the Post button.
Shift + Tab	Highlights the previous control or input box.
Right arrow/ Left arrow	Moves the cursor through the text in input boxes.
Up arrow/ Down arrow	Selects the previous/next item in lists.
Enter	<p>Opens the attachment fields and places the cursor in the input field if the Tag or Link symbol is selected. Opens the Select document dialog when the File symbol is selected.</p> <ul style="list-style-type: none"> Posts the comment when the Post button is selected. Executes the highlighted button. Opens the dialog/the selection list of the highlighted item.
Ctrl + Enter	Posts a comment when the Post button is active.

3.4.16.2 What is a feed?

Feeds contain the posts (page 424) in Collaboration, which for example, can be commented (page 426) on. The posts are categorized as follows:

-  **My feed**
Shows the posts and comments by the users from Collaboration whose feeds you follow.
-  **All company feed**
Shows all posts and comments by users and public groups from Collaboration.
-  **My portal feeds**
Displays a linked list of the portal feeds you follow. Portal feeds are only available if Collaboration is used within ARIS Connect.

3.4.16.3 How can users automatically follow content?

These options enable users to automatically become followers.

POSTING OR COMMENTING ON FEEDS

If **Automatically follow users/Automatically follow groups/Automatically follow models** is enabled in the configuration (**ARIS Administration > Collaboration > General settings**), you automatically become a follower of users, groups, or models, by posting or commenting on their feeds. To stop following this content, click **Unfollow**.

PERSON RESPONSIBLE

If a user name is set for the **Person responsible** model attribute of a model in an ARIS database, this user automatically becomes a follower of this model. Once automatic following is activated in Collaboration (**ARIS Administration > Collaboration > Configure database**), this user sees all model activities in **My feed**, and receives notifications about them. However, this only applies if this user has at least the **Read (r---)** access privilege in the corresponding ARIS database.

If a different user name is set for the **Person responsible** model attribute at a later point in time, the automatic following remains activated for the previous user until this user manually stops following this model (**Unfollow**).

3.4.16.4 What does following posts mean?

When you follow users, you have access to the posts that they publish in their feeds. In private groups, a coordinator must confirm your request before you are allowed access to this group's posts, comments, etc. In public groups you have immediate access to the group.

The feeds you follow are displayed under  **My feed** and the groups you follow under **Groups**. To stop following a user or group, click **Unfollow** in the user or group profile. Users who are following your feeds are displayed under **Followers** in your profile. Users and groups you are following are displayed under **Following** in your profile.

3.4.16.5 Which target groups can be assigned to posts?

The following target groups can be selected for posts (page 424):

-  **Private**
Only the creator can see this group. You can use it to keep your own notes.
-  **Public**
All users can see this group.
-  **Public Collaboration group**
Only members of the selected public group(s) can see this group. Multiple selection is possible.
-  **Private Collaboration group**
Only members of the selected public group(s) can see this group. Multiple selection is possible, but you can assign only groups you are a member of.
-  **ARIS user group (ARIS Administration)**
Only members of the selected ARIS user group(s) can see this group. Multiple selection is possible, but you can assign only groups you are a member of.

By default, a new post is public. Any combination of ARIS user groups, public Collaboration groups, and private Collaboration groups is possible. It is not possible to assign users.

In a post, you can move the mouse pointer over the group symbol () to view the names of assigned groups.

The Collaboration administrator can view all posts, even the private ones.

3.4.16.6 What does Like mean?

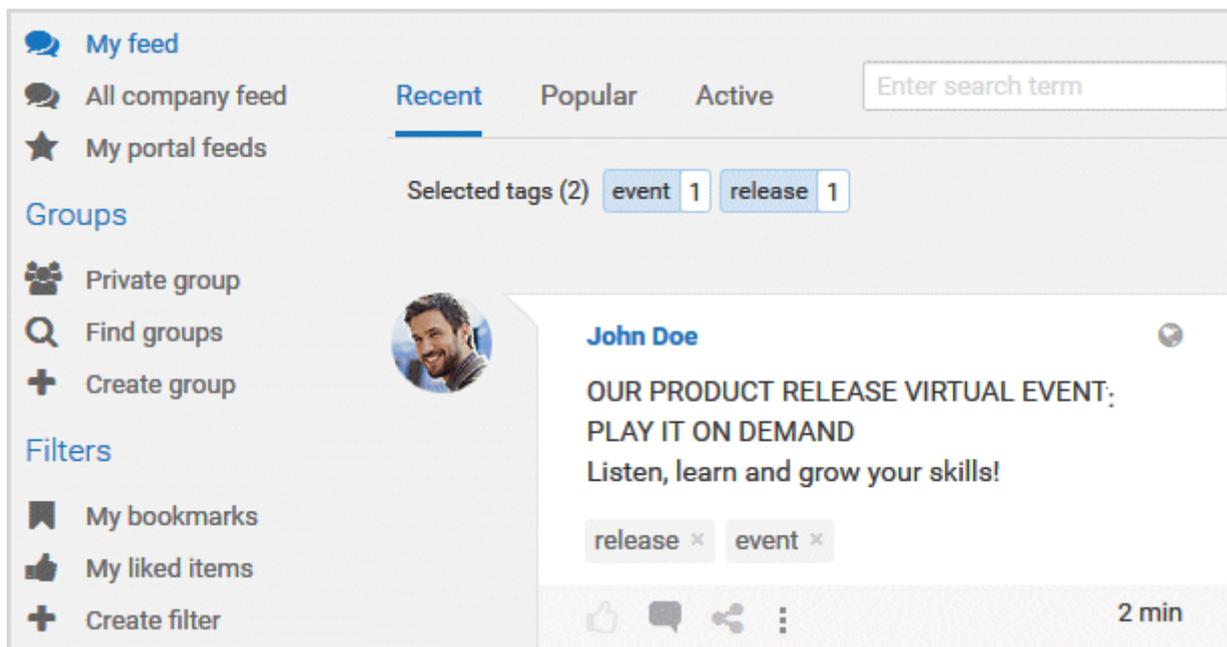
By clicking on  **Like** under a post, you are telling other people that you are giving this post a positive rating, but without leaving a comment. Just like a comment, this is shown along with your user name below the post. To cancel your Like, click  **Unlike**.

3.4.16.7 What is a timestamp?

A timestamp (page 426) indicates when a post was last updated in Collaboration. Example: Last update was 2 hours ago. Timestamp = **2 h**.

3.4.16.8 What is a tag?

Tags are used to categorize posts using keywords, making them easier to find (page 430). The keywords entered as tags are shown below the post. Tags are automatically created for hashtags so that they can be used to filter feeds. By default, the search operator for tags is **AND**. It can be changed to **OR** in the ARIS Administration configuration (**ARIS Administration** >  **Configuration** > **Collaboration** > **General settings** > **Search operator 'OR' instead of 'AND'**).



3.4.16.9 What is a hashtag?

Hashtags are used to categorize posts and comments using keywords or topics, making them easier to find. The keyword entered as a hashtag is displayed as a link, highlighted in color. If a user clicks the hashtag, all post and comments subsequently entered are displayed on a separate page. A hashtag can be saved as a filter (page 428). You can then use the same hashtag in the filter definition, for example, #BPM.

A hashtag consists of the # character followed by a keyword or phrase. There is no space after the # and the phrase does not contain any punctuation marks.

Examples

#BPM

#Optimize your processes using social collaboration

3.4.16.10 What does it mean to flag a post?

You can send (page 426) posts you deem inappropriate to the Collaboration administrator for review. The administrator decides whether the post will be deleted or not.

3.4.16.11 Which group types exist?

Groups can be created (page 432) for teams, departments, interest groups, topics, projects, etc. There are public and private groups. Public groups are open to all users. For private groups, a coordinator decides who is to be granted access (page 437) to the group.

3.4.16.12 Which database access privileges of ARIS Architect are relevant to Collaboration?

For some interactions in Collaboration, users need special access privileges, for example, to post on portal feeds. These access privileges are assigned in ARIS Architect. You can synchronize the privileges in Collaboration manually, after you edited them in ARIS Architect. The following database access privileges are relevant to Collaboration:

- **No access (----)**
No portal content is displayed.
- **Read (r---)**
Portal content is displayed. Users can read posts added to models, and they can like, share, bookmark, tag, and flag them. However, they cannot comment on models.
- **Read + Comment (rc--), Read + Write (rw--)** (and all other types of rw access)
Portal content is displayed. Users can use all functions of Collaboration.

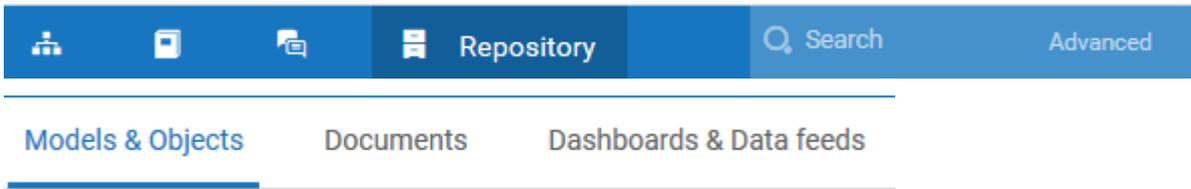
For detailed information about access privileges, refer to the help in ARIS Architect (ARIS Configuration and Administration).

3.5 Use the repository



The repository contains databases and documents etc. of the selected server.

3.5.1 Work in the repository



In the repository, you can manage models and objects, documents (page 822), and dashboards (page 843).

With the **ARIS Connect Designer** license privileges, you can navigate to database groups and edit their content, for example, rename models and objects.

The procedures that you can execute directly in the repository are summarized here.

Navigation bar (page 466)

Group menu (page 469)

Detail view (page 470)

Item menu in the detailed view (page 471)

Repository buttons

3.5.1.1 Create model

You can create a new model in the selected database group. Many users use event-driven process chains (EPC) or Business Process Model and Notation (BPMN) version 2.0. The basics for these modeling techniques can be found in EPC in ARIS

([../../../../../abs/help/en/documents/6 Using ARIS/61 Beginner/EPC cheat sheet.pdf](#)) and in BPMN 2.0 in ARIS ([../../../../../abs/help/en/documents/6 Using ARIS/61 Beginner/BPMN cheat sheet.pdf](#)).

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new model. When you select the group, its contents are displayed in the detail view (page 470). Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create model**. The corresponding dialog opens.
5. In the **Model name** box specify the name that the new model is to be created with in the selected group.
6. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
7. Select the required model type.
8. Click **OK**.

The new model is created and saved in the selected group. A new tab with the model opens and you can model the content.

3.5.1.2 Create object definitions

Create object definitions (page 1150) that you want to create occurrences for later in models and create an object library (page 1150). Thus, the required objects are available when modeling.

With the **ARIS Connect Designer** license privilege, you can create multiple objects of the same type at the same time.

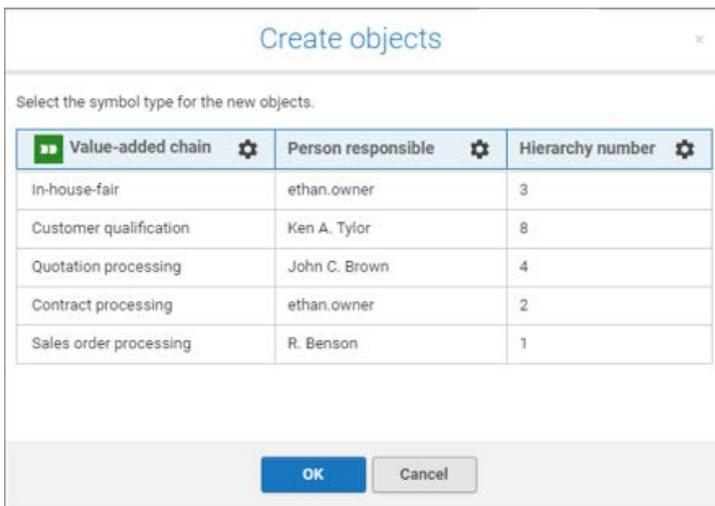
COPY OBJECTS NAMES AND ATTRIBUTES IN THE CLIPBOARD

1. In a text editor, enter the names of the new object in separate lines.
2. On the right of the objects, enter the attributes separated by tabs.
3. Press **Ctrl + A** to select all entries and **Ctrl + C** to copy them in the clipboard.

You have created objects names and attributes in the clipboard.

INSERT THE OBJECT DEFINITIONS

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Log in to the relevant database.
3. Select the database group in which you want to save the object definitions.
4. Click  **Create objects**. The dialog opens.
5. Press **Ctrl + V** to copy the clipboard content in the dialog box. The content is inserted into the dialog and rows are created for the symbol and attribute types.
6. In the **Select symbol type** header, click  **Configure** to select the symbol type for all new objects.
7. In the **Select attribute type** headers, click  **Configure** to select the attribute type for all attributes of the column.



 Value-added chain 	Person responsible 	Hierarchy number 
In-house-fair	ethan.owner	3
Customer qualification	Ken A. Tylor	8
Quotation processing	John C. Brown	4
Contract processing	ethan.owner	2
Sales order processing	R. Benson	1

8. Click **OK**.

The object definitions are created in the group based on the selected object type.

Tip

Create occurrences of the objects in an overview model. This prevents the object definitions from being deleted unintentionally during a database reorganization.

3.5.1.3 Display and open a recently used model

In the repository, you can display and open models modified in ARIS Connect Designer, regardless of which database they are stored in.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Click **Recently used** if not already selected. A preview of all recently used models with model type, name, and name of the database in which they are stored is displayed.
3. Click the model preview.

The model is opened in ARIS Connect Designer (page 529).

3.5.1.4 Display a model preview

You can display a model preview for selected models in the  **Repository**.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which the relevant item is saved. When you select the group, its contents are displayed in the detail view (page 470).
4. Activate the **Models** tab.
5. If the **Details** bar (page 472) is not open, click  **Detail** in the button bar.
6. Activate the check box of the model you want to see in the preview.

The model is displayed in the preview (page 472). Besides the graphical view the attributes **Name**, **Type**, **Last change** and **Last user** are displayed. You can open the model in ARIS Connect Designer by clicking on the model preview.

3.5.1.5 Create group

You can create a new group in a database in which you can store models and objects.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new group. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create group**. The corresponding dialog opens.
5. Enter the required name in the **Name** box.
6. Click **OK**.

The group is created as a subgroup of the selected one and you can store models and objects in it.

3.5.1.6 Generate report for multiple elements

You can generate a report for multiple elements. Depending on the selected elements, reports are offered that provide a plausible evaluation for this context.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the group where the content you want to select is stored.
4. In the detail view (page 470), activate the check boxes of the relevant elements.
5. Click  **Reports**. The **Reports** bar opens. The number of items for which the report is generated is shown.
6. Click the drop-down list box to display the list of available reports.
7. Leave the mouse pointer on the name of a report if you want to display its description.
8. Click the name of the relevant report.
9. Click **Start** if you want to output the report in the displayed format (page 200).
To select a different output format, click the **Output format** field and select the format you want to use, for example, **Output PDF**.
10. Click **Start**. The report is created. If the report provides alternatives or requires entries, dialogs are displayed where you can make your settings.
11. When the report is created, the result is listed in the **Reports** bar, and a dialog to download the result opens.
12. Click  **Download result**. Depending on your browser settings, you can specify the download folder or the result is downloaded in the default download folder.
13. To download the result later, click  **Download** in the **Reports** bar.

You have created a report for multiple elements.

3.5.1.7 Run a semantic check for models and objects

You can check one or multiple models and objects for semantic correctness. When you run a semantic check, the previous semantic check results are deleted from the results list.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Select the database group which contains the models and/or objects you want to check.
4. In the detail view (page 470), enable the check boxes of the relevant models and/or objects.
5. The **Semantic checks** bar displays the name of the selected item and the corresponding semantic check. If you have selected more than one item, the **Semantic checks** bar displays the number of selected items.
6. Click in the semantic check list box. The relevant semantic checks are listed.
7. Select the required semantic check.
8. Click **Start**. Depending on the rules to be checked, the semantic check is executed without further input or dialogs are opened and you must make settings.

The **Semantic check** is executed. Previous results are deleted from the **Result** area, the current result is listed and can be downloaded (page 801) in the selected format (page 788).

3.5.1.8 Run a semantic check for the content of a group

You can check the content of a group for semantic correctness.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Select the database group which contains the models and/or objects you want to check.
4. Click  **Semantic checks** to open the **Semantic checks** bar. The **Semantic checks** bar displays the name of the selected database group.
5. Click in the semantic check list box. The relevant semantic checks are listed.
6. Select the required semantic check.
7. Click **Start**. Depending on the rules to be checked, the semantic check is executed without further input or dialogs are opened and you must make settings.

The **Semantic check** is executed. Previous results are deleted from the **Result** area, the current result is listed and can be downloaded (page 801) in the selected format (page 788).

3.5.1.9 Delete a model or an object

You can delete a model or an object from the database.

Warning

You cannot undo the deletion of models and objects.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which the relevant item is saved. When you select the group, its contents are displayed in the detail view (page 470).
4. Move the mouse cursor over the row of the item you want to delete. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **Delete**. A confirmation prompt is displayed.
6. Click **OK**.

The item is deleted.

Tip

You can delete multiple items at the same time. To do this, activate the check boxes of two or more items and click  **Delete** displayed above the navigation bar (page 466).

3.5.1.10 Rename a model or an object

You can rename a model or an object.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Navigate to the database group in which the relevant item is saved. When you select the group, its contents are displayed in the detail view (page 470).
4. Move the mouse cursor over the row of the item you want to delete. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **Rename**. The corresponding dialog opens.
6. Overwrite the current item name.
7. Click **OK**.

The item is renamed.

3.5.1.11 Copy a model or an object into another group

You can copy models and objects and paste them into a database group.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Navigate to the database group in which the relevant item is saved. When you select the group, its contents are displayed in the detail view (page 470).
4. Move the mouse cursor over the row of the item you want to copy. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **Copy**.
6. Select the group in which you want to paste the model or the object. The  **More** icon is displayed beside the group name.
7. Click  **More** >  **Paste**.

If you insert a model, it is newly created, while occurrence copies (page 1151) of the existing objects are used for the objects it contains. If an object is inserted, a definition copy (page 1143) is created.

Tip

You can copy and paste either multiple models or multiple objects at the same time. To do this, activate two or more check boxes of models or objects and click  **Copy** displayed above the navigation bar (page 466). Now you can paste them into a group.

3.5.1.12 Paste objects from the repository into a model

You can copy objects in the repository and paste them into a model of the same database as occurrence copy (page 1151) or as definition copy (page 1143).

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the relevant database group. When you select the group, its contents are displayed in the detail view (page 470).
4. Move the mouse cursor over the row of the object. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **Copy**.
6. Select the model tab on which you want to paste the object.
7. If you want to insert the object as occurrence copy, click  **Paste** in the **Start** tab bar. If you want to insert the object as definition copy, click the  **Paste as** down arrow to the right of the  **Paste** button in the **Start** tab bar and then click **Definition copy**.

The object is inserted as occurrence copy (page 1151) or as definition copy (page 1143) and can be dragged to the corresponding position.

Tip

You can copy multiple objects at the same time. To do this, activate the check boxes of two or more objects and click  **Copy** displayed above the navigation bar (page 466).

3.5.1.13 Move a model or an object

You can move a model or an object to another database group of the same database.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which the relevant item is saved. When you select the group, its contents are displayed in the detail view (page 470).
4. Move the mouse cursor over the row of the item you want to move. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **Cut**.
6. Select the group in which you want to move the model or the object.
7. Click the  **More** icon of the group and click  **Paste**.

The selected item is moved.

Tip

You can move multiple models and objects at the same time. To do this, activate two or more check boxes of models and objects and click  **Cut** displayed above the navigation bar (page 466). Now you can paste them into another group.

3.5.1.14 Show technical information for models and objects

You can show the GUID (page 1146), the type number, and the API name (page 1137) for selected models or objects. You can copy the data.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Navigate to the database group in which the relevant item is saved. When you select the group, its contents are displayed in the detail view (page 470).
4. Move the mouse pointer over the relevant item. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **Technical information**.

The GUID, the type number, and the API name for the selected model or the selected object are shown. You can copy the data. In this way, you can insert the GUID elsewhere, for example.

3.5.1.15 Go to the fact sheets of a model

You can navigate from the  **Repository** to the fact sheets (page 1144) of a model in the  **Portal**.

Prerequisites

- You have the **ARIS Connect Designer** license privilege.
- The database containing the model has been published.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which the relevant model is stored.
4. Move the mouse pointer over the model. The  **More** icon is displayed beside the item name.
5. Click  **More** >  **View publication**.

A new tab with the fact sheets of the model opens. The **Overview** fact sheet is activated.

3.5.1.16 Use database groups

You can use the database group functionality to manage database contents.

3.5.1.16.1 Create group

You can create a new group in a database in which you can store models and objects.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new group. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create group**. The corresponding dialog opens.
5. Enter the required name in the **Name** box.
6. Click **OK**.

The group is created as a subgroup of the selected one and you can store models and objects in it.

3.5.1.16.2 Move a group

You can move a database group and its contents to another group of the same database.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Select the database group you want to move. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Cut**.
5. Select the group into which you want to move the cut group.
6. Click  **More** >  **Paste**.

The group and its contents are moved into the selected group.

3.5.1.16.3 Rename a group

You can rename a group.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Select the database group you want to rename. Beside the name of the group the **More** icon is displayed.
4. Click **More** >  **Rename**. The corresponding dialog opens.
5. Overwrite the current group name.
6. Click **OK**.

The group is renamed.

3.5.1.16.4 Create model

You can create a new model in the selected database group. Many users use event-driven process chains (EPC) or Business Process Model and Notation (BPMN) version 2.0. The basics for these modeling techniques can be found in EPC in ARIS

([../../../../../abs/help/en/documents/6 Using ARIS/61 Beginner/EPC cheat sheet.pdf](#)) and in BPMN 2.0 in ARIS ([../../../../../abs/help/en/documents/6 Using ARIS/61 Beginner/BPMN cheat sheet.pdf](#)).

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new model. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create model**. The corresponding dialog opens.
5. In the **Model name** box specify the name that the new model is to be created with in the selected group.
6. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
7. Select the required model type.
8. Click **OK**.

The model is created and saved in the selected group. A new tab with the model opens and you can model the content.

3.5.1.16.5 Copy group with models

You can copy a group. The models contained in the group are also copied by this operation. Objects contained in the group are not copied. You can copy objects using the specific functionality (page 455).

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Navigate to the database group that you want to copy. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Copy**.

The group and the contained models are copied and can be pasted (page 462) into another group.

3.5.1.16.6 Paste content in a group

You can insert models (page 455), objects (page 455), and groups with models (page 462) into a group.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Navigate to the database group into which you want to paste content. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Paste**.

The models, objects, or groups with models are inserted into the group.

3.5.1.16.7 Import an ARIS Express model

You can import a model from ARIS Express and use it in ARIS Connect. ARIS Express saves models in files of the **ARIS Document Format** format (adf).

Prerequisite

- The model is of a model type allowed by ARIS Connect and by the method filter (page 523) you are using.
- You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to import the ARIS Express model. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Import ARIS Express model**. The corresponding dialog opens.
5. Click **Select file** and use the **File Upload** dialog to navigate to the group in which the model is stored in **ADF** format.
6. Select the relevant ADF file and click **Open**.
 - a. The selected model is imported if an ARIS Express filter or an ARIS Express template is available.
 - b. If no ARIS Express filter or ARIS Express template is available, you are asked whether you still want to import the model. Click **OK** if you want to import the model. Only after you have imported the ARIS Express filter and ARIS Express template does the model look as in ARIS Express. Click **OK** to confirm the message that some object types are represented by default symbols.
7. Use ARIS Architect to import the ARIS Express filter and the ARIS Express template if you want the imported model to appear exactly as it does in ARIS Express.

The imported model is stored in the selected group and you can open it for editing.

3.5.1.16.8 Import BPMN file

You can import (page 704) data from a BPMN file and use the BPMN diagram that was generated by the import in ARIS Connect. When importing a BPMN diagram of a third-party supplier, an Enterprise BPMN diagram is created in ARIS.

Prerequisites

- The method filter (page 523) you are using allows BPMN diagrams.
- You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Select the database group into which you want to import the BPMN diagram. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Import BPMN diagram**. The corresponding dialog opens.
5. Click **Select file** and navigate to the relevant BPMN file.
6. Select the BPMN file and click **Open**. The file is parsed. If it is a valid BPMN file, it is imported.

The BPMN diagram is stored in the selected group, and you can open it for editing on a tab.

3.5.1.16.9 Refresh content of a database group

You can update the contents of the selected database to display the current contents. This is useful if several people are working in the database at the same time. For example, if someone else changes the names of groups, you can see the changes after refreshing.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**.
2. Select the relevant database.
3. Select a database group. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Refresh**.

The current database data is read and displayed.

3.5.1.16.10 Delete a group

You can delete a group and its contents.

Warning

You cannot undo the deletion of the group and its contents.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group you want to delete. Beside the name of the group the **More** icon is displayed.
4. Click **More** >  **Delete**. A confirmation prompt is displayed.
5. Click **Delete**. If the group does not contain any items, it is deleted immediately. If the group contains items, you are asked in a confirmation prompt whether you also want to delete these items.
6. Click **Yes**.

The group and its contents are deleted.

3.5.1.17 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.1.17.1 Where can you generate reports?

A report is a script that can be applied to database content.

A report can be used, for example, to collect database content and group it according to specific aspects, output the relationships (page 1152) between database elements, generate comparison tables, or display multiple uses of database items.

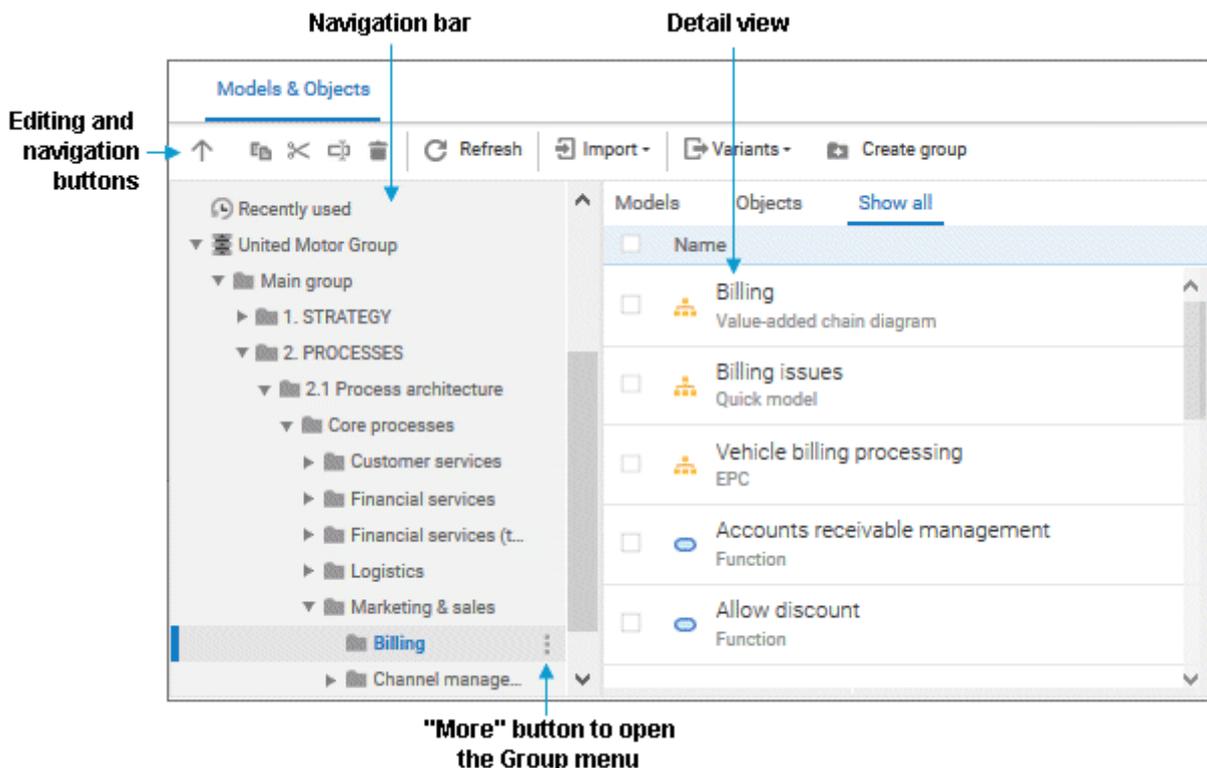
It can also be used to change database content, such as entering attribute (page 1138) values or correcting the layout of models (page 1148).

You can generate reports in the repository or in ARIS Connect Designer for selected objects or the open model (page 655).

3.5.1.17.2 Navigation bar in the repository

The navigation bar contains the database content and editing buttons to edit models and objects. The editing buttons that can be applied to the selected item are displayed.

The following picture shows the navigation bar of the view **Classic**. The navigation bar might look different depending on the selected or user-defined view.

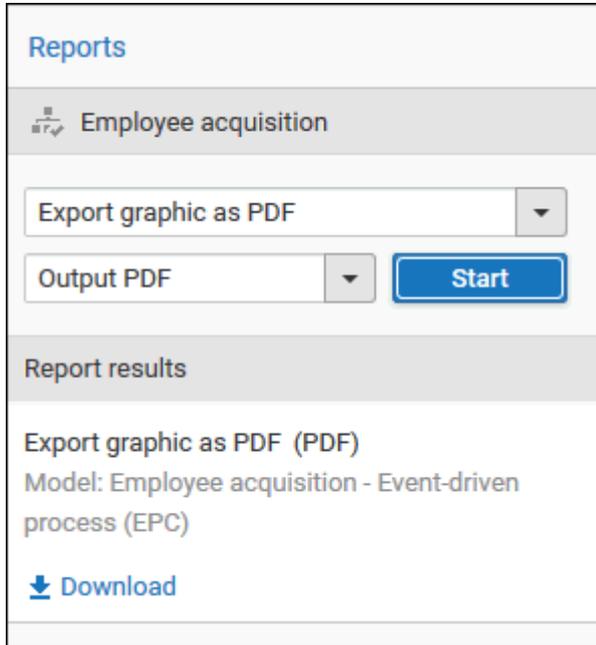


3.5.1.17.3 Bars in the repository

You can open the following bars in the repository.

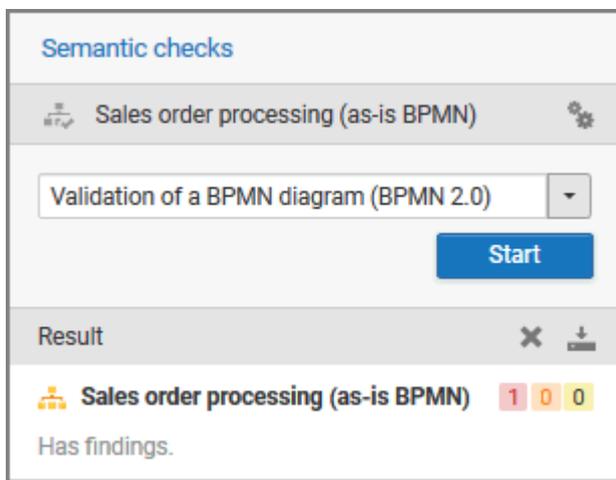
REPORTS

You can open the **Reports** panel to generate reports on the selected items or to download the result of a previously generated report.



SEMANTIC CHECKS

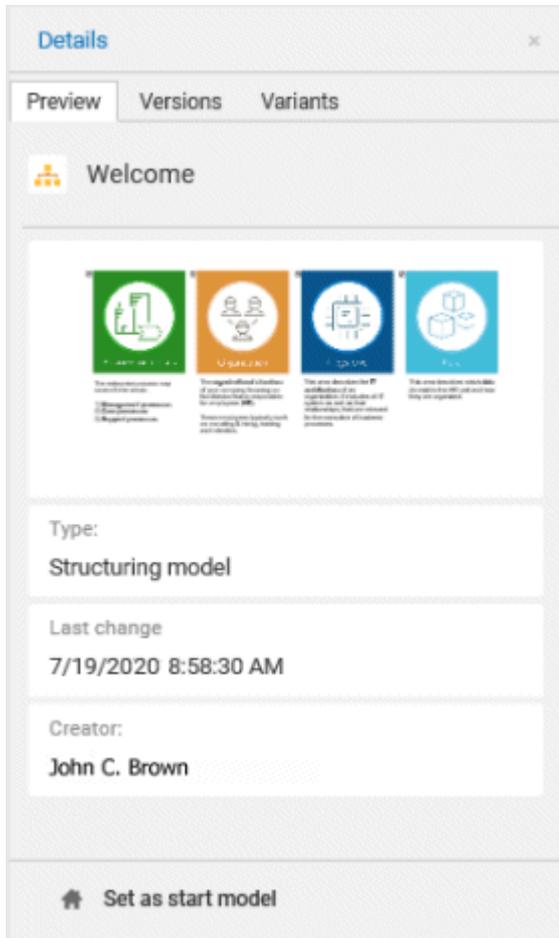
You can open the **Semantic checks** panel to run a semantic check for models or to download the result of a previously performed semantic check.



DETAILS

Displays the details of the selected item on the **Preview**, **Versions** and **Variants** tab.

The **Preview** tab displays attributes for a model, such as model name and model type. A preview and the  **Set as start model** button are also available. You can click the preview to open the model in ARIS Connect Designer, and you can set the model as the start model of the database.

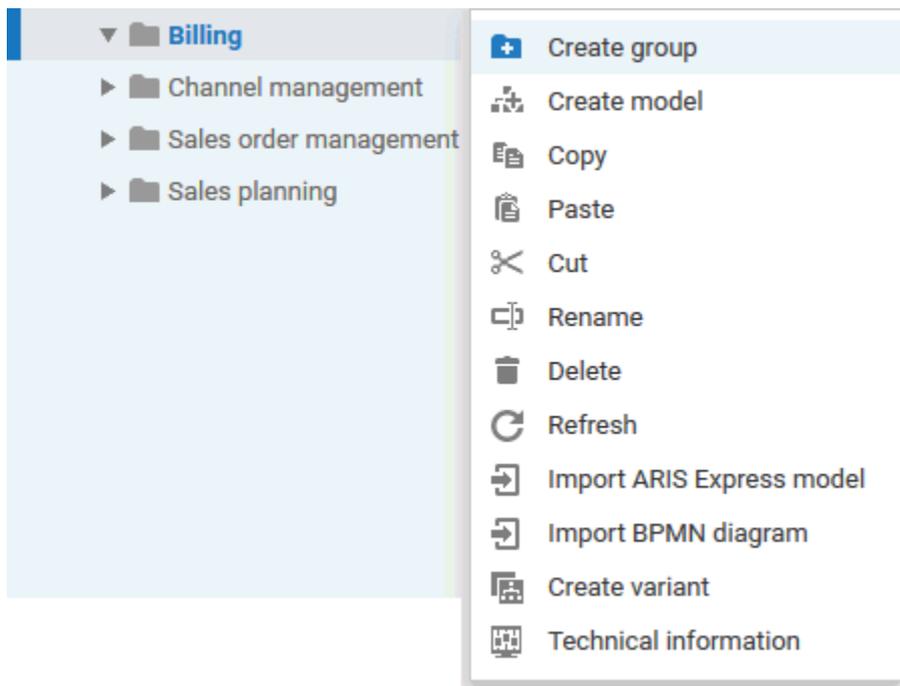


The **Version** tab displays versions (page 809) of the selected model. You can open a model version (page 821) read-only to check, for example, what changes have been made to the model since the version was created.

The **Variants** tab displays variants (page 809) of the selected model. You can compare models (page 815) to check the differences between the two models.

3.5.1.17.4 Group menu

The following menu items are available for groups.



-  Create group (page 450)
-  Create model (page 461)
-  Copy (page 462)
-  Paste (page 462)
-  Cut (page 459)
-  Rename (page 460)
-  Delete (page 465)
-  Refresh (page 464)
-  Import ARIS Express model (page 463)
-  Import BPMN diagram (page 464)
-  Create variant (page 810)
-  Technical information (page 458)

3.5.1.17.5 Detail view

The detail view displays the contents of a group.

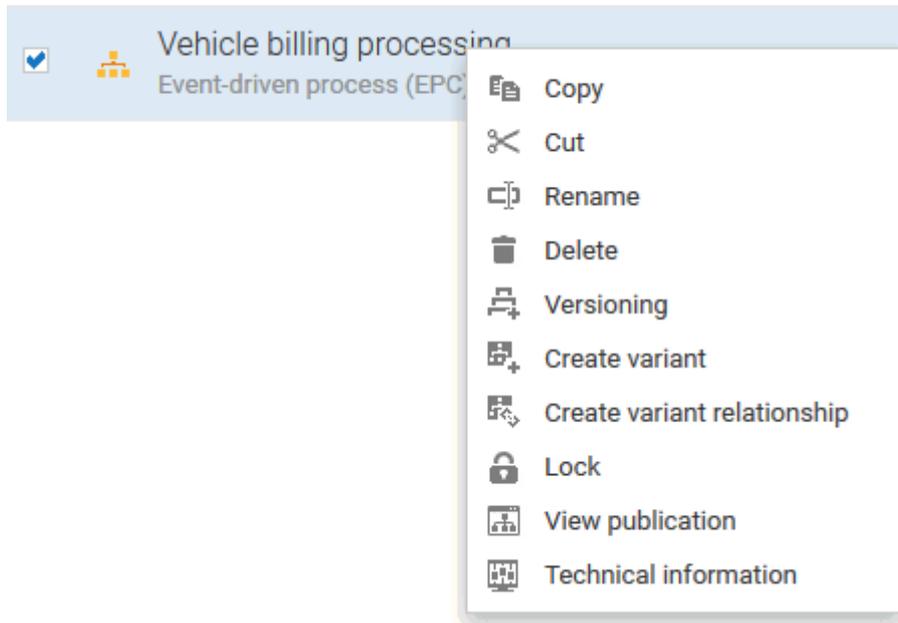
<input type="checkbox"/>	Name	Changed
<input type="checkbox"/>	 Billing Process landscape	12.02.2019 20:44:36 by system
<input type="checkbox"/>	 Billing issues Quick model	29.09.2018 17:48:56 by system
<input type="checkbox"/>	 Vehicle billing processing Event-driven process (EPC)	29.09.2018 17:48:43 by system
<input type="checkbox"/>	 Accounts receivable management Function	14.09.2009 15:26:38 by system
<input type="checkbox"/>	 Allow discount Function	26.03.2018 21:05:16 by system
<input type="checkbox"/>	 AND rule Rule	14.09.2009 15:26:38 by system
<input type="checkbox"/>	 Billing Function	03.01.2014 16:15:39 by system

You can use the restrict buttons to restrict the contents displayed to models or objects.



3.5.1.17.6 Item menu in the detail view

Items of the detail view have the following menu items. Depending on the selected item, the menu items are enabled or disabled.



 Copy (page 462)

 Cut (page 459)

 Rename (page 460)

 Delete (page 465)

 Versioning (page 820)

 Create variant (page 810)

 Create variant relationship (page 811)

 Lock (page 806)

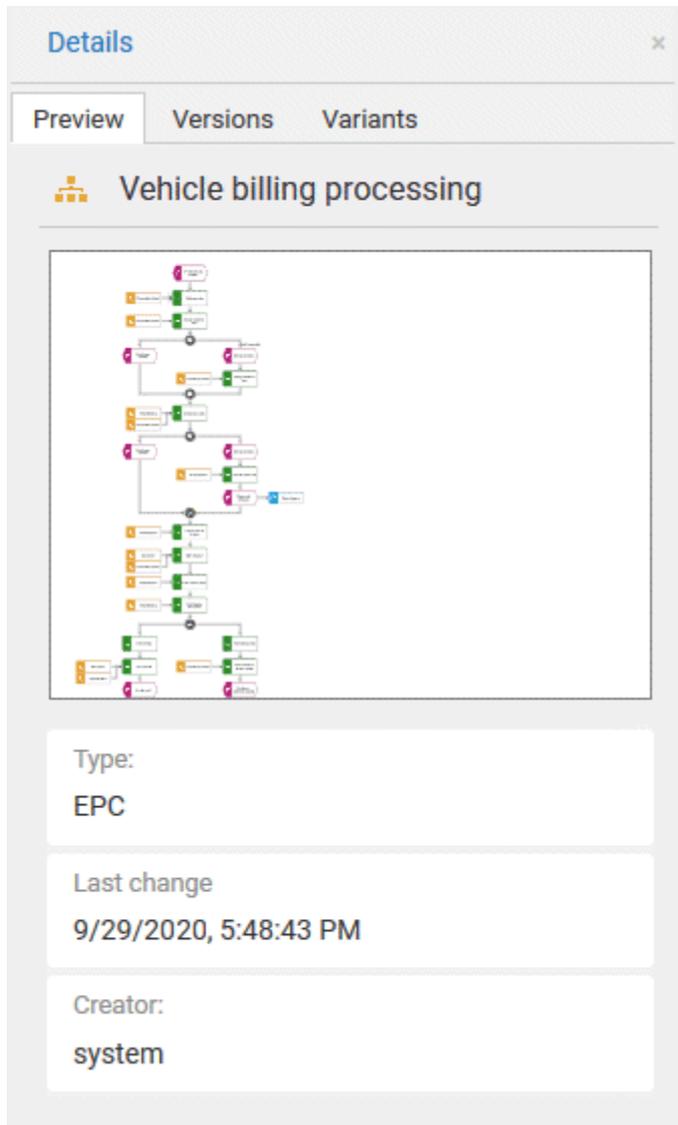
 View publicatio (page 654)

 Technical information (page 458)

3.5.1.17.7 Details bar

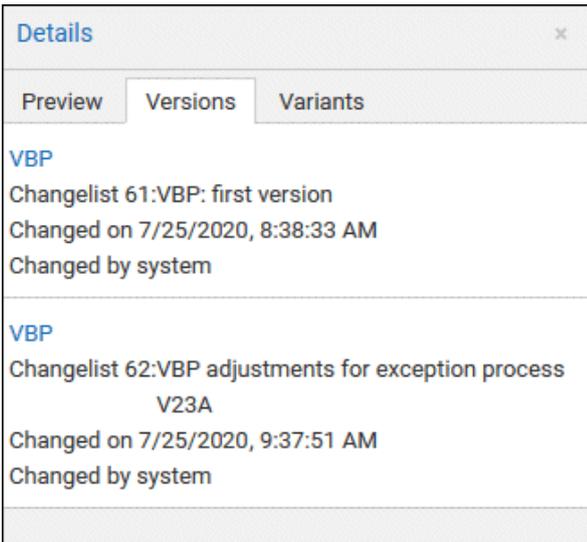
The **Details** bar contains the **Preview**, **Versions**, and **Variables** tabs.

The **Preview** tab displays a preview of the item selected in the detail view (page 470), for example, for a model. Data, such as type and last change, are also displayed.



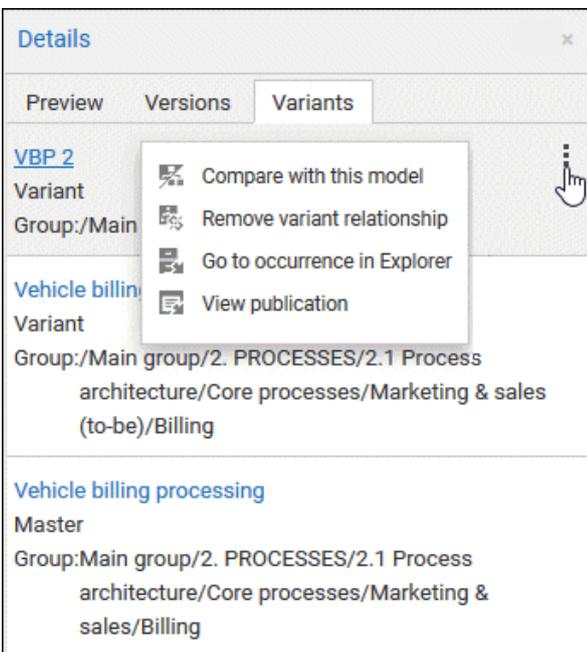
The **Versions** tab displays all change lists (page 1139) with which the selected model has been versioned. You can open a version (page 1157) in ARIS Connect Designer (page 529) by

clicking the name of the model. Because versions cannot be changed, the model is opened read-only.



The **Variants** tab displays all variants (page 1157) of the selected item. You can open the variant or master of a selected model in ARIS Connect Designer (page 529) by clicking the name of the model. You can open the fact sheet of the variant or master of a selected object if the database is published.

Some menu items are available for the master and variants of the selected item. You can compare the selected item (page 815) with the master or variants, remove the variant relationship (page 813), find the master or variants (page 812) in Explorer, and open the fact sheet.



3.5.2 Create and edit models

Models are a collection of objects (page 1150) and connections (page 1140). In this respect, models are graphic representatives of processes, structures, data, etc. of a company. Models, objects and connections are detailed by attributes (page 1138). While objects represent activities, states, data, etc., connections represent how objects relate to each other.

ARIS Connect Designer allows you to edit existing and new models (page 516) in ARIS Connect. Using the **ARIS Connect Designer** license privilege you can create new models (page 516) directly in the portal, as well as edit (page 529) or create models (page 516) in the repository.

You can access the entire modeling functionality of ARIS Connect Designer using buttons and bars (page 504) that you can use to efficiently edit your models.

If you have created or opened a model, you can set up the perspective (page 496) and adjust it to your own needs. Modeling (page 529) your organization, processes, data, etc., is just as simple as extended model editing (page 594). In addition to the graphic information, you can add further information to your models using attributes (page 563) that can be placed in the model as a symbol (page 610) or a text (page 607), if necessary.

In combination with ARIS Architect, automated processing steps can be inserted via macros (page 589). In addition, semantic checks can be used to execute exactly specified model and object checks.

Of course, you can also add comments to models (page 653) and discuss models with other users.

To use ARIS Connect Designer, you must have the **ARIS Connect Designer** license.

3.5.2.1 ARIS Connect Designer quick start

In the following you can create a simple model (page 1148) step by step with Smart Modeling (page 501) and learn how to use the basic functions of ARIS Connect Designer.

ARIS video tutorial

Model creation with Smart Modeling (<https://www.ariscommunity.com/videos/model-creation-smart-modeling>) (approx. 6 minutes)

3.5.2.1.1 Before you start

The Quick Start Guide introduces you to the basic functions of ARIS Connect Designer. Using simple examples, you learn about important workflows for creating models, as well as for evaluating model content.

After specifying the required settings, you will first create a model of the **EPC** type and then evaluate it with a report.

Your work with ARIS Connect Designer can be divided into the following phases:



The Quick Start Guide guides you step by step through the required workflow.

If you have questions about working with ARIS Connect Designer, activate the **ARIS Advanced** tab, click your user name, then **Help**, and visit the **Model** (page 529) area of the online help.

The screenshots in this manual may differ from your program interface because your system may be customized and/or various features may be provided in ARIS Connect depending on your license.

3.5.2.1.2 Prerequisites

The following points are assumed.

- You have an **ARIS Connect Designer** license and the necessary privileges in the system.
- You have **Read**, **Write**, and **Delete** database privileges for the database group in which you want to create the sample model.
- You have the access data for ARIS Connect, that is, user name, password, and a link to the start page of ARIS Connect. This link should have been provided to you by your system administrator.

If in doubt, please contact your system administrator.

3.5.2.1.3 Start ARIS Connect

This description assumes that the prerequisites for working with ARIS Connect (page 475) are fulfilled.

Procedure

1. Click the link to ARIS Connect or enter it in the address bar of your browser. The ARIS Connect start page opens.
2. Enter your user name and your password.
3. Click **Log in**.

ARIS Connect opens.

3.5.2.1.4 Create model and specify settings

On the following pages, you will learn how to create your first model and make settings for modeling.



3.5.2.1.4.1 Create a model

To create the **Customer acquisition** EPC, proceed as follows.

Procedure

1. Click  **Repository**.
2. Click the ► arrow of  **Databases** on the left to display the available databases.
3. Click the ► arrow of the database in which you want to create the new model.
4. Click the ► arrows of the groups to navigate to the group where you want to save the model.
5. Select the group name. A ▼ down arrow is displayed at the right hand side.
6. Click the ▼ down arrow, and then click  **Create model**. The **Create model** dialog opens.
7. Enter the model name **Customer acquisition**.
8. Press **Tab** on the keyboard. The cursor jumps to the **Model type** box.
9. Enter **ep**. All model types are listed that have **ep** in its name.
10. Click **EPC**.
11. Click **OK**.

The **Create model** dialog is closed and the newly created model is opened in a new tab. The functionality of ARIS Connect Designer is available.

3.5.2.1.4.2 Hide grid

Normally, you do not need the grid if you use Guided Modeling (page 501) and Smart Modeling (page 501).

Guided Modeling provides lines and arrows that inform you about the orientation and distance of the items from adjacent items when you place or move objects and connections.

Smart Modeling provides automatic modeling features (page 547), such as creating space for new objects, placing objects, and reconnecting connections.

Therefore, switch off the grid.

Procedure

1. Activate the **Model** (page 576) tab bar.



2. Click  **Modeling area** > **Use grid**. The check box is disabled.

The grid is hidden.

3.5.2.1.4.3 Set up default distance

With Smart Modeling (page 501), objects are automatically placed in the specified default distance. In addition, Guided Modeling (page 581) displays the default distance with a specific cursor () when you move objects. Smart Modeling and Guided Modeling are enabled by default.

Procedure

1. In the activated **Model** (page 576) tab bar, click  **Layout**. The layout options are provided.
2. Enter the value **20** for **Horizontal item spacing** and retain **10** for **Vertical item spacing**.
3. Click **OK**.

When you create a model with Smart Modeling, the objects are placed at the set distance.

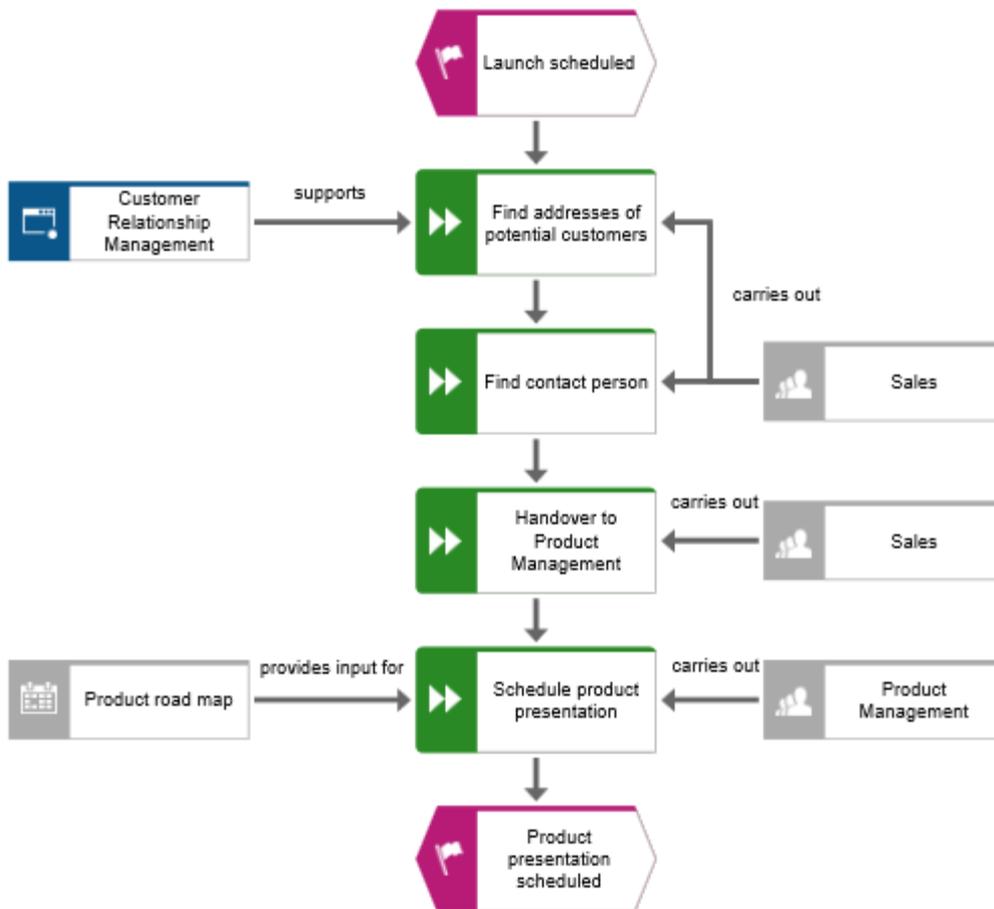
3.5.2.1.4.4 Model

In the following sections, you place objects in your model and edit object attributes.



Please note: If you create the model in a database that contains objects, when you enter object names, you will get name suggestions if a name begins with the letters you entered. Ignore these suggestions.

Your model will look like this after completion:



3.5.2.1.4.4.1 Create the basic control flow model

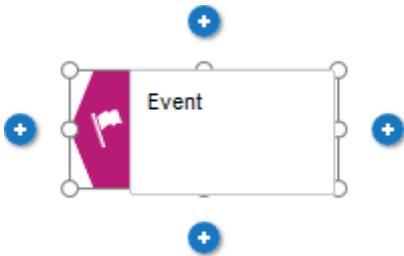
In this section, you create the basic control flow model, which includes the required work steps in the correct sequence.

Procedure

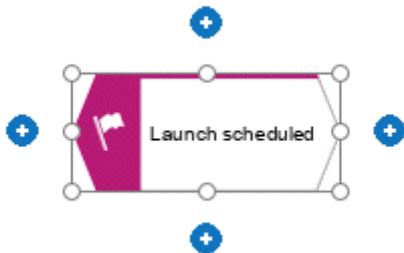
1. Click the  **Event** symbol in the **Symbols** bar and hold down the mouse button. An event shows that a certain state has occurred.
2. Drag the mouse pointer to the position you want to place the object in the modeling area.



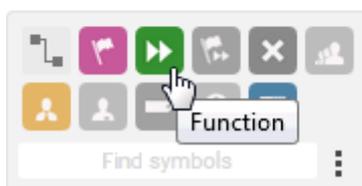
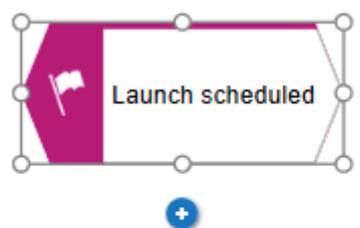
3. Release the mouse button. The object is placed, and its name is selected for overwriting.



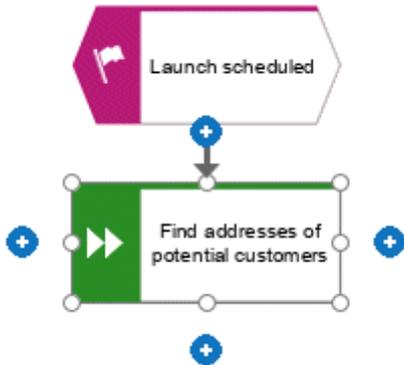
4. Enter a name for the event by overtyping the selection with **Launch scheduled** and press **Enter**.



5. Click  **Insert at the bottom** under the **Launch scheduled** event.



6. Click  **Function**. The function is placed in the default distance to the event and the name is selected for overwriting.
7. Since a function indicates that an activity must be performed, type **Find addresses of potential customers** and press **Enter**.



8. Create the following objects one below the other in the same way:
 - a.  Function: Find contact person
 - b.  Function: Schedule product presentation
 - c.  Event: Product presentation scheduled

The basic control flow model, which includes the required work steps in the correct sequence, is completed.

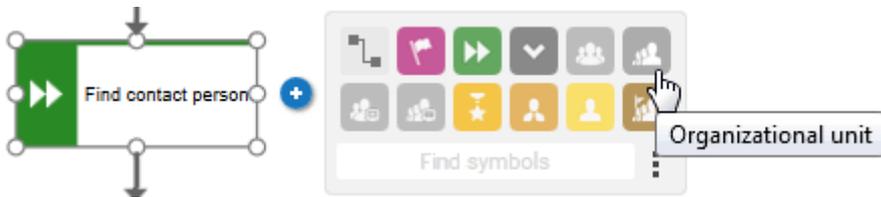


3.5.2.1.4.4.2 Assign work steps to organizational units

In this section, you assign the work steps (functions) to the organizational units that are to execute the functions.

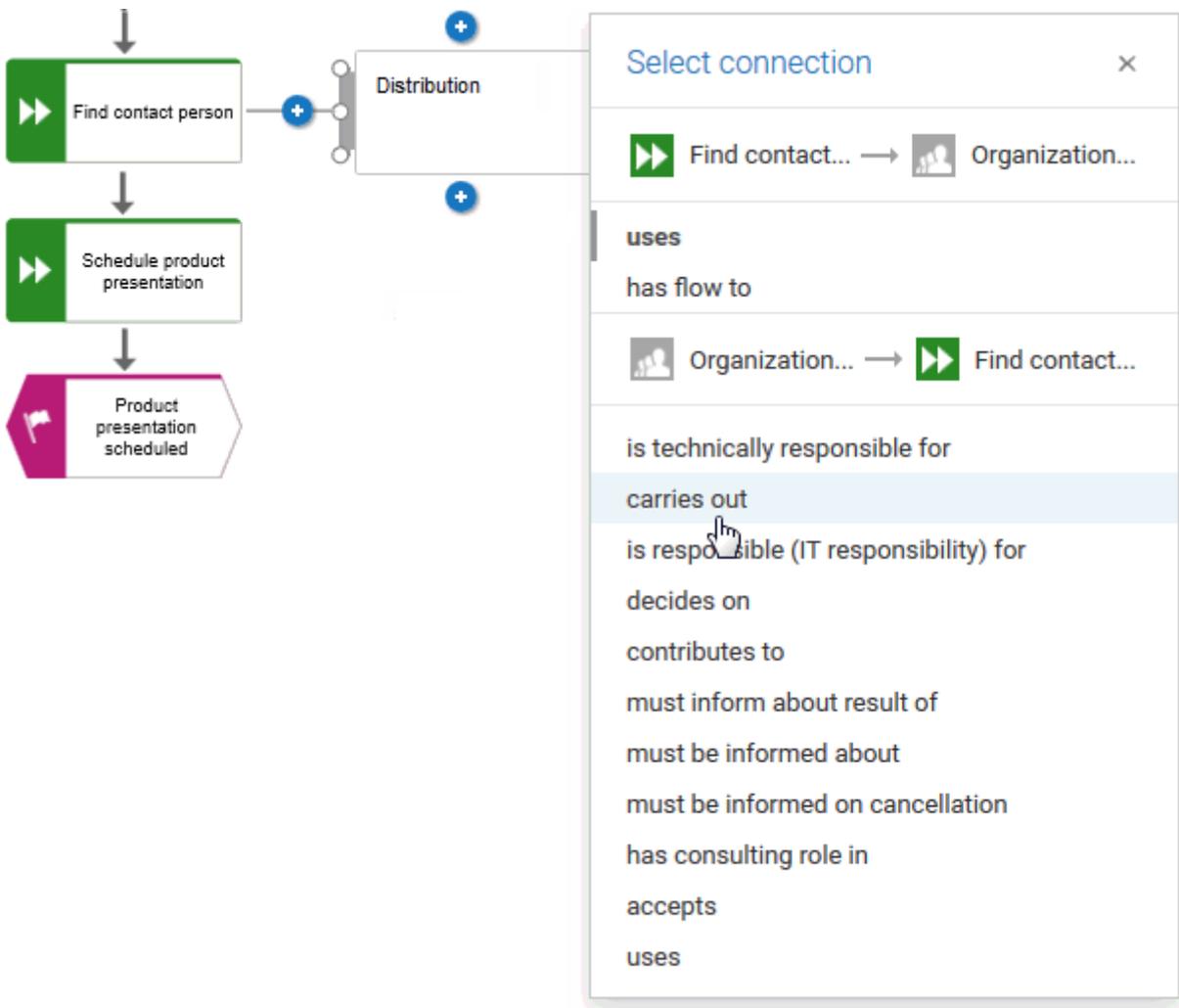
Procedure

1. Click the **Find contact person** function and then **+** **Insert to the right**.
2. Click **Organizational unit**.



There are various connections available to connect the work step (function) and the organizational unit.

3. Enter the name **Distribution** and click **carries out**.

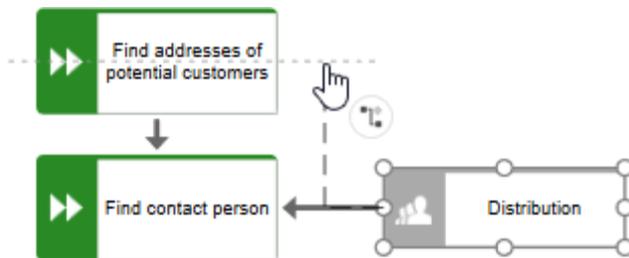


The organizational unit is placed.

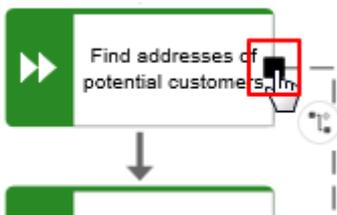


Not only the **Find contact person** work step, but also the **Find addresses of potential customers** work step is performed by the **Distribution** organizational unit. Therefore, connect **Distribution** with **Find addresses of potential customers**.

4. Click the **Distribution** organizational unit and then click  **Insert to the left** and hold down the mouse button.
5. Move the mouse pointer to the border of the **Find addresses of potential customers** function. While you move the mouse pointer, the Guided modeling (page 581) line helps you to connect the connection centrally to the side of the object.



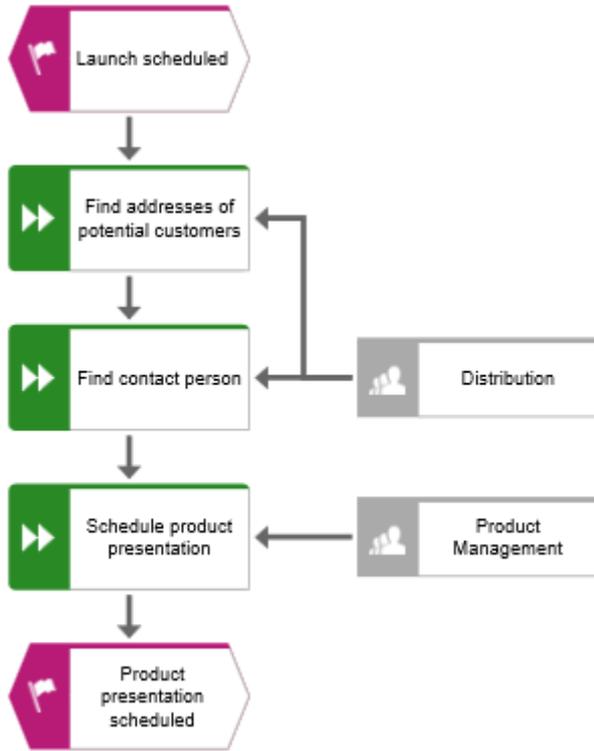
6. Release the mouse button when the connection anchor point is displayed.



The connection selection is displayed.

7. Click **carries out**.

8. Now assign the function **Schedule product presentation** in the same way to the organizational unit **Product Management** as you assigned **Find contact person** to **Distribution**. The connection **carries out** is already selected, so click in the modeling area to finish. Your model now looks as shown.



You have assigned the work steps to organizational units.

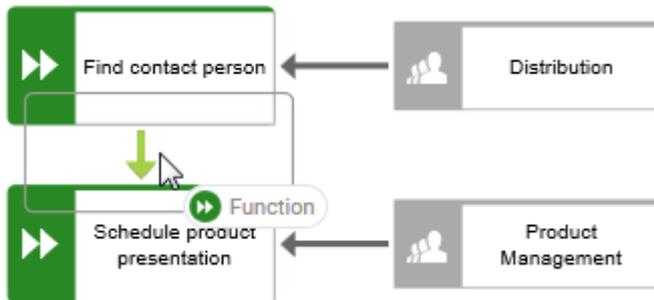
3.5.2.1.4.4.3 Insert a missing object

In this section, you use drag and drop (page 529) to insert a missing object.

As you inserted the object **Product Management**, you noticed that the handover between the organizational units is not modeled. Do this now.

Procedure

1. Click the  **Function** symbol in the **Symbols** bar and hold down the mouse button.
2. Move the mouse pointer over the connection between the functions **Find contact person** and **Schedule product presentation**. The connection is colored green.



3. Release the mouse button. In one step the object is placed, the connection between the functions **Find contact person** and **Schedule product presentation** is removed, and connections from the new object to **Find contact person** and **Schedule product presentation** are created.
4. Enter **Handover to Product Management** and press **Enter**.

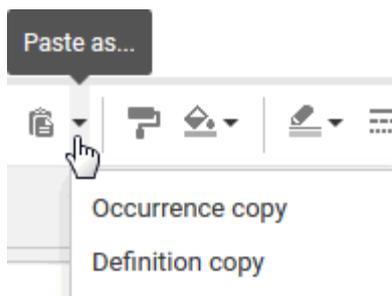
The missing object is inserted.

3.5.2.1.4.4.4 Create object occurrences

Of course, the **Distribution** organizational unit is also responsible for the **Handover to Product Management** step. To structure your model clearly, create an occurrence (page 1151) of the **Distribution** object beside the function **Handover to Product Management**. Object occurrences are copies of object symbols that represent the same object in one or more models. Each occurrence of the **Distribution** object you have created represents the object you have already created in this model. If you change an attribute, for example, the name of an occurrence, the names of all occurrences of this object change.

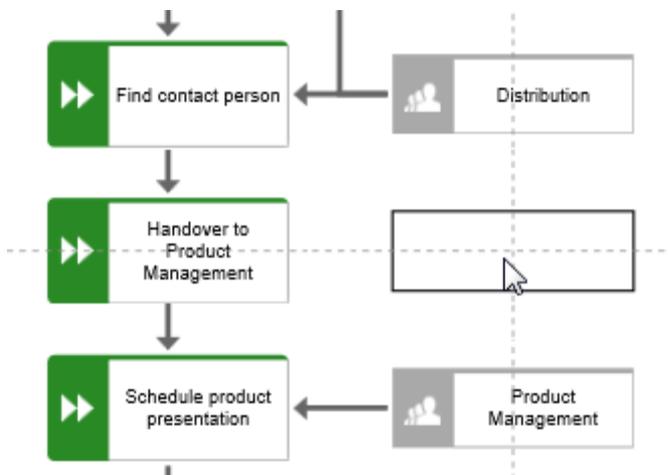
Procedure

1. Select the **Distribution** object and click  **Copy** in the **Model (page 576)** tab bar.
2. Click the ▼ down arrow of  **Paste** and then **Occurrence copy**.



A preview frame of the object is displayed in the modeling area.

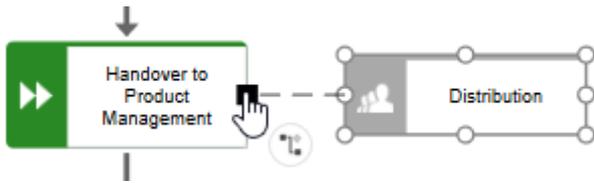
3. Move the mouse pointer beside the **Handover to Product Management** object. Lines indicate the distance and orientation (page 501) of the moved object from the other objects.
4. Click this position.



The **Distribution** occurrence copy is placed, selected, and the  **Insert** icons are displayed.

5. Click  **Insert to the left** and hold down the mouse button.

6. Move the mouse pointer to the border of the **Handover to Product Management** function and release the mouse button when the connection anchor point is displayed.



The connection selection is displayed.

7. Click **carries out**.

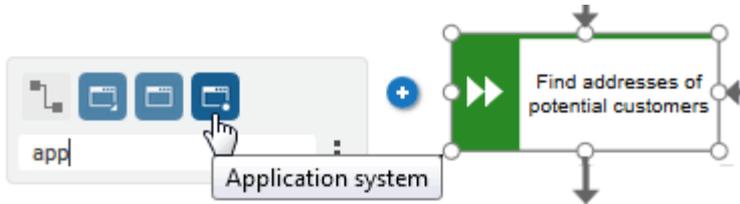
The occurrence copy is created and connected to the work step.

3.5.2.1.4.4.5 Assign supporting systems

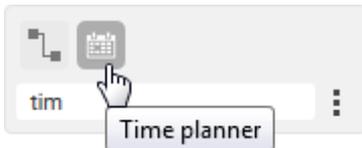
In this section, you assign the systems that support the work steps.

Procedure

1. Click the **Find addresses of potential customers** function and then  **Insert to the left**.
2. Because the application system is not listed in the **Smart Modeling** toolbar, enter **app** in the **Find symbols** box. The **Application** object symbols are displayed.

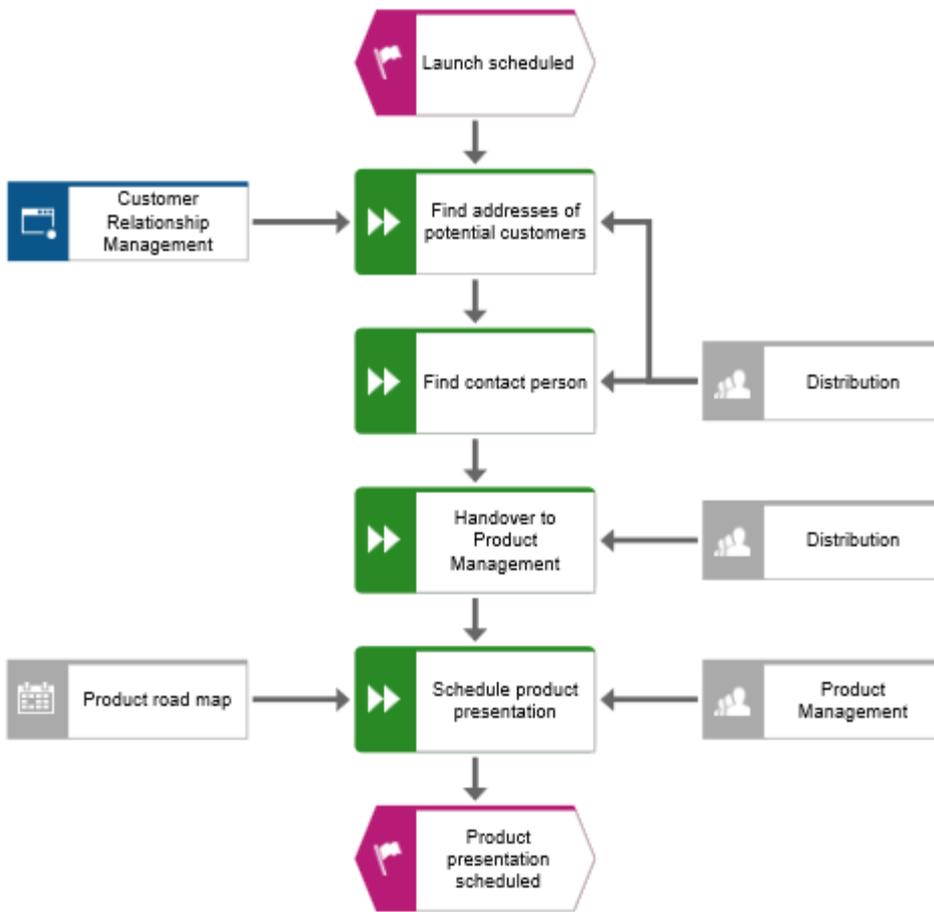


3. Click **Application system**. The application system is placed.
4. Enter the name **Customer Relationship Management**. The supporting system is placed.
5. Click the **Schedule product presentation** function and then  **Insert to the left**.
6. Because the **Time planner** object is not listed in the **Smart Modeling** toolbar, enter **tim** in the **Find symbols** box. The **Time planner** object symbol is displayed.

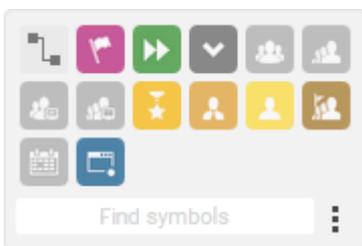


7. Click **Time planner**.
8. Enter the name **Product road map** and click the **provides input for** connection.

The supporting systems are assigned. The current model looks like this:



Object symbols that are placed using the **Find symbols** box of the **Smart Modeling** toolbar are automatically added to the **Smart Modeling** toolbar for the respective object. Therefore, the object symbols of the application system and the time planner are now available in the **Smart Modeling** toolbar for objects of type **Function**.



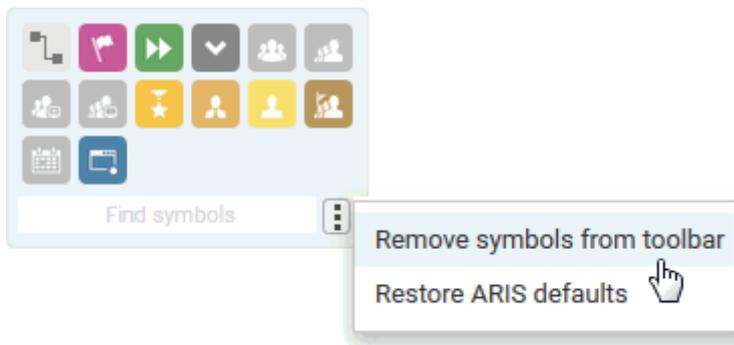
You can configure the **Smart Modeling** toolbar (page 489).

3.5.2.1.4.4.6 Configure Smart Modeling toolbar

In this section, you customize the **Smart Modeling** toolbar to your needs. In the following procedure, you can click any  **Insert** button of any function object, since you do not change the model, but only the number of object symbols that the **Smart Modeling** toolbar provides for functions.

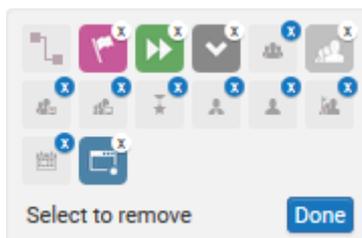
Procedure

1. Click a function and click any  **Insert** button.
2. Click  **Configure** > **Remove symbols from toolbar**.



The available object symbols are marked by remove icons.

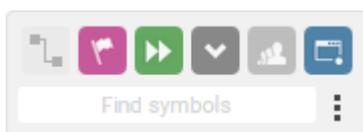
3. Click the object symbols you want to remove. They are grayed and their  remove icons are highlighted.



If you want to exclude an already selected object symbol from removal, click the object symbol again.

4. Click **Done**.

The selected object symbols are removed from the **Smart Modeling** toolbar. If you click the  **Insert** button of an object of **Function** type, the following object symbols are now offered.



3.5.2.1.4.4.7 Rename objects

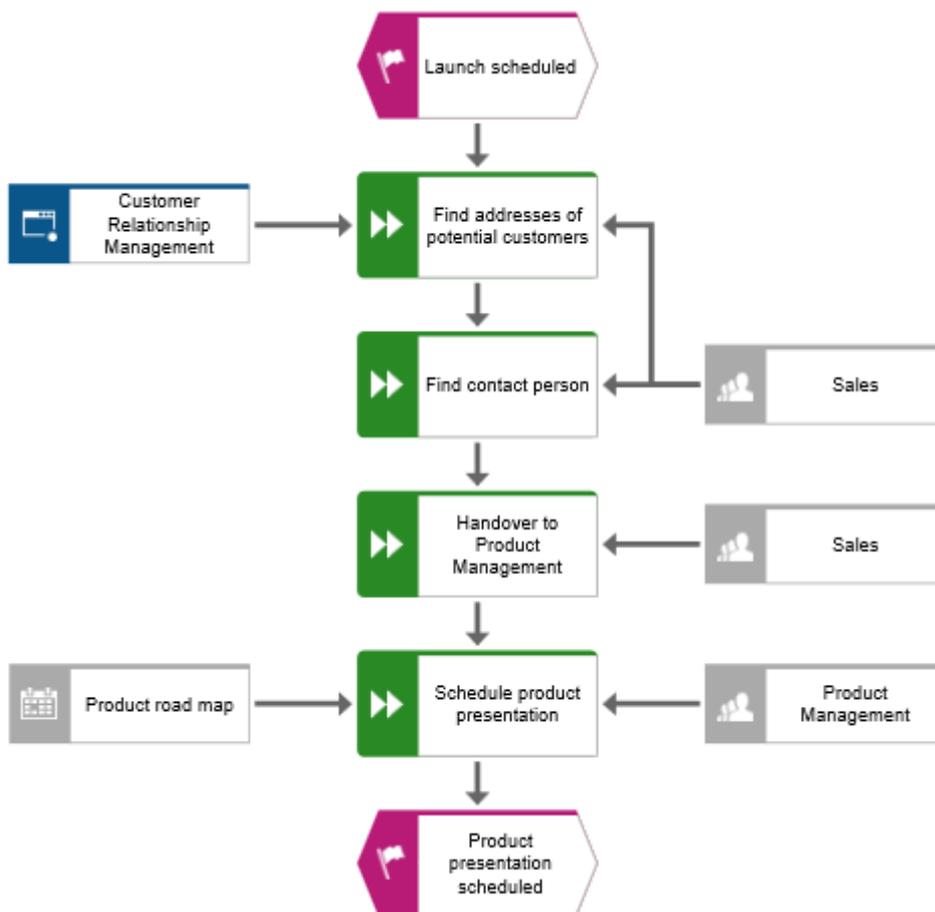
You can change object names directly in the model. If you change a name, all occurrences of the object (page 485) in the database are renamed accordingly.

In the following, you will change the name of the **Distribution** organizational unit.

Procedure

1. Select one of the **Distribution** symbols and click the symbol name again. The name is selected and can be overwritten.
2. Enter **Sales** and click in the modeling area.

The name of the organizational unit is now **Sales** and both occurrences (page 1151) of the object are displayed with the new name.

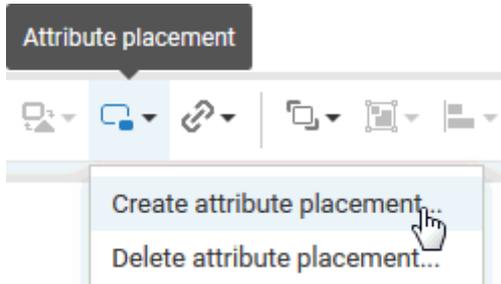


3.5.2.1.4.4.8 Place attributes

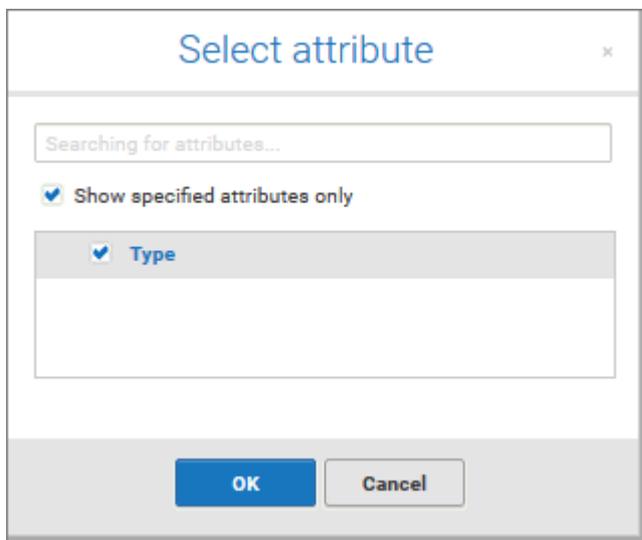
You can display the attributes of objects and connections in your model. Now, you will display connection types.

Procedure

1. Select the connection between the **Sales** and **Find addresses of potential customers**.
2. Click  **Attribute placement** in the **Start** tab bar.
3. Click **Create attribute placement**.



The **Select attribute** dialog opens. Enable the **Show specified attributes only** check box and enable **Type**.



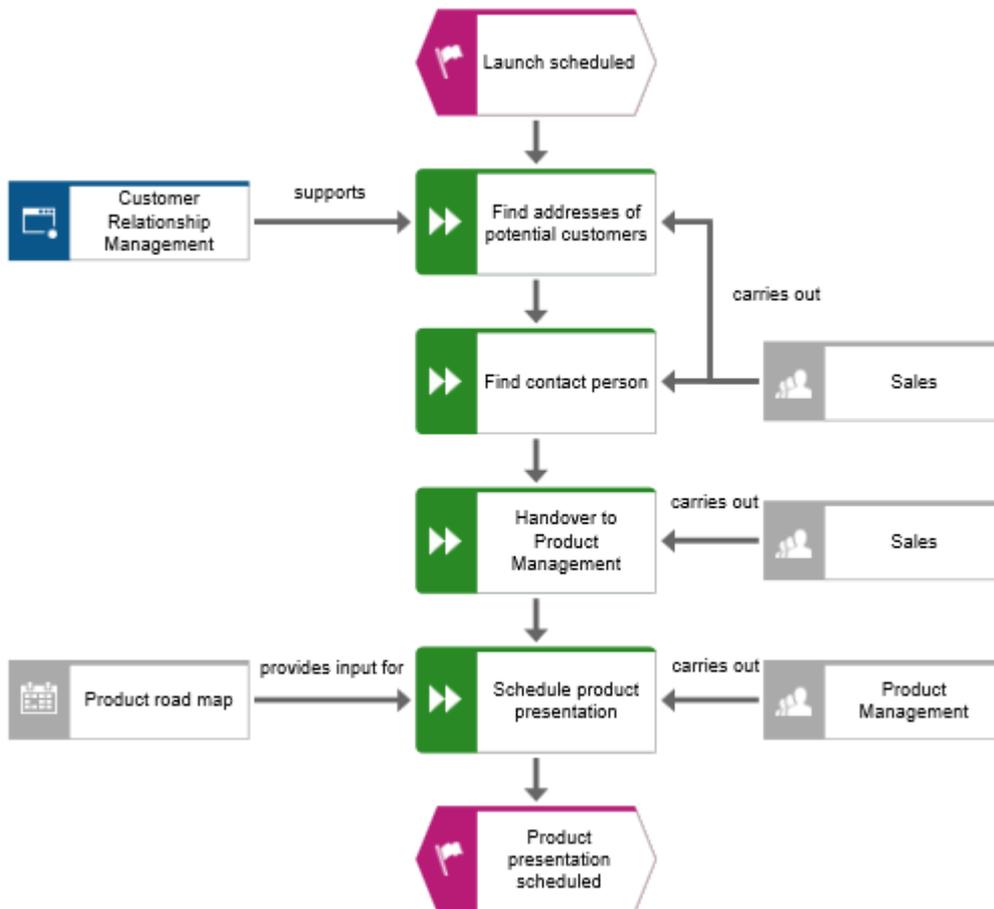
4. Click **OK**. The dialog closes and a preview frame for the attribute to be placed is displayed at the mouse pointer.

5. Drag the attribute to the selected connection and click the position at which you want to place it. It is displayed in the modeling area.



6. Click the object **Customer Relationship Management**, press the **Ctrl** key, and click **Product road map**. Release the **Ctrl** key and drag the selected objects to the left. This ensures that the model layout is preserved and that there is enough space between the objects **Product road map** and **Schedule product presentation** to place the **Type** attribute of the connection **provides input for**.
7. Place the attributes for the connections between all functions and the organizational units and supporting systems as you did the first time.

You have completed the model. Your model now looks like this:



3.5.2.1.4.5 Save and close model

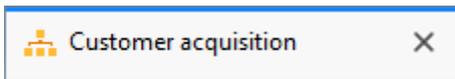
You have finished the model.

1. To save your work, click  **Save** in the **Start** tab bar.
The model is saved and you are informed about the result.



Model 'Customer acquisition' was successfully saved. x

2. Click x **Close** on the model tab.



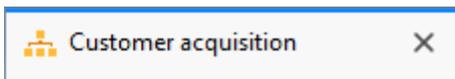
The model tab is closed.

3.5.2.1.4.6 Close the model

You have created the model. Now you can close it.

Procedure

1. Click x **Close** on the model tab.



If you have not yet saved the model, an information dialog opens. Depending on the browser, various buttons are offered to close the dialog and return to the tab for saving.

2. For example, click **Stay on Page** and save the model (page 493).
3. Click x **Close** on the model tab again.

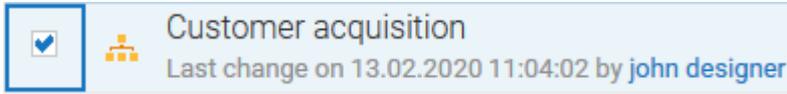
The model tab is closed.

3.5.2.1.5 Output model

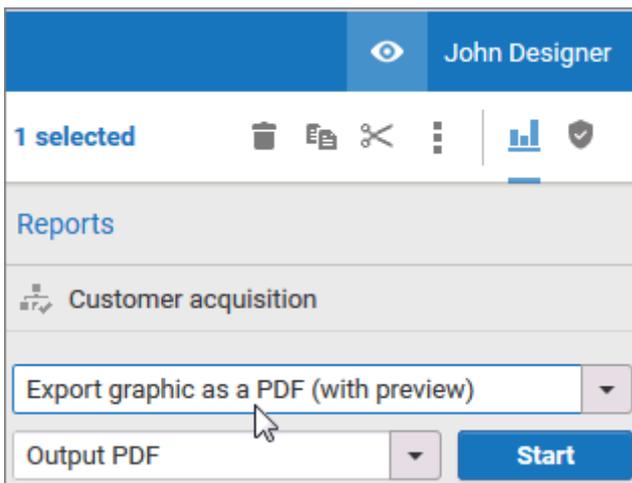
You can create a PDF file of your model.

Procedure

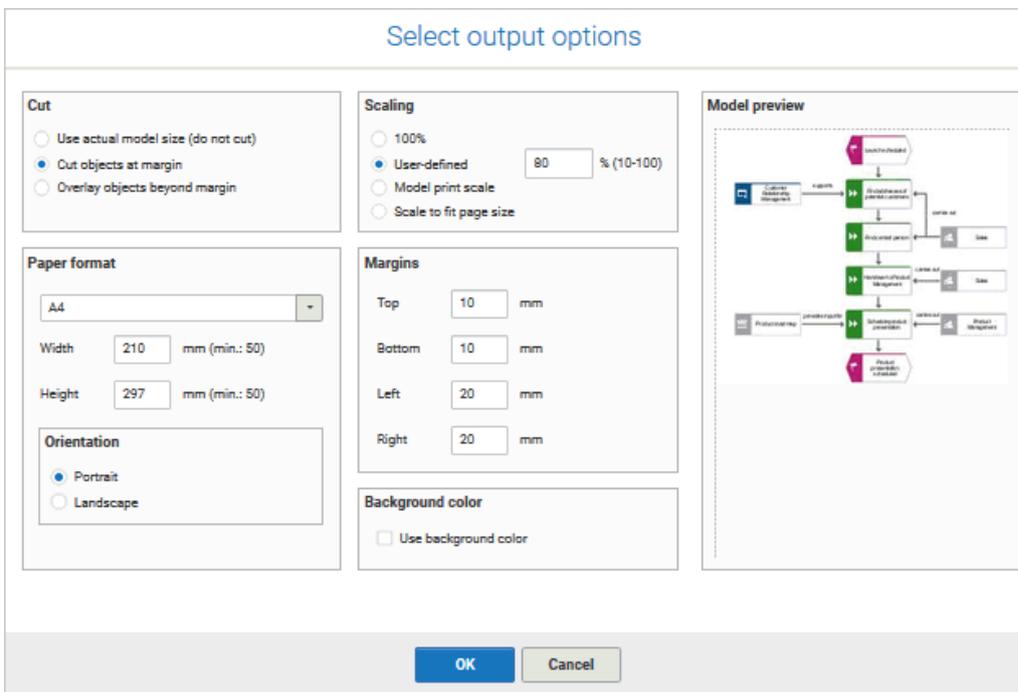
1. After closing the model tab, activate the **ARIS Connect** tab if it is not already activated.
2. Activate the check box of the **Customer acquisition** model.



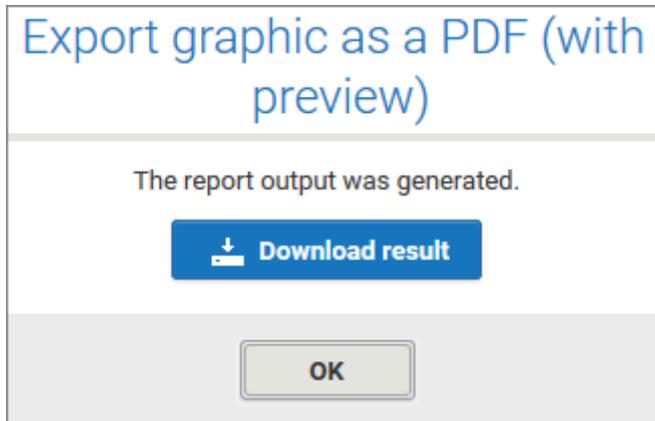
3. Click **Reports**. The **Reports** bar opens.
4. Select the report **Export graphic as a PDF (with preview)**.



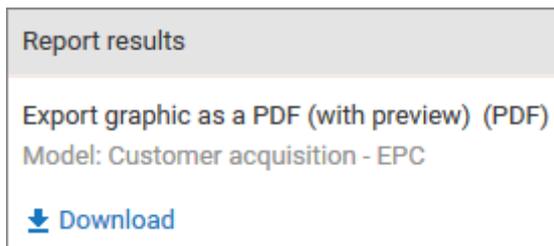
5. Click **Start**. The report is executed and the **Select output options** dialog opens.



6. Set up the output. For example, you can specify that objects placed on margins should be cut or that the output model size should be 80 %.
7. Click **OK**.
8. The PDF file is created. In the **Reports** bar, the report execution is listed. The result dialog opens and you can download the PDF file.



9. Click **Download result**. Depending on your browser settings, the PDF file is saved in your **Download** folder or you can select the folder in which you want to save the PDF file. The PDF file is downloaded.
10. If you do not want to download the PDF file immediately, you can close the result dialog and download the PDF file later from the **Reports** bar.



You have created a PDF file from your model.

3.5.2.2 Customize ARIS Connect Designer

If you create a new model in ARIS Connect or open an existing model for editing, the model is displayed on a separate tab and ARIS Connect Designer is activated. You can set up the ARIS Connect Designer user interface according to your requirements. In addition, you can apply templates to specify the appearance of model items. ARIS Connect Designer provides you with the following functionality:

- edit models.
- create new models.
- assign models.
- generate reports.
- run semantic checks.
- comment on models and model items.

3.5.2.2.1 Show and hide bars

You can use the bar buttons to show or hide bars as required.

What is said in the following for the **Symbols** bar applies to all bars.

Procedure

Click  **Symbols**. If the **Symbols** bar is shown, it will be hidden. If it is hidden, it will be shown.

Depending on your selection you either have more room to edit the model items or direct access to the relevant functionality.

3.5.2.2.2 Customize Symbols bar

You can change the content of the **Symbols** bar so that you are offered only the symbols you need for modeling.

Procedure

Remove individual symbols from the Symbols bar

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Move the mouse pointer over the symbol you want to remove. Behind the symbol the icon  **Remove** is displayed.
3. Click  **Remove**.

The symbol is removed from the **Symbols** bar.

Add a specific symbol

4. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
5. In the **Symbols** bar, click  **Add/Remove symbols**. The dialog opens. Objects displayed in the **Symbols** bar are followed by a  check mark.
6. Click the **Enter symbol name** box and enter the name of the required symbol partly or entirely. All object symbols are displayed whose names contain the term you entered.
7. Click the symbol not yet displayed in the **Symbols** bar that you want to include. A  check mark is added to the symbol.
8. Click **Close**.

The selected symbol is added to the **Symbols** bar.

Overall setup of the Symbols bar

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. In the **Symbols** bar, click  **Add/Remove symbols**. The dialog opens. Objects displayed in the **Symbols** bar are followed by a  check mark.
3. Click the symbols that are displayed in the **Symbols** bar, but that you no longer want to display. Their  check marks are removed.
4. Click the symbols not yet displayed in the **Symbols** bar that you want to include. A  check mark is added to these symbols.
5. Click **Close**.

The **Symbols** bar now provides you with the object symbols required for modeling your model. If you placed an object symbol using the **Symbols** bar, you can then use the mini toolbar (page 580) to create further objects.

Restore defaults

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. In the **Symbols** bar, click  **Add/Remove symbols**. The dialog opens. Objects displayed in the **Symbols** bar are followed by a  check mark.
3. Click **Restore defaults**. A  check mark is added to the object symbols that the system provides in the **Symbols** bar by default.
4. Click **Close**.

All symbols that are part of the system default are visible in the **Symbols** bar.

The **Symbols** bar provides the object symbols that you want to use.

3.5.2.2.3 Customize Properties tab

You can show additional attributes or specify whether and when attributes are to be shown.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. Click  **Edit language** if you want to show (page 605) an additional language column for language-specific attributes. You can select an additional database language and view and edit it next to the language currently used.
4. Click  **Add** in the **Properties** tab. The **Select attribute** dialog opens.
5. If you want to add only specified attributes, enable the **Show specified attributes only** check box. You can restrict the result of displayed attributes using a search term.
6. Enter a search term for the attributes you want to display. The attribute type groups that contain attributes whose names contain the term you entered are expanded and the attributes are displayed.
7. Enable the check boxes of the relevant attributes.
8. Click **OK**. The selected attributes are added to the **Properties** tab.
9. Click  **More** next to the attribute whose visibility you want to specify.
10. Click  **Hide always** if you want to hide the attribute from the **Attributes** tab even if a value has been specified. For the attribute to be displayed later, you must select it explicitly by clicking **Add**.
11. Click  **Hide, if not specified** if you want the attribute to be displayed on the **Attributes** tab only if a value has been specified.
12. Click  **Place attribute** and then the relevant position in the modeling area if you want the attribute value to be displayed in the model.
13. Click  **Delete attribute** if you want to delete the attribute value. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

The attributes on the **Attributes** tab are displayed according to your settings.

3.5.2.2.4 Show and hide mini toolbar

You can show and hide the mini toolbar for an object.

Procedure

1. Select an object in the model. The mini toolbar (page 580) is shown as transparent. When you move the mouse pointer over the mini toolbar it becomes opaque. Now you can configure the mini toolbar (page 500), or click the  **Connection** symbol or object symbols.
2. If you want the mini toolbar to be hidden only temporarily while the mouse pointer is not over the object, move the mouse pointer away from the object until the mini toolbar is hidden. As soon as you move the mouse pointer back towards the object, the mini toolbar is shown again.
3. If you do not want the mini toolbar to be shown for a selected object anymore, move the mouse pointer several centimeters away from this object. The mini toolbar is hidden and is then no longer shown when you position the mouse pointer over the object. It will be visible for the object again only if you cancel the selection and select the object again.

Depending on your action, the mini toolbar is either shown or hidden for an object.

3.5.2.2.5 Configure mini toolbar

You can define which object symbols the mini toolbar (page 580) should offer for the relevant object type. You are offered only the object symbols for which the creation of a connection to the selected object type is allowed by the method.

Procedure

1. Select the object symbol whose object type you want to configure the mini toolbar for. The mini toolbar is shown.
2. Move the mouse pointer to the mini toolbar and click  **Add/Remove symbols**. The dialog opens.
3. Click the symbols that are displayed in the mini toolbar, but that you no longer want to display. Their  check marks are removed.
4. Click the symbols that are not displayed in the mini toolbar, but that you do want to include. A  check mark is added to these symbols.
5. Click **Close**.

Now, when you open the mini toolbar (page 500) the selected object symbols are available.

3.5.2.2.6 Enable or disable Smart Modeling

You can enable or disable Smart Modeling that provides automatic modeling features (page 547), such as creating space for new objects, placing objects, and reconnecting connections.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area** > **Smart Modeling**. The check box is enabled () and the Smart Modeling can be used. Keep the setting if you want to leave Smart Modeling enabled.
3. To disable Smart Modeling, click  **Modeling area** > **Smart Modeling**. The check box is disabled.

You have enabled or disabled Smart Modeling.

3.5.2.2.7 Enable and disable Guided Modeling

You can enable or disable Guided Modeling (page 581), which uses lines and arrows to help you place objects or connections (page 565) in the modeling area.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area** > **Show guides**. The check box is enabled () and the guides for placing items are shown in the modeling area.
3. To disable the guides, click  **Modeling area** > **Show guides**. The check box is disabled.

You have enabled or disabled the guides for Guided Modeling.

3.5.2.2.8 Use or hide grid

If the grid is hidden, you can show and use it in the modeling area (page 504). When you place or move model items (page 561), they are inserted or moved according to the grid width (page 502). This facilitates the orderly placement of model items.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area** > **Use grid**. The check box is enabled () and the dot grid is displayed in the modeling area. Model items are placed and moved according to the grid width.
3. To hide the grid, click  **Modeling area** > **Use grid**. The check box is disabled. The dot grid is hidden and model items (page 552) are placed or moved pixel by pixel.

You have enabled or disabled the grid.

3.5.2.2.9 Set grid width

You can show a grid in the modeling area (page 504). You can set the grid width. Based on the grid width, model items are inserted or moved in the modeling area (page 504).

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area > Change grid width**. The corresponding dialog opens.
3. Enter the required grid width in the spin box or click the up or down arrow to increase or reduce the grid width.
4. Click **OK**.

The grid is displayed with the new grid width, and model items are aligned and moved within this grid.

3.5.2.2.10 Adjust size of appearance

Use the **Display** bar to change the size in which models and model items are displayed. The **Display** bar is located at the bottom of the modeling area.

Procedure

- Click  **Fit to window**.
If you have not selected a model item, the entire model content is placed in the visible area.
If you have selected one or more model items, their size of appearance is adjusted so that the selected model items are optimally placed in the visible area.
- In the Display bar, click  **Original size**. The model content is output in the size 100 %.
- In the Display bar, click  **Zoom in**. The model content is enlarged by 10 %.
- In the Display bar, click  **Zoom out**. The model content is reduced in size by 10 %.

You have resized the model according to your requirements.

3.5.2.2.11 Apply model template

You can apply a template (page 1148) to a model and thus, change its appearance as well as its attribute placements in the modeling area (page 504) at once automatically.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Template**. The list of available templates is shown.
3. Click the required template.

The content of the modeling area is adjusted immediately in line with the model template settings. Templates are assigned additively. Therefore, the assignment of a template may not seem to have any effect. In this case, first reset the model template (page 503) and then reassign the required model template.

3.5.2.2.12 Reset model template

You can reset the appearance of a model for which a template (page 1148) was used to the ARIS default appearance. Color and size changes and attribute placements assigned by templates are removed.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Template**. The list of available templates is shown.
3. Click **Reset**.

The content of the modeling area (page 504) is adjusted immediately.

3.5.2.2.13 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.2.13.1 How is ARIS Connect Designer structured?

ARIS Connect Designer from ARIS Connect has the following areas.

HEADER

The header outputs the name and type of the opened model. It also displays the current language.

If you change the language (page 551), the text attributes are output in the selected language as long as the text attributes are specified in the target language. If this is not the case, the text attributes are displayed in the alternative language and identified by the language code added to the alternative language.



BAR BUTTONS

You can use the bar buttons to show or hide the **Search** and the **Details, Reports, Semantic checks** (page 784), **Symbols, Collaboration bars, and the Modeling table** (page 682).



TAB BARS

Tab bars enable you to access the relevant buttons within a specific context.

All tab bars contain frequently used buttons (page 511). This means that you do not need to switch between tab bars to access these buttons.

START TAB BAR

The **Start** tab bar groups the functions related to the representation and placement of model items (page 574).

MODEL TAB BAR

The **Model** tab bar groups the functions related to the layout and the graphic of models (page 576).

FORMAT TAB BAR

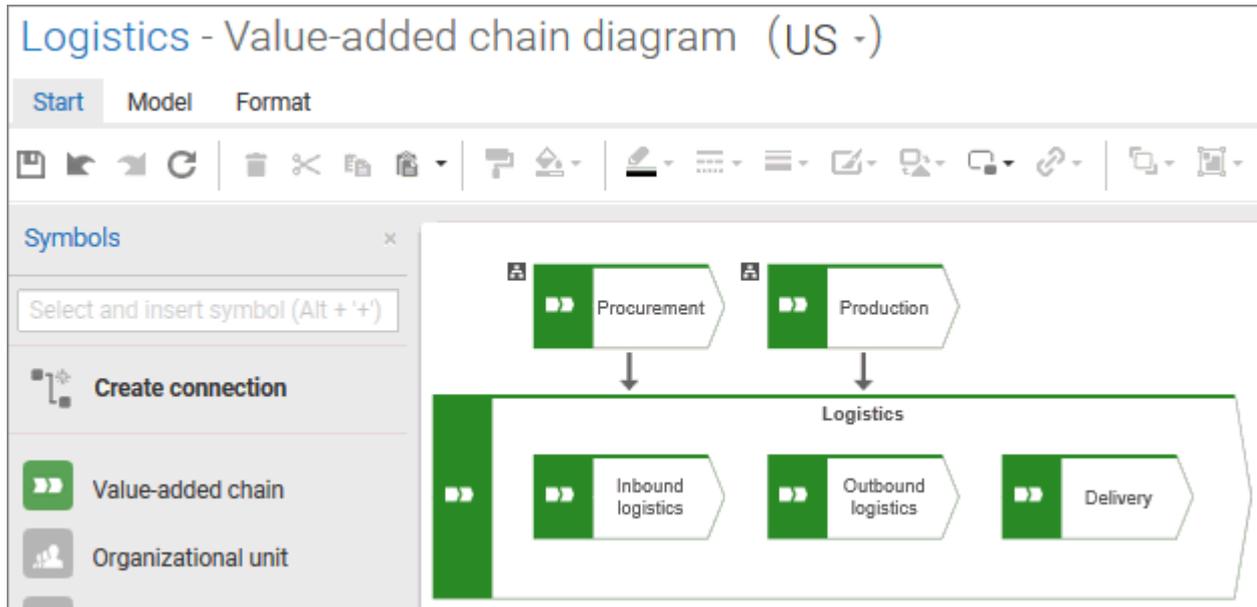
The **Format** tab bar groups the functions related to the presentation of written data in models (page 577).

BPMN TAB BAR

The BPMN tab bar is displayed if you have opened a BPMN diagram. It groups the functions that are used for the convenient editing of BPMN diagrams (page 579).

MODELING AREA

The model items are arranged in the modeling area. You can see the changes made with the different bars immediately. Thus, color changes made to objects or changes in the size of appearance are displayed at once. In addition, you can quickly bring relevant objects into the visible model section, even in large models, using the bar button  **Search**.



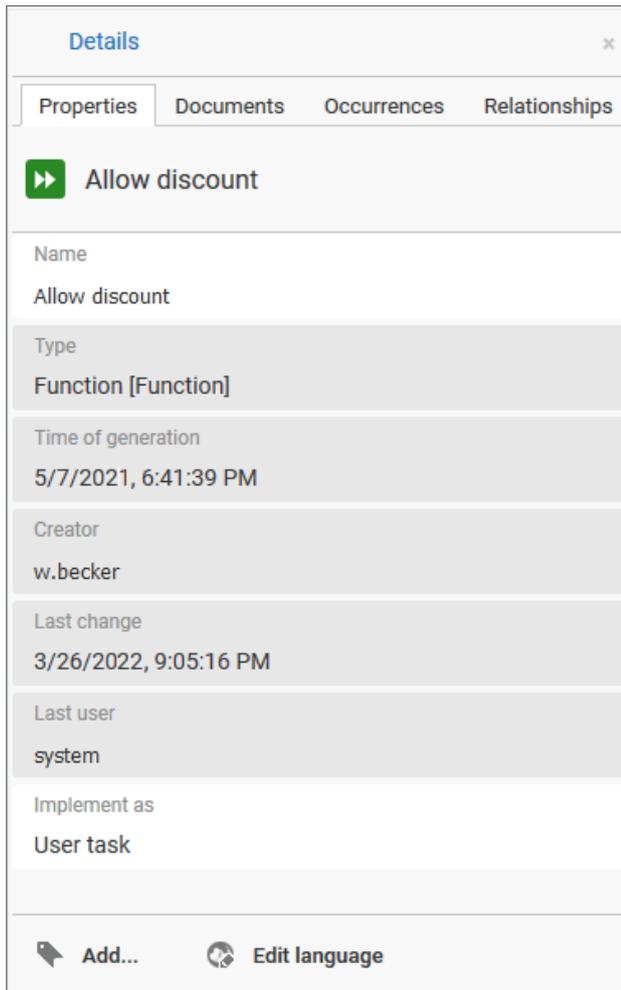
SEARCH BAR

Click the bar button  **Search** to show the **Search** bar that you can use to have objects selected in the model (page 602).



DETAILS BAR

Click the bar button  **Details** to show the **Properties** tab where you can edit attributes (page 563), or view occurrences (page 569) and relationships of objects (page 570), for example.



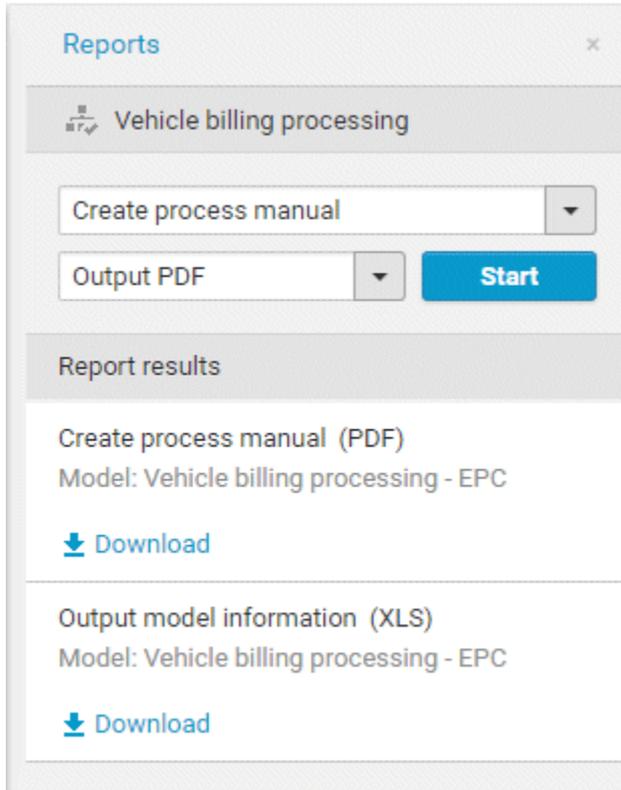
The screenshot shows a 'Details' window with a close button (x) in the top right corner. Below the title bar are four tabs: 'Properties' (selected), 'Documents', 'Occurrences', and 'Relationships'. The main content area displays the following information:

- Allow discount** (with a green play button icon)
- Name**: Allow discount
- Type**: Function [Function]
- Time of generation**: 5/7/2021, 6:41:39 PM
- Creator**: w.becker
- Last change**: 3/26/2022, 9:05:16 PM
- Last user**: system
- Implement as**: User task

At the bottom of the window, there are two buttons: 'Add...' (with a plus icon) and 'Edit language' (with a globe icon).

REPORTS BAR

Click the bar button  **Reports** to show the **Reports** tabs and generate reports (page 655).



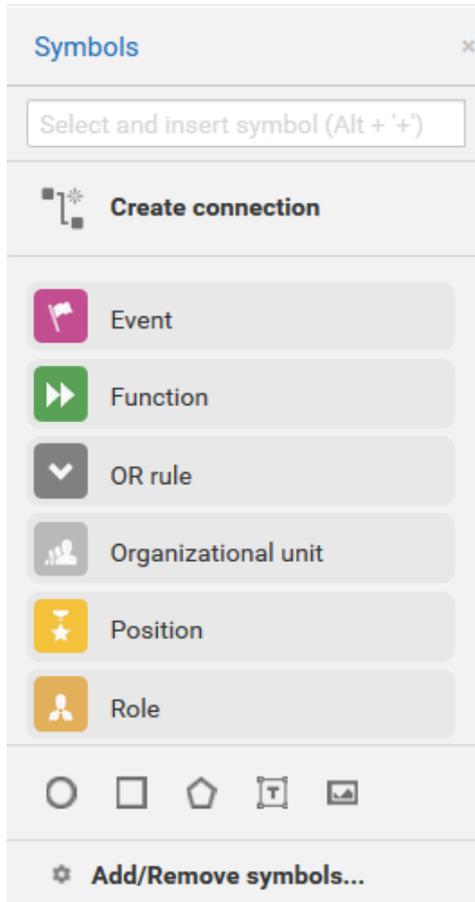
SEMANTIC CHECKS BAR

Click bar button  **Semantic checks** to show the **Semantic checks** bar where you can run semantic checks for a model (page 784) or for one or more objects (page 785). Among other things, the toolbar allows you to restrict the view to errors, warnings, or notes (page 787).

#	Item	Finding types	Description
4	> ● Accountant	! Allocation rules	Incorrect relationship: less than 1
5	> ● Financial assistant	! Allocation rules	Incorrect relationship: less than 1
6	> ● Financial assistant	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
7	> ● Financial assistant	! Allocation rules	Incorrect relationship: less than 1
8	> ● Financial assistant	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
9	> ● Financial clerk	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code

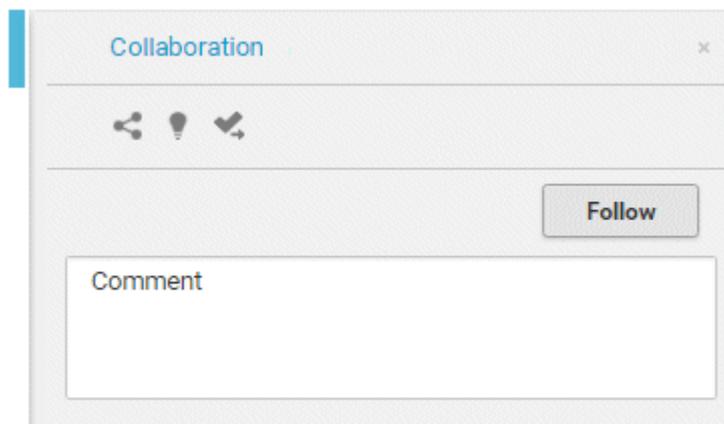
SYMBOLS BAR

The **Symbols** bar provides object symbols (page 552), graphic objects (page 628), and text for insertion into the modeling area. It also allows you to filter the available object symbols by entering names and create connections between (page 565) objects.



COLLABORATION BAR

Click the bar button  **Collaboration** to show the **Collaboration** bar that you can use to enter notes, improvement proposals, questions, etc., pertaining to the model (page 653).



MODELING TABLE

The **Modeling table** allows rapid and comfortable modeling (page 682) of EPCs and BPMN diagrams (page 692).

#		Name	Description/Definition	is under responsibilit...	is supported by Syste...	receives input from l...
1		Invoice is to be created				
2		Call order data		 Financial assistant		
3		Check customer data		 Financial assistant		
4		XOR rule				
5		No change required				
6		XOR rule				
7		Check order data		 Financial clerk		
8		XOR rule				
9		No change required				
10		XOR rule				

DISPLAY BAR

The **Display bar** is located at the bottom of the modeling area. This bar allows you to quickly define which modeling elements are to be displayed in the visible window pane (page 502).

If for example, you want to display the entire model in the visible window pane, click  **Fit to window** (without any model item being selected).



3.5.2.2.13.2 What are tab bars for?

Tab bars enable you to access the relevant buttons within a specific context.

All tab bars contain frequently used buttons (page 511). This means that you do not need to switch between tab bars to access these buttons.

START TAB BAR

The **Start** tab bar groups the functions related to the representation and placement of model items (page 574).

MODEL TAB BAR

The **Model** tab bar groups the functions related to the layout and the graphic of models (page 576).

FORMAT TAB BAR

The **Format** tab bar groups the functions related to the presentation of written data in models (page 577).

BPMN TAB BAR

The BPMN tab bar is displayed if you have opened a BPMN diagram. It groups the functions that are used for the convenient editing of BPMN diagrams (page 579).

3.5.2.2.13.3 What general buttons are available?

The following general buttons are available for each tab bar.



Save: Saves your changes in the database.



Undo: Undoes editing steps.



Redo: Redoes editing steps that were undone.



Refresh: Refreshes the display. Reloads the data from the database and thereby also shows any changes made by a different editor in the meantime.



Delete: Deletes selected model items.



Cut: Cuts selected items and saves them to the clipboard.



Copy: Copies selected items to the clipboard.



Paste: Pastes the content of the clipboard into the model. If an object is on the clipboard, an occurrence copy (page 657) is inserted. Click the arrow next to the **Paste** icon if you want to paste a definition copy.

3.5.2.2.13.4 Keyboard shortcuts for ARIS Connect Designer

The following shortcuts are available in ARIS Connect Designer (page 474).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Alt	Temporarily switches off Guided Modeling and grid (page 556) when you drag items.
Alt + down arrow	Moves selected objects down four grid lines.
Alt + F4	Closes the web browser. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Alt + left arrow	Moves selected objects four grid lines to the left.
Alt + - (minus)	Inserts an optional hyphen (page 559) at the cursor position in a text.
Alt + right arrow	Moves selected objects four grid lines to the right.
Alt + up arrow	Moves selected objects up four grid lines.
Backspace	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Ctrl + A	Selects all items.
Ctrl + C	Copies selected items to the clipboard. This enables you to paste copied items from the clipboard into models/diagrams and into other Windows programs.
Ctrl + down arrow	Moves selected items downwards by increments of one pixel.
Ctrl + End	Displays the bottom right pane of the modeling area.
Ctrl + Enter	Inserts a line break for text attributes, such as free-form texts, object names, etc.
Ctrl + F	Opens the Find bar.
Ctrl + F4	Closes the model tab. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Ctrl + Home	Displays the upper left pane of the modeling area.
Ctrl + left arrow	Moves selected items to the left by increments of one pixel.
Ctrl + Page down	Switches to the next web browser tab from left to right if your web browser supports changing tabs using the keyboard.

Shortcut	Action
Ctrl + Page up	Switches to the next web browser tab from right to left if your web browser supports changing tabs using the keyboard.
Ctrl + right arrow	Moves selected items to the right by increments of one pixel.
Ctrl + S	Saves your changes.
Ctrl + Shift + V	Inserts a definition copy of an object if an object is in the clipboard.
Ctrl + up arrow	Moves selected items upwards by increments of one pixel.
Ctrl + V	Pastes the content of the clipboard, if this is content that can be placed in the modeling area. If an object is in the clipboard, an occurrence copy of the object is inserted.
Ctrl + X	Cuts selected items and copies them to the clipboard.
Ctrl + Y	Redoes editing steps that were undone.
Ctrl + Z	Undoes preceding editing steps.
Del	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Down arrow	Moves the modeling area contents up (the contents of the modeling area that are further down will be displayed).
Enter	Ends the input.
Esc	Removes selections and closes dialogs. Closing dialogs with the ESC key is the same as clicking Cancel .
F2	Selects the selected text attribute of an element or the object name of a selected object for editing.
F3	Opens the Find bar. When the find bar is open, pressing the F3 key jumps to the next occurrence of the searched term.
F5	Updates the current view based on the database changes.
F11	Turns full screen mode on or off if your web browser supports full screen.
Left arrow	Moves the modeling area contents to the right (the contents of the modeling area that are further left will be displayed).
- (minus)	Reduces the display of the model content by 10%.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
+ (plus)	Enlarges the display of the model content by 10%.

Shortcut	Action
Right arrow	Moves the modeling area contents to the left (the contents of the modeling area that are further right will be displayed).
Shift	Keeps the shapes of a circle and a square (page 631) when you place and scale the graphic objects Circle/Ellipse and Square/Rectangle .
Shift + Del	Deletes (page 544) a structurally relevant object (page 1154) without creating a connection between the remaining objects when you use Smart Modeling. (page 534)
Shift + down arrow	Moves the object one grid to the left.
Shift + left arrow	Moves the object down one grid.
Shift + Page down	Moves the contents of the modeling area page by page to the right (the contents of the modeling area that are further left will be displayed).
Shift + Page up	Moves the contents of the modeling area page by page to the left (the contents of the modeling area that are further right will be displayed).
Shift + right arrow	Moves the object one grid to the right.
Shift + up arrow	Moves the object one grid up.
Up arrow	Moves the modeling area contents down (the contents of the modeling area that are further up will be displayed).

3.5.2.2.13.5 Keyboard shortcuts for the Select attribute dialog

The following shortcuts are available in the **Select attribute** dialog with which you can add attributes on the Properties tab (page 604).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Moves the focus down to the next attribute if the focus is in the attribute list field.
End	Moves to the lower attributes if the focus is in the attribute list field.
Enter	Closes the dialog and adds the selected attributes when the focus is on the OK button, or closes the dialog and adds no attributes when the focus is on the Cancel button.
ESC	Closes the dialog without changes. Pressing this key corresponds to clicking Cancel .
F5	Updates the current view based on the database changes. The Select attribute dialog is closed without changes.
F11	Turns full screen mode on or off if your web browser supports full screen. The Select attribute dialog remains open.
Home	Moves to the upper attributes if the focus is in the attribute list field.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
Space	Toggles the check box of the attribute on which the focus is located.
Tab	Jumps from the Search field to the Show specified attributes only check box, the attribute list field, in the attribute list, the OK button, and the Cancel button.
Up arrow	Moves the focus up to the next attribute if the focus is in the attribute list field.

3.5.2.3 Create/Import a model

You can use ARIS Connect Designer to create new models and to import models from ARIS Express (<http://www.ariscommunity.com/aris-express>).

3.5.2.3.1 Create new models

You can create new models in order to for example, model procedures as a control flow or model the data generation and usage. Many users use event-driven process chains (EPC) or Business Process Model and Notation (BPMN) version 2.0. The basics for these modeling techniques can be found in EPC in ARIS (.../documents/6 Using ARIS/61 Beginner/EPC cheat sheet.pdf) and in BPMN 2.0 in ARIS (.../documents/6 Using ARIS/61 Beginner/BPMN cheat sheet.pdf).

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

In the portal

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click  **Create new model** on the **Quick start** area. The corresponding dialog opens.
4. Enter a name for the new model in the **Model name** box.
5. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
6. Select the required model type. The **Target** area displays the database and group names. This is where the new model will be stored.
7. Click the  group icon next of the **Groups** box.
8. If more than one database is provided, select the relevant database.
9. Navigate to the group where you want to save the model.
10. Click **OK**. The **Select target group** dialog is closed.
11. Click **OK**. The **Select target group** dialog closes.
12. Check your input.
13. Click **OK**. The **Create model** dialog closes.

In the repository

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new model. When you select the group, its contents are displayed in the detail view (page 470). Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create model**. The corresponding dialog opens.
5. In the **Model name** box specify the name that the new model is to be created with in the selected group.
6. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
7. Select the required model type.
8. Click **OK**.

The new model is created and opened in a new tab. You can set up ARIS Connect Designer (page 496) and model the model.

3.5.2.3.2 Create group

You can create a new group in a database in which you can store models and objects.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new group. Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create group**. The corresponding dialog opens.
5. Enter the required name in the **Name** box.
6. Click **OK**.

The group is created as a subgroup of the selected one and you can store models and objects in it.

3.5.2.3.3 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.3.3.1 What model types are available in ARIS Connect?

The following model types are available.

The number of model types may differ from the model types listed here. Additional model types can be enabled by the license key used. On the other hand, the number of model types can be limited by the filter used (page 523).

Access diagram
Access diagram (physical)
Application collaboration diagram
Application collaboration diagram (physical)
Application system diagram
Application system type diagram
ArchiMate model (2.1)
ArchiMate model (3.x)
Attribute allocation diagram (Solution Design)
Bow tie diagram
BPMN allocation diagram (BPMN 2.0)
BPMN collaboration diagram (BPMN 2.0)
BPMN conversation diagram (BPMN 2.0)
BPMN process diagram (BPMN 2.0)
BSC Cause-and-effect diagram
Business controls diagram
Business ecosystem
Business footprint diagram
Business Model Canvas
Business rule allocation diagram
Business rule architecture diagram

Business segment matrix
Class diagram
CtX-tree
Customer journey landscape
Customer journey map
Customer segmentation map
Customer touchpoint allocation diagram
Customer touchpoint map
Data type diagram (Solution Design)
Data Warehouse model
DMN boxed function
DMN context diagram
DMN decision requirements diagram
DMN decision table model
DMN invocation diagram
Document structure (Solution Design)
DW structure
E-Business scenario diagram
eERM
eERM attribute allocation diagram
Enterprise BPMN collaboration diagram
Enterprise BPMN process diagram
EPC
EPC (column display)
EPC (horizontal table display)
EPC (instance)
EPC (material flow)
EPC (row display)
EPC (table display)
Event diagram
Fishbone diagram

Function allocation diagram
Function mapping
Function tree
Functions mapping (SAP Solution Manager)
IE Data model
Information carrier diagram
IoT object context
IoT object definition
IT architecture mapping
IT architecture matrix
Knowledge map
Knowledge structure diagram
KPI allocation diagram
KPI tree
Matrix model
Network diagram
Network topology
Objective diagram
Organizational chart
Process selection diagram
Process selection matrix
Product allocation diagram
Product selection matrix
Product/Service exchange diagram
Product/Service tree
Product tree
Program flow chart (PF)
Questionnaire template allocations
Quick model
RAD
Requirement allocation diagram

Requirements tree
Risk diagram
Role diagram
SAP functions mapping (SAP Solution Manager)
SAP NetWeaver Business Warehouse data flow model
SAP NetWeaver Business Warehouse mapping multi provider
SAP NetWeaver Business Warehouse structure
SAP NetWeaver Business Warehouse transformation
SAP Solutions allocation diagram
SAP Solutions organizational elements mapping
Screen design
Screen design (Solution Design)
Screen diagram
Screen navigation
Service allocation diagram
Service architecture diagram
Service collaboration diagram
SIPOC
Strategy allocation diagram
Strategy diagram
Structuring model
Survey management
SWOT diagram
System environment
Table diagram
Task allocation diagram
Technical resources
Technical terms model
TOGAF diagram
Value-added chain diagram
Value stream map

Work breakdown structure

XML model

3.5.2.3.3.2 Which template is used for new models?

When you create, import, or generate a new model, it is created on the basis of a template. In ARIS Architect, users with the **Configuration administrator** function privileges create templates and assign them to model types.

If a template is assigned to the model type you use, this template is used. If there is no assignment to a template, your model is created on the basis of the **Default** template.

3.5.2.3.3.3 Which method filter is used?

When you open and edit models, your work is based on one of the method filters (page 1148) assigned to you ARIS Architect. Database administrators specify which method filter a user may use in ARIS Connect. To do this, a database administrator assigns the relevant method filter to the database and user in ARIS Architect.

The method filter applied depends on the method filter(s) assigned to you.

- If you were assigned only one filter, that filter is applied.
- If you were assigned multiple filters:
 - The method filter assigned to the database is used (default filter of the database).
 - If the default filter of the database does not exist, the filter named **Demo** is used.
 - If the **Demo** filter does not exist either, the **Entire method** filter is applied.
 - If the **Entire method** filter also does not exist, the first method filter of the alphabetically sorted list is used.

3.5.2.3.3.4 Keyboard shortcuts for ARIS Connect Designer

The following shortcuts are available in ARIS Connect Designer (page 474).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Alt	Temporarily switches off Guided Modeling and grid (page 556) when you drag items.
Alt + down arrow	Moves selected objects down four grid lines.
Alt + F4	Closes the web browser. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Alt + left arrow	Moves selected objects four grid lines to the left.
Alt + - (minus)	Inserts an optional hyphen (page 559) at the cursor position in a text.
Alt + right arrow	Moves selected objects four grid lines to the right.
Alt + up arrow	Moves selected objects up four grid lines.
Backspace	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Ctrl + A	Selects all items.
Ctrl + C	Copies selected items to the clipboard. This enables you to paste copied items from the clipboard into models/diagrams and into other Windows programs.
Ctrl + down arrow	Moves selected items downwards by increments of one pixel.
Ctrl + End	Displays the bottom right pane of the modeling area.
Ctrl + Enter	Inserts a line break for text attributes, such as free-form texts, object names, etc.
Ctrl + F	Opens the Find bar.
Ctrl + F4	Closes the model tab. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Ctrl + Home	Displays the upper left pane of the modeling area.
Ctrl + left arrow	Moves selected items to the left by increments of one pixel.
Ctrl + Page down	Switches to the next web browser tab from left to right if your web browser supports changing tabs using the keyboard.

Shortcut	Action
Ctrl + Page up	Switches to the next web browser tab from right to left if your web browser supports changing tabs using the keyboard.
Ctrl + right arrow	Moves selected items to the right by increments of one pixel.
Ctrl + S	Saves your changes.
Ctrl + Shift + V	Inserts a definition copy of an object if an object is in the clipboard.
Ctrl + up arrow	Moves selected items upwards by increments of one pixel.
Ctrl + V	Pastes the content of the clipboard, if this is content that can be placed in the modeling area. If an object is in the clipboard, an occurrence copy of the object is inserted.
Ctrl + X	Cuts selected items and copies them to the clipboard.
Ctrl + Y	Redoes editing steps that were undone.
Ctrl + Z	Undoes preceding editing steps.
Del	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Down arrow	Moves the modeling area contents up (the contents of the modeling area that are further down will be displayed).
Enter	Ends the input.
Esc	Removes selections and closes dialogs. Closing dialogs with the ESC key is the same as clicking Cancel .
F2	Selects the selected text attribute of an element or the object name of a selected object for editing.
F3	Opens the Find bar. When the find bar is open, pressing the F3 key jumps to the next occurrence of the searched term.
F5	Updates the current view based on the database changes.
F11	Turns full screen mode on or off if your web browser supports full screen.
Left arrow	Moves the modeling area contents to the right (the contents of the modeling area that are further left will be displayed).
- (minus)	Reduces the display of the model content by 10%.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
+ (plus)	Enlarges the display of the model content by 10%.

Shortcut	Action
Right arrow	Moves the modeling area contents to the left (the contents of the modeling area that are further right will be displayed).
Shift	Keeps the shapes of a circle and a square (page 631) when you place and scale the graphic objects Circle/Ellipse and Square/Rectangle .
Shift + Del	Deletes (page 544) a structurally relevant object (page 1154) without creating a connection between the remaining objects when you use Smart Modeling. (page 534)
Shift + down arrow	Moves the object one grid to the left.
Shift + left arrow	Moves the object down one grid.
Shift + Page down	Moves the contents of the modeling area page by page to the right (the contents of the modeling area that are further left will be displayed).
Shift + Page up	Moves the contents of the modeling area page by page to the left (the contents of the modeling area that are further right will be displayed).
Shift + right arrow	Moves the object one grid to the right.
Shift + up arrow	Moves the object one grid up.
Up arrow	Moves the modeling area contents down (the contents of the modeling area that are further up will be displayed).

3.5.2.3.3.5 Keyboard shortcuts for the Select attribute dialog

The following shortcuts are available in the **Select attribute** dialog with which you can add attributes on the Properties tab (page 604).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Moves the focus down to the next attribute if the focus is in the attribute list field.
End	Moves to the lower attributes if the focus is in the attribute list field.
Enter	Closes the dialog and adds the selected attributes when the focus is on the OK button, or closes the dialog and adds no attributes when the focus is on the Cancel button.
ESC	Closes the dialog without changes. Pressing this key corresponds to clicking Cancel .
F5	Updates the current view based on the database changes. The Select attribute dialog is closed without changes.
F11	Turns full screen mode on or off if your web browser supports full screen. The Select attribute dialog remains open.
Home	Moves to the upper attributes if the focus is in the attribute list field.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
Space	Toggles the check box of the attribute on which the focus is located.
Tab	Jumps from the Search field to the Show specified attributes only check box, the attribute list field, in the attribute list, the OK button, and the Cancel button.
Up arrow	Moves the focus up to the next attribute if the focus is in the attribute list field.

3.5.2.3.3.6 How to proceed if the model type is missing for models

Model types and method filters are configured in ARIS Architect. Therefore, the description of the **Solutions** section explains how the system administrator proceeds in ARIS Architect.

CAUSE

There is a model in the database that is based on a user-defined model type that no longer exists in the ARIS method configuration. In this case, the user-defined model type can no longer be used to find the model. There are two possible reasons why the model type is no longer available:

- The method filter used does not contain the user-defined model type.
- The model type has been intentionally deleted from the ARIS method configuration.

SOLUTIONS

- If a method filter exists on the server or tenant that contains the user-defined model type, the user can log in to the database again with this method filter. The model is based on the user-defined model type again.
- If there is no method filter on the server or tenant that contains the user-defined model type, the system administrator can use ARIS Architect to import the method filter into the server/tenant and the user can log in to the database again with this method filter. The model is based on the user-defined model type again.
- If the user-defined method filter has been intentionally deleted, the system administrator can reorganize the database on the **Administration** tab of ARIS Architect with the **Automatically replace missing item types** option. This resets the model type to the standard ARIS model type. After re-logging in to the database, the model is found again by the search if the search is performed using the standard ARIS model type.

3.5.2.4 Model

ARIS Connect Designer assists you in editing models, for example, by providing Guided Modeling (page 501), a grid (page 501), a mini toolbar (page 562), graphic objects (page 628), or in-place formatting options (page 564).

3.5.2.4.1 Modeling by drag and drop

This section describes how to model using drag and drop. This includes placing objects between existing objects (page 531) and rearranging objects (page 532).

3.5.2.4.1.1 Open model for editing

You can open models in different ways.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The model type of the model is allowed (page 528) by the method filter (page 523) in use.

Procedure

From Groups or the Processes area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click **Groups** in the **Classic** view or **Processes** in the **Default** view.
3. Select the group or process area containing the required model. The content of the selected group or process area is listed.
4. Click the name of the relevant model.
5. Click **Diagram** if you want to display the model graphically.
6. Click  **Edit** >  **Edit model**.

From the repository

1. Click  **Repository**. The **Models & Objects** area is opened.
2. In the database, select the group containing the relevant model. The content of the selected group is listed.
3. Click the name of the model you want to open.

Using the search

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click the **Search** box (page 1131) and enter a term that is included in the model name. All models containing this term are listed immediately.
3. In the **Models** category, click the name of the model you want to open.

From the 'Recent changes' area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click  **Recent changes** in the **Home** area. All models are listed that have recently been changed or created.
3. Click the name of the model you want to open. Depending on active configuration set, the **Groups** or **Process** area opens and the model is activated.
4. Click **Diagram** if you want to display the model graphically.
5. Click  **Edit** >  **Edit model**.

The model opens in a separate tab.

3.5.2.4.1.2 Place object with drag and drop

You can place objects from the Symbols bar using drag and drop.

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the object symbol you want to place and hold down the mouse button.
3. Drag the mouse pointer to the position you want to place the object in the modeling area. If you have enabled Guided Modeling (page 501), lines and arrows inform you of the orientation and distance of the dragged object from adjacent items.
4. Release the mouse button. The object is placed, and its name is selected for overwriting.
5. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
6. Click in the modeling area or press **Enter**.

You have placed an object from the **Symbols** bar with drag and drop. You can also place objects with drag and drop using Smart Modeling (page 542).

3.5.2.4.1.3 Place an existing object

You can easily place existing objects.

Procedure

1. Place an object (page 530) using drag and drop. The name of the new object is selected for renaming.
2. Enter a term. As soon as you have entered two or more letters, all objects in the database that are of the same type as the selected object and whose names contain the entered term are listed.
3. Click the name of the object you want to place.

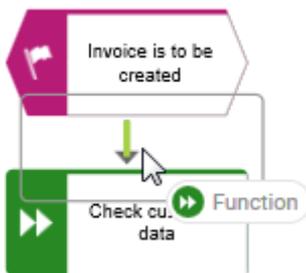
You have placed the symbol of an existing object in the modeling area.

3.5.2.4.1.4 Place object between existing objects

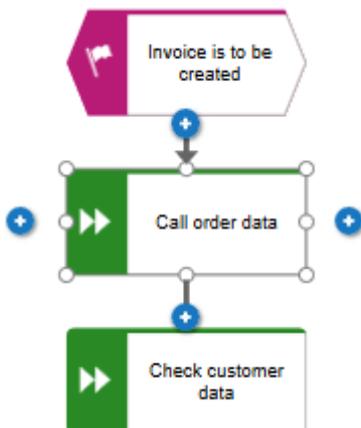
You can quickly place structurally relevant objects (page 1154) between existing objects using drag and drop.

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the object symbol you want to place and hold down the mouse button.
3. Drag the preview frame between the objects where you want to place the object. When the preview frame is over an edge between objects between which the selected object can be inserted methodically correct (page 534), the edge is colored green.



4. Release the mouse button. The object is placed, the lower objects are moved, and the connections are newly linked. The name of the new object is selected for renaming.
5. Enter a name. If you enter an existing name, existing objects are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).



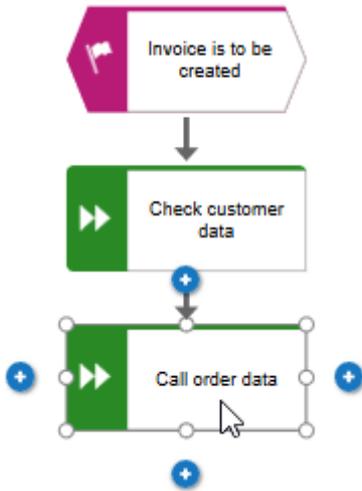
You have quickly placed a structurally relevant object between existing objects. You can also place objects with drag and drop using Smart Modeling (page 542).

3.5.2.4.1.5 Rearrange objects with drag and drop

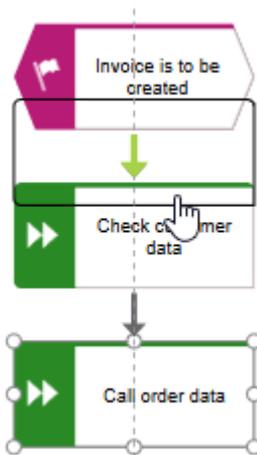
You can easily rearrange objects with drag and drop.

Procedure

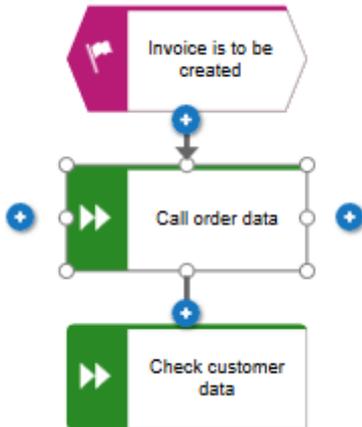
1. Click the object you want to move and hold down the mouse button.



2. Drag the preview frame between the objects where you want to place the object. If you have enabled Guided Modeling (page 501), lines and arrows inform you of the orientation and distance of the dragged object from adjacent items. When the preview frame is over an edge between objects between which the selected object can be inserted methodically correct (page 534), the edge is colored green.



3. Release the mouse button. The object is placed, the lower objects are moved, and the connections are newly linked.



You have rearranged objects using drag and drop. You can also place objects with drag and drop using Smart Modeling (page 542).

3.5.2.4.1.6 On which conditions can objects be placed between existing objects?

Objects can be placed between existing objects on the following conditions.

- Only one object is dragged, pasted, or placed.
- The object to be placed is only dragged onto one connection (page 531).
- Source and target object are not placed in an object (page 601).
- Both the connection between the source and target objects is structurally relevant (process-flow) and the source and target objects themselves are structurally relevant. (page 1154)

3.5.2.4.2 Use Smart Modeling

This section describes modeling with Smart Modeling, which provides automatic modeling features.

ARIS video tutorial

Model creation with Smart Modeling (<https://www.ariscommunity.com/videos/model-creation-smart-modeling>) (approx. 6 minutes)

3.5.2.4.2.1 Open model for editing

You can open models in different ways.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The model type of the model is allowed (page 528) by the method filter (page 523) in use.

Procedure

From Groups or the Processes area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click **Groups** in the **Classic** view or **Processes** in the **Default** view.
3. Select the group or process area containing the required model. The content of the selected group or process area is listed.
4. Click the name of the relevant model.
5. Click **Diagram** if you want to display the model graphically.
6. Click  **Edit** >  **Edit model**.

From the repository

1. Click  **Repository**. The **Models & Objects** area is opened.
2. In the database, select the group containing the relevant model. The content of the selected group is listed.
3. Click the name of the model you want to open.

Using the search

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click the **Search** box (page 1131) and enter a term that is included in the model name. All models containing this term are listed immediately.
3. In the **Models** category, click the name of the model you want to open.

From the 'Recent changes' area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click  **Recent changes** in the **Home** area. All models are listed that have recently been changed or created.
3. Click the name of the model you want to open. Depending on active configuration set, the **Groups** or **Process** area opens and the model is activated.
4. Click **Diagram** if you want to display the model graphically.
5. Click  **Edit** >  **Edit model**.

The model opens in a separate tab.

3.5.2.4.2.2 Enable or disable Smart Modeling

You can enable or disable Smart Modeling that provides automatic modeling features (page 547), such as creating space for new objects, placing objects, and reconnecting connections.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area** > **Smart Modeling**. The check box is enabled () and the Smart Modeling can be used. Keep the setting if you want to leave Smart Modeling enabled.
3. To disable Smart Modeling, click  **Modeling area** > **Smart Modeling**. The check box is disabled.

You have enabled or disabled Smart Modeling.

3.5.2.4.2.3 Set the default distance for Smart Modeling

You can set the default distance for objects that are placed when modeling with Smart Modeling.

Please note that this procedure will layout the current model, but you can easily undo the layout as described below. Keep in mind that the change of the default distance affects future layouts operations.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Layout**. The layout options are provided.
3. Enter values for **Horizontal item spacing** and **Vertical item spacing** (page 797).
4. Keep the **Use as default** check box enabled.
5. Click **OK**. The changed layout is applied to already placed objects.
6. If the new layout does not meet your requirements, click  **Undo**. The layout operation is undone and the model looks as before.

The entered item spacing is set as the default distance for objects you place using Smart Modeling (page 537).

3.5.2.4.2.4 Place object

With Smart Modeling (page 501), you can easily place new and existing objects (page 542).

Procedure

PLACE A DIRECTLY ACCESSIBLE OBJECT

1. Select the object you want to connect with a new object. The  **Insert** icons are displayed (page 548).
2. Click the  **Insert** icon of the direction in which you want to place the object. The **Smart Modeling** toolbar (page 547) opens.
3. Click an object shown on the **Smart Modeling** toolbar you want to place. The object is inserted in the direction you selected the  **Insert** icon and a connection is created to the previously selected object. The name of the new object is selected for renaming.
4. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
5. If selectable connections are displayed (page 549), click another connection or click in the modeling area to obtain the current connection.

With Smart Modeling, you have placed an object at the specified distance (page 536).

PLACE AN OBJECT BY USING THE FIND SYMBOLS BOX

1. Select the object you want to connect with a new object. The  **Insert** icons are displayed (page 548).
2. Click the  **Insert** icon of the direction in which you want to place the object. The **Smart Modeling** toolbar (page 547) opens.
3. Click the **Find symbols** box and enter the name of the object symbol you want to place.
4. Enter a term that is contained in the name of the object symbol you want to place. All object symbols containing the term are listed.
5. Click the object you want to place. The object is inserted in the direction you selected the  **Insert** icon and a connection is created to the previously selected object. The name of the new object is selected for renaming.
6. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
7. If selectable connections are displayed (page 549), click another connection or click in the modeling area to obtain the current connection.

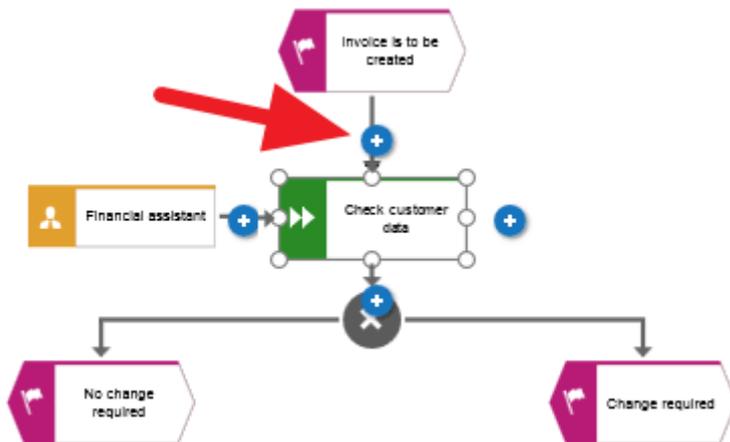
With Smart Modeling, you have placed an object at the specified distance (page 536). The object symbol of the placed object is added to the **Smart Modeling** toolbar for later use.

3.5.2.4.2.5 Place object between existing objects

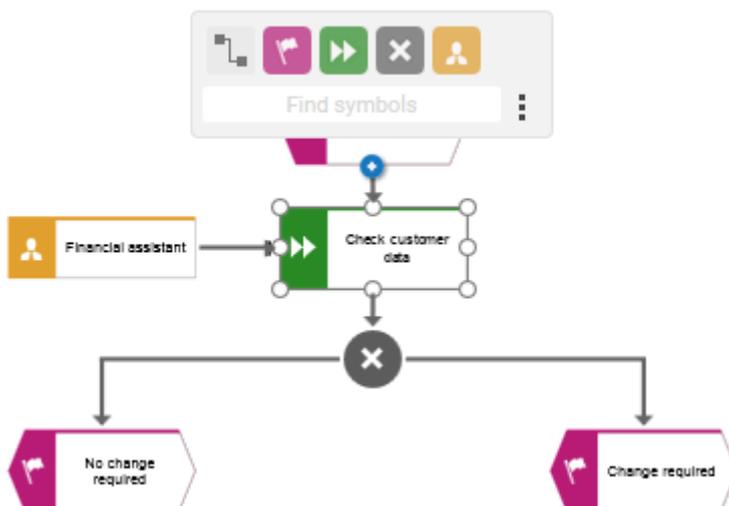
With Smart Modeling (page 501), you can quickly place objects between existing objects.

Procedure

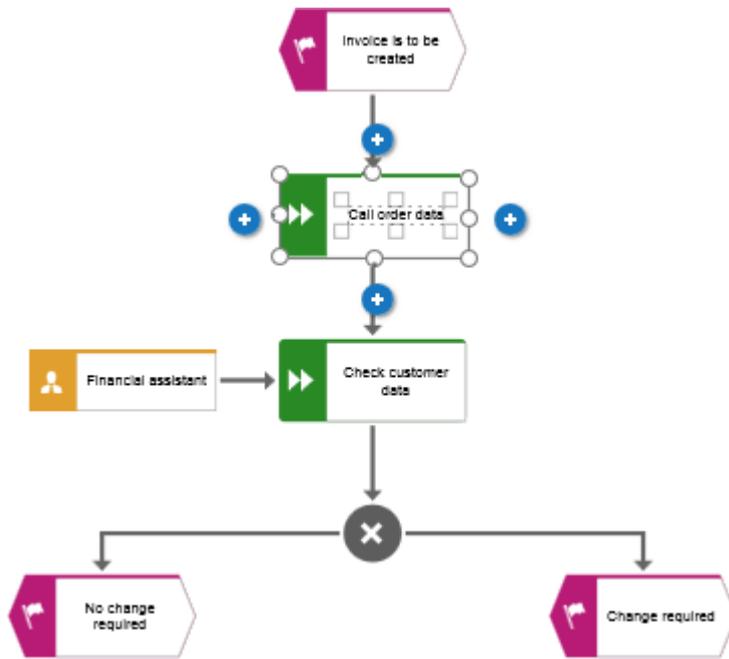
1. Select the object that is connected to another object. The  **Insert** icons are displayed (page 548).
2. Click the  **Insert** icon of the direction in which the selected object is connected to the other object.



The **Smart Modeling** toolbar opens.



3. Click the object you want to place between the existing objects. The object is placed between the existing object and new connections are created between the three objects.
4. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).



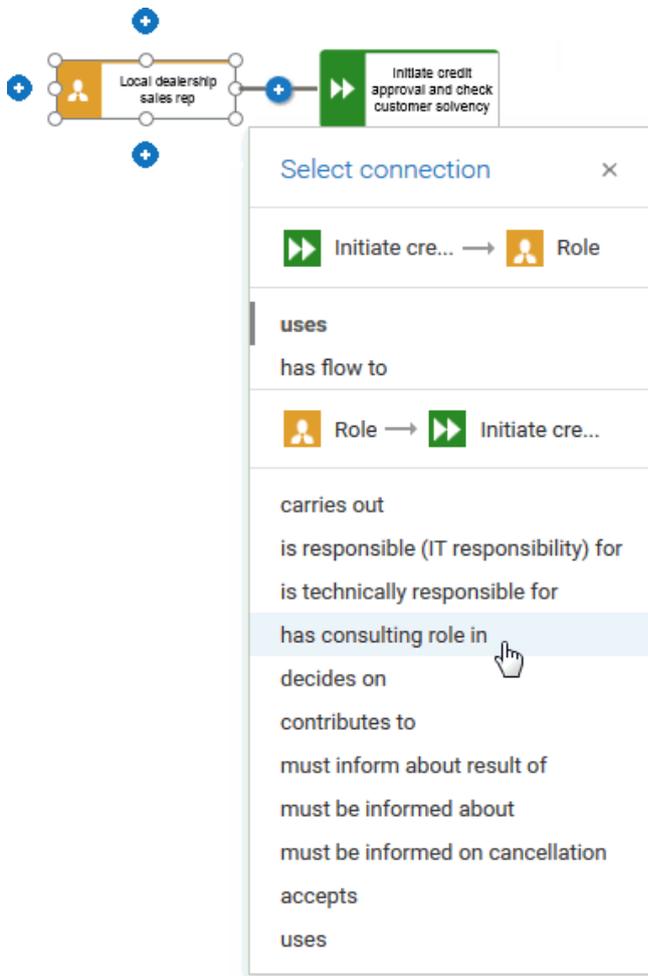
With Smart Modeling, you have quickly placed an object between existing objects.

3.5.2.4.2.6 Place multiple satellite objects

With Smart Modeling (page 501), you can easily place multiple satellite objects (page 1153). The following example shows how to place multiple satellite objects for an object of type **Function**.

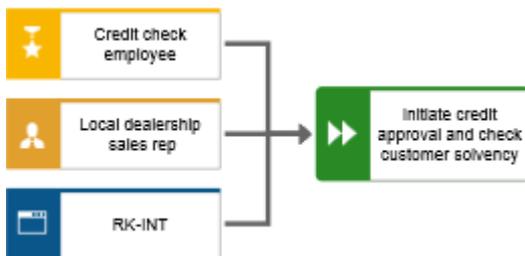
Procedure

1. Select the object you want to connect with multiple satellite objects. The  **Insert** icons are displayed (page 548).
2. Click the  **Insert** icon of the direction in which you want to place the object. The **Smart Modeling** toolbar (page 547) opens.
3. Click the object symbol shown on the **Smart Modeling** toolbar you want to place, for example, **Role**. The object is inserted in the direction you selected the  **Insert** icon and a connection is created to the previously selected object. The name of the new object is selected for renaming.
4. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
5. Select a connection, for example, **has consulting role in**.



The satellite object is inserted.

6. Reselect the object you want to connect with multiple satellite objects.
7. Click the  **Insert** icon in the same direction in which you placed the previous object and click the **Application system type** object symbol. The object is placed below the satellite that was placed first.
8. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
9. Select a connection, for example, **supports**.
10. Reselect the object you want to connect with multiple satellite objects.
11. Click the  **Insert** icon in the same direction in which you placed the previous object and click the **Position** object symbol. The object is placed above the other satellites.
12. Select a connection, for example, **carries out**. The satellite object is inserted.



With Smart Modeling, you have placed multiple satellites.

3.5.2.4.2.7 Place object with drag and drop

Objects placed with Smart Modeling are placed according to the set default distance (page 536). If you want to place a smart object in a specific position, you can place it via drag and drop in the modeling area.

Procedure

1. Select the object that you want to connect to a new object. The  **Insert** icons are displayed (page 548).
2. Click the  **Insert** icon on the side of the selected object to which you want to attach the connection. The **Smart Modeling** toolbar (page 547) opens.
3. Click the object symbol you want to place and hold down the mouse button.
4. Drag the mouse pointer to the position you want to place the object in the modeling area. If you have enabled Guided Modeling (page 501), lines and arrows inform you of the orientation and distance of the dragged object from adjacent items.
5. Release the mouse button. The object is placed, and its name is selected for overwriting.
6. Enter a name. If you enter an existing name, existing objects (page 542) are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
7. If selectable connections are displayed (page 549), click another connection or click in the modeling area to obtain the current connection.

With Smart Modeling, you have placed an object with drag and drop.

3.5.2.4.2.8 Place an existing object

With Smart Modeling (page 501), you can easily place existing objects.

Procedure

1. Place an object (page 537). The name of the new object is selected for renaming.
2. Enter a term. As soon as you have entered two or more letters, all objects in the database that are of the same type as the selected object and whose names contain the entered term are listed.
3. Click the name of the object you want to place.

With Smart Modeling, you have placed the symbol of an existing object in the modeling area.

3.5.2.4.2.9 Connect objects

When you use Smart Modeling (page 501), some connections (page 549) are automatically created between the selected and the newly created objects (page 537). Objects are also reconnected when you place new objects between existing objects (page 538). You can also connect unconnected objects using the **Smart Modeling** toolbar (page 547).

Procedure

CONNECT OBJECT BY DRAG AND DROP

1. Select the object you want to connect with an object that has already been placed. The  **Insert** icons are displayed.
2. Click the  **Insert** icon on the side of the selected object to which you want to attach the connection and hold down the mouse button.
3. Move the mouse pointer to the border of the target object.
4. Click the connection anchor point to which you want to attach the connection to the target object. If more than one connection can be created between the objects, the selectable connections are displayed (page 549) and the currently used connection is highlighted in bold.
5. If you want to use another connection, click the corresponding name, otherwise click on the modeling area. The connection selection is closed.

You have created a connection using the **Smart Modeling** toolbar.

CONNECT OBJECTS BY CLICKING

1. Select the object you want to connect with an object that has already been placed. The  **Insert** icons are displayed.
2. Click the  **Insert** icon on the side of the selected object to which you want to attach the connection. The **Smart Modeling** toolbar (page 547) opens.
3. In the **Smart Modeling** toolbar, click  **Connection**.
4. Move the mouse pointer to the border of the target object.
5. Click the connection anchor point to which you want to attach the connection to the target object. If more than one connection can be created between the objects, the selectable connections are displayed (page 549) and the currently used connection is highlighted in bold.
6. If you want to use another connection, click the corresponding name, otherwise click on the modeling area. The connection selection is closed.

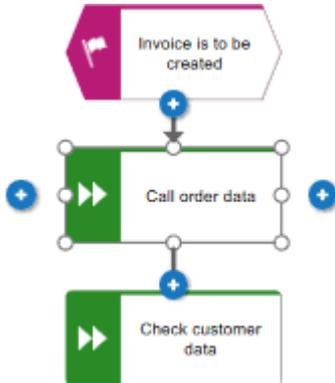
You have created a connection using the **Smart Modeling** toolbar.

3.5.2.4.2.10 Delete object

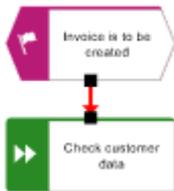
If you use **Del** to delete a structurally relevant object (page 1154) that is connected to two structurally relevant objects, Smart Modeling (page 501) automatically creates a connection between the remaining objects. If you use **Shift + Del**, Smart Modeling does not create a connection between the remaining objects.

Procedure

1. Select the object you want to delete.



2. If you want the connection between the remaining objects to be created automatically, press **Del**.



The connection is created.

3. If you do not want the remaining objects to be connected, press **Shift + Del**.



No connection is created.

You have deleted a structurally relevant object so that a connection is automatically created between the remaining objects or no connection is created.

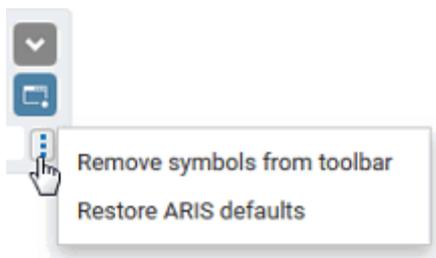
3.5.2.4.2.11 Configure the Smart Modeling toolbar

You can configure the **Smart Modeling** toolbar (page 547) for symbol type per model type to provide direct access to the objects you want to connect with that object type.

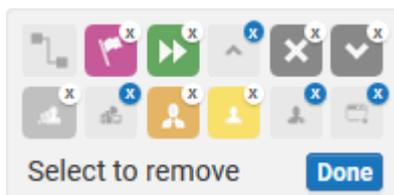
The object symbols you place using the search box (page 537) are automatically added to the **Smart Modeling** toolbar of the corresponding object symbol for later use.

Procedure

1. Select an object symbol of an object of the type you want to configure. The  **Insert** icons are displayed.
2. Click one of the  **Insert** icons. The **Smart Modeling** toolbar (page 547) opens.
3. In the **Smart Modeling** toolbar, click **Configure**.



4. To remove individual object symbols, click **Remove symbols from toolbar**.
5. Click the object symbols you want to remove. They are grayed and their  remove icons are highlighted.



6. If you want to exclude an already selected object symbol from the removal list, click it again.
7. To complete the removal, click **Done**. The selected objects symbols are removed.
8. To reset direct access to object symbols of the bar to the default setting, click **Configure** and **Restore ARIS defaults**. The **Smart Modeling** toolbar provides the object symbols for direct access that are default set by ARIS.

You have configured the **Smart Modeling** toolbar.

3.5.2.4.2.12 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.2.12.1 Which models are supported by Smart Modeling?

Smart Modeling offers full support for the following **EPC** and **BPMN** model types.

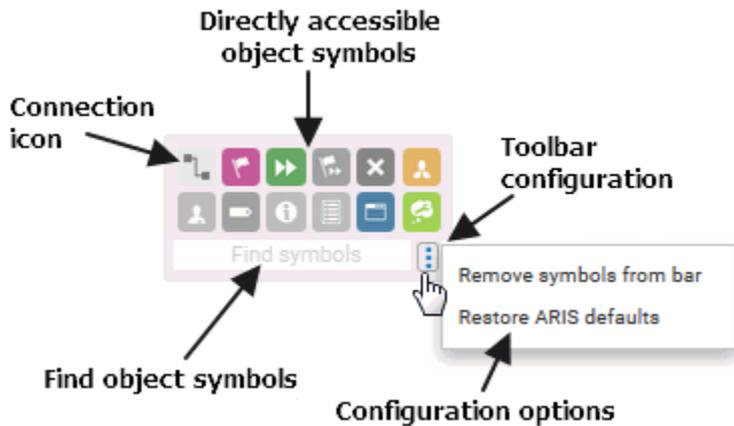
- EPC
- EPC (material flow)
- BPMN allocation diagram (BPMN 2.0)
- BPMN collaboration diagram (BPMN 2.0)
- BPMN conversation diagram (BPMN 2.0)
- BPMN process diagram (BPMN 2.0)
- Enterprise BPMN collaboration diagram
- Enterprise BPMN process diagram

Many model types have no layout rules and the user is free to decide what the underlying model should look like. Smart Modeling is also available for these model types, but with limited support. Limited support may mean:

- Objects are created overlapping if you insert more than one object with the same insert icon (page 548) of an object. Therefore, you must arrange them manually. This applies, for example, to models of the **Organizational chart** type.
- Objects can be selected from the Smart Modeling toolbar (page 547), but they are not placed. You must click at the relevant position to place them. This applies to all lane models, such as **EPC (table display)** and **E-Business scenario diagram**.

3.5.2.4.2.12.2 What is the Smart Modeling toolbar for?

The **Smart Modeling** toolbar provides functionality for the simple and very fast placement of objects. It provides objects that are directly accessible and a search box for finding and placing object symbols that are not listed in the toolbar. In addition, you can use the smart object toolbar to create connections to existing objects.



When you place an object using the search box, the symbol of the placed object is added to the list of directly accessible objects for the selected object type.

You can configure the toolbar (page 545) for each object type so that you always have access to the objects you want to connect with it.

3.5.2.4.2.12.3 When are Insert icons displayed?

Under the following conditions insert icons are displayed.

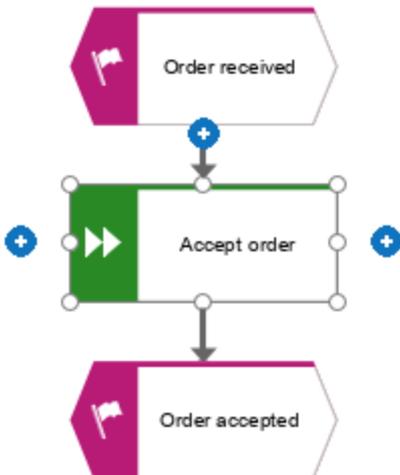
ENOUGH SPACE

There must be enough space to arrange  **Insert** icons around an object symbol. Therefore, the model display (page 502) must be large enough to display  **Insert** icons in the model in addition to the objects.

Thus,  **Insert** icons are displayed when Smart Modeling is enabled and the model display is equal or greater than 30 %.

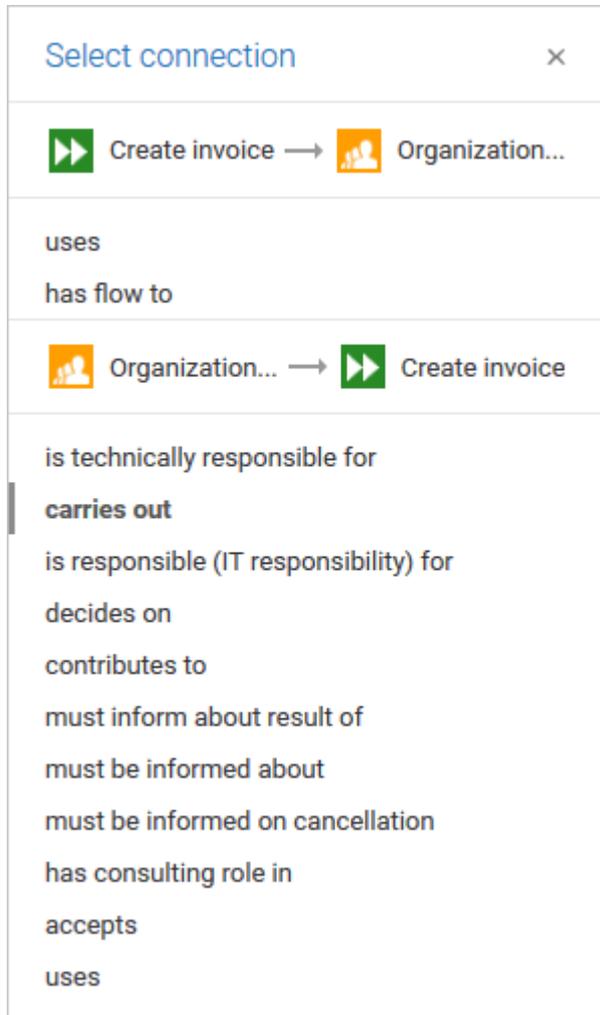
PERMISSION TO USE A CONNECTION

The user must have a privilege to use the outgoing connection of the selected object. If a user does not have the privilege because the used filter does not allow the connection, the  **Insert** icon for the corresponding direction is not displayed. In the following example, the user does not have the privilege to create the outgoing connection from the function **Accept order** to the event **Order accepted**.



3.5.2.4.2.12.4 How are connections created when using Smart Modeling?

If you place structurally relevant objects (page 1154), the connection is chosen automatically. If you place satellites (page 1153), the selectable connections are displayed. The currently used connection is highlighted in bold.



3.5.2.4.3 Basic modeling

This section describes the basic procedures for editing models.

3.5.2.4.3.1 Open model for editing

You can open models in different ways.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The model type of the model is allowed (page 528) by the method filter (page 523) in use.

Procedure

From Groups or the Processes area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click **Groups** in the **Classic** view or **Processes** in the **Default** view.
3. Select the group or process area containing the required model. The content of the selected group or process area is listed.
4. Click the name of the relevant model.
5. Click **Diagram** if you want to display the model graphically.
6. Click  **Edit** >  **Edit model**.

From the repository

1. Click  **Repository**. The **Models & Objects** area is opened.
2. In the database, select the group containing the relevant model. The content of the selected group is listed.
3. Click the name of the model you want to open.

Using the search

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click the **Search** box (page 1131) and enter a term that is included in the model name. All models containing this term are listed immediately.
3. In the **Models** category, click the name of the model you want to open.

From the 'Recent changes' area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click  **Recent changes** in the **Home** area. All models are listed that have recently been changed or created.
3. Click the name of the model you want to open. Depending on active configuration set, the **Groups** or **Process** area opens and the model is activated.
4. Click **Diagram** if you want to display the model graphically.
5. Click  **Edit** >  **Edit model**.

The model opens in a separate tab.

3.5.2.4.3.2 Change database language of a model

You can select a database language other than the one currently in use for a model. This enables you to specify all language-dependent attributes for the model in a language of your choice.

If you change the language (page 551), the text attributes are output in the selected language as long as the text attributes are specified in the target language. If this is not the case, the text attributes are displayed in the alternative language and identified by the language code added to the alternative language.

Procedure

1. In the header, click the language code next to the model name. A list of available languages is displayed.
2. Click the language you want to use for entering the language-dependent contents.

The modeling area and the bars will directly display the language-dependent contents in the selected language, for example, on the **Attributes** tab of the **Properties** bar. You can change language-dependent contents specified in this language or enter new contents.

3.5.2.4.3.3 Set up default distance for Guided Modeling

You can set the default distance for Guided Modeling (page 581).

Please note that this procedure will layout the current model, but you can easily undo the layout as described below. Keep in mind that the change of the default distance affects future layouts operations.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Layout**. The layout options are provided.
3. Enter values for **Horizontal item spacing** and **Vertical item spacing** (page 797).
4. Keep the **Use as default** check box enabled.
5. Click **OK**. The changed layout is applied to already placed objects.
6. If the new layout does not meet your requirements, click  **Undo**. The layout operation is undone and the model looks as before.

The entered item spacing is set as the default distance. When placing objects, the default distance is indicated by the following cursor: 

3.5.2.4.3.4 Place object symbols

You can place object symbols in the modeling area (page 504) in various ways.

Procedure

Using the Symbols bar by clicking

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the object symbol you want to place in the modeling area.
3. Move the mouse pointer to the modeling area. The frame of the object is displayed. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
4. Click the position in the modeling area where you want to insert the object symbol. The name of the object symbol is selected for overwriting by default.
5. If necessary, overwrite the previous name with the name of your choice and press Enter.

The object symbol has been inserted in the modeling area.

Using the Symbols bar by drag and drop (page 530)

Using the selection box in the Symbols bar

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. In the **Select and insert symbol** box enter a few characters of the object symbol name. All object symbols whose names contain these characters are listed, regardless of whether they are hidden or shown in the **Symbols** bar. The list is continuously updated while you are entering your input.
3. In the list, click the object symbol you want to place.
4. Move the mouse pointer to the modeling area. The frame of the object is displayed. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
5. Click the position in the modeling area where you want to insert the object symbol. The name of the object symbol is selected for overwriting by default.
6. If necessary, overwrite the previous name with the name of your choice and press Enter. The object symbol has been inserted in the modeling area.

Using the mini toolbar

Prerequisite

- An object symbol has already been placed in the modeling area.
- Smart Modeling is disabled (page 501).

Procedure

1. Click the placed object symbol. The mini toolbar is shown.
2. In the mini toolbar, click the symbol you want to place in the modeling area.
3. The **Select connection** box and the outline of the object is displayed. The currently used connection is marked with a preceding bar and is highlighted in bold.
4. Click on another connection or close the **Select connection** box with **✕ Close**.
5. Move the mouse pointer to the position to where you want to insert the object. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
6. Click the position in the modeling area where you want to insert the object symbol. The name of the object symbol is selected for overwriting by default.
7. If necessary, overwrite the previous name with the name of your choice and press Enter. The object symbol is placed in the modeling area and linked to the previously selected object symbol using the selected connection.

Using the Smart Modeling toolbar (page 537)

As an occurrence copy

Create a new occurrence for an existing object. This enables you, for example, to insert the same organizational unit at all positions in a process where it actually participates in the process.

Prerequisite

An object symbol has already been placed in the modeling area.

Procedure

1. Click the placed object symbol and then  **Copy**.
2. Click  **Paste**. Alternatively, press **Ctrl + V**. A frame for the occurrence copy is displayed in the modeling area.
3. Drag the frame to the required position. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
4. Click the position in the modeling area where you want to insert the object symbol.

The object symbol is placed in the modeling area. It represents the object whose object symbol you copied as an occurrence copy (page 1151). This means, for example, that the name of both object symbols is changed, that is, the name of the copied object symbol and the name of the object symbol copy, if you change it for ONE of the two.

As a definition copy

Use an existing object as the basis for a new object. Thus, you only need to change the attributes by which the new object differs from the source object.

Prerequisite

An object symbol has already been placed in the modeling area.

Procedure

1. Click the placed object symbol and then  **Copy**.
2. Click **▼ down arrow > Definition copy** next to  **Paste**. Alternatively, press **Ctrl + Shift + V**. A frame for the definition copy is displayed in the modeling area.
3. Drag the frame to the required position. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
4. Click the position in the modeling area where you want to insert the object symbol.

The object symbol is placed in the modeling area. As a definition copy (page 1143) it represents a new object using the attributes of the object whose object symbol you have copied. The new object is autonomous even though it has the same attributes as the source object. This means, for example, that the name of the copied object does not change if you change the name of the source object.

3.5.2.4.3.5 Create multiple objects at once

Create and insert multiple objects of the same type.

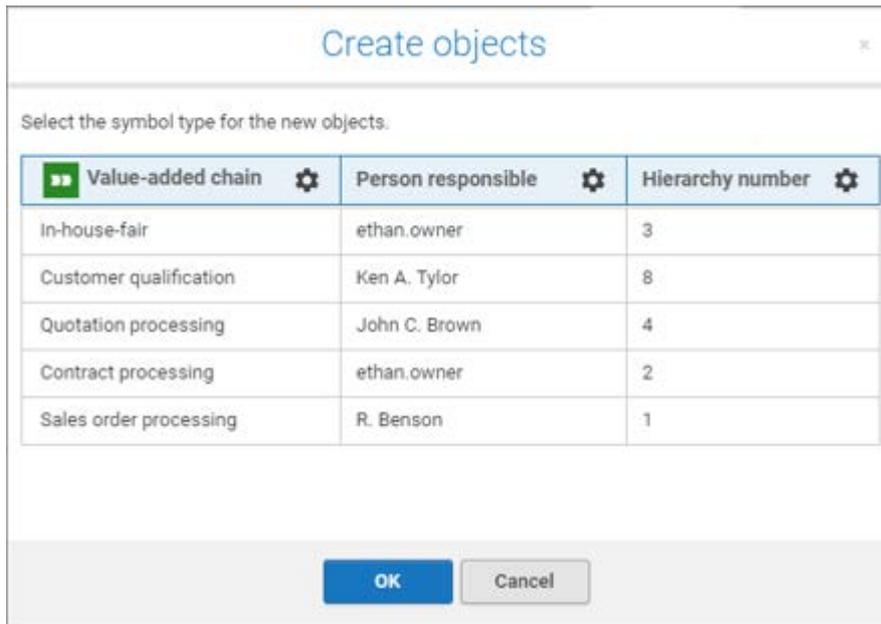
COPY OBJECTS NAMES AND ATTRIBUTES IN THE CLIPBOARD

1. In a text editor, enter the names of the new object in separate lines.
2. On the right of the objects, enter the attributes separated by tabs.
3. Press **Ctrl + A** to select all entries and **Ctrl + C** to copy them in the clipboard.

You have created objects names and attributes in the clipboard.

INSERT THE OBJECT DEFINITIONS

1. In the **Start tab** bar, click  **Create objects**. The dialog opens.
2. Click  **Create objects**. The dialog opens.
3. Press **Ctrl + V** to copy the clipboard content in the dialog box. The content is inserted into the dialog and rows are created for the symbol and attribute types.
4. In the **Select symbol type** header, click  **Configure** to select the symbol type for all new objects.
5. In the **Select attribute type** headers, click  **Configure** to select the attribute type for all attributes of the column.



6. Click **OK**. The preview of the object symbols is displayed in the modeling area.
 7. Click the position in the modeling area where you want to place the object symbols.
- The objects are placed and you can connect them with other objects.

3.5.2.4.3.6 Temporary switch off Guided Modeling and grid

When Guided Modeling (page 501) and the grid (page 501) are enabled, you can temporarily switch off Guided Modeling and the grid when dragging items.

Procedure

1. Select the item you want to drag.
2. Press the **Alt** key.
3. Drag the item.

The item is not "caught" by Guided Modeling and/or the grid and can be moved pixel by pixel. Depending on how you want to align objects, you can turn off the grid (page 501) and align objects using Guided Modeling (page 581) only.

3.5.2.4.3.7 Place occurrence copy

You can place occurrence copies in the modeling area (page 504) in different ways.

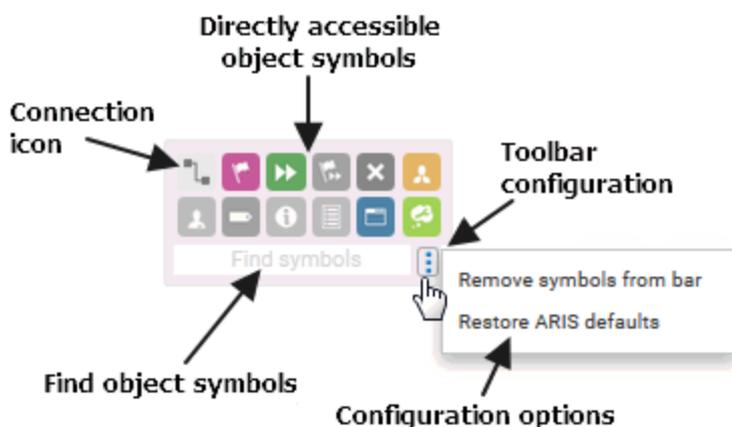
Procedure

By drag and drop

Procedure

1. Click the relevant object symbol in the Symbols bar or in the Smart object toolbar and hold down the mouse button.

The **Smart Modeling** toolbar provides functionality for the simple and very fast placement of objects. It provides objects that are directly accessible and a search box for finding and placing object symbols that are not listed in the toolbar. In addition, you can use the smart object toolbar to create connections to existing objects.



When you place an object using the search box, the symbol of the placed object is added to the list of directly accessible objects for the selected object type.

You can configure the toolbar (page 545) for each object type so that you always have access to the objects you want to connect with it.

2. Move the mouse pointer to the modeling area. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
3. Drag the object symbol over a connection or the position in the modeling area where you want to insert the object symbol.
4. Release the mouse button. The object is placed, and its name is selected for overwriting.
5. Enter at least two letters. A list of existing objects is displayed that have the same type as the placed object and whose names begin with the letters entered.
6. Click the name of the object you want to create as an occurrence copy. The name is entered in the object.

The occurrence copy is placed between existing objects (page 531) or in the modeling area (page 530).

By placing an object symbol

Procedure

1. Click the relevant object symbol in the Symbols bar or the mini toolbar.
2. Move the mouse pointer to the modeling area. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
3. Click the position in the modeling area where you want to insert the object symbol. The name of the object symbol is selected for overwriting by default.
4. Enter at least two letters. A list of existing objects is displayed that have the same type as the placed object and whose names begin with the letters entered.
5. Click the name of the object you want to create as an occurrence copy. The name is entered in the object.

The occurrence copy is placed in the modeling area.

By copying and pasting

Procedure

1. In the modeling area, click the object of which you want to create an occurrence copy.
2. Click  **Copy** in the toolbar.
3. Click  **Paste** in the toolbar. A frame for the occurrence copy is displayed in the modeling area.
4. Drag the frame to the required position. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
5. Press the mouse button.

You have placed the occurrence copy.

3.5.2.4.3.8 Create object of the same name

You can create a new object with the same name as an existing object.

Procedure

1. Place an object in the modeling area. The name of the new object is selected for renaming.
2. Enter a name of an existing object.
3. Click in the modeling area or press **Enter**. You are informed that the entered name is already used.
4. In the **Create a new object with this name** area, click the name you entered.

The new object is created. The existing object and the new object are independent from each other. They have different GUIDs and can have completely different attributes except for the name.

3.5.2.4.3.9 Use optional hyphens

You can insert optional hyphens in texts. These hyphens are displayed only when necessary when texts must be broken up due to, for example, resizing an object. Optional hyphens can be used for attribute texts and free-form texts. The following procedure describes an example use of optional hyphens for the name attribute of an object.

Procedure

1. Click a selected object in the model. The name of the object is selected for editing.
2. Place the cursor at the position at which you want to insert an optional hyphen.
3. Press **Alt + -**. An optional hyphen is inserted and the placeholder for the optional hyphen is displayed (↵).
4. Insert optional hyphens wherever you want to separate the attribute value when you change the size of an object.
5. Click in the modeling background.

The text input box is closed and the optional hyphen placeholders are no longer displayed.

If you now change the size of the object so that the text requires a line break, the text is wrapped at the position of the optional hyphen and a hyphen is automatically inserted at that position.

3.5.2.4.3.10 Paste copied object as an occurrence copy

You can paste a copied object into a model as an occurrence copy. Thus, a new occurrence is created, that is, a new graphical representation of the object. This means, for example, that changing the name of this occurrence will change the name in all occurrences of the copied object.

Prerequisite

The object is allowed to exist in the target model according to the method.

Procedure

1. Select the relevant object.
2. Click  **Copy**. Now you can insert the copy into the current or another model.
3. Click  **Paste > Occurrence copy**. Alternatively, press **Ctrl + V**. The frame of the object is displayed.
4. Move the mouse pointer to the relevant position. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
5. Click the position in the modeling area where you want to insert the object symbol.

Copying and pasting the occurrence of an object is now complete.

Occurrence copies enable you to quickly reuse the same object at different positions in the same model, or to reuse it in various other models.

3.5.2.4.3.11 Paste copied object as a definition copy

You can paste a copied object into a model as a definition copy. Thus, a new object is created whose attributes are identical with those of the copied object. Changing the attributes of the pasted object will not affect the copied object.

Prerequisite

The object is allowed to exist in the target model according to the method.

Procedure

1. Select the relevant object.
2. Click  **Copy**. Now you can insert the copy into the current or another model.
3. Click  **Paste > Definition copy**. The frame of the object is displayed.
4. Move the mouse pointer to the relevant position. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
5. Click the position in the modeling area where you want to insert the object symbol.

Copying an object and pasting it as a definition copy is now complete.

Using definition copies reduces the effort of creating multiple objects that differ only in a few attributes.

3.5.2.4.3.12 Move model item

You can place model items in a different position than the existing one using the mouse or using the keyboard.

Using the keyboard, objects in column and row models can be moved only within the columns and rows in which they are placed. If you want to move objects between columns or rows in which the objects are allowed by the method, use the mouse or the **Cut/Copy** functionality.

Procedure

Using the mouse

1. Click the model item, for example, an object symbol or a graphic object (page 628) and hold down the mouse button.
2. Drag the mouse pointer to the relevant position. The preview frame of the model item is displayed. If you move objects, lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
3. Release the mouse button.

If you set a grid (page 501), the model item "jumps" to the grid. If multiple model items are selected for moving, they "jump" from one gridline to the next in the grid width you set.

If you want to place a model item in a position outside the visible area, you have several options:

- Drag the model item to the edge of the modeling area. The visible area is moved automatically as long as you keep the model item in this position with the mouse button held down.
- Reduce the zoom factor (page 502) so that the new position will be visible, and drag the model item to the relevant position.

Using the keyboard

4. Select the model item you want to move.
5. Hold down the **Shift** key and press the arrow keys to move the model item in the corresponding direction by increments of one gridline.
6. Hold down the **Ctrl** key and press the arrow keys to move the model item in the corresponding direction by increments of one pixel, regardless of the grid scale set.
7. Hold down the **Alt** key and press the arrow keys to move the model item in the corresponding direction by increments of four gridlines.

You have moved a model item.

3.5.2.4.3.13 Change object symbol

You can change the symbol for selected objects if various symbols are available for them.

Prerequisite

The method filter in use (page 523) includes different symbols of the objects you selected.

Procedure

1. Click an object, or hold the **Ctrl** key pressed to select multiple objects of the same type.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Change symbol**. The list of object symbols available for the selected object(s) is shown.
4. Click the symbol you want to use from now on for the selected object/s in this model.

The symbol for the selected object is or the symbols of the selected objects are changed.

3.5.2.4.3.14 Modeling using the mini toolbar

You can model very effectively using the mini toolbar (page 580). By configuring (page 500) it you are quickly offered the object symbols (page 500) required for your model.

Prerequisite

Smart Modeling is disabled (page 501).

Procedure

1. Click a placed object symbol (page 552). The mini toolbar is shown.
2. In the mini toolbar, click the object symbol you want to place. A preview frame is displayed for the new object.
3. Move the mouse pointer to the modeling area. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
4. Click the position in the modeling area where you want to insert the object symbol. The object symbol is placed together with a connection to the source object and the name field for overwriting.
5. Enter a name. If you enter an existing name, existing objects are offered for selection. You can create a new object, select an existing one, or create a new one with the same name (page 558).
6. Press **Enter**.

The new object symbol is placed and the connection to the source object is created automatically.

3.5.2.4.3.15 Edit attribute

You can edit attributes of models, objects, and connections. You can customize the **Properties** tab (page 499) with the  **More** menu to see only the attributes you want to work with.

Prerequisite

The attribute you selected can be edited. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. If you want to edit model attributes, ensure that no model item is selected.
If you want to edit object or connection attributes, select the corresponding object or connection.
4. Display the relevant attribute (page 604) if it is not listed.
5. Move the mouse pointer over the attribute. Depending on the attribute, different editing buttons are displayed (page 614).
6. Change the value or the display options (page 604) of the attribute.

You have edited the attribute.

3.5.2.4.3.16 Directly format placed text attributes

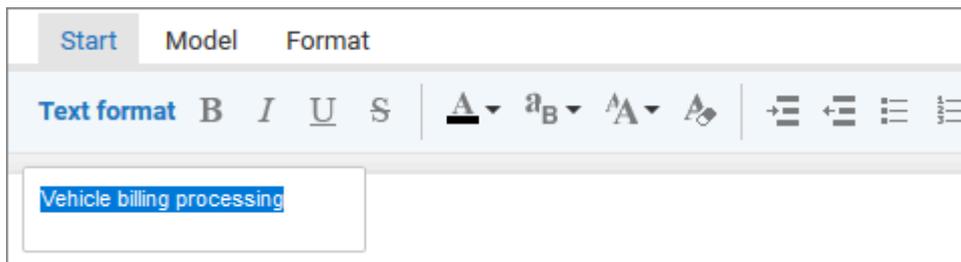
You can format free-form text and placed attributes of models, objects, and connection in the modeling area.

Prerequisite

The attribute you selected can be edited. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

Procedure

1. Double-click the free-form text or the placed attribute of a model, object, or connection so that the text is selected. The formatting toolbar is shown.
2. In the formatting toolbar, click the button for the formatting you want to assign to the selected attribute, for example,  **Increase indent**.



The formatting information is directly applied to the selected attribute.

3. Click an empty area in the modeling area. The attribute selection is undone. You have formatted the placed attribute.

3.5.2.4.3.17 Create connections

You can link objects using connections in different ways in the modeling area (page 504).

Procedure

When placing objects using the mini toolbar

Prerequisite

- An object symbol has already been placed in the modeling area.
- Smart Modeling is disabled (page 501).

Procedure

1. Click the placed object symbol. The mini toolbar is shown.
2. In the mini toolbar, click the symbol you want to place in the modeling area.
3. The **Select connection** box and the outline of the object is displayed. The currently used connection is marked with a preceding bar and is highlighted in bold.
4. Click on another connection or close the **Select connection** box with **✕ Close**.
5. Move the mouse pointer to the position to where you want to insert the object. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
6. Click the position in the modeling area where you want to insert the object symbol. The name of the object symbol is selected for overwriting by default.
7. If necessary, overwrite the previous name with the name of your choice and press Enter. The object symbol is placed in the modeling area and linked to the previously selected object symbol using the selected connection.

Subsequently using the Symbols bar

1. In the **Symbols** bar click  **Create connection**.
2. Click the object in the modeling area you want to connect with another object.
3. Click a target object that can be connected to the source object. If the method does not allow objects to be connected to one another, a prohibitory sign is displayed on the target object; the connection cannot be attached to this object.

Both objects are linked by a connection.

Subsequently using the mini toolbar

1. Click the object in the modeling area you want to connect with another object. The mini toolbar is shown.
2. In the mini toolbar, click  **Create connection**.
3. Click a target object that can be connected to the source object. If the method does not allow objects to be connected to one another, a prohibitory sign is displayed on the target object; the connection cannot be attached to this object.

Both objects are linked by a connection.

You have linked objects in the modeling area.

3.5.2.4.3.18 Determine the appearance of connections

You can determine the color, the line style and weight, the bridge height, and rounding intensity of connections.

Procedure

Determine the connection color

1. Select the connections you want to adjust.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Line color**. The color palette opens.
4. Click the color you want to apply.

The connection color is adjusted.

Tip

Using the color palette, you can define another color or reset the color to the default color.

Determine the line style and weight

1. Select the connections you want to adjust.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Line style**.
4. Click the solid, dashed, or dotted line to adjust the selected connections.
5. Click  **Line weight**.
6. Click the weight in points in which the connections are to be displayed.

The line style and the line weight of the selected connections are adjusted.

Determine the bridge height and rounding intensity

1. Open the model you want to adjust.
2. Activate the **Model** (page 576) tab bar.
3. Click  **Connection properties**. The **Edit connections** dialog opens.
4. Click the **Bridge height** field and specify the height of the bridge. The higher the value, the higher the bridge. A preview of the specified bridge height is displayed.
5. Click the **Rounding intensity** field and specify the degree of edge rounding for connections with directional changes. The higher the value, the stronger the rounding. A preview of the specified edge rounding is displayed.
6. Click **OK**.

The bridge height and rounding intensity of the current model's connections are adjusted.

You have adjusted the connections.

3.5.2.4.3.19 Insert graphic

You can place images and graphics in the modeling area in order to add further information to the model or to optimize the design. For example, you can optimize a model for representation purposes.

Procedure

1. Open (page 529) the relevant model.
2. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
3. Click  **Graphic**. The **Select graphic** dialog opens.
4. Click **Select file** and use the **Open** dialog to navigate to the directory in which the required graphic or image is stored.
5. Select the graphic or image and click **Open**.

The image or graphic is placed in the modeling area. You can change its size, drag it to another position, and place it behind model items (page 645), for example.

3.5.2.4.3.20 Select connected object

You can select the object that is linked to the selected object by a connection.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Select the occurrence of the relevant object in the modeling area.
3. Click the **Relationships** tab if it is not activated yet. The relationships of the selected object are listed.
4. Next to the name of the occurrence of a relationship  (connection (page 1140)), click  **More > Go to object**.

The connected object is selected in the modeling area.

3.5.2.4.3.21 Display and select connection

You can view and select the connection between a source and target object.

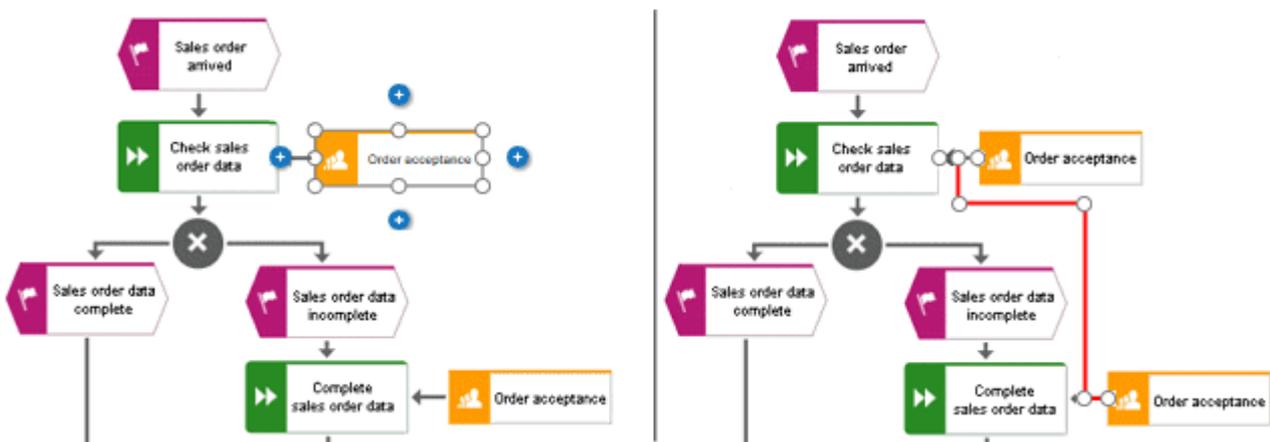
Procedure

1. Click **i** **Details**. The **Details** bar opens.
2. Select the occurrence of the relevant object in the modeling area.
3. Click the **Relationships** tab if it is not activated yet. The relationships of the selected object are listed.
4. Next to the name of the occurrence of a relationship  (connection (page 1140)), click **More > Display connection**.

The connection between source and target object is selected. If multiple occurrences of a source object are used in a model, any connections that do not yet exist between the occurrences and the target object are created and selected.

Example

The following graphic shows two occurrences of the **Order acceptance** object. If you select one of the two occurrences and enable the **Display connection** function for the **carries out** connection linking the selected occurrence to the **Check sales order data** object, a **carries out** connection is also created to the target object from the other object occurrence that had a connection only to the **Complete sales order data** object before.



3.5.2.4.3.22 Delete connection

You can delete connections that do not have any occurrences in models for specific objects.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Select the occurrence of the relevant object in the modeling area.
3. Click the **Relationships** tab if it is not activated yet. The relationships of the selected object are listed.
4. Next to the name of a relationship that has no occurrences in a model  (connection (page 1140)), click  **More** >  **Delete**.

If the connection no longer has any occurrences in any model, it is deleted. If it still has an occurrence in a model, a message is displayed and the connection is not deleted.

3.5.2.4.3.23 Display occurrences in an open model

You can display the usage of the selected object and connection occurrences in the open model.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Select the relevant occurrence in the modeling area.
3. Click the **Occurrences** tab if it is not activated yet. The usage of the selected occurrence is displayed in the areas **In this model** and **In other models**.
4. Navigate to the individual occurrences in the model, if multiple occurrences exist. To do this, use the navigation buttons in the **In this model** area.
 - d. From top to bottom or left to right: Click the  right arrow.
 - e. From bottom to top or right to left: Click the  left arrow.
 - f. Select occurrence directly: Click  direct selection and then the number of the relevant occurrence.

The occurrence selected is highlighted. If it is placed outside the visible area, the model display is moved automatically so that the selected occurrence is placed in the visible area.

3.5.2.4.3.24 Display occurrences in other models

You can display the usage of the selected object and connection occurrences in other models than the open model.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Select the relevant occurrence in the modeling area.
3. Click the **Occurrences** tab if it is not activated yet. The usage of the selected occurrence is displayed in the areas **In this model** and **In other models**.
4. In the **In other models** area, click the name of the model in which the occurrence is to be selected.

The selected model opens in a new tab and the occurrence is highlighted. If multiple occurrences of the object exist in this model, the top one is highlighted.

3.5.2.4.3.25 Display relationships of selected objects

You can display the relationships of selected objects (page 584).

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Select the occurrence of the relevant object in the modeling area.
3. Click the **Relationships** tab if it is not activated yet.

The relationships of the selected object are listed. If a relationship has an occurrence as a connection (page 1140), you can select the object (page 567) that is linked to the selected object by the connection. You can also delete connections that do not have any occurrences in models.

3.5.2.4.3.26 Delete model items

You can delete model items from the modeling area (page 504).

Procedure

1. Select the model items you want to delete.
2. Click  **Delete** in the tab bar, or press **Del**, or **Backspace**. The selected elements are deleted without prompting. As long as you have not saved the model you can undo the deletion by clicking  **Undo**.

You have deleted model items from the modeling area.

3.5.2.4.3.27 Refresh model appearance

You can refresh the model appearance in order to display current content from the database. This is useful if several people work with the model items. For example, names of objects that have an occurrence in the model you have opened may have been changed.

Procedure

1. Make the relevant changes in your model.
2. Click  **Refresh** if you want to compare the most current state of your model with the changes from other users.

The current data is read from the database and the appearance of your model is refreshed. If for example, the names of the objects used in the model were changed the new names are displayed.

3.5.2.4.3.28 Save model

Save your model.

Procedure

1. Make the required changes.
2. Click  **Save** in the tab bar.

Your changes are saved. You or others can access this model status at a later time.

3.5.2.4.3.29 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.3.29.1 Bars and buttons

3.5.2.4.3.29.1.1 What are tab bars for?

Tab bars enable you to access the relevant buttons within a specific context.

All tab bars contain frequently used buttons (page 511). This means that you do not need to switch between tab bars to access these buttons.

START TAB BAR

The **Start** tab bar groups the functions related to the representation and placement of model items (page 574).

MODEL TAB BAR

The **Model** tab bar groups the functions related to the layout and the graphic of models (page 576).

FORMAT TAB BAR

The **Format** tab bar groups the functions related to the presentation of written data in models (page 577).

BPMN TAB BAR

The BPMN tab bar is displayed if you have opened a BPMN diagram. It groups the functions that are used for the convenient editing of BPMN diagrams (page 579).

3.5.2.4.3.29.1.2 What general buttons are available?

The following general buttons are available for each tab bar.



Save: Saves your changes in the database.



Undo: Undoes editing steps.



Redo: Redoes editing steps that were undone.



Refresh: Refreshes the display. Reloads the data from the database and thereby also shows any changes made by a different editor in the meantime.



Delete: Deletes selected model items.



Cut: Cuts selected items and saves them to the clipboard.



Copy: Copies selected items to the clipboard.



Paste: Pastes the content of the clipboard into the model. If an object is on the clipboard, an occurrence copy (page 657) is inserted. Click the arrow next to the **Paste** icon if you want to paste a definition copy.

3.5.2.4.3.29.1.3 What buttons does the Start tab bar have?

Beside the general buttons (page 511), the **Start** tab bar provides the following buttons.



Format painter: Transfers the format (page 637) from one item to another.



Fill color: Colors the item in the selected color (page 637).



Equation 1: Edit

Line color: Colors the line of the item in the selected color (page 639).



Line style: Assigns a different style to selected items (page 640).



Line weight: Assigns a different line weight in points to selected items (page 640).



Appearance: Assigns other properties to or removes properties from selected items (page 641), such as **Shaded**, **3-D effect**, and in addition, **Active** for objects.



Change symbol: Changes the symbol (page 562) of a selected object or the symbols of all selected objects of a type.



Attribute placement: Places attributes at the preset positions.



Assignments: Assigns a new model to the selected object (page 643). The type and name of the new model can be selected.



Arrange: Positions selected items (page 645) behind or in front of other items.



Group/Ungroup: Groups selected items (page 645), so that they can be treated like a single item or ungroups them (page 646).



Align: Aligns selected items in the model section regarding to each other (page 646).



Match size of items: Matches the size of selected model items with each other (page 646).



Go to: Opens the **Go to** menu.



Show in repository: Opens a new tab showing the repository for the selected object or model and enables the relevant check box.



View publication: Opens the fact sheets (page 1144) of the current model in a new tab. The **Overview** fact sheet is activated.



Alfabet: Provides functionality for establishing connections (page 652) with Alfabet.

3.5.2.4.3.29.1.4 What buttons does the Model tab bar have?

Beside the general buttons (page 511), the **Model** tab bar provides the following buttons.



Check diagram: Starts the selected semantic check (page 785) for the current model or the selected objects.



Layout: Automatically creates a new layout for the model (page 650).



Horizontal space: Inserts space in your model (page 650) from left to right.



Vertical space: Inserts space in your model (page 650) from top to bottom.



Export graphic: Exports the graphic of the model (page 648) to your download area.



Connection properties: Determines the bridge height and rounding intensity of connections (page 566).



Modeling area: Enables or disables Smart Modeling (page 501), enables or disables Guided Modeling (page 501), uses or hides (page 501) the grid in the modeling areas, and sets the grid width (page 502).



Freeze/Unfreeze: Allows you to exclude columns and rows from scrolling (page 594).



Background color: Changes the background (page 641) color of an open model.



Apply template: Provides the available model templates for selection (page 502).

3.5.2.4.3.29.1.5 What buttons does the Format tab bar have?

Beside the general buttons (page 511), the **Format** tab bar provides the following buttons.



Format painter: Transfers the format (page 637) from one item to another.



Font format: Provides the available font formats for selection.



Bold: Applies bold formatting to a text.



Italic: Applies italic formatting to a text.



Underline: Applies underline formatting to a text.



Strikethrough: Applies strikethrough formatting to a text.



Font color: Opens the color palette for you to change the color of the selected text.



Font: Provides all fonts available for the selected text.



Font size: Enables you to change the font size for the selected text.



Reset character formatting: Undoes all formatting changes.



Increase indent: Increases the text indent from the left margin.



Decrease indent: Decreases the text indent from the left margin.



Bullets: Applies a bullet to each paragraph of the selected text.



Numbering: Turns the paragraphs of the selected text into a numbered list, starting at 1.



Align left: Aligns selected text to the left.



Centered: Aligns selected text to the center.



Align right: Aligns selected text to the right.

3.5.2.4.3.29.1.6 What buttons does the BPMN tab bar have?

Beside the general buttons (page 511), the **BPMN** tab bar provides the following buttons.



Change symbol: Changes the symbol (page 562) of a selected object or the symbols of all selected objects of a type.



Add lane: Adds a new lane (page 706) to a pool or lane.



Insert lane: Inserts a selected lane in the selected pool or lane (page 707).



Delete pool or lane: Deletes the selected pool or lane (page 708).



Move lane: Moves the selected lane (page 707) in the required direction.



Transform into call conversation: Transforms communication elements into call conversations (page 709).



Change type of sequence flow: Specifies the type of a sequence flow (page 709).



Collapse subprocess: Collapses a subprocess object (page 709).



Expand subprocess: Expands a subprocess object (page 710).



Figure 1: Edit

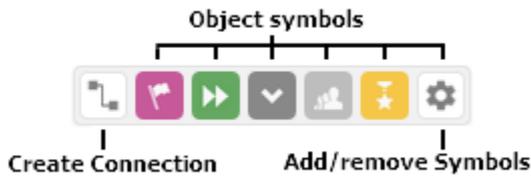
Edit: Opens the assigned model contained in the subprocess (page 710) on a separate tab for editing.



Select global reference: Opens the dialog **Select global process or task** to assign it to a Call activity (page 710).

3.5.2.4.3.29.1.7 What is the mini toolbar for?

The mini toolbar provides you with exactly the object symbols that can be linked to the selected object using a connection.



When you place an object symbol from the mini toolbar in the modeling area, a connection between the selected object and the new object symbol is created at the same time. In addition, you can use the mini toolbar to create connections to existing objects.

The mini toolbar is configured for each object type. When you click an object, the mini toolbar provides the object symbols you selected for the underlying object type.

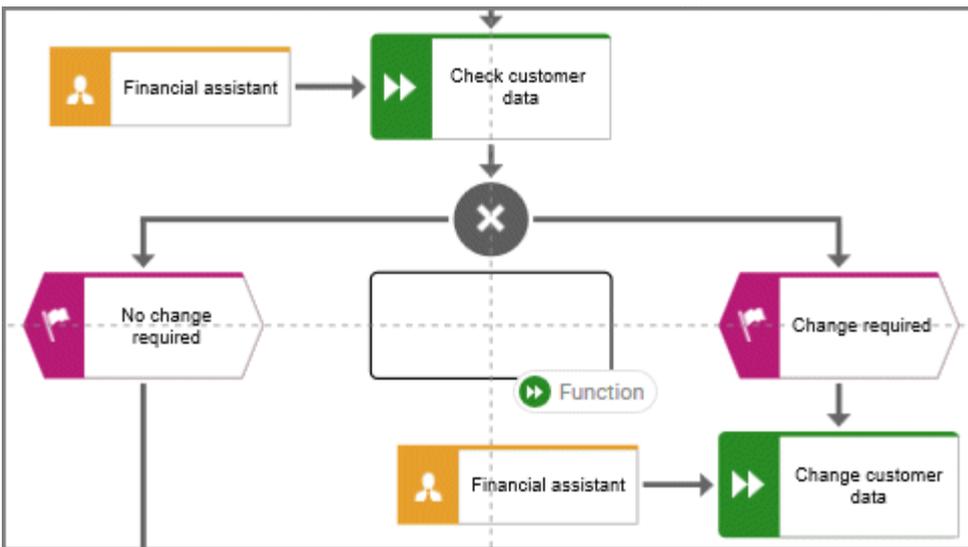
3.5.2.4.3.29.2 Model display

3.5.2.4.3.29.2.1 What is Guided Modeling for?

Guided Modeling supports you in placing or moving items. When you place or move objects or connections in a model, lines and arrows appear informing you of the orientation and distance of the items from adjacent items. The items snap into place at the point where Guided Modeling "suggests" that they be positioned.

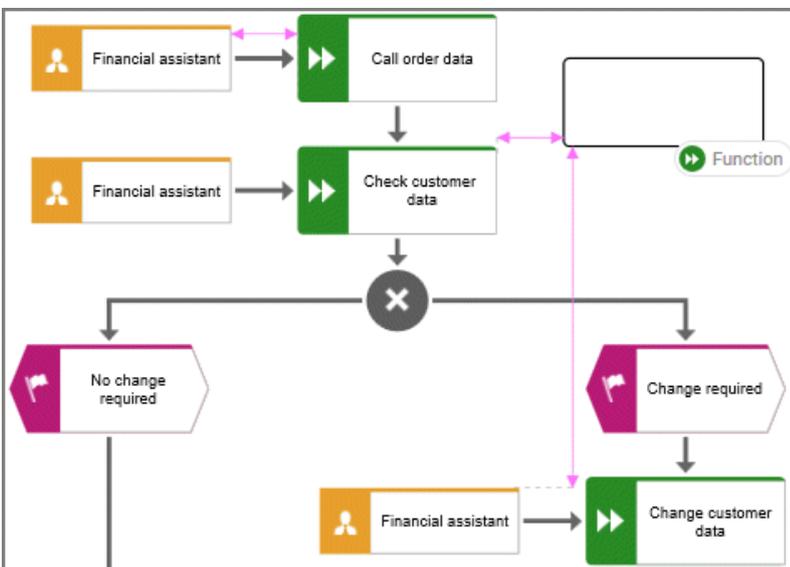
If Guided Modeling (page 501) and the grid (page 502) are switched on, Guided Modeling has priority when you position items.

Lines show the horizontal and vertical alignment to the adjacent items.



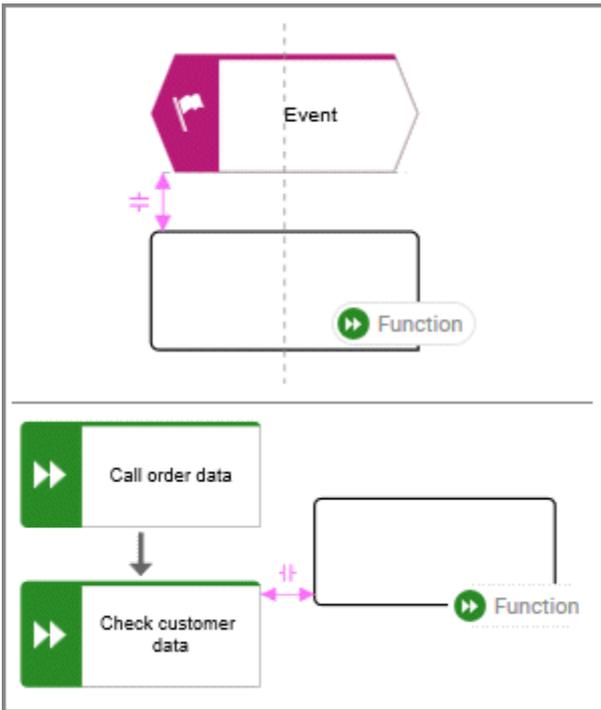
Guided Modeling always considers the nearest relevant items for the alignment lines.

Arrows indicate the distance between the moving object and the adjacent items.



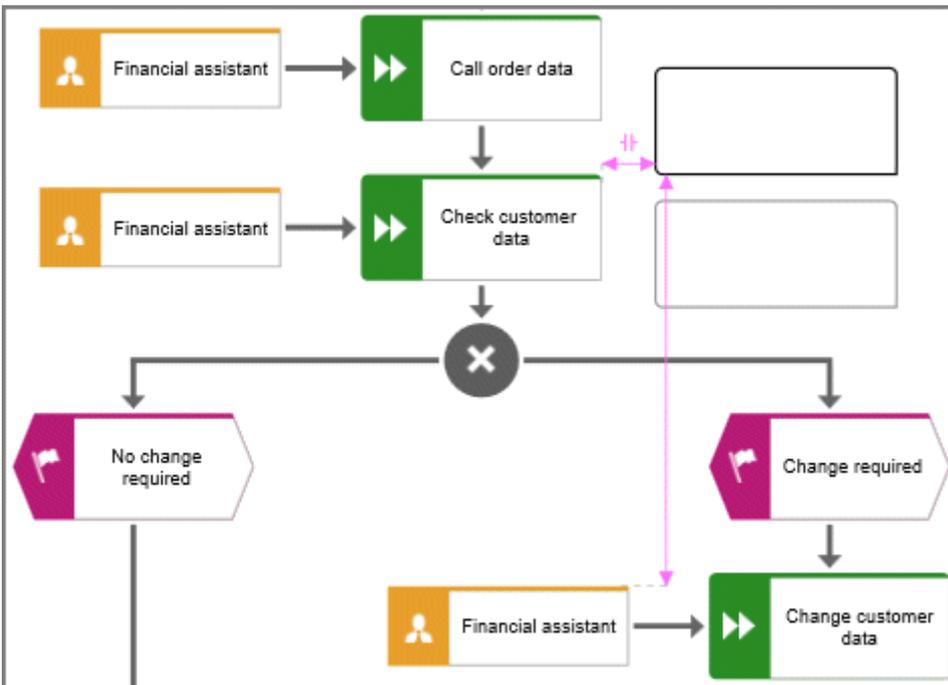
Distances are only displayed for items that are in the visible area of the modeling area.

When placing objects, the default distance is indicated by the following cursor: 



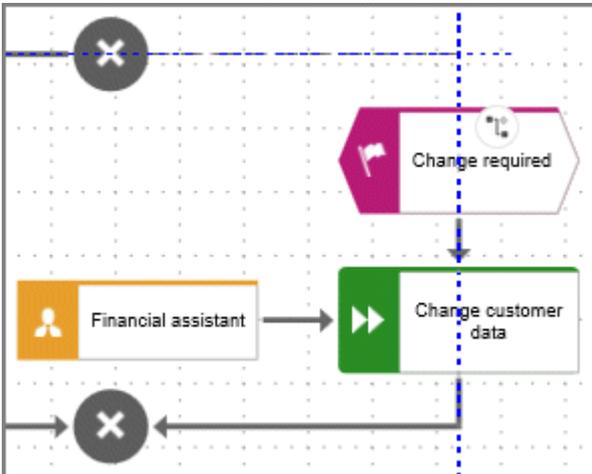
The default distance is the distance set for the horizontal and vertical item spacing of an optimized layout (page 650). To set the default distance, you must perform an optimized layout with an item spacing setting (page 552).

Guided Modeling is also provided for multi selections and connections.



The item of several selected items that you click to drag is used as the reference item. It is highlighted in bold when dragged and the orientation and distance guides are displayed for this item.

Guided Modeling for connections allows you to connect connections centrally at the border of the object regardless of the grid. (The blue highlighting of the guides in the screenshot serves only for clarification.)



3.5.2.4.3.29.2.2 How are object relationships displayed by symbols?

The relationships are identified by the following symbols:



Symbol for relationships for which an occurrence or an implicit connection exists in the current model.



Symbol for assignment relationships (implicit relationships).



Symbol for relationships for which no occurrences exist in the current model and that are not implicit either.

For example, if a connection was created between objects **A** and **B** and object **B** has been deleted, the relationship is displayed when object **A** is selected.

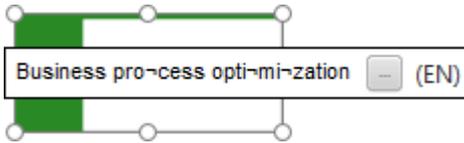
3.5.2.4.3.29.2.3 What are optional hyphens for?

The purpose of optional hyphens is to specify separation points for longer words. Where required, automatic separation occurs at these points and optional hyphens are inserted.

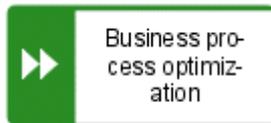
When entering an attribute text, for example, optional hyphens can be specified. They are indicated by a placeholder (↔) during input. If, for example, optional hyphens are inserted for an object name, the name is automatically adjusted if the size of the object is changed.

Example

You insert optional hyphens when entering the text:



When you exit the entry by clicking in the model background, the name is separated.



When you enlarge the object, the name is separated at a different place and provided with a hyphen. The previously displayed hyphens are removed.



3.5.2.4.3.29.2.4 What to consider when placing objects in/on objects

You can place objects on other objects (page 601) or in other objects (page 601). The difference between these two procedures is as follows: When placing an object **on** another object you specify that no implicit connection will be created between the objects. In contrast, when placing an object **in** another object you specify that an implicit connection is to be created between the objects.

You can place multiple objects of one type in an object at once. If you want to embed two objects at once and object 1 already has a connection to the enclosing object while object 2 has none, proceed as follows when creating connections:

- Select the connection that exists between object 1 and the enclosing object: This connection now links both objects to the enclosing object.
- Select a connection other than the one that exists between object 1 and the enclosing object: Object 1 is now linked to the enclosing object via two connections - the existing connection and the one you have selected. Object 2 uses the new connection.

Objects that were placed in other objects are also moved when the enclosing object is moved. If an enclosing object is selected, the embedded object is selected as well. This indicates clearly that an object is embedded in another object. In contrast, a non-embedded object is neither selected nor moved when the object on which it was placed is selected or moved.

You can drag an embedded object from an enclosing object to the model background. The connections linking the objects are then displayed.

3.5.2.4.3.29.2.5 Which items can be copied from one model to another?

You can copy graphic objects, such as circles, free-form texts, graphics, and objects, from one model to another.

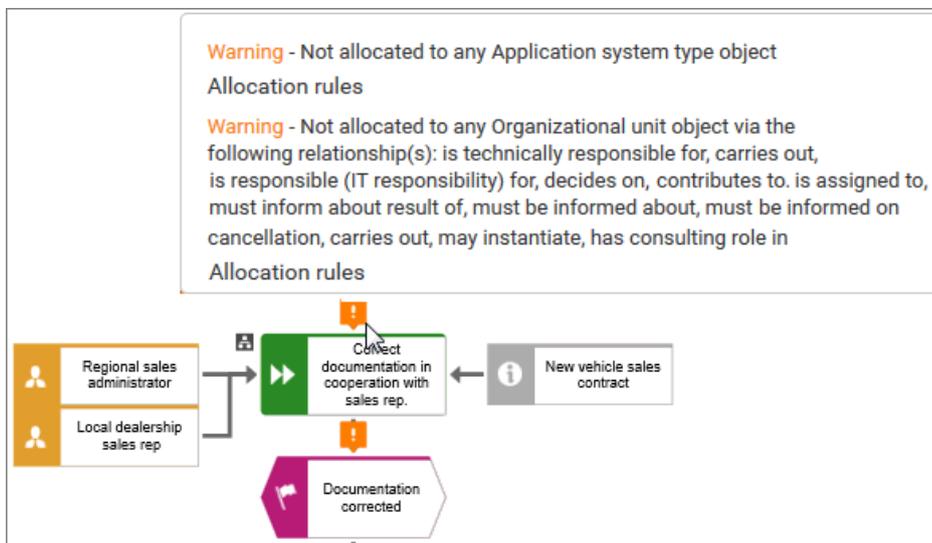
However, for an object to be pasted in the target model it has to be allowed there by the method. For example, if you copy functions and organizational units in the source model, only the organizational units will be pasted into a model of the **Organizational chart** type because functions are not allowed in this model type. The corresponding information is provided by the preview frames of the copied functions, showing as crossed out with an X when they are pasted into the organizational chart.

3.5.2.4.3.29.2.6 How are errors, warnings, and notes marked in the model?

If a semantic check detects errors, warnings, or notes, the corresponding object is marked in the model.

Severity	Marker
Error	
Warning	
Note	

If, for example, a warning is found, the warning marker is placed above the corresponding object. When you position the mouse pointer over the marker, additional information about the warning is displayed.



You can show detailed information in the **Semantic checks** bar by expanding an entry.

#	Item	Finding type	Description
32	Correct documentation in cooperation with sales rep.	Allocation rules	Not allocated to any Organizational unit object via the following relationship(s): is technically responsible for, carries out
33	Correct documentation in cooperation with sales rep.	Allocation rules Warning	Not allocated to any Application system type object Rule: Function can be supported by application system type (1:n) This rule checks whether at least one application system type is allocated to each function.

3.5.2.4.3.29.3 ARIS and Alfabet

3.5.2.4.3.29.3.1 What is Alfabet?

Alfabet is an IT planning and portfolio management system. Based on answering the questions, when, where, how and why to make changes in the IT portfolio, it is used to increase IT investment returns and reduce transformation risks.

3.5.2.4.3.29.3.2 How do ARIS and Alfabet interact?

You can use the **ARIS - Alfabet Interoperability Interface** to reuse objects from connected ARIS databases and Alfabet databases in the respective other system. This is done interactively and for one object at a time or as a batch job and for multiple objects. By default, data from applications can be transferred from Alfabet to the ARIS database, while processes and functions can be transferred from ARIS to the Alfabet database.

It is easy to navigate between the systems. For example, from a business process in Alfabet, you can jump to the corresponding function or to a model in ARIS Connect that contains the function.

3.5.2.4.3.29.3.3 When is the Alfabet button shown?

When Alfabet is configured with ARIS Architect, the Alfabet button is available in the Start (page 574) tab bar. You can find the complete configuration description in the ARIS Architect online help.

3.5.2.4.3.29.4 Macros

You can apply macros to your models in ARIS Connect. The macros are executed on the server, which means that the models are locked when the macros are applied.

3.5.2.4.3.29.4.1 What are macros?

Macros are command sequences with which recurring actions can be automated.

Macros can be started manually in ARIS Architect or automatically in ARIS Architect and ARIS Connect. To start macros automatically, you can define that a macro is started when a certain event occurs (page 589).

For example, you can specify that the **Output model information** report is generated whenever a model of a specific type is saved (event **Model saved**). Or you can specify that whenever a new object occurrence of a specific object type is placed in a model of a specific model type the object symbol is always colored blue (event **Object occurrence created**).

3.5.2.4.3.29.4.2 Where to choose macro events for ARIS Connect Designer?

On the **Administration** tab in ARIS Architect, you can choose the macro events to start macros (page 589) in ARIS Connect Designer.

Click **ARIS > Administration** to open the tab.

Click **Evaluations > Macros** to open the macro categories.

In the appropriate category, right-click the relevant macro and click **Properties**.

In the **Property** dialog, click **Context** and enable the option button **Event**.

Click **Select event**. In the dialog, the **Available in ARIS Connect** column in the dialog box indicates the events that can be used in ARIS Connect to start a macro.

3.5.2.4.3.29.4.3 What does the addition vetoable in macro names mean?

Some macro names have the addition **vetoable**. This indicates the ability of a macro developer to suppress standard functionality.

You can define a macro that starts, for example, a semantic check automatically when a user saves a model. The semantic check is triggered by the **Model is to be saved (vetoable)** event. To suppress the save operation for non-compliant models, you must include the line **Context.setProperty("event.veto", "1")** into the corresponding statement block. The model is saved only if the semantic check rules are met.

3.5.2.4.3.29.5 Keyboard shortcuts for ARIS Connect Designer

The following shortcuts are available in ARIS Connect Designer (page 474).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Alt	Temporarily switches off Guided Modeling and grid (page 556) when you drag items.
Alt + down arrow	Moves selected objects down four grid lines.
Alt + F4	Closes the web browser. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Alt + left arrow	Moves selected objects four grid lines to the left.
Alt + - (minus)	Inserts an optional hyphen (page 559) at the cursor position in a text.
Alt + right arrow	Moves selected objects four grid lines to the right.
Alt + up arrow	Moves selected objects up four grid lines.
Backspace	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Ctrl + A	Selects all items.
Ctrl + C	Copies selected items to the clipboard. This enables you to paste copied items from the clipboard into models/diagrams and into other Windows programs.
Ctrl + down arrow	Moves selected items downwards by increments of one pixel.
Ctrl + End	Displays the bottom right pane of the modeling area.
Ctrl + Enter	Inserts a line break for text attributes, such as free-form texts, object names, etc.
Ctrl + F	Opens the Find bar.
Ctrl + F4	Closes the model tab. If changed models have not yet been saved, the system displays a message to notify you. You can cancel the dialog and save the model or leave the model page without saving.
Ctrl + Home	Displays the upper left pane of the modeling area.
Ctrl + left arrow	Moves selected items to the left by increments of one pixel.
Ctrl + Page down	Switches to the next web browser tab from left to right if your web browser supports changing tabs using the keyboard.

Shortcut	Action
Ctrl + Page up	Switches to the next web browser tab from right to left if your web browser supports changing tabs using the keyboard.
Ctrl + right arrow	Moves selected items to the right by increments of one pixel.
Ctrl + S	Saves your changes.
Ctrl + Shift + V	Inserts a definition copy of an object if an object is in the clipboard.
Ctrl + up arrow	Moves selected items upwards by increments of one pixel.
Ctrl + V	Pastes the content of the clipboard, if this is content that can be placed in the modeling area. If an object is in the clipboard, an occurrence copy of the object is inserted.
Ctrl + X	Cuts selected items and copies them to the clipboard.
Ctrl + Y	Redoes editing steps that were undone.
Ctrl + Z	Undoes preceding editing steps.
Del	Removes selected object symbols or deletes selected items, such as free-form text and graphic objects.
Down arrow	Moves the modeling area contents up (the contents of the modeling area that are further down will be displayed).
Enter	Ends the input.
Esc	Removes selections and closes dialogs. Closing dialogs with the ESC key is the same as clicking Cancel .
F2	Selects the selected text attribute of an element or the object name of a selected object for editing.
F3	Opens the Find bar. When the find bar is open, pressing the F3 key jumps to the next occurrence of the searched term.
F5	Updates the current view based on the database changes.
F11	Turns full screen mode on or off if your web browser supports full screen.
Left arrow	Moves the modeling area contents to the right (the contents of the modeling area that are further left will be displayed).
- (minus)	Reduces the display of the model content by 10%.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
+ (plus)	Enlarges the display of the model content by 10%.

Shortcut	Action
Right arrow	Moves the modeling area contents to the left (the contents of the modeling area that are further right will be displayed).
Shift	Keeps the shapes of a circle and a square (page 631) when you place and scale the graphic objects Circle/Ellipse and Square/Rectangle .
Shift + Del	Deletes (page 544) a structurally relevant object (page 1154) without creating a connection between the remaining objects when you use Smart Modeling. (page 534)
Shift + down arrow	Moves the object one grid to the left.
Shift + left arrow	Moves the object down one grid.
Shift + Page down	Moves the contents of the modeling area page by page to the right (the contents of the modeling area that are further left will be displayed).
Shift + Page up	Moves the contents of the modeling area page by page to the left (the contents of the modeling area that are further right will be displayed).
Shift + right arrow	Moves the object one grid to the right.
Shift + up arrow	Moves the object one grid up.
Up arrow	Moves the modeling area contents down (the contents of the modeling area that are further up will be displayed).

3.5.2.4.3.29.6 Keyboard shortcuts for the Select attribute dialog

The following shortcuts are available in the **Select attribute** dialog with which you can add attributes on the Properties tab (page 604).

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

Shortcut	Action
Down arrow	Moves the focus down to the next attribute if the focus is in the attribute list field.
End	Moves to the lower attributes if the focus is in the attribute list field.
Enter	Closes the dialog and adds the selected attributes when the focus is on the OK button, or closes the dialog and adds no attributes when the focus is on the Cancel button.
ESC	Closes the dialog without changes. Pressing this key corresponds to clicking Cancel .
F5	Updates the current view based on the database changes. The Select attribute dialog is closed without changes.
F11	Turns full screen mode on or off if your web browser supports full screen. The Select attribute dialog remains open.
Home	Moves to the upper attributes if the focus is in the attribute list field.
Page down	Scrolls the screen down. The scroll distance may vary depending on the application.
Page up	Scrolls the screen up. The scroll distance may vary depending on the application.
Space	Toggles the check box of the attribute on which the focus is located.
Tab	Jumps from the Search field to the Show specified attributes only check box, the attribute list field, in the attribute list, the OK button, and the Cancel button.
Up arrow	Moves the focus up to the next attribute if the focus is in the attribute list field.

3.5.2.4.4 Extended editing

Besides the basic editing options, Model Editor provides you with additional functionality, such as copying formatting (page 637), creating groupings (page 645), applying various colors (page 638), inserting user-defined descriptions (page 635), or automatic resizing of objects (page 646).

3.5.2.4.4.1 Use frozen model column/row

You can freeze parts of models to prevent them from scrolling. This allows you to display objects of a model side-by-side that are placed far apart, and to work on different parts of the model.

FREEZING COLUMNS/ROWS IN DIFFERENT MODEL TYPES

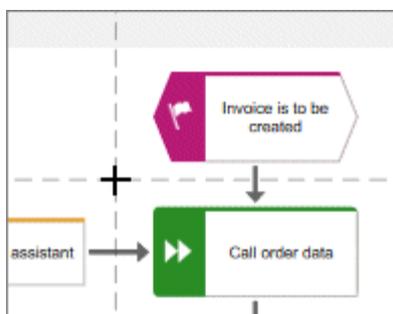
You can freeze the column and row of non-lane models and lane models (page 1147). A non-lane model is, for example, a model of type **EPC**, a lane model, for example, a model of type **Business segment matrix**.

For non-lane models, you can freeze the column and row in parallel. You can also specify for non-lane models that the frozen column and row are visible even if no scrolling has taken place.

FREEZE COLUMN/ROW

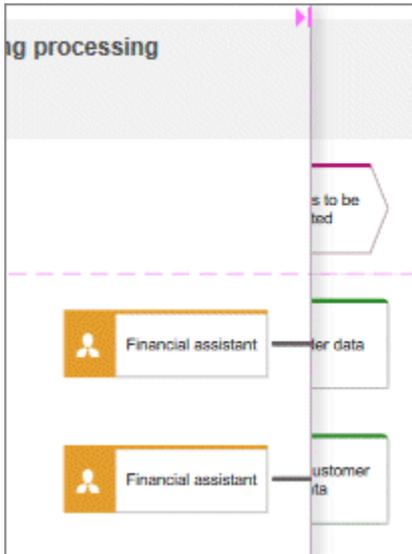
You can freeze the column and row at any position in one go. The following example is based on a model of type **EPC**.

1. Activate the **Model** (page 576) tab bar.
2. Click  **Freeze/Unfreeze > Freeze column/row**. Position lines are displayed in the modeling area.

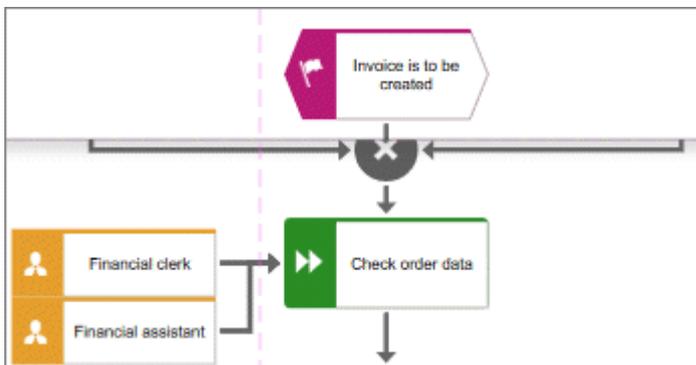


3. Click the position where the row and column should be frozen.

- If you scroll to the right, a separator is displayed between the frozen column and the scroll area on the right side.



- If you scroll down, a separator is displayed between the frozen row and the scroll area below.



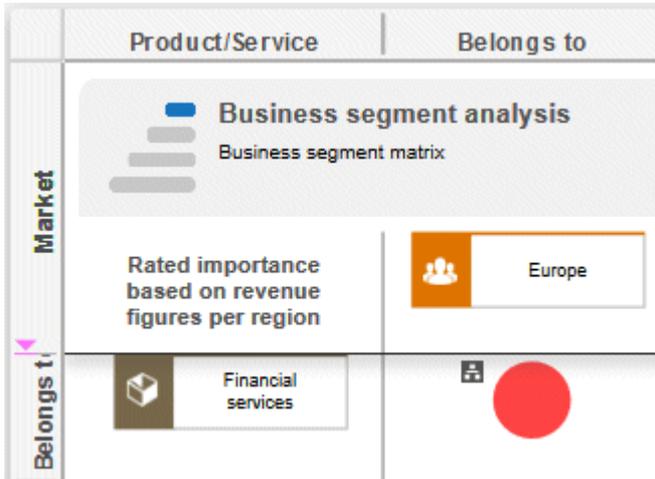
- If you scroll to the right and down, both separators are displayed.

You have frozen a column and a row and moved the scrollable area.

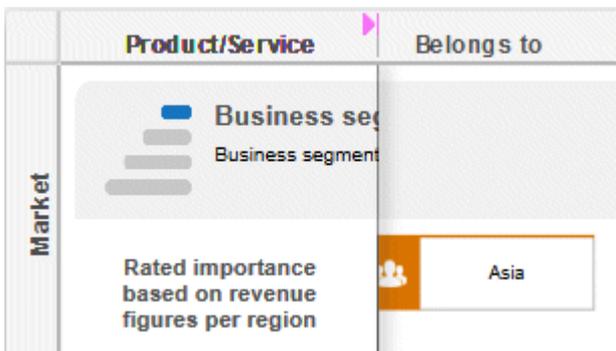
FREEZE COLUMN/ROW IN SWIMLANE MODELS

You can freeze the first row or the first column of a lane model (page 1147).

1. Activate the **Model** (page 576) tab bar.
2. Freeze the required area.
 - If you want to freeze the first row, click  **Freeze/Unfreeze > Freeze first row**.
The first row is frozen and therefore marked with a downward arrow. If you scroll down, a separator is displayed between the frozen row and the scroll area below.



- If you want to freeze the first column, click  **Freeze/Unfreeze > Freeze first column**.
The first column is frozen and therefore marked with an arrow to the right. If you scroll to the right, a separator is displayed between the frozen column and the scroll area on the right side.



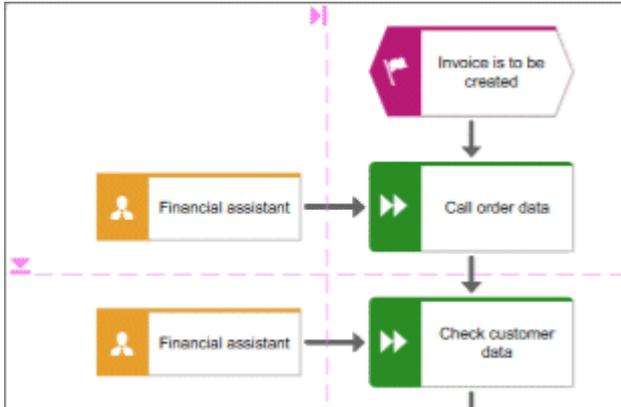
You have frozen a column or a row of a lane model and moved the scrollable area.

SHOW FROZEN COLUMN/ROW

You can show frozen columns/rows. This allows you to recognize the frozen column and/or row even if none of the scrollable areas in the model have moved.

1. Activate the **Model** (page 576) tab bar.
2. Freeze a column and/or row in the non-lane model, for example, in a model of type EPC.
3. Click  **Freeze/Unfreeze > Show frozen column/row**.

The frozen column/row is indicated by an arrow pointing to the scrollable area, even if you have not moved any of the scrollable areas in the model.



You have enabled the frozen column and row display.

UNFREEZE COLUMNS/ROWS

Click  **Freeze/Unfreeze > Unfreeze columns/rows**.

The freezing of columns and rows is removed.

3.5.2.4.4.2 Create a new model using an assignment

The assignment enables you to describe objects in independent models in more detail, for example. Assigned models are displayed by way of an  assignment icon at the object and can be opened by double-clicking the assignment icon.

Procedure

1. In the open model, click the object to which you want to assign a model.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Assignment** >  **Create assignment**. The dialog opens.

Select the required model type. The model types that are allowed for the selected object by the method and by the method filter (page 523) in use are available for selection. The name of the selected object is suggested as a model name.

3.5.2.4.4.3 Use objects

3.5.2.4.4.3.1 Place objects directly below each other

You can easily place objects directly below each other.

Procedure

1. Enable Guided Modeling. (page 501)
2. Drag the object to the border of the object under which you want to position it directly. It snaps into place here.
3. Release the mouse button.

The object is now placed directly below the other object.

3.5.2.4.4.3.2 Change object size when placing

You can place an object and determine its size at the same time.

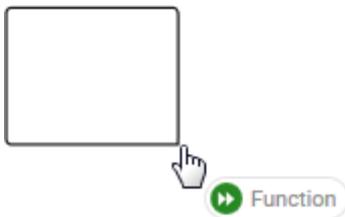
Procedure

USING THE SYMBOLS BAR

1. In the Symbols bar, click the object you want to place.
2. Move the mouse pointer to the modeling area, click, and hold down the mouse button.



3. Move the mouse pointer in the direction in which you want to resize the object. The position of the upper left object corner is the anchor point.



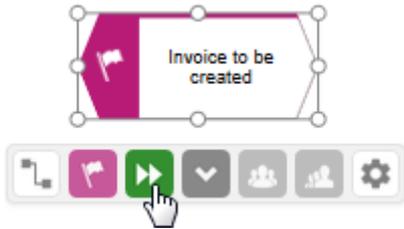
4. Release the mouse button when the object has the required size.



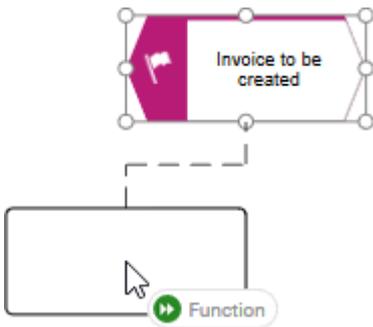
You have placed an object and determined its size at the same time.

USING THE MINI TOOLBAR

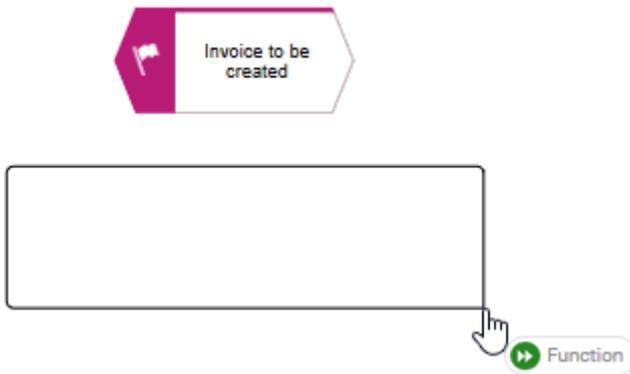
1. In the mini toolbar (page 580), click the object you want to place.



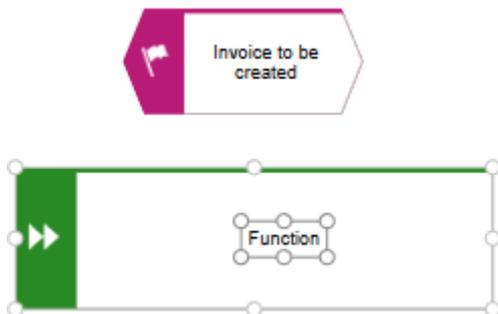
2. Place the preview frame of the object so that the upper left corner of the object is placed as anchor point at the position you want.



3. Move the mouse pointer in the direction in which you want to resize the object.



4. Release the mouse button when the object has the required size.



You have placed an object and determined its size at the same time.

3.5.2.4.4.3.3 Place an object in an object

You can place an object in another object. The object then overlaps the object in which it is placed and has an implicit connection to this object. Implicit connections are connections that are not being displayed while an object is placed in another object.

Procedure

1. Click the object you want to place in another object, and hold down the mouse button.
2. Drag the object on top of the other object, position it inside the other object's borders, and release the mouse button. If multiple connections are available between the two objects, the connection selection is displayed. A right arrow is added to the outgoing connections of the embedded object, while a left arrow is added to the incoming connections.
3. Click the connection you want to draw between these two objects. The connection created is an implicit connection, which means that it is not displayed while the object is embedded in the other object.

The object is now placed in the other object. Due to the existing implicit connection, the embedded object is also selected or moved when the object in which it was placed is selected or moved.

Tip

You can place multiple objects of one type in an object at once.

3.5.2.4.4.3.4 Place an object on an object

You can place an object on another object. The object then overlaps the object on which it is placed, but has no implicit connection to this object. Implicit connections are connections that are not being displayed while an object is placed in another object.

Procedure

1. Click the object you want to place on another object, and hold down the mouse button.
2. Drag the object on top of the other object, position it inside the other object's borders, and release the mouse button. The connection selection is displayed.
3. Click **× No connection**. Thus, no connection is created between the two objects.

The object is now placed on the other object. Due to the lack of an implicit connection, the embedded object is neither selected nor moved when the object on which it was placed is selected or moved.

3.5.2.4.4.3.5 Find objects in an open model

You can have objects selected in the modeling area. If the object is not located in the visible area of the modeling area the visible area is moved and the object is displayed as selected in the visible area.

Procedure

1. Click the  **Find** bar button or press **Ctrl + F**. The Find bar opens.
2. Enter a part of the name or the entire name for the object to be found.
3. Click either  **Search down** or  **Search up**, depending on the direction in which you want to search for objects. The next object whose name contains the term entered is selected. If it is located outside of the visible area it is placed in the visible area.
4. Click  **Search down** or  **Search up** again. The next object with the term in its name is selected.

Each time you click the up and down buttons the next occurrence is selected. If a corresponding object cannot be found in the one direction the first occurrence is selected again.

3.5.2.4.4.3.6 Show where object occurrences are used

You can display where occurrences of an object or a connection are used and select the required occurrence using the navigation controls.

Procedure

1. Select an object in the model.
2. Click  **Details**. The **Details** bar opens.
3. Click the **Occurrences** tab. The occurrences of the selected object are listed. If more than one occurrence exists in the current model, the number of the selected occurrence and the total number of occurrences are displayed next to the object name.
4. Click the left or right arrow to navigate to the next occurrence in the model. The next occurrence is selected and its number updated.
5. To directly select an occurrence, expand the drop-down list and click the occurrence number.
6. To open a model that contains an occurrence of the selected object, click the name of the model in the **In other models** area. The model opens and the first occurrence of the object is selected. If there is no **Diagram** fact sheet for the occurrence, the first fact sheet (page 1144) is shown, for example, **Overview**

In the **In other models** area, all models are displayed to which you have at least read access. You switched between the occurrences of an object using the navigation controls.

3.5.2.4.4.4 Use attributes

You can use attributes to describe and distinguish between models, objects and connections. You can place attributes directly in the modeling area (page 608). You can specify that the attribute name is displayed (page 610) in addition to the attribute value and, for specific attributes, that the attribute value is displayed as a symbol (page 610).

3.5.2.4.4.4.1 Customize Properties tab

You can show additional attributes or specify whether and when attributes are to be shown.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. Click  **Edit language** if you want to show (page 605) an additional language column for language-specific attributes. You can select an additional database language and view and edit it next to the language currently used.
4. Click  **Add** in the **Properties** tab. The **Select attribute** dialog opens.
5. If you want to add only specified attributes, enable the **Show specified attributes only** check box. You can restrict the result of displayed attributes using a search term.
6. Enter a search term for the attributes you want to display. The attribute type groups that contain attributes whose names contain the term you entered are expanded and the attributes are displayed.
7. Enable the check boxes of the relevant attributes.
8. Click **OK**. The selected attributes are added to the **Properties** tab.
9. Click  **More** next to the attribute whose visibility you want to specify.
10. Click  **Hide always** if you want to hide the attribute from the **Attributes** tab even if a value has been specified. For the attribute to be displayed later, you must select it explicitly by clicking **Add**.
11. Click  **Hide, if not specified** if you want the attribute to be displayed on the **Attributes** tab only if a value has been specified.
12. Click  **Place attribute** and then the relevant position in the modeling area if you want the attribute value to be displayed in the model.
13. Click  **Delete attribute** if you want to delete the attribute value. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

The attributes on the **Attributes** tab are displayed according to your settings.

3.5.2.4.4.4.2 Add attributes to the Properties tab

You can add model attributes and the attributes of objects or connections.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. If you want to edit model attributes, ensure that no model item is selected.
If you want to edit object or connection attributes, select the corresponding object or connection.
4. Click  **Add** in the **Properties** tab. The **Select attribute** dialog opens.
5. If you want to see only attributes with assigned values, enable the **Show specified attributes only** check box. You can restrict the result of displayed attributes using a search term.
6. Enter a search term for the attributes you want to display. The attribute type groups that contain attributes whose names contain the term you entered are expanded and the attributes are displayed.
7. Enable the check boxes of the relevant attributes.
8. Click **OK**.

The selected attributes are added to the **Properties** tab.

3.5.2.4.4.4.3 Hide attributes of the Properties tab

You can hide attributes of the **Attributes** tab to keep the attribute list clear.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. If you want to hide model attributes, ensure that no model item is selected.
If you want to hide object or connection attributes, select the corresponding object or connection.
4. Move the mouse pointer over the row of the attribute you want to remove.
5. Click the  three dots at the end of the row. The attribute menu opens.
6. Click  **Hide always** if you want to hide the attribute, even if it has a value.
Click  **Hide, if not specified** if you want to hide the attribute if it is not specified, but should be displayed if a value has been entered.

The attributes you "hide always" are hidden.

The attributes you "hide, if not specified" are hidden if no value is entered or hidden as soon as their values are deleted. If a value is entered for them, for example, in the modeling area, they are displayed again on the **Attributes** tab.

3.5.2.4.4.4.4 Edit attribute

You can edit attributes of models, objects, and connections. You can customize the **Properties** tab (page 499) with the  **More** menu to see only the attributes you want to work with.

Prerequisite

The attribute you selected can be edited. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. If you want to edit model attributes, ensure that no model item is selected.
If you want to edit object or connection attributes, select the corresponding object or connection.
4. Display the relevant attribute (page 604) if it is not listed.
5. Move the mouse pointer over the attribute. Depending on the attribute, different editing buttons are displayed (page 614).
6. Change the value or the display options (page 604) of the attribute.

You have edited the attribute.

3.5.2.4.4.4.5 Show language column

You can show a column for another language next to the original column. This enables you to compare and edit (page 606) the contents of language-dependent items in different languages. For example, you can use this option to translate language-dependent contents from one language into another.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. Click  **Edit language**. A second column is shown for language-dependent attributes.
4. Click the  **down arrow** in the header cell and select the required language.

The content of the language column is displayed in the language you have selected. If you change or enter attribute values, this is done in the selected language.

3.5.2.4.4.4.6 Hide language column

You can hide the shown language column (page 605) when you no longer need it.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. Click  **Hide language**.

The additional column for language-dependent attributes is removed, and only the column of the original language remains visible.

3.5.2.4.4.4.7 Edit attributes of various languages

You can edit model, object, and connection attributes in various languages as long as they are not system attributes.

Procedure

1. Click  **Details**. The **Details** bar opens.
2. Click the **Properties** tab if it is not activated yet.
3. Show the relevant attribute if it is not listed.
4. Show the required language column (page 605).
5. Click in the cell behind the attribute name. The **Edit** dialog and the selected language column are shown. If required, you can enlarge (page 607) the dialog.
6. Make your changes. Different input options are available depending on the type of attribute. While you can enter text for text attributes such as names, you can, for example, select a number and a unit for times. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.
7. If you have specified your input for the language displayed and want to specify input for other languages, click the name of the selected language in the dialog. The list of available languages opens.
8. Select another language and make your entries.
9. Click **OK**.

Your changes are saved in the various languages.

3.5.2.4.4.4.8 Increase size of attribute editing dialog

You can increase the size of the attribute editing dialog so that you can conveniently edit comprehensive content. The dialog is opened for attributes, such as **Description/Definition** and **Remark/Example**.

Procedure

1. Click the attribute you want to edit, for example, **Description/Definition**. The editing dialog opens.
2. Click  **Zoom in**. The size of the dialog increases and offers more space for editing the attribute.
3. Make your entry.
4. Click  **Zoom out** to display the dialog in the original size again. If the content cannot be displayed completely in the dialog, a scroll bar is added.

You have resized the attribute editing dialog according to your requirements.

3.5.2.4.4.4.9 Place attributes at fixed positions

You can place any attribute of objects and connections, not just the name, visibly in the modeling area. For quick placement several fixed positions in and around the object are offered.

Procedure

Place new attributes at fixed positions

1. Select the object or connection for which you want to place a new attribute.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Attribute placement**.
4. Click **Create attribute placement**. The **Select attribute** dialog opens.
5. Enable the **Show specified attributes only** check box. Then only the attributes with a value are made available for selection.
6. Enter the first letters of the required attribute name. All attributes are displayed whose names contain the term you entered.
7. Activate the check box of the attribute you want to place.
8. Click **OK**. The dialog closes and a frame for the attribute is displayed in the modeling area.
9. Click anywhere in the modeling area. The attribute is placed and identified by handles.
10. Click  **Attribute placement**.
11. Click the position of the object where the attribute is to be placed, for example,  **Top right**.

The attribute is placed in the selected position at the object or the connection. You can specify that the attribute name is to be displayed (page 610) for the placed attribute. You can also specify for certain attributes that they are to be displayed as a symbol (page 610).

Place freely placed attributes at fixed positions

1. Select the freely placed attributes you want to place at a fixed position. Their handles are displayed.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Attribute placement**.
4. Click the position of the object where the attribute is to be placed, for example,  **Top right**.

The attributes are placed at the objects at the position selected. You can specify that the attribute name is to be displayed (page 610) for the placed attribute. You can also specify for certain attributes that they are to be displayed as a symbol (page 610).

You have placed attributes at fixed positions.

3.5.2.4.4.4.10 Place attributes at any position

You can place any attribute of objects and connections, not just the name, visibly in the modeling area. These cannot only be placed at fixed positions (page 607), but also freely.

Procedure

Place new attribute freely

Select the object or connection for which you want to place a new attribute.

1. Activate the **Start** (page 574) tab bar.
2. Click  **Attribute placement**.
3. Click **Create attribute placement**. The **Select attribute** dialog opens.
4. Enable the **Show specified attributes only** check box. Then only the attributes with a value are made available for selection.
5. Enter the first letters of the required attribute name. All attributes are displayed whose names contain the term you entered.
6. Click the name of the attribute you want to place.
7. Click **OK**. The dialog closes and a frame for the attribute is displayed in the modeling area.
8. In the modeling area, click the position where you want to place the attribute.

The attribute is placed in the selected position in the modeling area.

Reposition a placed attribute

1. Click the placed attribute you want to reposition and hold down the mouse button. The  handles are displayed.
2. Drag the attribute to the position in the modeling area where you want to place it and release the mouse button.

The attribute is placed in the selected position in the modeling area.

You have placed attributes at any positions.

3.5.2.4.4.4.11 Place attributes from Attributes tab

Use the **Attributes** tab to quickly place an attribute.

Procedure

1. Select the object or connection for which you want to place a new attribute.
2. Click  **Details**. The **Details** bar opens.
3. Click the **Properties** tab if it is not activated yet.
4. Behind the attribute you want to place, click  **More**.
5. Click  **Place attribute**.
6. Move the mouse pointer to the modeling area. A frame is displayed.
7. Drag the frame in the modeling area to the position where you want to place the attribute.
8. Click the relevant position.

The attribute is placed.

3.5.2.4.4.4.12 Place attributes at any position

You can place model attributes, such as **Name** or **Type**, in the modeling area.

Procedure

1. Make sure that neither an object nor a connection is selected.
2. On the **Properties** tab, move the mouse pointer over the attribute which you want to place in the modeling area. The editing options are displayed (page 614).
3. Click  **More** >  **Place attribute**.
4. In the modeling area, click the position where you want to place the attribute.

The attribute is placed. You can specify that the attribute name is to be displayed (page 610) for the placed attribute. You can also specify for certain attributes that they are to be displayed as a symbol (page 610).

3.5.2.4.4.4.13 Select placed attributes

You can select placed attributes in order to place them at another position or to remove the placement (page 612).

Procedure

1. Click a placed attribute in the modeling area. The attribute is marked by  handles.
2. Press the **Ctrl** key, and click additional placed attributes you want to reposition or remove.

You can now delete or reposition (page 607) the selected attributes.

3.5.2.4.4.4.14 Display names of placed attributes

You can specify that the attribute name of placed attributes is to be displayed in the modeling area.

Procedure

1. Select the placed attribute whose attribute name you want to display in the modeling area.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Attribute placement**.
4. Enable the **With name** check box.

The attribute name is placed in front of the attribute value.

3.5.2.4.4.4.15 Display placed attributes as a symbol

You can display certain attributes as a symbol (page 620) if they are placed.

Prerequisite

The attribute can be represented by a symbol. This is the case if you select the attribute and the **As a symbol** check box becomes available.

Procedure

1. Select the placed attribute you want to represent with a symbol, for example, **Existence**.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Attribute placement**.
4. Enable the **As a symbol** check box.

The placed attribute is represented as a symbol.

3.5.2.4.4.16 Directly format placed text attributes

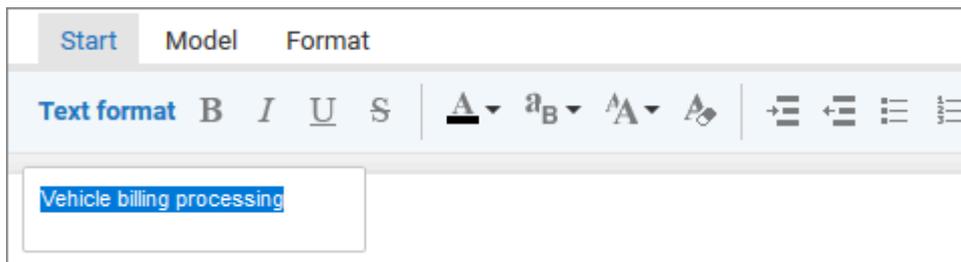
You can format free-form text and placed attributes of models, objects, and connection in the modeling area.

Prerequisite

The attribute you selected can be edited. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

Procedure

1. Double-click the free-form text or the placed attribute of a model, object, or connection so that the text is selected. The formatting toolbar is shown.
2. In the formatting toolbar, click the button for the formatting you want to assign to the selected attribute, for example,  **Increase indent**.



The formatting information is directly applied to the selected attribute.

3. Click an empty area in the modeling area. The attribute selection is undone. You have formatted the placed attribute.

3.5.2.4.4.17 Move placed attribute

You can move placed attributes of objects and connections.

Procedure

1. Click the placed attribute and hold down the mouse button. The attribute now has  handles.
2. Drag the attribute to the required position and release the mouse button.

The attribute is placed at the new position.

3.5.2.4.4.4.18 Remove placed attribute

You can remove placed attributes from the modeling area. Of course, only the attribute placement is deleted and not the value that was placed. To change the attribute value, edit the attribute (page 563) on the **Properties** tab of the  Properties bar.

Procedure

1. Select the placed attribute (page 610) whose placement you want to remove.
2. Press **Del**.

The placement of the selected attribute is removed without prompting for confirmation.

3.5.2.4.4.4.19 Remove multiple placed attributes

You can remove multiple placed model, object, or connection attributes from the modeling area in only one step. Of course, only the attribute placement is deleted and not the value that was placed.

Procedure

Remove directly

1. Use the **Ctrl** key to select the placed attributes you want to delete in the modeling area directly.
2. Press **Del**.

The placements of the selected attributes are removed without prompting for confirmation.

Use a dialog

3. Select the object or connection whose attribute placements you want to remove.
4. Activate the **Start** (page 574) tab bar.
5. Click  **Attribute placement > Delete attribute placement**. The dialog is displayed.
6. Enable the check boxes for the placed attributes whose attribute placement you want to delete. You can enable all check boxes at once by enabling the superior check box **Attribute name**.
7. Click **OK**.

The placements of the selected attributes are removed. You have removed multiple placed attributes.

3.5.2.4.4.4.20 Delete attributes

Use the Attributes bar to delete attributes.

Procedure

1. Select the object or connection whose attribute you want to delete. If you want to delete model attributes, you must ensure that no object or connection is selected so that the model attributes will be displayed on the **Attributes** tab of the **Properties** bar.
2. Click  **Details**. The **Details** bar opens.
3. Click the **Properties** tab if it is not activated yet.
4. Behind the attribute you want to delete, click  **More**.
5. Click  **Delete attribute**.

The value of the attribute will be deleted. You cannot change or delete attribute values of attributes that the system defines. These are placed in gray cells, for example, **Type**.

3.5.2.4.4.4.21 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.4.4.21.1 What editing options are available for attributes?

Write-protected attributes have a gray background. These attribute values cannot be changed in the **Properties** bar. If a model is opened read-only, all attributes are read-only and therefore have a gray background. When a model is opened for editing, only attributes inserted by the system or as part of a system-based editing process have a gray background. Examples of these attributes are **Last Change** as a system attribute for the Change Management attribute **Status (CMA)** for a system-based editing process.

There are attributes that can be changed by the system and by the user, such as the **Semantic check successful** attribute. Attributes that can be modified are displayed on a bright background. The editing options depend on the type of the selected attribute.

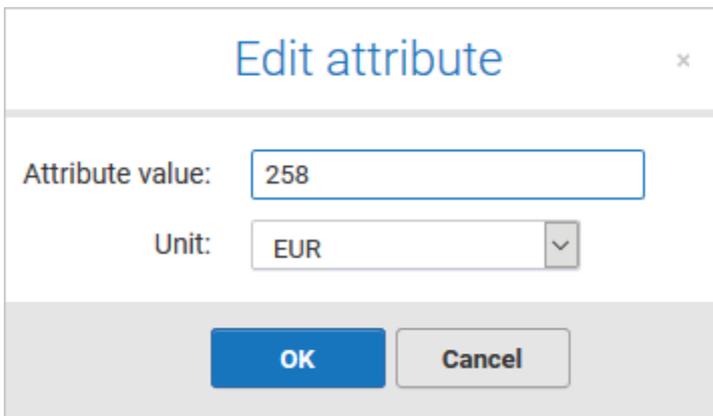
Boolean attribute, such as **Existence**

Boolean attributes switch a state. You can specify that the attribute is activated (the check box is enabled) or not activated (the check box is not disabled)



Cost attribute, such as **Max. total costs**

Costs are entered in a dialog box in which you can assign the currency unit.

A screenshot of a dialog box titled 'Edit attribute' with a close button (x) in the top right corner. The dialog has a light gray background. It contains two input fields: 'Attribute value:' with a text box containing '258', and 'Unit:' with a dropdown menu showing 'EUR'. At the bottom, there are two buttons: a blue 'OK' button and a gray 'Cancel' button.

Date attribute, such as **Earliest start date**

You can enter a date directly or you can pick a date from the calendar.

Earliest start date
2020 Nov 11

A calendar dialog box with a close button (x) in the top right corner. It features two dropdown menus at the top: one for the year '2020' and one for the month 'November'. Below these is a calendar grid with days of the week (Mon to Sun) as column headers. The date '11' is highlighted with a blue border. At the bottom of the calendar is a 'Today' button. At the very bottom are two buttons: 'OK' (blue) and 'Cancel' (grey).

Link attribute, such as **Link 1**

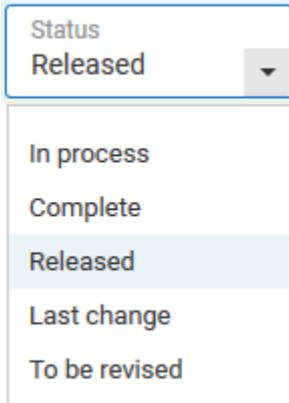
Link attributes link an item with other elements, for example, with a web page.

Link 1
www.softwareag.com

An 'Edit hyperlink' dialog box with a close button (x) in the top right corner. It has a title bar that says 'Edit hyperlink'. Below the title bar is a label 'URL:' followed by a text input field containing the text 'www.softwareag.com'. At the bottom are two buttons: 'OK' (blue) and 'Cancel' (grey).

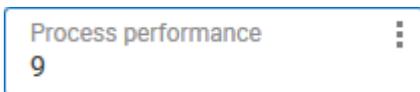
List box attribute, such as **Status**

List boxes offer specific values from which you can select one.



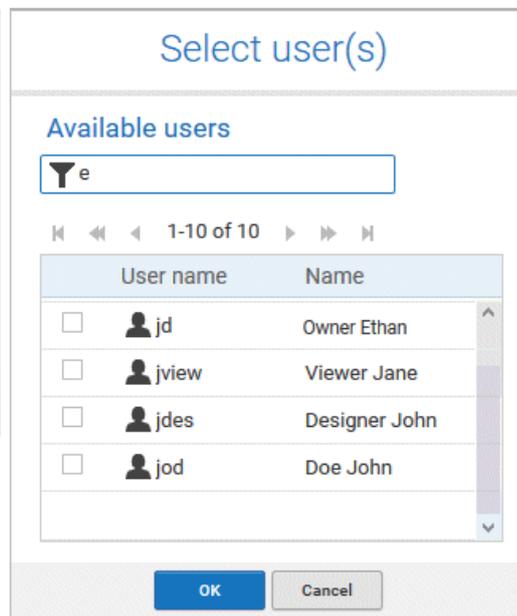
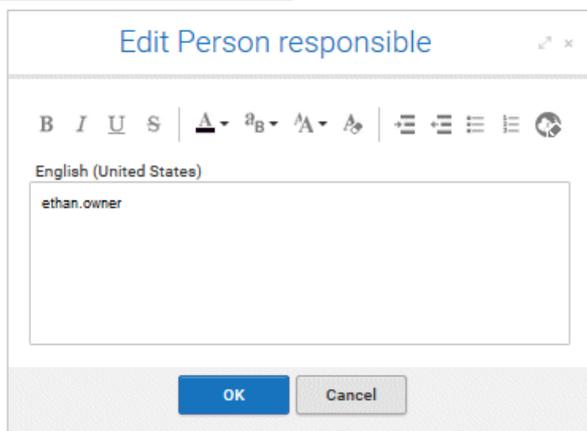
Numeric value attribute, such as **Process performance**

You can enter numeric values directly. If you enter characters other than numbers, the entry is not accepted and you receive a corresponding message.



User selection attribute, such as **Person responsible**

Click the **Person responsible** attribute to open the **Edit** dialog, where you can directly insert a person's name. Or you can click the **Person** icon to open the **Select user(s)** dialog and select the relevant user.



Text attribute, such as **Name**

For text attributes, the **Edit** dialog opens where you can enter and format the text.

Name

Vehicle billing processing

Edit Name

B *I* U **S**
▲
aB
^A
↻
☰
☰
☰
☰

English (United States)

Vehicle billing processing

OK
Cancel

Value with unit attribute, such as **Processing time**

To enter a value with unit, a dialog opens in which you can enter the value and select the corresponding unit.

Avg. processing time

2 Hour(s)

Edit attribute

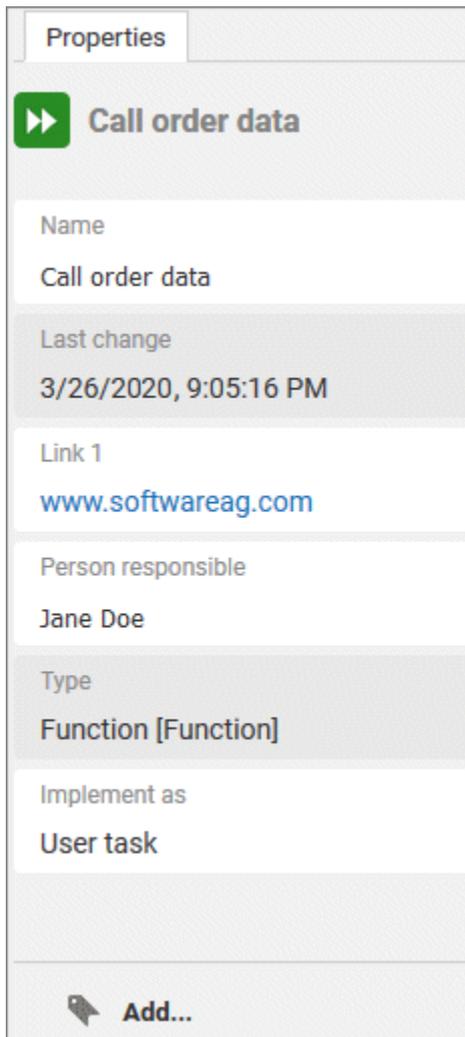
Attribute value:

Unit: ▼

OK
Cancel

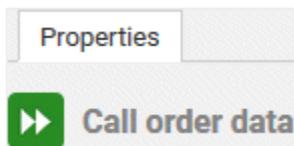
3.5.2.4.4.4.21.2 How is the Properties tab structured?

The **Properties** tab displays the properties you entered for the selected item.



The name and, if available, the symbol of the selected item is displayed.

For objects, the object symbol is displayed.

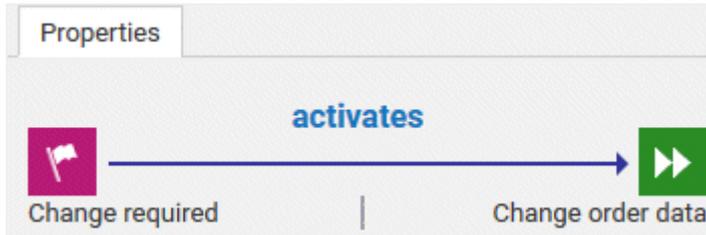


If an object has additional occurrences in other models of the database, this is indicated by a number under the object symbol.



You can display the models in which the object has occurrence copies, and you can open these models (page 602) using the **Occurrences** tab.

For connections, the source and target object, the connection name and, if available, the direction of the connection are displayed with an arrow.



You can configure the **Properties** tab to display the attributes (page 604) you want to work with and hide the attributes (page 604) you do not need.

3.5.2.4.4.4.21.3 What placed attribute does an object have?

If you place an object in the modeling area, the name of the object is output as an attribute. The name attribute is usually placed within the object. You can place additional attributes of objects in the modeling area in order to have the relevant information available directly in the modeling area.

If you want to place morer attributes, it is useful to place them near the object to which they belong. It can however occur that in the layout objects are positioned very close to one another making it difficult to say which object a placed attribute belongs to. In addition, it is also possible to place attributes freely. If an attribute was placed farther away from its object it may be difficult to assign the placed attribute after the layout is changed.

By clicking the placed attribute, the placed attributes receive handles as markers and its object is also provided with handles. If you move an object, its placed attributes are also moved.

3.5.2.4.4.4.21.4 What to consider when placing objects in/on objects

You can place objects on other objects (page 601) or in other objects (page 601). The difference between these two procedures is as follows: When placing an object **on** another object you specify that no implicit connection will be created between the objects. In contrast, when placing an object **in** another object you specify that an implicit connection is to be created between the objects.

You can place multiple objects of one type in an object at once. If you want to embed two objects at once and object 1 already has a connection to the enclosing object while object 2 has none, proceed as follows when creating connections:

- Select the connection that exists between object 1 and the enclosing object: This connection now links both objects to the enclosing object.
- Select a connection other than the one that exists between object 1 and the enclosing object: Object 1 is now linked to the enclosing object via two connections - the existing connection and the one you have selected. Object 2 uses the new connection.

Objects that were placed in other objects are also moved when the enclosing object is moved. If an enclosing object is selected, the embedded object is selected as well. This indicates clearly that an object is embedded in another object. In contrast, a non-embedded object is neither selected nor moved when the object on which it was placed is selected or moved.

You can drag an embedded object from an enclosing object to the model background. The connections linking the objects are then displayed.

3.5.2.4.4.4.21.5 What does place attribute as a symbol mean?

Attributes of objects can be placed in the modeling area which allows them to emphasize additional, important aspects in the model.

A symbol can be placed instead of a value for some attributes, which allows the attribute value to be identified immediately.

If such an attribute was specified and placed, for example, the **Existence** attribute, the **As a symbol** check box becomes available. If you enable the check box, a plus sign is placed in the model instead of **Yes** for the **Existence** attribute, and a minus sign instead of **No**.

Other attributes can be assigned attribute symbols for placement by a user with the **Configuration administrator** function privilege. This is done on the **Administration** tab in ARIS Architect.

3.5.2.4.4.4.21.6 What happens to placed attributes that have no attribute value?

If you place an object in the modeling area, the name of the object is output as an attribute. The name attribute is usually placed within the object. You can place additional attributes of objects in the modeling area in order to have the relevant information available directly in the modeling area. The usual procedure is to place attributes with an attribute value that can be seen directly in the model.

However, it may be useful to place attributes that are assigned a value at a later point in time. If, for example, it was defined that, as a rule, the maximum processing time is to be placed to the upper left of the **Function** object type this may happen even if the attribute value of this attribute has not been entered for all functions. If the value is entered later it is automatically displayed in the modeling area.

If a placeholder is to be used to make the placement of attributes without a value visible in the modeling area, you can define that they are to be placed with an attribute name. In our example, **Max. processing time:** would then be output for the relevant functions, and a value entered would appear behind the colon.

3.5.2.4.4.4.21.7 How is the format copied to placed attributes?

You can copy the formats of a selected item to another item or to several other items.

The following applies to placed attributes and free-form texts:

- If object or connection occurrences are the target, all of the placed attributes of the target are modified. The position is not changed.
- If placed attributes or free-form texts are the target, the target text is modified. The position is not changed.

3.5.2.4.4.4.21.8 What are time zone-dependent attributes?

Time zone-dependent attributes are attributes that take the current time zone into account when they are displayed. The values of the attributes are adjusted depending on the time zone in which they are displayed.

Time-zone dependent attributes are:

- Time of generation: AT_CREAT_TIME_STMP
- Last change: AT_LAST_CHNG_2
- Time of last semantic check: AT_TIME_OF_LAST_SEMANTIC_CHECK
- (Internal attribute: AT_TIME_STAMP)

STORING

In the database, these attributes are stored in Greenwich Mean Time (GMT + 0). When the attributes are displayed to users in the attribute editor, designer, **Diagram** fact sheet, etc., they are first converted to the client's local time.

When the values are changed by a user in his local client time zone, the values are internally converted to GMT + 0 and stored in the database.

REPORTS

When a report is started from a client, the client's time zone is transferred to the server. The server converts the time zone-dependent attributes when creating the output.

When a report is run as a scheduled report, no client information is available and no conversion can be performed. Therefore, the time zone-dependent attribute is displayed as if the server were in the GMT + 0 time zone.

REPORT SCRIPT API

You should always use the methods accepting a string as parameter to change the value of time attributes. Example:

```
oDef.Attribute(Constants.AT_SAP_TIME_GEN, 0).setValue("07:12:45;11/19/2018");
```

RECOMMENDATION

We recommend not using **java.util.Date**, especially the **setValue()** methods, which accept a **Date** object as parameter: most of the various constructors of **Date** perform automatic conversion depending on the client's time zone. The conversion of a date into a character string, for example, via **toString()**, also performs a conversion into the client's time zone.

Example

This example assumes that both users are accessing the same server.

A user in Germany creates an object on **Nov. 19 2018 4:12PM**. (Based on his operating system local, the creation time is displayed as **19.11.2018 16:12**.) If another user located in San Francisco looks at the **Time of generation** attribute, the value is not **Nov. 19 2018 4:12PM**, but **Nov. 19 2018 7:12AM**, because San Francisco is 9 hours behind German time.

3.5.2.4.4.5 Use free-form text

You can use free-form text to add additional information to your model.

3.5.2.4.4.5.1 Insert free-form text

You can place text in the modeling area irrespective of other model items. This way you can add additional information to your model.

Warning

Free-form texts are not saved in groups and are thus not protected by access privileges for groups. Therefore, it is possible to have reports output the free-form texts of models for which the person running the report does not have read privileges. Therefore, remember not to include confidential information in free-form texts but to use model and object attributes for that.

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click  **Text**. When you drag the mouse pointer onto the model background, an icon is added to the pointer: 
3. Click the position in the modeling area where you want to place the text. A text box opens, in which you can make your entry.
4. Click next to the text box to finish the input.

Your text is displayed in the model and you can place it anywhere.

3.5.2.4.4.5.2 Change free-form text

You can change the content of free-form text any way you want.

Warning

Free-form texts are not saved in groups and are thus not protected by access privileges for groups. Therefore, it is possible to have reports output the free-form texts of models for which the person running the report does not have read privileges. Therefore, remember not to include confidential information in free-form texts but to use model and object attributes for that.

Procedure

1. In the modeling area, click the free-form text twice. Alternatively, you can click the free-form text and then press the **F2** key.
2. Use the arrow keys to select the text area you want to overwrite.
3. Overwrite the text area you want to modify.
4. Click next to the text box to end the input.

The free-form text is modified.

3.5.2.4.4.5.3 Format free-form text

You have several options for formatting free-form texts. You can format the entire free-form text as well as a selected part of the free-form text.

Warning

Free-form texts are not saved in groups and are thus not protected by access privileges for groups. Therefore, it is possible to have reports output the free-form texts of models for which the person running the report does not have read privileges. Therefore, remember not to include confidential information in free-form texts but to use model and object attributes for that.

Procedure

1. To format the entire free-form text, click the free-form text. It is marked by handles.
2. Activate the **Format** tab bar.
3. Select formatting options, such as **B Bold** or  **Centered**.
4. To format selected free-form text, click the free-form text twice. Alternatively, you can click the free-form text and then press the **F2** key. Use the arrow keys to select the text area you want to overwrite.
5. Select formatting options, such as **B Bold** or  **Font**.

The free-form text is formatted.

Tip

Alternatively, you can select all or a part of the free-form text. The formatting toolbar is displayed (page 627) above the selection to format the selected free-form text.

3.5.2.4.4.5.4 Move free-form text

You can place free-form text anywhere in the modeling area.

Warning

Free-form texts are not saved in groups and are thus not protected by access privileges for groups. Therefore, it is possible to have reports output the free-form texts of models for which the person running the report does not have read privileges. Therefore, remember not to include confidential information in free-form texts but to use model and object attributes for that.

Procedure

1. Click the free-form text and hold down the mouse button.
2. Drag the free-form text to the position where you want to place it.
3. Release the mouse button.

The free-form text is placed at the new position.

Tip

You can also move selected free-form text using the keyboard:

- Use the **Shift** key and the arrow keys to move it by increments of one gridline.
- Use the **Ctrl** key and the arrow keys to move it regardless of the grid.
- Use the **Alt** key and the arrow keys to move it by increments of four gridlines.

3.5.2.4.4.5.5 Use free-form text as occurrence copy

You can create a free-form text as an occurrence copy (page 1151) to make changes to text at different positions in the model or in various models at once.

Warning

Free-form texts are not saved in groups and are thus not protected by access privileges for groups. Therefore, it is possible to have reports output the free-form texts of models for which the person running the report does not have read privileges. Therefore, remember not to include confidential information in free-form texts but to use model and object attributes for that.

Procedure

1. Click the free-form text, and select  **Copy**.
2. In the same model or in another model, click  **Paste as > Occurrence copy**.
3. Move the mouse pointer to the position in the model at which you want to place the occurrence copy of the free-form text.

A new occurrence exists for the same free-form text. If you edit one of the occurrences, the free-form text of the other occurrences is also changed automatically.

Tip

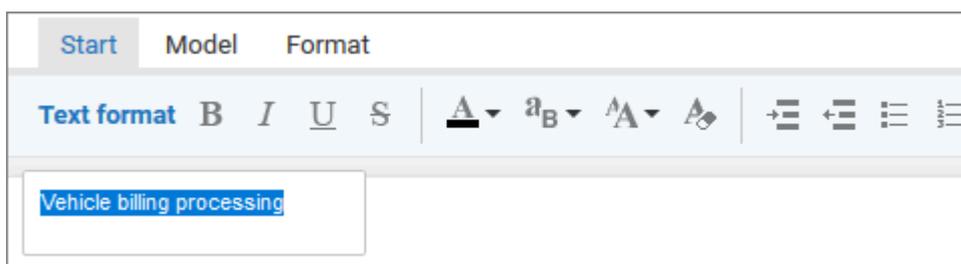
You can copy free-form text as a normal copy, that is, as text that can be changed without affecting other free-form texts, using the **Copy/Paste** functionality.

3.5.2.4.4.5.6 Show formatting toolbar

The formatting toolbar is enabled for selected texts, for example, for the text of placed attributes (page 564) or free-form text (page 625). The formatting bar is not available for attributes that the system changes, for example, for the attribute **Creator**.

Procedure

1. Select the placed attribute in the modeling area.
2. Click the attribute again.



The text of the attribute is selected for you to overwrite it, and the formatting toolbar is shown. If you deselect the placed attribute, the formatting toolbar is hidden.

3.5.2.4.4.6 Use graphic objects

Graphic objects (page 1145) are shapes that can structure model content for the user. With regard to models, graphic objects do not have any semantics. That is why they cannot be evaluated by reports or included in analyses, for example.

3.5.2.4.4.6.1 Place graphic objects

You can place graphic objects in the modeling area (page 504) in order to, for example, structure model content.

Procedure

Place circle

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Circle/Ellipse**.
3. Click the position in the modeling area where you want to insert the graphic objects.

The circle is inserted in the modeling area. Now you can color the line (page 639) and inside (page 637), and, for example, place the graphic object behind a model section (page 645) to highlight this area.

Tip

To create a circle of a size you have selected, press the **Shift** key while dragging the mouse pointer across the workspace. In this case, the change in size is proportional.

Place square

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Square/Rectangle**.
3. Click the position in the modeling area where you want to insert the graphic objects.

The square is inserted in the modeling area. Now you can color the line (page 639) and inside (page 637), and, for example, place the graphic object behind a model section (page 645) to highlight this area.

Tip

To create a square of a size you have selected, press the **Shift** key while dragging the mouse pointer across the workspace. In this case, the change in size is proportional.

Place rectangle

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Square/Rectangle**.
3. Click the position in the modeling area where you want to place the graphic symbol and hold down the mouse button.
4. Drag the mouse pointer in the desired direction so that the placed item receives the required form of a rectangle.
5. Release the mouse button.

The rectangle is inserted in the modeling area. Now you can color the line (page 639) and inside (page 637), and, for example, place the graphic object behind a model section (page 645) to highlight this area.

Place ellipse

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Circle/Ellipse**.
3. Click the position in the modeling area where you want to place the graphic symbol and hold down the mouse button.
4. Drag the mouse pointer in the desired direction so that the placed item receives the required form of an ellipse.
5. Release the mouse button.

The ellipse is inserted in the modeling area. Now you can color the line (page 639) and inside (page 637), and, for example, place the graphic object behind a model section (page 645) to highlight this area.

Place polygon

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Polygon/Line**.
3. In the modeling area, click the position where you want the polygon to begin.
4. Click the positions where the lines of the polygon are to change direction.
5. Double-click the position where you would like the polygon to end.

The polygon is inserted in the modeling area. Now you can color the line (page 639) and inside (page 637), and, for example, place the graphic object behind a model section (page 645) to highlight this area.

Place line

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Polygon/Line**.
3. In the modeling area, click the position where you want the line to begin.
4. Double-click the position where you would like the line to end.

The line is inserted in the modeling area. Now you can color the line (page 639).

Specify size when placing objects

You can directly resize circles/ellipses and squares/rectangles when placing them.

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Circle/Ellipse** or  **Square/Rectangle**.
3. In the modeling area, click the position where you want the graphic object to begin, and hold down the mouse button.
4. Drag the mouse pointer in the required direction until the graphic object has reached the required size.
5. Release the mouse button.

The graphic object is placed with the required size.

3.5.2.4.4.6.2 Paste copied graphic objects

You can paste copied graphic objects, such as circles or squares, regardless of whether you have copied them from the same or another model.

Procedure

1. Select the required graphic objects.
2. Click  **Copy**.
3. Open the target model, if required.
4. Click  **Paste**. Preview frames are displayed for the items you are pasting.
5. Click the position in the modeling area where you want to insert the graphic objects.

Copying and pasting graphic objects is now complete.

3.5.2.4.4.6.3 Resize ellipses and rectangles

You can directly resize circles/ellipses and squares/rectangles when placing them.

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. Click the graphic object  **Circle/Ellipse** or  **Square/Rectangle**.
3. In the modeling area, click the position where you want the graphic object to begin, and hold down the mouse button.
4. Drag the mouse pointer in the required direction until the graphic object has reached the required size.
5. Release the mouse button.

The graphic object is placed with the required size.

3.5.2.4.4.6.4 Place and scale circle or square

You can place and scale graphic objects in one operation. Placement and scaling of circles and squares differ from the placement of other graphic objects.

Procedure

1. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
2. To place a circle: Click the graphic object  **Circle/Ellipse**.
To place a square: Click the graphic object  **Square/Rectangle**.
3. Press the **Shift** key.
4. Click the position in the modeling area where you want to place the graphic symbol and hold down the mouse button.
5. Move the mouse pointer to scale the graphic object. The circular or square shape is retained during the operation.
6. Release the mouse button and the **Shift** key when the correct size of the graphic object is reached.

The circle or square is placed and scaled.

3.5.2.4.4.7 Use documents

ARIS document storage enables you to propose documents or to submit a change request for a document. You can use further functionality in the repository (page 822).

3.5.2.4.4.7.1 Upload documents

You can upload documents to ARIS document storage and assign them to models and objects (page 633) in order to supplement these with detailed descriptions and graphics, for example. We strongly recommend that you check documents for malicious software before uploading.

Prerequisite

The filter in use (page 523) allows the **ARIS document storage Link** attribute.

Procedure

1. Open (page 529) the relevant model.
2. Click  **Details**. The **Details** bar opens.
3. Click the **Properties** tab if it is not activated yet.
4. Show the **ARIS document storage Link** attribute.
5. In the editing cell of the **ARIS document storage Link** attribute, click  **Edit**. The **Select document** dialog opens.
6. Select **ARIS document storage** if it is not yet selected.
7. Select the folder in which you want to save the document.
8. Click  **Upload new document**. The dialog opens.
9. Click **Browse**. The dialog opens.
10. Navigate to the relevant document, select it, and click **Open**.
11. The dialog closes and you may enter the document's title, a description, as well as tags (keywords) enabling the document to be identified in ARIS document storage.
12. Click **Upload**.

Once the upload of the document is complete, you can assign it to models and objects (page 633).

3.5.2.4.4.7.2 Assign documents

You can supplement individual models and objects with, for example, detailed information and graphics by assigning documents available in ARIS document storage to them.

Prerequisite

The filter in use allows the **ARIS document storage Link** attribute.

Procedure

1. Open (page 529) the relevant model.
2. Select the object to which you want to assign a document, or ensure that no object is selected if you want to assign the document to the model.
3. Click  **Details**. The **Details** bar opens.
4. Click the **Properties** tab if it is not activated yet.
5. Show (page 499) the **ARIS document storage Link** attribute.
6. In the editing cell of the **ARIS document storage Link** attribute, click  **Select document**. The dialog opens.
7. Select ARIS document storage if it is not yet selected.
8. Select the folder containing the relevant document.
9. Enable the option button of the document you want to assign.
10. Click **OK**.

The document is assigned to the item.

On the **Documents** tab, a document with the **ARIS document storage Link** attribute is marked with  for objects and  for models. If a document title was specified, it is shown, otherwise the complete link to the document in ARIS document storage. You can place the attribute (page 607). To ensure that the name you specify is placed in the model instead of the link, you can show the **ARIS document storage Title** attribute from the **Attributes** tab (**Properties** bar). If you specify a name for the attribute, this name is displayed in the model instead of the contents of the placed **ARIS document storage Link** attribute.

3.5.2.4.4.7.3 Open assigned document

You can easily open an assigned document.

Procedure

Placed attribute

Double-click the placed **ARIS document storage Link** attribute.

From the Attributes bar

1. Activate (page 499) the **Attributes** bar.
2. Show the **ARIS document storage Link** attribute.
3. Click the entry in the editing cell.

You can either open or save the assigned document.

3.5.2.4.4.7.4 Link documents

You can link documents available in ARIS document storage directly with individual models and objects and thus supplement them with detailed descriptions and graphics, for example.

Procedure

1. Open (page 529) the relevant model.
2. Select the object for which you want to create a link to a document, or ensure that no object is selected if you want to link the document with the model.
3. Click  **Properties**.
4. Activate the **Documents** bar.
5. Click  **Add**.
6. In ARIS document storage, click the folder containing the relevant document.
7. Enable the check box for the required document, and click **OK**.

The document is linked with the item.

On the **Documents** tab, a mark is shown:  for objects and  for models. If a document title was specified, it is shown, otherwise the complete link in ARIS document storage.

3.5.2.4.4.7.5 Open linked document

You can easily open an assigned document.

Procedure

1. Activate (page 499) the **Documents** bar.
2. Click a document.

You can either open or save the linked document.

3.5.2.4.4.7.6 Use the Documentation attribute

You can describe database and model items (models, objects, groups, etc.) using formatted documents or other files and save these documents in the **Documentation** attribute. If you are using the Microsoft® Word file formats **DOC** and **DOCX**, a preview is available and the  **Edit** button is available. You can also create the documents directly from the **Documentation** attribute.

Insert an external description

Prerequisite

You are using Microsoft® Word.

Procedure

1. Open a model (page 529).
2. Select the item to which you want to assign the description and which does not yet have an external description.
3. Activate the **Attributes** tab of the **Properties** bar and show the **Documentation** attribute (page 499).
4. Click  **Edit external document** in the attribute row. Microsoft® Word opens with a blank document.
5. Enter your description and click **Save**.

The description is assigned to the item. When you click  **Edit external document** again, the document opens and you can edit it.

Import external description

1. Create an external description and save it, for example, in Microsoft Word.
2. Start ARIS Connect and open ARIS Connect Designer.
3. Activate the **Attributes** tab of the **Properties** bar and show the **Documentation** attribute (page 499).
4. Click  **Import external document** in the attribute row. The **Select document** dialog opens.
5. Click **Select file** and select the external document in the dialog.
6. Click **Open**.

The document is inserted in the **Documentation** attribute.

Edit an external description

If you are using the Microsoft® Word file formats **DOC** and **DOCX**, a preview is available and the  **Edit** button is available.

Warning

Due to technical restrictions external descriptions cannot be locked if they are open in the editor. Therefore, it is possible that a user deletes an external description in ARIS Connect while it is being edited by another user in the text editor. In this case, all changes of the description are deleted without the editing user being notified.

Procedure

1. If the attribute is not displayed: Activate the **Attributes** tab of the **Properties** bar and show the **Documentation** attribute (page 499).
2. Click  **Edit external document** in the attribute row. The word processor is launched and the document opens.
3. Edit and save the document.
4. Close Microsoft® Word and activate ARIS Connect.
5. If necessary, click  **Refresh external document**.

The document is added to the **Documentation** attribute and a preview is displayed.

Display external descriptions read-only

1. Select the item the description of which you want to display.
2. Activate the **Attributes** tab of the **Properties** bar and show the **Documentation** attribute (page 499).
3. Click  **View external document**. Depending on your browser, you may be asked whether you want to save or open the file.
4. Select **Open**. The corresponding program launches and the file opens in read-only mode.

You can now find out about the content of the document.

If you decide to save the document, you must save it with a name that differs from its previous name. Thus, a copy is created. It is, however, not inserted into the **Documentation** attribute.

Refresh the preview of the external description

5. Select the item the description of which you want to display.
6. Activate the **Attributes** tab of the **Properties** bar and show the **Documentation** attribute (page 499).
7. Click  **Refresh external document**.

The display of the **Documentation** attribute is updated so that the changes you have made will be displayed.

You have described a database or model item with a formatted document.

3.5.2.4.4.8 Format model and model items

3.5.2.4.4.8.1 Format painter

You can copy the formats of a selected item to another item or to several other items. This way, you can transfer the format of one object to all other objects and need not to transfer it to each object individually.

Procedure

1. Select the model item whose format you want to copy.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Format painter**.
 - If you want to copy the format to one item: click the relevant item.
 - If you want to copy the format to more than one item: use the mouse to draw a border around the relevant items.
 - You can also press the **Ctrl** key and click the required items one after the other.

The format of the selected items is adjusted accordingly.

3.5.2.4.4.8.2 Color model items

You can assign a different color to object symbols and graphic objects.

Procedure

1. Select the model items you want to color.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Fill color**. The color palette opens.
4. Click the color you want to color the selected model item with. The selected model items are colored with the selected color. The color palette closes.

You have colored the selected model items.

3.5.2.4.4.8.3 Color model items with a user-defined color

You can assign your own color to object symbols and graphic objects.

Procedure

1. Select the model items you want to color.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Fill color**. The color palette opens.
4. Click **Choose your own color**. The **Define color** dialog opens.
5. Select your own color in one of the ways described below. Your changes will be displayed in the preview window on the right:
 - a. Click the color bar and move the line to the relevant color range to select the basic color. Then click on the relevant position in the color box to select the brightness of the basic color.
 - b. Enter the respective share of each color from 0 to 255 in the **Red**, **Green** and **Blue** boxes. 0 means that the corresponding color is absent. If you enter **0** in all three boxes you have selected the color **black**.
 - c. Enter a hexadecimal color definition in the **Color code: #** box. The hexadecimal system uses the letters A to F in addition to the numerals of the decimal system, which means that it is based on the base 16. If you enter FFFF00, this sets the color to **Yellow**.
6. Click **OK**.

You have colored the selected model items with a self-defined color.

3.5.2.4.4.8.4 Color model items with a gradient

You can color object symbols and graphic objects with a gradient.

Procedure

1. Select the model items you want to color.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Fill color**. The color palette opens.
4. Click **Choose your own color**. The **Define color** dialog opens.
5. Enable the **Gradient** check box. Two color boxes and a list box for the direction of the gradient are displayed.
6. Click the first color box and select the start color (page 638) for the gradient.
7. Click the second color box and select the second color (page 638) for the gradient.
8. Click the list box and select the direction of the gradient.
9. Click **OK**.

You have colored the selected model items with a gradient.

3.5.2.4.4.8.5 Display model items without color

You can display object symbols and graphic objects without a color fill.

Procedure

1. Select the model items you want to display without color.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Fill color**. The color palette opens.
4. Click **No fill color**.

The selected model items are displayed without color.

3.5.2.4.4.8.6 Reset object symbol color

You can reset the color of an object symbol back to the default color if you have changed the color.

Procedure

1. Select the object symbol you colored.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Fill color**. The color palette opens.
4. Click  **Reset**.

You have reset the color of the selected object symbols to their original color.

3.5.2.4.4.8.7 Color borders and lines

You can assign a different color to the borders of object symbols and graphic objects, as well as connections.

Procedure

1. Select the model items whose borders you want to color.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Line color**. The color palette opens.
4. Click the color you want to color the borders and lines of the selected model items with.

You have colored the borders and lines of the selected model items.

3.5.2.4.4.8.8 Reset border and line color

You can reset the colors of the borders and lines of model items if you changed their color.

Procedure

1. Select the model items whose borders or lines you colored.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Line color**. The color palette opens.
4. Click  **Reset**.

You have reset the colors of the borders and lines of selected model items.

3.5.2.4.4.8.9 Change line style

You can assign a different style to the borders of object symbols, graphic objects, and connections.

Procedure

1. Select the model items whose border and line style you want to change.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Line style**. The style selection opens.
4. Click **Solid**, **Dashed**, or **Dotted**, depending on which style you want to assign to the selected elements.

The style of the borders and lines of the selected model items is adjusted accordingly.

3.5.2.4.4.8.10 Change line weight

You can change the weight of the borders of object symbols, graphic objects, and connections.

Procedure

1. Select the model items whose line weight for borders and lines you want to change.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Line weight**. The weight selection opens.
4. Click **0 pt**, **2 pt**, **4 pt**, or **8 pt**, depending on which weight you want to assign to the borders and lines of the selected model items.

The weight of the borders and lines of the selected model items is adjusted accordingly.

3.5.2.4.4.8.11 Change item appearance

You can change the appearance of model items in the modeling area.

Procedure

1. Select the model items whose appearance you want to define.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Appearance**. The appearance selection opens.
4. Click **Shaded** if the selected items are to have a shadow. The check box is enabled. Connections cannot have a shadow.
5. Click **3-D effect** if the selected items are to be displayed in 3-D style. The check box is enabled. Connections cannot be displayed in a 3-D style.
6. Click **Active** if the selected items are to be displayed as inactive. The check box is disabled. Objects are displayed without color and with a gray border, connections are displayed in gray. Graphic objects cannot be displayed as inactive.

You have defined the appearance of model items. To change a setting again, click the relevant option again.

3.5.2.4.4.8.12 Change model background

You can change the background color of an open model.

Procedure

1. Open the relevant model.
2. Activate the **Model** (page 576) tab bar.
3. Click  **Background color**. The **Color palette** opens.
4. Click a color of the color palette.

The model background is colored with the selected color.

3.5.2.4.4.8.13 Use your own color for the background

You can change the background color of an open model with a custom color.

Procedure

1. Open the relevant model.
2. Activate the **Model** (page 576) tab bar.
3. Click  **Background color**. The **Color palette** opens.
4. Click  **Choose your own color**. The **Define color** dialog opens.
5. Use the colored areas to directly select a color, or insert the values in the **Red**, **Green** and **Blue** boxes to define an RGB color, or enter a hexadecimal HTML color code.
6. Click **OK**.

The model background is colored with the defined color.

3.5.2.4.4.8.14 Reset background color

You can reset the background color of an open model. The assigned background color is removed and the background color of the template on which the model is based is displayed.

Procedure

1. Open the relevant model.
2. Activate the **Model** (page 576) tab bar.
3. Click  **Background color**. The **Color palette** opens.
4. Click  **Reset**.

The color palette remains open and you can select another color (page 641).

3.5.2.4.4.9 Assign models

3.5.2.4.4.9.1 Assign a new model to an object

You can assign a new model to an object. The assignment enables you to describe objects in independent models in more detail, for example. Assigned models are displayed by way of an  assignment icon at the object and can be opened by double-clicking the assignment icon.

Procedure

1. In the open model, click the object to which you want to assign a model.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Assignment** >  **Create assignment**. The dialog opens.
4. Select the required model type. The model types that are allowed for the selected object by the method and by the method filter (page 523) in use are available for selection. The name of the selected object is suggested as a model name.
5. Keep the suggested model name or enter a new one.
6. Click **OK**.

The new model is assigned to the selected object and opens on a separate tab. You can model the required content.

3.5.2.4.4.9.2 Assign an existing model to an object

You can assign an existing model to an object. The assignment enables you to describe objects in independent models in more detail, for example. Assigned models are displayed by way of an  assignment icon at the object and can be opened by double-clicking the assignment icon.

Procedure

1. In the open model, click the object to which you want to assign a model.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Assignment** >  **Create assignment**. The dialog opens.
4. Select the required model type. The model types that are allowed for the selected object by the method and by the method filter (page 523) in use are available for selection. The name of the selected object is suggested as a model name.
5. Enter the name of an existing model. As you type the model name, all models whose names begin with the characters you type are listed.
6. Select the relevant model from the list.
7. Click **OK**.

The existing model is assigned and the  assignment icon is displayed on the left of the selected object.

3.5.2.4.4.9.3 Open assigned model

You can open models that you assigned (page 1137) to objects.

Procedure

1. Select the object for which you want to open an assigned model.
2. Double-click the  assignment icon (page 1138).
If multiple models are assigned to the object, the **Select model** dialog is shown, where you can select the model you want to open.
If only one model is assigned to the object, the model will open without prompting.

The assigned model opens and you can use it.

3.5.2.4.4.9.4 Delete model assignments

You can delete the relationship between objects and assigned models.

Procedure

1. Click the object with the assignment that you want to delete.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Assignment** >  **Delete assignment**. The **Delete model assignment** dialog opens.
4. Enable the check box(es) of the model(s) for which you want to delete the assignment relationships (page 1138)..
5. Click **OK**.

The selected assignment relationships are deleted without prompting for confirmation.

3.5.2.4.4.10 Use model items

You can arrange model items, such as objects, graphic objects, and free-form text in the modeling area.

3.5.2.4.4.10.1 Place model items one behind the other

You can specify in which order overlapping model items are placed one behind the other in the modeling area.

In the example below, it is assumed that you have created the three objects **1**, **2**, and **3** in sequence. As the most recently placed objects are created at the highest level, object **3** is at the highest level and object **1** is at the lowest level. You want to reverse this sequence.

Procedure

1. Activate the **Start** (page 574) tab bar.
2. Select the object **3** and click  **Arrange** >  **Send backward**.
3. Select the object **1** and click  **Arrange** >  **Bring forward**.

Now, when you place the objects one behind the other they are placed in the order 1, 2, and 3.

In the same manner, you can place graphic objects such as squares or circles behind parts of objects to highlight these areas separately.

3.5.2.4.4.10.2 Group model items

You can group model items and then handle them as if they were a single object.

Procedure

1. Select the model items you want to group.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Group/Ungroup** > **Group**. The selected model items are combined in a group (page 1145). The  handles are placed around the grouping.

To select all items in a group, click one of the previously independent items. You can now move them all together, for example.

3.5.2.4.4.10.3 Ungroup

You can undo the grouping of model items and move and edit the items of the group separately once again.

Procedure

1. Select the grouping you want to undo.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Group/Ungroup > Ungroup**. The grouping is ungrouped. Each item has its own  handles.

When you click one of the previously grouped items, it is now selected separately once again and can be moved separately.

3.5.2.4.4.10.4 Align model items

You can quickly align selected model items relative to each other.

Procedure

1. Select the model items you want to align.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Align** and then the relevant alignment, for example, **Align left** or **Distribute vertically**.

The selected model items are aligned accordingly.

3.5.2.4.4.10.5 Match size of items

You can resize selected items so that they match.

Prerequisite

For this model, the model option **Resize symbol** for text attributes in symbol was **not** selected in <aba>.

Procedure

1. Select the different-sized model items you want to match.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Match size of items** and then the relevant size change, for example,  **Same height (maximum)**.

The height of the selected model items is matched to that of the tallest item.

3.5.2.4.4.11 Lanes

3.5.2.4.4.11.1 Add a column/row to lane models

You can add new columns/rows to lane models (page 1147). In the example, a row is added. The procedure for columns is the same.

Procedure

1. Click the relevant row header. The  **Add column/row** button is displayed.
2. Click  **Add column/row**. The **Insert lane** dialog opens.
3. Select the lane type you want to add.
4. Click **OK**.

The selected row is inserted under the marked row.

3.5.2.4.4.11.2 Delete a column/row from lane models

You can delete columns/rows from lane models (page 1147). In the example, a row is deleted. The procedure for columns is the same.

Procedure

1. Click the relevant row header. The  **Delete column/row** button is displayed.
2. Click  **Delete column/row**.
 - If the row is not mandatory and contains no objects, it is deleted without prompting.
 - If the row is mandatory and must always exist in the model, you are informed of this and the row is not deleted.
 - If the row contains objects, you will be asked whether you want to delete the objects because the row can only be deleted after doing this.
3. Click **OK** if you are sure that the objects can be deleted together with the row.

The objects and the selected rows are deleted.

3.5.2.4.4.12 Export

3.5.2.4.4.12.1 Export model as a graphic

You can export the model as a graphic and use it in other programs.

Procedure

1. Open (page 529) the relevant model.
2. Ensure that no model item is selected.
3. Activate the **Model** (page 576) tab bar.
4. Click  **Export as a graphic** in the tab bar. The model graphic is created.
5. Decide whether to open or save the graphic. To save the graphic, confirm the Save options in the dialog.

The model graphic either opens in your graphics program or is available as a PNG file in your download area.

3.5.2.4.4.12.2 Export model items as a graphic

You can export parts of models as a graphic and use the graphic in other programs.

Procedure

1. Open (page 529) the relevant model.
2. Select the model item you want to export as a graphic.
3. Activate the **Model** (page 576) tab bar.
4. Click  **Export as a graphic** in the tab bar. The model item graphic is created.
5. Decide whether to open or save the graphic. To save the graphic, confirm the Save options in the dialog.

The model graphic either opens in your graphics program or is available as a PNG file in your download area.

3.5.2.4.4.12.3 Export BPMN diagram

You can export (page 704) a BPMN diagram (page 699). When exporting an Enterprise BPMN collaboration diagram or an Enterprise BPMN process diagram, an **arisebpmn** extension tag with the Enterprise BPMN specific information is added to the BPMN file.

Procedure

1. In the  **Repository**, select the group of the database containing the BPMN diagram. The group content is displayed.
2. In the row of the relevant BPMN diagram, click  **More**.
3. Click  **BPMN export**. The BPMN 2.0 diagram is validated. If modeling errors occur, these are highlighted in the diagram and must be corrected. A tip for solving an error is displayed when you move the mouse pointer over the highlighting. You can open or save the BPMN file.
4. Save the file at the required location.

You can use exported BPMN diagrams in other applications.

3.5.2.4.4.13 Layout

3.5.2.4.4.13.1 Optimize layout

You can automatically generate the alignment of objects of a model with each other.

Procedure

1. Open the model whose layout you want to generate automatically.
2. Activate the **Model** (page 576) tab bar.
3. Click  **Layout**. The layout options are provided.
4. Specify your settings (page 797) and click **OK**.

The objects of the model are realigned.

3.5.2.4.4.13.2 Insert space

You can insert space between model items, either from top to bottom or from left to right. You can then insert additional model items between the items you moved.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Horizontal space** to insert space from left to right.
Click  **Vertical space** to insert space from top to bottom.
A horizontal or vertical line is shown in the modeling area.
3. Click the position from where you want to insert space.
4. Move the mouse pointer to the right to insert horizontal space, or down to insert vertical space. The covered modeling section is highlighted in green and a plus sign is added. This allows you to immediately identify which area is being freed up for new model items.
5. Click the position up to where you want to insert space. Objects, graphic objects, and free-form text are moved from the highlighted area.

You have added space between existing model items, which you can use to place other model items.

3.5.2.4.4.13.3 Remove space

You can remove space between model items, either from right to left or from bottom to top.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Horizontal space** to remove space from right to left.
Click  **Vertical space** to remove space from bottom to top.
A horizontal or vertical line is shown in the modeling area.
3. Click the position from where you want to remove space.
4. Move the mouse pointer to the left to remove horizontal space, or to the top to remove vertical space. The model section you select is highlighted in red and a minus sign is added. This enables you to immediately identify how much space will be reduced between the model items.
Once you can no longer delete any space between model items, the area covered is no longer increased when moving the mouse pointer.
5. Click the position up to where you want to remove space. The model items are moved accordingly.

You have successfully removed space between model items.

3.5.2.4.4.14 ARIS and Alfabet

3.5.2.4.4.14.1 Map Alfabet objects to ARIS objects

You can map an Alfabet object to an ARIS object. Multiple mapping is not possible. By default, objects of the **Application system type** type can be mapped. In the description, this object type is used as an example.

Prerequisite

The database is connected with Alfabet.

Procedure

1. Open a model that contains objects of the **Application system type** type.
2. Select the relevant application system type.
3. In the Start (page 574) tab bar, click  **Alfabet** >  **Map Alfabet object**. The **Select Alfabet object** dialog opens.
4. Select the Alfabet table, for example, **Application**. You will see only those Alfabet objects you have the privileges to use. If you start typing the object name into the **Filter** field, the number of entries will decrease.
5. Click the Alfabet object you want to map to the ARIS object. The option button is activated.
6. Click **OK**.

The mapping between the Alfabet object and the ARIS object has been created. The name of the Alfabet object is now used for the ARIS object. Additional attributes have been entered for this object in the **Alfabet** attribute type group in ARIS.

3.5.2.4.4.14.2 Create Alfabet object

You can create a missing Alfabet object to be mapped to an ARIS object.

Prerequisite

The database is connected with Alfabet.

Procedure

1. Open a model that contains objects of the **Application system type** type.
2. Select the relevant application system type.
3. In the Start (page 574) tab bar, click  **Alfabet** >  **Map Alfabet object**. The **Select Alfabet object** dialog opens.
4. Select the Alfabet table, for example, **Application**.
5. Click **Create Alfabet object** button. The Alfabet login dialog opens.
6. Create the object in Alfabet.
7. In the **Select Alfabet object** dialog of ARIS Connect Designer, click  **Refresh**.

The new object is listed in the table.

3.5.2.4.4.14.3 Unmap Alfabet object

You can delete the mapping between an ARIS object and an Alfabet object. By default, objects of the **Application system type** type can be mapped. In the description, this object type is used as an example.

Prerequisite

The database is connected with Alfabet.

Procedure

1. Open a model that contains objects that are mapped to Alfabet objects (page 652).
2. Select the relevant **Application system type** object.
3. In the Start (page 574) tab bar, click  **Alfabet** >  **Unmap Alfabet object**.

The mapping between the selected ARIS object and the Alfabet object is removed without prompting. All attributes in the **Alfabet** attribute type group are deleted. The name of the Alfabet object continues to be used for the ARIS object.

3.5.2.4.4.15 Enter comments

You can write comments about models, which can be read and answered by other users. This way you can participate in improving your own models and those of others.

Procedure

1. Click  **Collaboration**. The Collaboration bar opens.
2. Enter a comment or answer an existing comment.
3. Enter an http link to a Web site that provides additional information, e. g., **http://www.ariscommunity.com**. The entry must start with **http://**.
4. Click **Post**.

Your comment or reply is added and can be read by the other users. Accordingly, users can react to your input and you can improve the model together with them as required.

3.5.2.4.4.16 Select object or model in the Repository

You can navigate from a model to the occurrence of a selected object or of the model in Explorer.

Prerequisite

Selected objects are saved.

Procedure

1. Select the object to whose occurrence you want to navigate to in Explorer. If you want to navigate to the occurrence of the model, make sure that no object is selected.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Show in repository**.

A new tab showing the repository opens. The group structure of the database expands and the check box in front of the selected object or model is enabled in the detail view.

3.5.2.4.4.17 Go to the published model

You can navigate from a model to the fact sheets (page 1144) of the model in the  **Portal**.

Prerequisites

- No object is selected.
- The database containing the model has been published.

Procedure

4. Activate the **Start** (page 574) tab bar.
5. Click  **View publication**.

A new tab with the fact sheets of the model opens. The **Overview** fact sheet is activated.

3.5.2.4.4.18 Generate report

You can generate and download a report for the open model or for selected objects.

Procedure

1. Click  **Reports**. The **Reports** bar opens.
2. Select one or more objects or deselect all model items to perform the action on the model.
3. Click the drop-down list box to display the list of available reports.
4. Leave the mouse pointer on the name of a report if you want to display its description.
5. Click the name of the relevant report.
6. Click the **Start** button if you want to output the report in the displayed format (page 200).
To select a different output format, click the **Output format** field and select the format you want to use, for example, **Output PDF**.
7. Click the **Start** button. The report is created.
8. If additional settings are required, dialogs are opened. Specify the settings.
9. When the report is created, the result is listed in the **Reports** bar, and a dialog to download the result opens.
10. Click  **Download result**. Depending on your browser settings, you can specify the download folder or the result is downloaded in the default download folder.
11. To download the result later, click  **Download** in the **Reports** bar.

You generated the report for the open model or for the selected objects.

3.5.2.4.4.19 Create infographics

You can create infographics (page 1146) for selected personas (page 1152) (objects of the **Persona** type). You can select an object in a fact sheet (page 1144) of the  **Portal**, in the  **Repository**, or in the open model. Objects of the **Persona** type can be used in models of **Customer segmentation map** and **Matrix model** type.

The following describes how to proceed in the  **Portal**.

Prerequisite

The corresponding attributes of the persona objects must be specified (page 182).

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click **Groups** in the **Classic** view or **Processes** in the **Default** view.
4. Navigate to the relevant model.
5. Select the model that contains the persona.
6. If you have selected a model of the **Customer segmentation map** type, select the **Diagram** fact sheet. If you have selected a model of the **Matrix model** type, select the **Matrix** fact sheet.
7. Select the relevant **Persona** object in the fact sheet.
8. Click  **Evaluation**. The **Evaluation** bar opens showing the name of the item for which the report is generated.
9. Click the ▼ down arrow next to the currently displayed report name.
10. Select the **Create infographic for persona (page 182)** report.
11. Select the output format (page 200), for example, **Output DOCX**.
12. Click **Start**. After the report is complete, the report is shown in the **Report results** link list for downloading.
13. In the **Report results** link list, click **Download**.

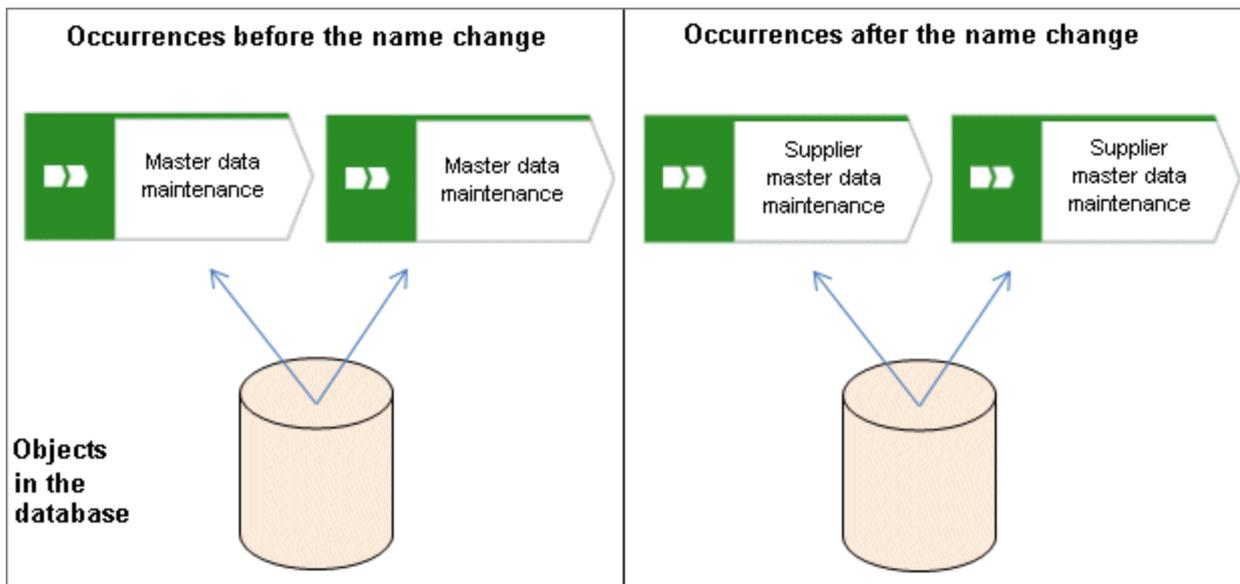
You have created an infographic for a persona. Depending on the attributes entered for the persona, the information graphic provides information about the personality, the goals, the frustrations, etc.

3.5.2.4.4.20 Valuable information

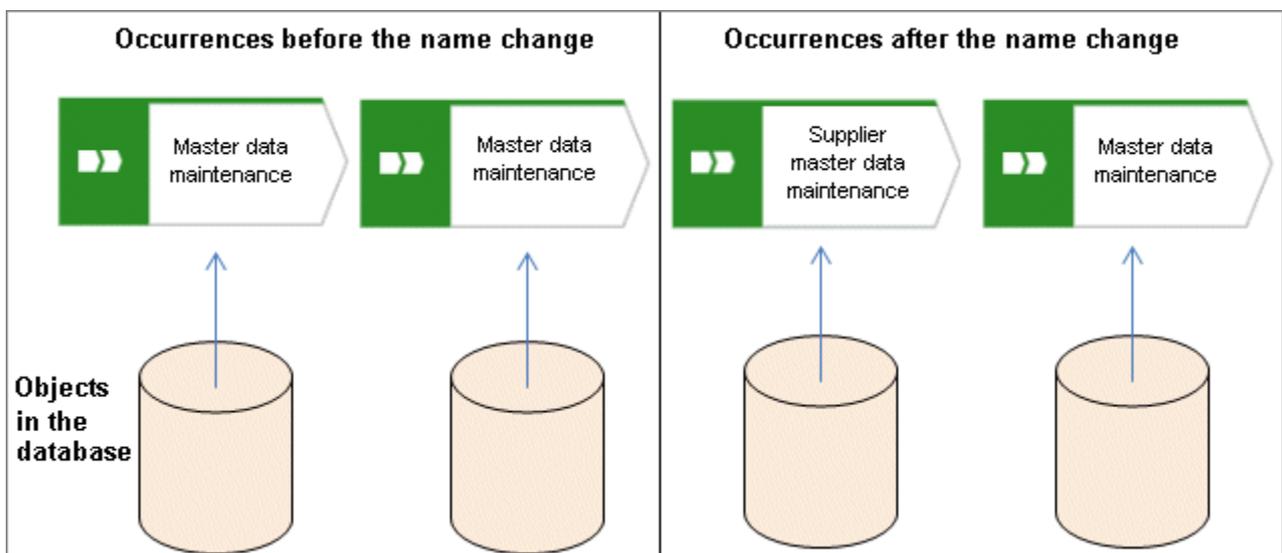
This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.4.20.1 What is the difference between occurrence copy and definition copy?

An occurrence copy is only the copy of a graphical representation of an object. Thus, when you create an occurrence copy, a graphic is created that references the copied object:



When you create a definition copy, an entirely new object is created whose attributes are identical with those of the copied object:



If attributes of an object are changed, this change also applies to the corresponding attributes in all occurrences of the object. This becomes clear when changing the **Name** attribute:

	Source object	Occurrence copy	Definition copy
Before the name change			
After the name change			

3.5.2.4.4.20.2 Which items can be copied from one model to another?

You can copy graphic objects, such as circles, free-form texts, graphics, and objects, from one model to another.

However, for an object to be pasted in the target model it has to be allowed there by the method. For example, if you copy functions and organizational units in the source model, only the organizational units will be pasted into a model of the **Organizational chart** type because functions are not allowed in this model type. The corresponding information is provided by the preview frames of the copied functions, showing as crossed out with an X when they are pasted into the organizational chart.

3.5.2.4.4.20.3 Which formats are copied to which items?

You can copy the formats of a selected item to another item or to several other items. This depends on whether the format has been copied to one or more items and the items between which the format is copied.

THE FOLLOWING FORMATS ARE COPIED:

- Fill color, including transparency and gradient
- Line style, weight, and color
- Shadow
- Active information of objects and connections
- Connection direction arrow (if the source and target connections are of the same connection type)

THE FORMAT CAN BE COPIED BETWEEN THE FOLLOWING ITEMS:

- Object occurrences
- Connection occurrences
- Attribute occurrences
- Graphic objects, for example, circle, square, etc.
- Free-form texts and placed model attributes
- Groupings (as the target, with the formats being copied to all items in the grouping as if the items were selected individually)

FORMAT COPYING AFFECTS THE FOLLOWING ATTRIBUTE PLACEMENT CHARACTERISTICS:

- Placement and sorting
- Font formats and individual characters as well as paragraph formatting for attribute definitions if the formatting includes the entire text.
- Alignment
- **With attribute name** and **As a symbol** settings

WHEN A FORMAT IS COPIED, IT AFFECTS THE FOLLOWING CHARACTERISTICS OF FREE-FORM TEXTS/PLACED MODEL ATTRIBUTES/ATTRIBUTE OCCURRENCES:

- Font formats
- Alignment
- **As a comment** setting
- **Character formatting** setting
- General character formatting.

3.5.2.4.4.20.4 Which formats are not copied?

You can copy the formats of a selected item to another item or to several other items. This depends on whether the format has been copied to one or more items and the items between which the format is copied.

However, some formats are not copied:

- Model properties, for example, background color, grid, and print settings, and the **New connections only right-angled** setting are not copied for models.
- In terms of attribute placements, the text area size is not copied.
- The size is not copied for objects, free-form text/placed model attributes/attribute occurrences in order not to destroy the layout of models.

3.5.2.4.4.20.5 How are formats copied to identical and different items?

You can copy the formats of a selected item to another item or to several other items. This depends on whether the format has been copied to one or more items and the items between which the format is copied.

It is possible to copy formats from one item to another identical item, but also from one item to a different item, for example, from an object occurrence to a connection occurrence. The items can be placed in different models.

Of course, the formats copied between different items are based on the formats that are available to all these items. Below, we will use the example of object occurrences to explain how formats are copied.

The object symbol size is not copied in order not to destroy the layout of models.

SOURCE AND TARGET OCCURRENCES ARE IDENTICAL

Object occurrences are identical if they are based on the same object type and have the same object symbol. All formats are copied.

PLACED SOURCE AND TARGET ATTRIBUTES ARE IDENTICAL

The copy format function causes the attribute placements of the source object occurrence to be transferred to the target object occurrence. This means that the target object occurrence receives the attribute placements of the source object occurrence.

SOURCE AND TARGET OBJECT OCCURRENCES DIFFER

- The source object occurrence is based on another object type than are the target object occurrences/All target object occurrences are identical: All formatting except for the fill color is copied.
For example, the formatting of an activity can be copied to a group of organizational units or graphic objects.
- The source object occurrence is based on another object type than are the target object occurrences/Target object occurrences differ: The formats are copied only to object occurrences that are identical to the source object occurrence. None of the other objects change at all.
This enables you to use the mouse to select modeling sections and copy the format without having to consider whether object occurrences will be changed unintentionally.

PLACED SOURCE AND TARGET ATTRIBUTES DIFFER

The copy format function copies the formats only from placed attributes that exist in both the source and target object occurrences. The position is not copied. If the source and target attributes have different placements, the attribute placements are not deleted or created.

3.5.2.4.4.20.6 How is the format copied to placed attributes?

You can copy the formats of a selected item to another item or to several other items.

The following applies to placed attributes and free-form texts:

- If object or connection occurrences are the target, all of the placed attributes of the target are modified. The position is not changed.
- If placed attributes or free-form texts are the target, the target text is modified. The position is not changed.

3.5.2.4.4.20.7 How do you enable navigation via process interface?

To navigate from one process model of the **EPC** type to another, place an object of **Process interface** type in a model and assign the relevant process model (page 643) to the process interface.

If you open the **Steps** fact sheet of the model containing the process interface, you can easily jump to the assigned model by clicking the process interface.

3.5.2.4.4.20.8 How can documents be linked?

Documents can be linked to models or objects in two ways:

USING THE ATTRIBUTES OF A MODEL OR OBJECT (PAGE 633)

DIRECTLY USING THE DOCUMENTS TAB (PAGE 634)

3.5.2.4.4.20.9 Where can you generate reports?

A report is a script that can be applied to database content.

A report can be used, for example, to collect database content and group it according to specific aspects, output the relationships (page 1152) between database elements, generate comparison tables, or display multiple uses of database items.

It can also be used to change database content, such as entering attribute (page 1138) values or correcting the layout of models (page 1148).

You can generate reports in the repository or in ARIS Connect Designer for selected objects or the open model (page 655).

3.5.2.4.4.20.10 What reports are available?

The Evaluation bar provides various standard reports. Depending on the model type you have opened or the object type you have selected, the reports offered may vary because only the reports related to the corresponding model or object type are displayed.

Script administrators can make additional reports available in ARIS Architect.

3.5.2.4.4.20.10.1 Analyze classification

USE

This analysis classifies all objects of a type according to the selected attribute. You can use this to test the consistency of your processes and analyze process-relevant factors in a flexible manner.

If you start the analysis for models, for example, to compare an actual process with a target process, the analysis is automatically limited to functions. To examine other objects, select the relevant objects and run the analysis for the selection. Make sure that you only select objects of one type.

In this way, you can classify all process contents according to your own criteria. For example, you can find out quickly and easily whether your process steps include mainly value adding or non-value adding activities. You can also determine the degree to which your processes are automated. The parameters derived from this can be used as a basis for comparison.

For example, you can identify

- whether your target process has improved relative to the actual process based on your target parameters, or
- which process variants come closer to achieving your objective (for example, achieving the objective of the Collections department process in the Private customer business segment compared with the Business customer business segment).

This analysis evaluates all possible aspects, for example, including

- IT systems
 - How many piloted systems are used?
 - How many systems are scheduled to be shut down soon?
- Risks
 - How many risks with a high probability of occurrence exist, as opposed to risks with a low probability of occurrence?

If you run this analysis in a Publisher export, the **Assessment of value added** attribute is automatically evaluated.

CONTEXT

- Models
- Objects of one type

OUTPUT

The analysis is summarized in an Excel workbook. The number of worksheets varies depending on whether you are analyzing models or objects.

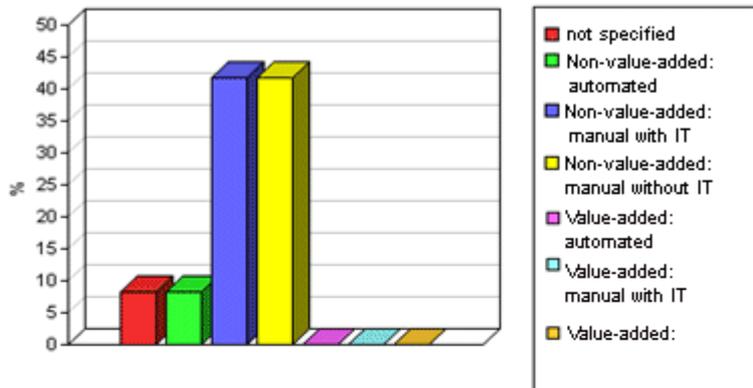
The following example is based on an analysis of the **Purchase order processing (actual)** and **Purchase order processing (target)** models. The **Assessment of value added** attribute is evaluated separately for each model. In this case, one worksheet is output with a table and one with charts.

TABLE

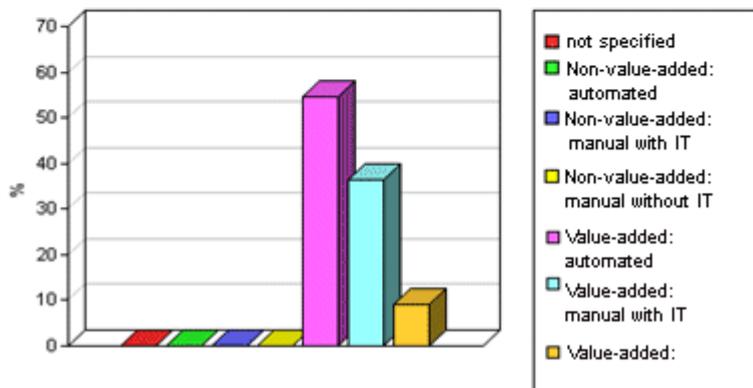
Analysis: Evaluate assessment of value added				
Created: 5/25/09 11:21 AM				
Server: horus.me.corp.ids-scheer.com				
Database: DemoDB-United Motors Group				
User: system				
File: Report0.xls				
Analyze classification				
Models:				
1.) United Motors Group\2. Processes\Process Architecture\Core Processes\Marketing & Sales (As Is Processes)\Sales order management (As Is)\Sales order processing\Sales order processing (As Is) (EPC)				
1.) United Motors Group\2. Processes\Process Architecture\Core Processes\Marketing & Sales (As Is Processes)\Sales order management (To Be)\Sales order processing\Sales order processing (To Be) (EPC)				
Attribute: Assessment of value added	1. Model		2. Model	
	Number	Percent	Number	Percent
Analyzed functions	12	100	11	100
not specified	1	8,33	0	0
Non-value-added: automated	1	8,33	0	0
Non-value-added: manual with IT	5	41,67	0	0
Non-value-added: manual without IT	5	41,67	0	0

CHARTS

1) United Motors Group\2. Processes\Process architecture\Core processes\Marketing&Sales (as-is processes)\Sales order management\Sales order processing\Sales order processing (as-is) (EPC)



1) United Motors Group\2. Processes\Process architecture\Core processes\Marketing&Sales (to-be processes)\Sales order management\Sales order processing\Sales order processing (to-be) (EPC)



CONTEXT

- Models
- Objects of one type

OUTPUT FORMAT

- XLS
- XLSX

3.5.2.4.4.20.10.2 Create infographic for persona

USE

This report outputs an infographic that visualizes all persona-related data you have specified. The following information is evaluated and displayed:

Lukas Andrews



Age	32
Job title	Software Engineer
Family status	married
Location	Saarbruecken
Customer segment	Family

"The Best Things in Life Are Free"

About

Lukas has been interested in technology for many years. As a software engineer he makes a living with programming innovative mobile apps. But his highest priority is the well-being of his family. For him, a car needs to be both functionally well designed and has enough space that the entire family can drive into holidays.

Personally, he owns many electronic gadgets. Generally, he is sensitive to cost but can get carried away if he sees an innovative solution.

Personality

- conscientious
- detail oriented
- humorous
- playful

Goals

- save money for buying a house
- get promoted in his company
- exercise his favorite sport more often: Climbing

Frustrations

- reading manuals
- services that are overly time consuming
- sharing his personal data to unknown entities





In order for the report to be run and for it to deliver meaningful results, make sure that the following attributes are specified for **Persona** objects:

Attribute	Example
Name	Lukas Andrews
Description/Definition	<p>This text is shown beneath the About topic.</p> <p>Lukas has been interested in technology for many years. As a software engineer he makes a living with programming innovative mobile apps. But his highest priority is the well-being of his family. For him, a car needs to be both functionally well designed and have enough space to accommodate the entire family for holiday trips.</p> <p>Personally, he owns many electronic gadgets. Generally, he is sensitive to cost but can get carried away if he sees an innovative solution.</p>

The following attributes must be specified for the **Customer Experience Management** attributes:

Attribute	Example
Age	32
Family status	married
Location	Saarbruecken
Job title	Software Engineer
Personality	<ul style="list-style-type: none"> ▪ conscientious ▪ detail oriented ▪ humorous ▪ playful
Frustration	<ul style="list-style-type: none"> ▪ reading manuals ▪ services that are overly time consuming ▪ sharing his personal data to unknown entities
Goals	<ul style="list-style-type: none"> ▪ save money for buying a house ▪ get promoted in his company ▪ exercise his favorite sport more often: Climbing
Quote	The Best Things in Life Are Free

You can link images either in the **Customer Experience Management** attribute type group or in the **ARIS document storage attribute** type group.

Customer Experience Management attribute	ARIS document storage attribute	Image/position
Portrait image link	ARIS document storage Link 1	Portrait; at the top
Descriptive image Link 1	ARIS document storage Link 2	Electronic gadgets; image on the left.
Descriptive image Link 2	ARIS document storage Link 3	Climbing; image in the center.
Descriptive image Link 3	ARIS document storage Link 4	Family; image on the right.

Some content is only shown in the infographic if the **Persona** object is related to a **Customer segment** object. The **belongs to** relationship is evaluated.

In this example, the **Family** Customer segment is shown because the **Lukas Andrews** Persona occurs in a Customer segmentation map and this **Persona** object is related to the **Family** Customer segment object.



CONTEXT

Object of **Persona** type

OUTPUT FORMAT

- DOC
- DOCX
- RTF
- ODT
- PDF

3.5.2.4.4.20.10.3 Create process manual

USE

This report outputs all data from the selected processes up to the selected assignment level.

CONTEXT

Models of type:

- BPMN process diagram (BPMN 2.0)
- BPMN process diagram (BPMN 1.x)
- E-Business scenario diagram
- EPC
- EPC (material flow)
- EPC (column display)
- EPC (horizontal table display)
- EPC (table display)
- EPC (row display)
- Industrial process
- Office process
- Process schedule
- UML Activity diagram
- PCD
- PCD (material flow)
- Value-added chain diagram

OUTPUT FORMAT

- PDF
- DOC
- DOCX
- ODT
- RTF

3.5.2.4.4.20.10.4 Export graphic as PDF

USE

This report exports a model graphic as a PDF file.

CONTEXT

Models

OUTPUT FORMAT

PDF

3.5.2.4.4.20.10.5 Generate job description

USE

Generates a job description for each selected organizational element and considers all processes and functions involved.

The following information can be output for each function:

- Organizational elements of the functions
- Data
- IT
- Improvement potential

If you start the report for models, only the modeled items are included. If you start the report for objects, all relevant object definitions are evaluated.

By default, the **carries out** connection is evaluated for the **Executing** relationship. The following connections are included for the **Participating** relationship:

- has consulting role in
- is IT responsible for
- is technically responsible for
- must be informed about
- must be informed on cancelation
- must inform about result of

Script administrators can change the content of the output.

If you output functional weak points, all information is output as for the job description. However, the selected organizational unit is listed along with all organizational units.

CONTEXT

MODELS OF TYPE

- EPC
- FAD
- Office process
- VACD

OBJECTS OF TYPE

- Group
- Organizational unit
- Organizational unit type
- Person
- Role
- Location
- Position
- System organizational unit
- System organizational unit type

OUTPUT FORMAT

- DOC
- XLS
- PDF
- DOCX
- ODT

3.5.2.4.4.20.10.6 Output functions across multiple assignment levels

USE

Outputs the following information for the selected models:

- Functions across multiple assignment levels
- Functions across multiple assignment levels according to ISO certification

The model attributes, the group, and the model graphic are output for the models, while the standard items are output additionally in the case of an evaluation according to ISO certification.

THE FOLLOWING INFORMATION IS OUTPUT FOR EACH MODEL EVALUATED

- Chapter number
- Model name
- Model type
- Function to which the model is assigned.
- Name of the group in which the model is saved.
- Specified model attributes
- Functions of the model are described in the order in which they are created within a partial path in the model. For each function, the chapter number and the name of the function are output.
- Model graphic (optional)
- Model type of the assigned models to be evaluated (optional)

Functions that occur in multiple models are only described once. Each subsequent occurrence in the report output contains a reference to this description.

ASSIGNED MODELS ARE HANDLED AS FOLLOWS

- All functions with assignments are determined.
- If an assigned model is a function allocation diagram, the evaluation is performed in the same way as for associations within the selected model.
- From the set of remaining assignments, select one to be examined in more detail. You can choose your own prioritization, for example, based on the model type. In turn, all functions are analyzed for the assigned model.

You have the option of restricting the report output by specifying the assignment level to be analyzed in detail. For each assignment outside this range, the report output shows only the model name and type.

OUTPUT

The output is created as text incorporating tables for the model and object information and is divided into chapters. The **REPORT1** to **REPORT4** styles are used for chapter headings. This enables you to create tables of contents in the output documents.

At the first level, the output is structured based on the models you have selected. The structural level is increased by one if the assigned model is a model with control flow. For all other assigned models, the structural level remains unchanged.

The descriptions of the functions in a model can be sorted numerically, alphabetically, by symbol type, or topologically. If you select numerical sorting, the functions in a model should be numbered. The numbering of a function uses the number specified in the **Type 1** attribute type in the **Function type** attribute type group.

The attributes, relationships, and assigned models for which the types can be determined are evaluated. Like selected models, the assigned models are evaluated up to a configurable structural level.

If you selected the topological sort criterion, the report output may contain additional information depending on the model class of the model in question.

The following table provides an overview of the model classes in question and the resulting special features of the output with topological sorting:

Model class	Special feature
Directed graph with associations	Beginning and end of process, as well as start and end of path.
Hierarchy	Chapter numbers of functions reflect the position of the object in the model hierarchy.
Central object type	If the model described is a function allocation diagram, the structural level in the report output is not increased. The allocations are described at the level of the object to which the model is assigned.
Process selection matrix	The scenarios in a process selection matrix and the processes assigned to them are evaluated in the same way as function trees, with the scenario taking on the function of the root. Main processes are not included.

CONTEXT

Model

OUTPUT FORMAT

- PDF
- DOC
- DOCX
- ODT
- RTF
- HTML

3.5.2.4.4.20.10.7 Output model information

USE

Outputs information about the selected models, the objects contained in the model, and the relationships of the objects in the model. Apart from name and type, the groups, additional attributes, and model graphic can also be output.

For object relationships, you can also output the name and type of the target object.

CONTEXT

Models

OUTPUT FORMAT

- RTF
- PDF
- HTML
- TXT
- DOC
- XLS

3.5.2.4.4.20.10.8 Output model information considering various aspects

USE

Outputs model information including group structure as an Excel table.

A worksheet is created for each aspect. The worksheet lists all models in which the relevant aspect occurs.

The following aspects can be output:

- Data
- IT
- Organizational elements
- Targets/KPIs
- Products/Services
- Risks
- Others

For each aspect, the related functions can be listed, as well. Individual or integrated evaluations can be carried out for function allocation diagrams (FAD). For integrated evaluations, the functions from the FAD are integrated in the model.

CONTEXT

Models and groups

OUTPUT FORMAT

- XLS
- XLSX

3.5.2.4.4.20.10.9 Output object information

USE

Outputs the relationships and target objects at definition level for the selected objects. Optionally, you can output the groups and the attributes for both the source and target objects.

The output is in table format.

CONTEXT

Object

OUTPUT FORMAT

- RTF
- PDF
- HTML
- DOC
- XLS
- XLSX
- DOCX
- ODT

3.5.2.4.4.20.10.10 Output occurrences of objects

USE

The occurrences in models are listed for the selected object definitions.

CONTEXT

Object

OUTPUT FORMAT

- RTF
- PDF
- HTML
- TXT
- DOC
- DOCX
- ODT
- XLS
- XLSX
- XML

3.5.2.4.4.20.10.11 Process manual (example)

USE

This report script is a sample created in ARIS Architect in the design view. It shows how to create report scripts in ARIS Architect without having programming knowledge.

CONTEXT

Objects

OUTPUT FORMAT

- PDF
- DOC
- DOCX
- ODT
- RTF

3.5.2.4.4.20.10.12 RA(S)CI - Output organizational participations in processes

USE

This report supplies information on which organizational elements participate in the activities (functions) of a process and in what manner. Organizational responsibilities and participations are output in a matrix.

The report returns plausible results if your processes and the organizational responsibilities for the individual activities conform to the modeling conventions required.

RA(S)CI stands for **R**esponsible, **A**ccountable, (**S**upportive), **C**onsulted, **I**nformed.

By default, this report does not return any **Supportive** information. To output this information, your script administrator must set the **g_brasci** variable to **true**.

The matrix shows which organizational unit participates in activities of a process and in what manner:

- **Responsible** indicates the person who assumes execution responsibility. It shows who is responsible for performing an activity and who actually performs it, but also who assumes the disciplinary responsibility.
- **Accountable** indicates the person who is ultimately answerable for the correct and thorough completion of a task. This may be the person in charge of managing the costs, that is, the person assuming project budget responsibility. The **decides on** and **accepts** connections are evaluated to identify this responsibility.
- **Consulted** indicates the person who has a consulting role. This organizational unit - typically a group of subject matter experts - is asked for advice prior to a final decision being made or a final action being taken.
- **Informed** indicates the person who must be informed. It indicates who is kept up to date on the progress or completion of a task.

In the RACI matrix, RACI data is displayed under the following conditions:

- The connections are used in the selected process model.
- The connections are used in a function allocation diagram that is assigned to a function of the selected process model.

The result of the report is an Excel workbook containing several tables. Each process model included creates a table. The first table consists of a full list of the functions and organizational units of the process models included.

Process steps	Function	Financial assistant	Financial clerk	Accountant
Vehicle billing (as-is)	Allow for discounts	R		I
Vehicle billing (as-is)	Call order data	R, A		
Vehicle billing (as-is)	Change customer	R		
Vehicle billing (as-is)	Change order data		R	
Vehicle billing (as-is)	Check customer data	R		
Vehicle billing (as-is)	Check order data	R	R	
Vehicle billing (as-is)	Enter payment type		R	
Vehicle billing (as-is)	Have customer	R		
Vehicle billing (as-is)	Print invoice		R	
Vehicle billing (as-is)	Send invoice		R	I
Vehicle billing (as-is)	Transfer data to		R	

CONTEXT

- Individual process
- List of processes
- Process hierarchy

OUTPUT FORMAT

- XLS

3.5.2.4.4.20.11 What output formats exist?

You can change the output format on the **Reports** or **Semantic checks** tab of the **Evaluation** bar by clicking the down arrow. The selection of output formats may be restricted based on the report or semantic check. Possible output formats are:

PDF
DOC
DOCX
ODT
RTF
HTML
TXT
XLS
XLSX
XML

3.5.2.4.5 Model table-based

Table-based modeling enables rapid and comfortable modeling of EPCs and BPMN diagrams (page 692). The modeling table is shown by default.

Objects are modeled in a table and simultaneously placed in the model displayed above. Layout takes place automatically. The distance between objects is defined by the spacings specified in the layout options.

Table-based modeling provides a quick and easy way to model processes and process frameworks at an early stage, for example, in meetings during the project planning phase.

Moreover, additional information (page 685) can be added for models and objects.

It can also be used to navigate in the model. If an object is selected in the table, it is selected in the model and the selected object is moved into the visible area. If an object is selected in the model, it is also selected in the table and the row is displayed in the visible area.

3.5.2.4.5.1 Hide/Show modeling table

You can hide or show the modeling table.

Procedure

1. Open (page 529) a model to edit or create (page 516) a new model.
2. Click  **Modeling table**.

If the modeling table is shown, it will be hidden. If it is hidden, it will be shown.

When a model is opened for the first time, the modeling table is shown. The setting made will be applied.

3.5.2.4.5.2 Switch full-screen mode on/off

You can hide or show the model above the table. By default, it is shown.

Procedure

1. Open (page 529) a model to edit or create (page 516) a new model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Click  **Collapse/Expand table**. The model is hidden.
4. Click  **Collapse/Expand table**. The model is shown.

You have hidden or shown the model.

3.5.2.4.5.3 Show/Hide BPMN container

For BPMN diagrams, you can specify whether or not the **Belongs to container** column is displayed. This column exists only in BPMN diagrams and is displayed by default.

Procedure

1. Open (page 529) a BPMN diagram.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Click  **Add or remove columns**.
4. Enable the **Show BPMN container column** check box to show the **Belongs to container** column. Disable the check box to hide the **Belongs to container** column.

You have specified whether or not the **Belongs to container** column is to be displayed.

3.5.2.4.5.4 Create object

You can add objects to a model. In the modeling table, a new object is always inserted below the selected object. You can use the table (page 684) to insert lanes into the model.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. In the modeling table, click the cell where you want to create an object.
4. Press **Ins**. Alternatively, click  **Add new object**.

Five default symbols that are allowed here are shown. To choose a different symbol, enter at least three characters of the symbols name. Symbols and objects that match with the entered text are displayed.

5. Select a symbol from the list and enter a name.
6. Start typing the name of the object to be created.
7. Press **Enter**.

The first object you add to a BPMN diagram is automatically placed within a pool.

Click  **Undo** or press **CTRL + Z** if you do not want the object to be added to a pool. The object is then placed directly in the diagram.

The object is inserted and the model items are rearranged in the model. The color of the object type is displayed before of the name.

3.5.2.4.5.5 Create object with special object symbol

You can use an object symbol that is not directly displayed. The example description is based on the **Function (target)** object symbol, which you can add to an EPC. It must be included in the filter you are using.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. In the modeling table, click the cell where you want to create an object.
4. Start typing the name of the object to be created. Alternatively, click **+ Add new object**.
5. Enter the term **target**, which is part of the name for the relevant object symbol. All object symbols and existing objects whose name contains the term are displayed.
6. Click **Function (target)** in the **Symbols** area. The symbol is inserted and the name is selected for overwriting.
7. Enter a name.
8. Press **Enter**.

You have created a new object using the **Function (target)** object symbol. The color of the object type is displayed before of the name.

3.5.2.4.5.6 Use existing object

You can reuse existing objects in the model.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. In the modeling table, click the cell where you want to create an object.
4. Start typing the name of the object to be created. Alternatively, click **+ Add new object**.
5. Enter a term that appears in the name of the existing object you want to insert. All objects whose name contains the term are displayed.
6. Select the required object in the **Existing objects** area.
7. Press **Enter**.

The selected object is reused. The color of the object type is displayed before of the name.

3.5.2.4.5.7 Rename structurally relevant object

In the modeling table, you can edit structurally relevant objects (page 1154) that have already been modeled.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Select the object you want to edit.
4. Press **F2**. Alternatively, click  **Edit table cell**.
5. Rename the object.
6. Press **Enter**.

You have renamed an object.

3.5.2.4.5.8 Edit the Description/Definition column

You can specify descriptions and definitions for objects.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. If the **Description/Definition** column is not shown, add (page 689) it.
4. Select the **Description/Definition** column for the relevant object and press **F2**.
Alternatively, double-click the **Description/Definition** column, or click the **Description/Definition** column and select **Edit table cell**. The **Edit Description/Definition** dialog opens.
5. Enter the description or definition. The text can be formatted.
6. Click **OK**.

The new or changed description is saved.

3.5.2.4.5.9 Create split paths

You can use operators such as **AND**, **XOR**, or **OR** to model split paths in a model.

You can also add split paths without using any operators, if this is permitted by the method, for example, in BPMN diagrams.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Select the object row below which the operator is to be modeled.
4. Press **Ins**. Alternatively, click  **Add new object**.

Five default symbols that are allowed here are shown. To choose a different symbol, enter at least three characters of the symbols name. Symbols and objects that match with the entered text are displayed.

5. Select an operator.

By default, the list displays an **OR** operator for EPCs and a **gateway** for BPMN diagrams.

If you want to use a different operator, enter part of the operator name. Corresponding operators are displayed. Select the relevant operator.

6. Press **Ins**. Alternatively, click  **Add new object**. Select the first object that will follow the operator and enter a name.
7. Press **Enter**. The object is placed below the operator in EPCs, and beside the operator in BPMN diagrams.
8. Select an operator.
9. Press **Ctrl + Shift + Ins**. Alternatively, click  **Add new object as a split path**. Select another object and enter a name. The object is placed next to the operator.
10. Press **Enter**.
11. Model (page 683) additional objects for the relevant split path.

You have modeled a split path.

The objects in a split path are outlined in the table by a thicker grid line.

3.5.2.4.5.10 Remove object from model

You can remove an object from the model. It is retained in the database and you can reuse it.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. In the modeling table, click the object you want to remove.
4. Press the **Del** key.

The object is removed from the model without prompting for confirmation.

Connections from and to the deleted object are also deleted. The preceding object is linked to the following object using a connection.

3.5.2.4.5.11 Model satellites

You can insert not structurally relevant objects (page 1154) (satellites (page 1154)) in a model or in a diagram.

Model new satellites

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Double-click the cell for the satellite you want to model for an object, for example, an **Organizational unit** object.
4. Select an object symbol.
5. Enter the name and press **Enter**.
6. Enter more names if you want to create additional satellites of the same type. If you want to create additional satellites of a different type in the same column, first select the object type.
7. Exit the cell (page 692) when you have created the required satellites.

You have modeled one or more satellites.

Model existing satellites

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Double-click the cell for the satellite you want to model for an object, for example, an **Organizational unit** object.
4. Enter a term that appears in the name of the existing object you want to insert. All objects whose name contains the term are displayed.
5. Select the required object in the **Existing objects** area.
6. Exit the cell (page 692) when you have created the required satellites.

You have modeled one or more existing satellites.

Tip

You can also open the dialog for the relevant column by pressing **F2**. Select an object type and press **Enter**. You can enter a name. Press an arrow key to exit the cell.

3.5.2.4.5.12 Add object column

You can add columns for satellite objects to the modeling table and also show these objects in the modeling area. Columns are always inserted to the right of the column that is selected. If no column is selected, the new column is inserted to the right of the **Name** column.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Click  **Add or remove columns**.
4. Click **Add object column**. A dialog opens.
5. Select an object and a connection from the list and click **OK**.

You have added an object.

3.5.2.4.5.13 Add attribute column

You can add an attribute column to specify model item attributes that are not initially displayed. Columns are always inserted to the right of the column that is selected. If no column is selected, the new column is inserted to the right of the **Name** column.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. In the table, click the object for which you want to specify attributes.
4. Click  **Add or remove columns**.
5. Click  **Add attribute column**. The **Add attribute** dialog opens.
6. Select an attribute.
7. Click **OK**.

The attribute column is added to the right of the selected column and you can enter an attribute value.

3.5.2.4.5.14 Edit attribute

You can specify attributes in the modeling table. Attributes specified by the system cannot be edited, for example, Creation date. System attribute columns have a gray background.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Select the cell for the relevant attribute.
4. Press **F2**.
5. Edit (page 697) the attribute value.
6. Exit the cell (page 692) once you have finished editing the attribute value.

You have edited an attribute.

3.5.2.4.5.15 Arrange columns

You can re-arrange columns as required by removing and recreating them. This example shows how to move the default **creates output to Information carrier** column next to the default **Name** column.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Click  **Add or remove columns**.
4. Click the  **Remove symbol** for the **creates output to Information carrier** column.
5. Click the name of an object in the **Name** column.
6. Click  **Add or remove columns**.
7. Click  **Add object column**. The **Add new object column** dialog opens.
8. Select an object and a connection. In this case, select the **Information carrier** object and the **creates output to** connection. This will create the **creates output to Information carrier** column header.
9. Click **OK**.

The **creates output to Information carrier** column is placed next to the **Name** column.

All columns can be re-arranged as described.

3.5.2.4.5.16 Remove column

You can remove columns for attributes or objects from the modeling table.

Procedure

1. Open (page 529) a model.
2. Click  **Modeling table** if the modeling table is not displayed.
3. Click  **Add or remove columns**.
4. Click the  **Remove** symbol in front of the name of an attribute or object column.

The attribute or object column is removed from the modeling table without prompting for confirmation, while the attribute value or the object is retained.

If required, you can add both the attribute value and the object to the modeling table.

3.5.2.4.5.17 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.5.17.1 What models can be edited using a table?

The following model types and the model types derived can be edited using a table:

- EPC
- BPMN collaboration diagram (BPMN 2.0)
- Enterprise BPMN collaboration diagram
- BPMN process diagram (BPMN 2.0)
- Enterprise BPMN process diagram

If you open a model of this type, you can  show and hide the modeling table (page 682).

3.5.2.4.5.17.2 How to control the table using the keyboard

Keyboard shortcuts can be performed on selected items. Selected items can be identified by the focus (page 1144) in the program.

You can control the modeling table using the keyboard:

How to model an EPC using the keyboard (video 4 min. 23 sec.)

How to model a BPMN diagram using the keyboard (video 2 min. 31 sec.)

Shortcut	Selection	Action
Arrow keys	Table	Moves to next column/row in direction of arrow.
Ctrl + End	Table	Activates the last cell in the modeling table.
Ctrl + Home	Table	Activates the first cell in the modeling table.
Ctrl + Shift + Ins	Operator	Creates split paths.
Del	Object name	Deletes the object from the model.
End	Table	Activates the last column in the current row.
Enter	Name column activated	Jumps to the next cell or ends editing.
F2	▪ Name cell	▪ Activates the name editing mode.

Shortcut	Selection	Action
	<ul style="list-style-type: none"> ▪ Description/Definition cell 	<ul style="list-style-type: none"> ▪ Opens the Description/Definition dialog. The description/definition can be edited.
	<ul style="list-style-type: none"> ▪ Object cell 	<ul style="list-style-type: none"> ▪ Opens the object symbol list if symbols can be inserted.
	<ul style="list-style-type: none"> ▪ Attribute cell 	<ul style="list-style-type: none"> ▪ Opens the Edit attribute dialog.
Home	Table	Activates the first column in the current row.
Ins	Table	Adds an object row.
PageDown	Table	Scrolls one page down.
PageUp	Table	Scrolls one page up.
Shift + F2	BPMN container cell	Enables renaming of the container.
Shift + Tab	Table cell	Activates the next cell to the left.
Tab	Table cell	Activates the next cell to the right.

3.5.2.4.5.17.3 What do different colors mean in table-based modeling?

The colors help you to distinguish between the object types. They correspond to the object colors.

Example

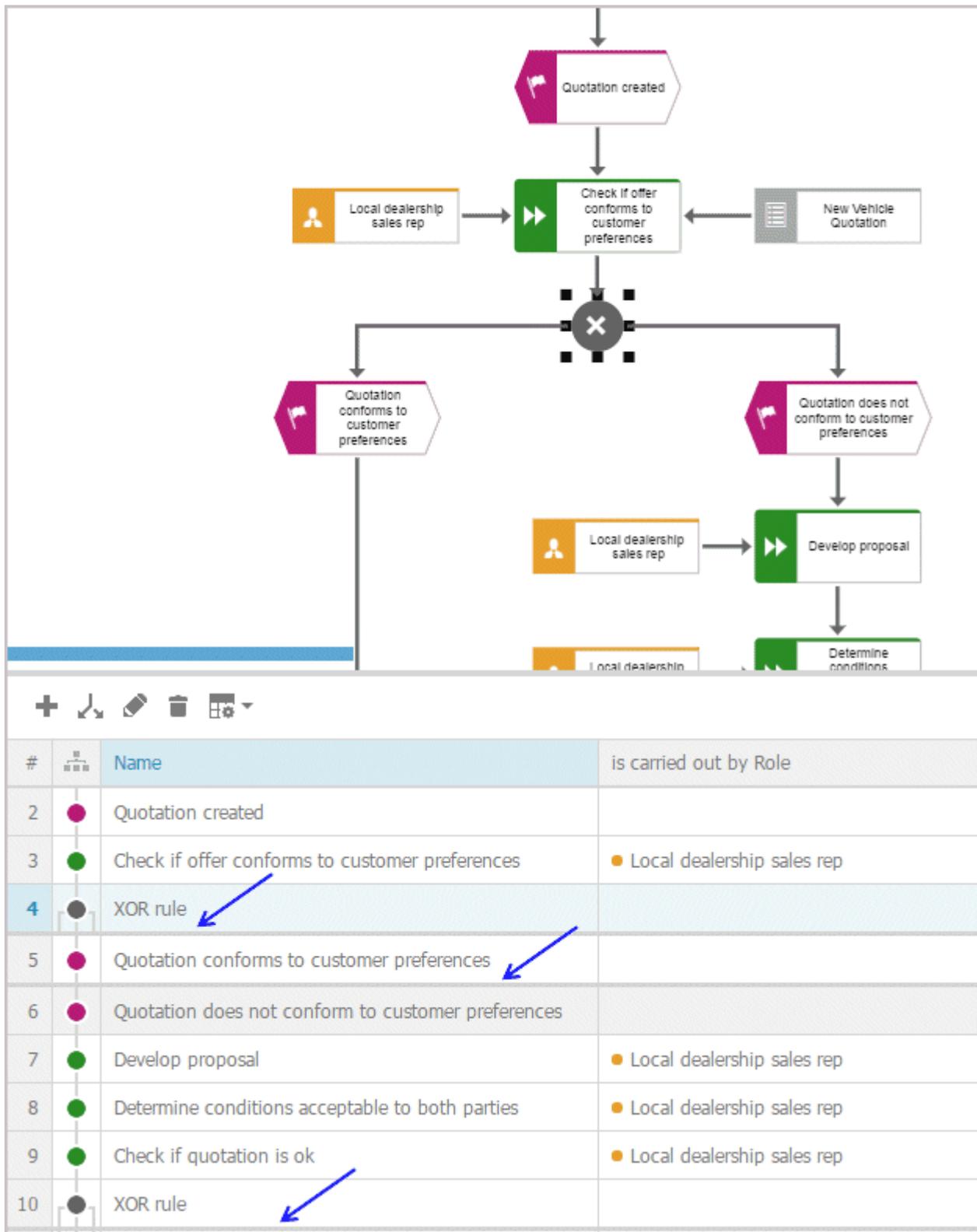
A table for a model of the **EPC** type contains, for example, green highlighting for functions because functions are displayed in green in the model. In a table for a BPMN diagram, a task appears in blue, as in the diagram.



A flashing cursor in an empty row indicates that entries can be made.

A gray background indicates that no entries can be specified.

Split paths are outlined by a thicker line.



In BPMN diagrams, lanes are outlined by a thicker line.

3.5.2.4.5.17.4 What default columns are available?

There are columns that are displayed by default when the modeling table is opened for the first time. However, you can hide all of them except for the numbering, color, and name column. Your setting is saved, which means that when you create or open a model, the table is displayed with the columns you specify.

IN AN EPC

- **Numbering**
Shows the line number.
- **Color column**
Displays the color of the object symbol.
- **Name**
The object name is entered here.
- **Description/Definition**
A description or definition of the object is entered here.
- **is carried out by Role**
The performing role or job description for the object is entered here. If the role or job description are not suitable for this object, a message is displayed.
- **is support by Application system type**
An application system type is inserted here. If such an object is not permitted for an object, for example, for an event, a message is displayed.
- **receives input from Information carrier**
An information carrier is inserted here. If such an object is not permitted for an object, for example, for an event, a message is displayed.
- **creates output to Information carrier**
An information carrier is inserted here. If such an object is not permitted for an object, for example, for an event, a message is displayed.

IN A BPMN DIAGRAM

- **Numbering**
Shows the line number.
- **Color column**
Displays the color of the object symbol.
- **Name**
The object name is entered here.
- **Description/Definition**
A description or definition of the object is entered here.

- **Belongs to container**

Shows the pool or lane to which an object belongs. This column cannot be edited.

3.5.2.4.5.17.5 What are the special features of BPMN diagrams?

For BPMN diagrams, you can specify whether or not the **Belongs to container** column is displayed. This column exists only in BPMN diagrams and is displayed by default. Lanes are automatically enlarged in table-based modeling if a new object does not fit completely into the lane.

3.5.2.4.5.17.6 What attribute values and processing types are available?

You can specify attributes in the modeling table. Attributes specified by the system cannot be edited, for example, Creation date. System attribute columns have a gray background.

The processing of an attribute value may change depending on the attribute type. For example, if you want to process an attribute of the **Time date** type, you can do this using the calendar displayed.

The following attribute types are available:

Date attributes

The calendar is displayed when you click in the cell containing the attribute value. For an attribute of the **Time date** type, you can select a time in addition to the date.

The screenshot shows a date and time selection dialog box. At the top, there are dropdown menus for the year (2016) and the month (March). Below these is a calendar grid with days of the week (Mon to Sun) and dates. The date 14 is highlighted. Below the calendar, there is a time field labeled 'Time:' with the value 12:41:10. At the bottom, there are two buttons: 'OK' and 'Cancel'.

Boolean

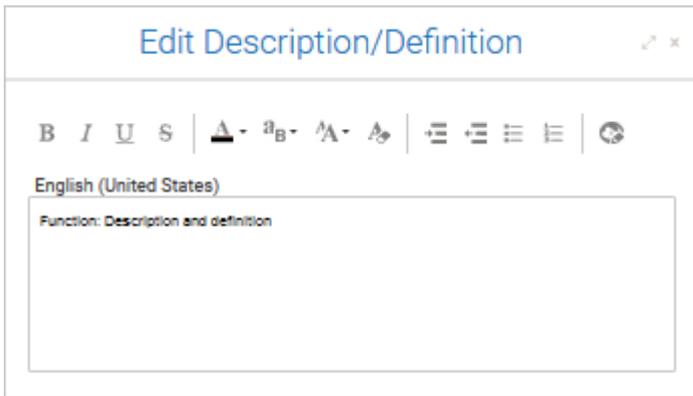
You can change the attribute value by enabling (true:) or disabling (false:) the check box. The check box for an attribute value that is not specified is shaded in color ().

Text attributes

You can change the attribute value directly in the cell.

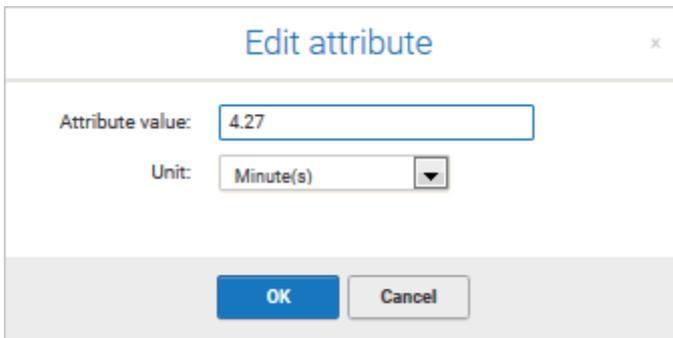
Formattable text attributes

A dialog opens. You can edit the text and formatting.



Attribute values with unit

A dialog opens. When saving the attribute value for numerical attributes, a check is made as to whether the value entered is a number. If not, you are notified.

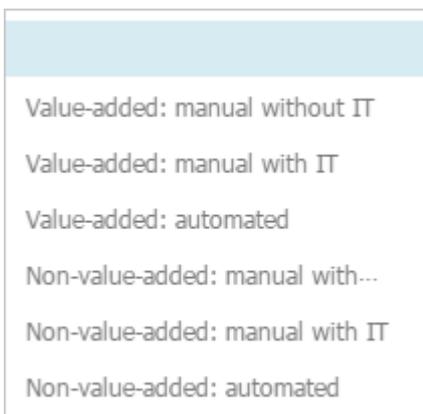


Numerical attributes

You can change the attribute value directly in the cell. When saving the attribute value, a check is made as to whether the value entered is a number. If not, you are notified.

List attributes

You can select from a list of attribute values specified by the method by clicking the relevant value.



3.5.2.4.6 Create and edit BPMN diagrams

ARIS Connect Designer can assist you in modeling BPMN (page 1139) diagrams. When placing objects, you automatically receive alternative object symbols for placement. Furthermore, when you work with BPMN diagrams, a specific tab bar is shown enabling you to quickly access BPMN functionality you frequently require.

3.5.2.4.6.1 Create BPMN diagram

You can create new BPMN diagrams in order to model your business processes, for example. ARIS Connect supports you with Smart Modeling (page 703) and Guided Modeling (page 501).

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

In the portal

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Click  **Create new model** on the **Quick start** area.
4. Enter a name for the new BPMN diagram in the **Model name** box.
5. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
6. Select the required diagram type. The **Target** area displays the database and group names. This is where the new model will be stored.
7. Click the  group icon next of the **Groups** box.
8. If more than one database is provided, select the relevant database.
9. Navigate to the group where you want to save the model.
10. Click **OK**. The **Select target group** dialog is closed.
11. Check your input.
12. Click **OK**. The **Create model** dialog closes.

The BPMN diagram is created and opened in a new tab. You can set up ARIS Connect Designer (page 496) and model the diagram.
13. Hide (page 477) the grid.
14. Enable Smart Modeling (page 703) and Guided Modeling (page 501).
15. Open the **Symbols** bar if it is not already open by clicking  **Symbols**.
16. Click the **Pool** object and hold down the mouse button.
17. Drag the mouse pointer to the position you want to place the object in the modeling area.
18. Enter a name for the pool.
19. Click the **Lane** object, drag it on the pool and drop it. Two lanes are placed insider the pool.

20. Enter names for the lanes.
21. Place a start event in the upper lane.
22. Hide (page 496) the **Symbols** bar.

In the repository

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Navigate to the database group in which you want to create a new BPMN diagram. When you select the group, its contents are displayed in the detail view (page 470). Beside the name of the group the  **More** icon is displayed.
4. Click  **More** >  **Create model**. The corresponding dialog opens.
5. In the **Model name** box specify the name that the new BPMN diagram is to be created with in the selected group.
6. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
7. Select the required model type.
8. Click **OK**.

The new BPMN diagram is created and opened in a new tab. You can set up ARIS Connect Designer (page 496) and model the diagram.

3.5.2.4.6.2 Place object

BPMN contains a multitude of symbols. Therefore, only the basic symbols are displayed in the modeling toolbar. During modeling, only the symbols that are allowed are displayed in a logical order.

Procedure

1. Open (page 529) a BPMN diagram.
2. Click the relevant object symbol in der **Symbols** bar (page 552).
If multiple symbols are allowed, they are offered for selection. If only one symbol is allowed, it is placed. If no symbol is allowed, an error message is displayed when placing the symbol.
3. Click the position in the modeling area where you want to place the object. Lines indicate the alignment of the moving object (page 501) to the placed objects and arrows indicate the distances.
4. Enter the relevant name. A new object definition will be created.
5. Click  **Edit symbol** to select the relevant symbol.
6. Click outside the object once you have entered or selected a name.

You have placed an object.

If you set a grid (page 501), the object symbol will be placed according to the grid width. When you place a horizontal pool or a horizontal lane, the **Name** attribute is automatically rotated and displayed vertically. If you place objects on pools or lanes, relationships are created automatically. In order to display these, enable the **Relationships** tab in the **Details** bar.

3.5.2.4.6.3 Place attributes for horizontal pools/lanes

If a horizontal pool or lane is placed, the **Name** attribute automatically rotates so that the read direction is from bottom to top. You can change the attribute alignment.

Procedure

1. Open (page 529) a BPMN diagram.
2. Enable the **Details** bar.
3. Click the  **More** next to the attribute.
4. Select  **Place attribute**.
5. Use the mouse to drag the attribute to the relevant position, or use the arrow keys on the keyboard.

You have changed the alignment of an attribute.

You can drag an attribute directly to the relevant position.

3.5.2.4.6.4 Move lane

You can subsequently reposition lanes that you have placed within pools or lanes.

Procedure

1. Click the lane you want to place at another position. The lane and all embedded objects are highlighted. Depending on where the lane is located with regard to the other lanes the corresponding options for moving are provided.
2. Click the required direction, such as  **Lane up**,  **Lane down**,  **Lane to the left**, or  **Lane to the right**.

The lane you selected is placed at the new position.

3.5.2.4.6.5 Change BPMN object symbol

You can change the symbol for selected objects if various symbols are available for them.

Prerequisite

The method filter in use (page 523) includes different symbols of the objects you selected.

Procedure

1. Click an object.
2. Click  **Edit symbol**. The list of object symbols available for the selected object(s) is shown.
3. Click the symbol you want to use from now on for the selected object/s in this model.

The symbol for the selected object is or the symbols of the selected objects are changed.

3.5.2.4.6.6 Collapse subprocess

You can collapse a symbol for the **Subprocess** type. This way the process modeled in the subprocess is assigned to the subprocess and the subprocess is collapsed.

Procedure

1. Select the subprocess you want to collapse.
2. Click  **Collapse**. The process contained in the subprocess is assigned to the object and, at the same time, is displayed as embedded in the object, which is indicated by a  **plus sign**.

The process contained is assigned to the subprocess (page 643) and can be opened by double-clicking the  assignment icon.

3.5.2.4.6.7 Expand subprocess

You can expand a collapsed symbol of the **Subprocess** type. This way the process modeled and assigned in this subprocess is displayed as embedded in the subprocess.

Procedure

1. Select the subprocess you want to expand.
2. Click  **Expand**.

The process contained is displayed as embedded in the subprocess. (page 643) The process remains assigned to the subprocess (page 643).

3.5.2.4.6.8 Edit subprocess

You can edit a subprocess.

Procedure

1. Activate the BPMN (page 579) tab bar.
2. Select the relevant subprocess symbol with an assigned model.
3. Double-click the  assignment icon.

The assigned model is opened for editing.

3.5.2.4.6.9 Enable or disable Smart Modeling

You can enable or disable Smart Modeling that provides automatic modeling features, such as creating space for new objects, placing objects, and reconnecting connections.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area** > **Smart Modeling**. The check box is enabled () and the Smart Modeling can be used. Keep the setting if you want to leave Smart Modeling enabled.
3. To disable Smart Modeling, click  **Modeling area** > **Smart Modeling**. The check box is disabled.

You have enabled or disabled Smart Modeling.

3.5.2.4.6.10 Enable and disable Guided Modeling

You can enable or disable Guided Modeling (page 581), which uses lines and arrows to help you place objects or connections (page 565) in the modeling area.

Procedure

1. Activate the **Model** (page 576) tab bar.
2. Click  **Modeling area** > **Show guides**. The check box is enabled () and the guides for placing items are shown in the modeling area.
3. To disable the guides, click  **Modeling area** > **Show guides**. The check box is disabled.

You have enabled or disabled the guides for Guided Modeling.

Set up default distance for Guided Modeling

What is Guided Modeling for?

3.5.2.4.6.11 How to import a BPMN file

The following applies when importing (page 464) a BPMN 2.0 diagram:

- You can import BPMN diagrams of the **BPMN collaboration diagram (BPMN 2.0)** and **BPMN process diagram (BPMN 2.0)** type.
- `<bpmn:import>` elements are not supported (see chapter 15.3.1 **Document Structure** of the BPMN specification (<http://www.bpmn.org/>)).
- Existing ARIS objects are not reused. Importing the same file multiple times results in new models and definition copies (page 1143). Occurrence copies (page 1151) of objects are not generated.
- XSD ID references are supported. QNames that can contain namespaces are not supported (see chapter 15.3.2 **References within the BPMN XSD** of the BPMN specification (<http://www.bpmn.org/>)).
- There are character limits for attributes in ARIS. For example, the Name (AT_NAME) attribute can have a maximum of 250 characters. If the BPMN import exceeds this number of characters, the first 250 characters are used, and the remaining characters are cut off.
- The colors of objects, connections and labels are exchanged if the third-party software supports this.

3.5.2.4.6.12 Use the BPMN tab bar

3.5.2.4.6.12.1 Change BPMN object symbol

You can change the symbol for selected objects if various symbols are available for them.

Prerequisite

The method filter in use (page 523) includes different symbols of the objects you selected.

Procedure

1. Click an object, or hold the **Ctrl** key pressed to select multiple objects of the same type.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Change symbol**. The list of object symbols available for the selected object(s) is shown.
4. Click the symbol you want to use from now on for the selected object/s in this model.

The symbol for the selected object is or the symbols of the selected objects are changed.

Tip

Select the object and click  **Edit** to select the relevant symbol.

3.5.2.4.6.12.2 Change loop type

You can use the **Loop type** attribute to specify the loop behavior for objects of the **Task** type.

Procedure

1. Select the task whose behavior you want to change.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Change symbol**.
4. Click  **Marker**.
5. Click one of the loop behaviors  **None**,  **Standard**,  **Multi-instance parallel** or  **Multi-instance sequential**.

The loop behavior of the **Task** object has been changed.

3.5.2.4.6.12.3 Add lane

You add additional lanes to placed pools and lanes.

Procedure

1. You add additional lanes to placed pools and lanes.
2. Select the lane for which you want to add an additional lane.
3. Activate the BPMN (page 579) tab bar.
4. Click  **Add lane**. Select where to add the lane, such as  **Add lane above**,  **Add lane below**,  **Add lane to the left**, or  **Add lane to the right**.
5. Click the corresponding option.

A lane is added to the selected lane according to your selection.

3.5.2.4.6.12.4 Add lane in an enterprise BPMN diagram

You add additional lanes to placed pools and lanes.

Procedure

1. Select the lane for which you want to add an additional lane.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Add lane**.
4. Select where to add the lane, such as  **Add lane above**,  **Add lane below**,  **Add lane to the left**, or  **Add lane to the right**.
5. Select a lane type.

A lane of the selected type is added to the selected lane according to your selection.

3.5.2.4.6.12.5 Insert lane into a pool or lane

You can easily insert a lane that is placed directly in the model into a pool or lane.

Prerequisite

The lane or pool into which a lane is to be inserted contains no flow objects.

Procedure

1. Activate the BPMN (page 579) tab bar.
2. Select the lane you want to insert.
3. Press the **Ctrl** key and select the pool or lane into which you want to insert the lane.
4. Click  **Insert lane**. If you have selected a pool into which to insert the lane, the lane is inserted immediately. If you have selected a lane into which to insert the lane, the **Specify which lane to insert** dialog opens.
5. Enable the options button of the lane you want to insert.
6. Click **OK**. The lane for which you have activated the options button is inserted into the other lane.

You have inserted a lane into a pool or lane.

3.5.2.4.6.12.6 Move lane

You can subsequently reposition lanes that you have placed within pools or lanes.

Procedure

1. Click the lane you want to place at another position. The lane and all embedded objects are highlighted. Depending on where the lane is located with regard to the other lanes the corresponding options for moving are provided.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Move lane** and select the required direction, such as  **Lane up**,  **Lane down**,  **Lane to the left**, or  **Lane to the right**.

The lane you selected is placed at the new position.

3.5.2.4.6.12.7 Delete pool or lane

You can easily delete a lane or pool.

Prerequisite

Flow objects and lanes must not be located side by side in the same pool, otherwise the lane cannot be deleted.

Procedure

1. Activate the BPMN (page 579) tab bar.
2. Select the pool or lane you want to delete.
3. Click  **Delete pool or lane**.

The pool or lane is deleted.

If the lane to be deleted contains objects, these are placed in an automatically created lane with the name **Automatically generated lane**. If the top container is deleted, the objects are retained.

3.5.2.4.6.12.8 Delete pool or lane from the repository

You can easily delete a lane or pool from the repository.

Prerequisite

Flow objects and lanes must not be located side by side in the same pool, otherwise the lane cannot be deleted.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. In the database, select the group containing the relevant model. The content of the selected group is listed.
3. Move the mouse cursor over the pool or the lane you want to delete and click  **Delete**.

The pool or lane is deleted.

If the lane to be deleted contains objects, these are retained.

3.5.2.4.6.12.9 Transform communication into call conversation

You can easily transform a communication into a call conversation.

Procedure

1. Open or create a BPMN conversation diagram containing a communication object.
2. Activate the BPMN (page 579) tab bar.
3. Select the communication symbol of the communication object you want to transform.
4. Click  **Transform into call conversation**.

The communication object is transformed into a call conversation and the conversation symbol is marked in bold.

3.5.2.4.6.12.10 Change type of sequence flow

You can change the sequence flow type in diagrams of the **BPMN process diagram (BPMN 2.0)**, **BPMN collaboration diagram (BPMN 2.0)**, **Enterprise BPMN collaboration diagram**, and **Enterprise BPMN process diagram** type.

Procedure

1. Click the flow connection you want to change.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Change type of sequence flow**.
4. Click one of the available types:  **Regular sequence flow**,  **Default sequence flow** or  **Conditional sequence flow**.

You changed the sequence flow type.

3.5.2.4.6.12.11 Collapse subprocess

You can collapse a symbol for the **Subprocess** type. This way the process modeled in the subprocess is assigned to the subprocess and the subprocess is collapsed.

Procedure

1. Select the subprocess you want to collapse.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Collapse subprocess**. The process contained in the subprocess is assigned to the object and, at the same time, is displayed as embedded in the object, which is indicated by a  **plus sign**.

The process contained is assigned to the subprocess (page 643) and can be opened by double-clicking the  assignment icon.

3.5.2.4.6.12.12 Expand subprocess

You can expand a collapsed symbol of the **Subprocess** type. This way the process modeled and assigned in this subprocess is displayed as embedded in the subprocess.

Procedure

1. Select the subprocess you want to expand.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Expand subprocess**.

The process contained is displayed as embedded in the subprocess. (page 643) The process remains assigned to the subprocess (page 643).

3.5.2.4.6.12.13 Edit subprocess

You can edit a subprocess.

Procedure

1. Activate the BPMN (page 579) tab bar.
2. Select the relevant subprocess symbol with an assigned model.
3. Click  **Edit subprocess**.

The assigned model is opened for editing.

3.5.2.4.6.12.14 Assign global reference to call activity

You can assign a global process or a task to an object of the **Call activity** type. If you place a call activity, the **Select global process or task** dialog opens and you can assign the relevant global process or task. You can change the assignment later.

Procedure

1. Select the relevant call activity.
2. Activate the BPMN (page 579) tab bar.
3. Click  **Select global reference**. The **Select global process or task** dialog opens.
4. Navigate to the database group in which the relevant global process or task is stored.
5. Select the global process or task.
6. Click **OK**.

The selected global process or task is assigned to the call activity.

3.5.2.4.6.13 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.6.13.1 What additional symbols are allowed in Enterprise BPMN diagrams

The most important object types with their default symbols and a reduced set of connections are available in diagrams of type **Enterprise BPMN diagram** and **Enterprise BPMN process diagram**.

- Cluster
- Control
- Risk
- Role
- Internal person
- Entity type
- D attribute (ERM)
- Document
- Location
- Application system type
- Position
- Organizational unit
- Organizational unit type
- Group

3.5.2.4.6.13.2 How is the BPMN specification implemented in ARIS?

The BPMN specification (<http://www.bpmn.org/>) defines a set of semantic objects that can be placed in a BPMN diagram. Each of these objects can define different attributes. All objects/attributes can be considered in their entirety as a BPMN metamodel.

An application supporting BPMN must provide methods enabling the use of the BPMN attributes that you must specify.

The BPMN specification does not define the way an application makes these mechanisms available. Instead, the application design determines how non-graphic BPMN attributes are modeled.

The following section describes how the BPMN specification is implemented in ARIS.

An exact ARIS representation is described for each BPMN attribute. This enables the ARIS user to:

- Model the entire BPMN semantics in ARIS
- Determine the exact semantics of a BPMN diagram saved in the ARIS repository.
- Use a report to transform BPMN diagrams into BPMN XML.
- Use an ARIS report to export BPMN diagrams/metamodels into an independent format.

In some situations, BPMN attributes are mapped to extended ARIS modeling techniques. In particular, different BPMN-semantic definitions, represented as BPMN attributes, are mapped to one or more of the following ARIS concepts:

- ARIS connection with special semantics (for example, definition of properties, assignment of properties)
- Several occurrences of the same ARIS object definition (for example, events of the **Link** type, referenced subprocesses, etc.)
- Model assignments (for example, during independent modeling of a subprocess)

ARIS video tutorial

BPMN modeling support (<http://www.ariscommunity.com/videos/learn-how-aris-assists-you-modeling-bpmn-diagrams>)

3.5.2.4.6.13.3 Which diagram types for BPMN are available in ARIS?

The following diagram types exist for BPMN in ARIS:

- BPMN process diagram (BPMN 2.0) - API name: MT_BPMN_PROCESS_DIAGRAM
- BPMN collaboration diagram (BPMN 2.0) - API name: MT_BPMN_COLLABORATION_DIAGRAM
- BPMN conversation diagram (BPMN 2.0) - API name: MT_BPMN_CONVERSATION_DIAGRAM
- BPMN allocation diagram (BPMN 2.0) - API name: MT_BPMN_ALLOCATION_DIAGRAM
- Enterprise BPMN collaboration diagram - API name MT_ENTERPRISE_BPMN_COLLABORATION
- Enterprise BPMN process diagram - API name MT_ENTERPRISE_BPMN_PROCESS

3.5.2.4.6.13.4 Which diagrams feature special modeling support?

Special BPMN modeling support is available in the following model types:

- Enterprise BPMN collaboration diagram
- Enterprise BPMN process diagram
- BPMN collaboration diagram (BPMN 2.0)
- BPMN process diagram (BPMN 2.0)

3.5.2.4.6.13.5 What general objects are available in BPMN?

The five basic categories of elements are:

- Flow objects
- Data
- Connecting objects
- Swimlanes
- Artifacts

Flow Objects are the main graphical elements to define the behavior of a business process.

There are three flow objects:

- Events
- Activities
- Gateways

Data is represented with four elements:

- Data objects
- Data inputs
- Data outputs
- Data stores

There are four ways of connecting the flow objects to each other or other information. There are four connecting objects:

- Sequence flow
- Message flow
- Associations
- Data associations

There are two ways of grouping the primary modeling elements through swimlanes:

- Pools
- Lanes

Artifacts are used to provide additional information about the process. There are two standardized artifacts

- Group
- Text annotation

3.5.2.4.6.13.6 What to consider when modeling BPMN diagrams

BPMN has numerous constraints that <ARIS Method does not have. Therefore, depending on the context, only connections between symbols that are logical in the BPMN environment are allowed or prohibited.

3.5.2.4.6.13.7 Which symbols are displayed in the Symbols bar?

Only the base symbols are displayed in the **Symbols** bar. When you place a base symbol, all of the symbols allowed by the method are offered to you for selection.

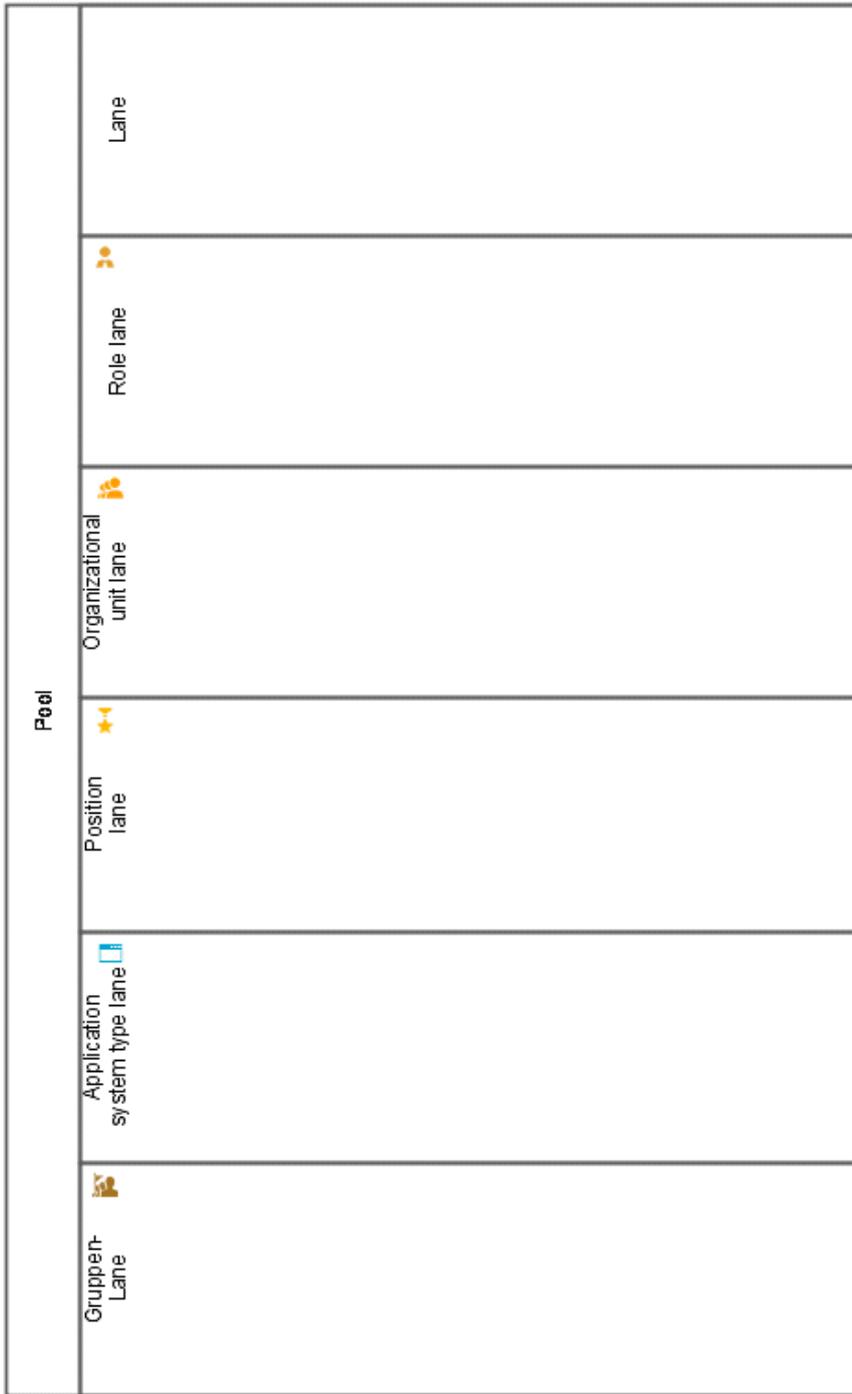
If there are symbols allowed by the method whose base symbol is not allowed by the method, the first permitted symbol is displayed, and when this symbol is placed, all other symbols allowed by the method are displayed.

3.5.2.4.6.13.8 What lane types exist?

Various lane types exist:

- Lanes that are not specified any further, in all model types
- Lanes for roles, only in Enterprise BPMN collaboration diagrams and Enterprise BPMN process diagrams
- Lanes for organizational units, only in Enterprise BPMN collaboration diagrams and Enterprise BPMN process diagrams
- Lanes for positions, only in Enterprise BPMN collaboration diagrams and Enterprise BPMN process diagrams
- Lanes for groups, only in Enterprise BPMN collaboration diagrams and Enterprise BPMN process diagrams

- Lanes for application system types, only in Enterprise BPMN collaboration diagrams and Enterprise BPMN process diagrams



Since lanes are object types it is impossible to change the symbol.

3.5.2.4.6.13.9 What implicit connections exist?

The following implicit connections exist in diagrams of the **Enterprise BPMN collaboration diagram**, **Enterprise BPMN process diagram**, **BPMN collaboration (BPMN 2.0)**, and **BPMN process diagram (BPMN 2.0)** type:

- belongs to
- carries out
- supports

These connections belong to the lanes and are therefore moved together with them.

3.5.2.4.6.13.10 How to avoid inconsistencies

Corresponding objects must be of the same type.

Example

An object of the **Message end event** type, which generates a message, must be handled by an object of the **Message start event** type, which receives the message.

To avoid any inconsistencies, the modeler must observe constructs such as those shown in the example above.

3.5.2.4.6.13.11 How to avoid symbol inconsistencies

Some attributes are fixed attributes of certain symbols. If you specify such an attribute, all occurrences of the same object definition must have the same symbol. The default symbol for this object definition is changed to this symbol.

The modeler cannot change the following attributes directly. Instead, they are specified automatically. Such attributes are displayed as read-only attributes:

- Event type
- Task type
- Activity type

After you have created a new object definition, you can only change the attribute if there is only one occurrence of this definition. If there are several object occurrences, the system automatically tries to change all occurrence copies.

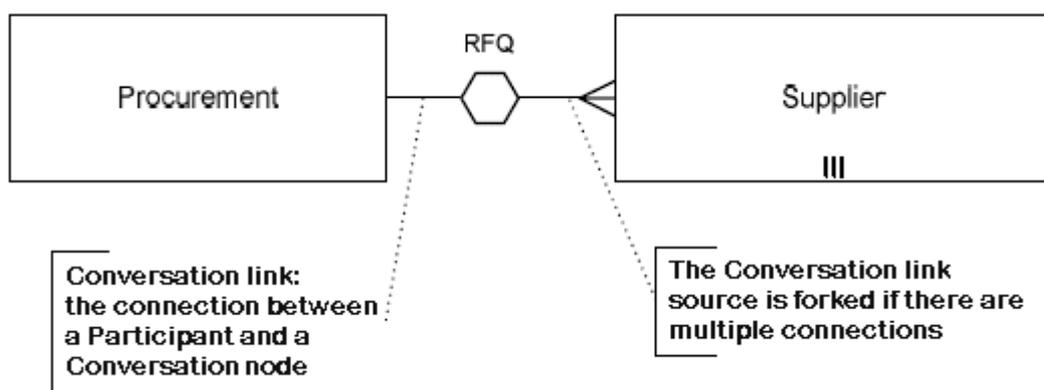
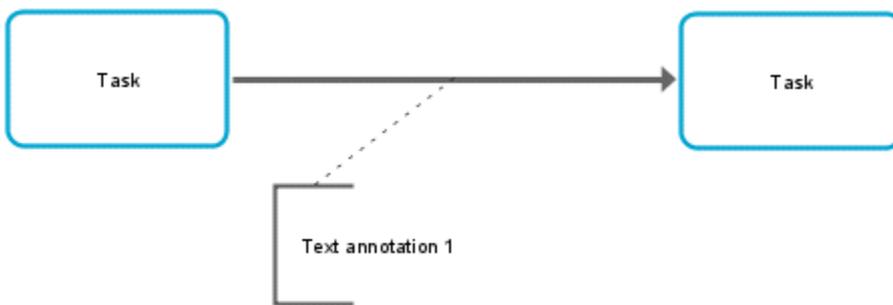
The following rules apply for changing symbols on occurrence copies:

- If you change the type (for example, the symbol is changed from **Message start event** to **Timer start event**), the symbols in all occurrence copies are changed. At the same time, the symbols are changed in such a way that the visual display of their properties is unaffected. If you do not change the type (for example, the symbol is changed from **Message start event** to **Message end event**), only the symbol for the selected occurrence is changed.

- Since only the type is changed, all other properties remain the same. A start event remains a start event (the same applies to intermediate events and end events). A **catch** event remains a **catch** event and a **throw** event remains a **throw** event. The same applies to the **Interrupting** and **Non-interrupting** properties. If any of these properties are not available, for example, because there is no such property for the new type, the symbol is still changed. In this case, the symbol that the user selected is now used.

3.5.2.4.6.13.12 How are connections to connections realized in ARIS?

In ARIS, you cannot model a connection to or from a connection. ARIS Method uses a fixed set of attributes of the **Annotation** type to represent such a construct at ARIS connection definitions. They are placed in the model using the symbol for the **Annotation** type from the **Symbols** bar.



3.5.2.4.6.13.12.1 Data object connected to a sequence flow

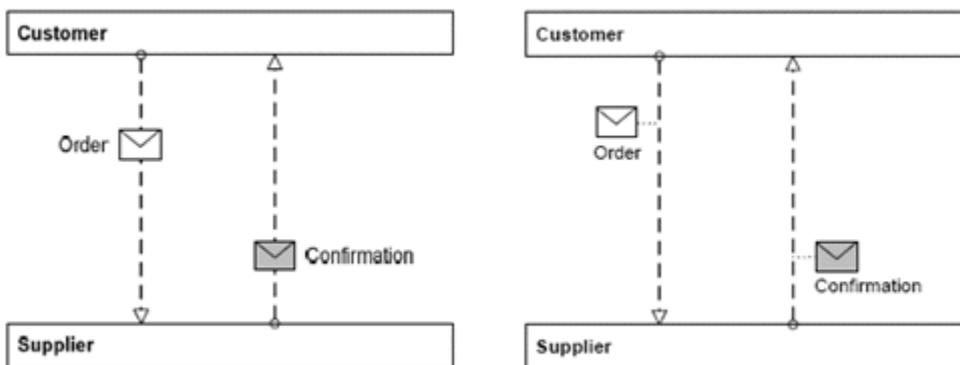
In BPMN, you can choose between the following two options.



The option shown on the left-hand side of the graphic represents the realization in ARIS.

3.5.2.4.6.13.12.2 Objects of the Message type connected to a message flow

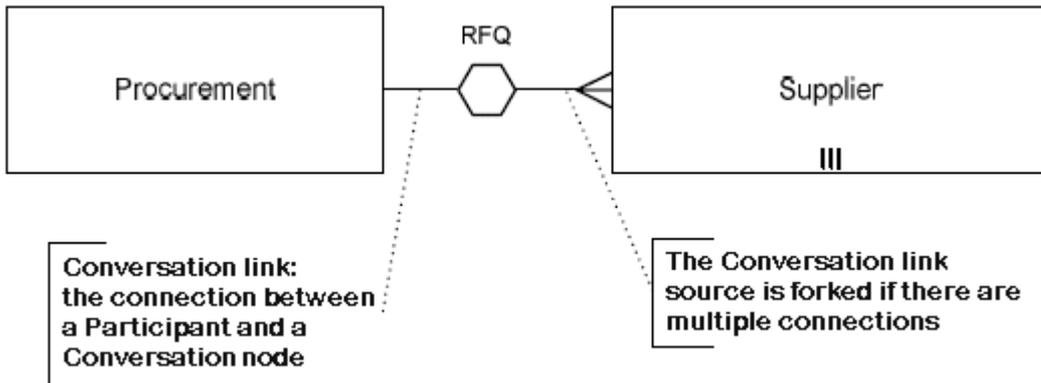
In BPMN, you can choose between the following two options.



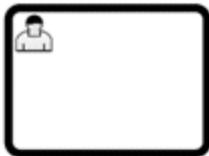
The option shown on the left-hand side of the graphic represents the realization in ARIS.

3.5.2.4.6.13.12.3 What relationships with text annotations exist?

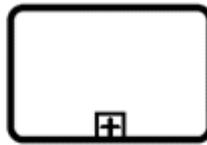
In ARIS, you cannot model a connection to or from a connection. ARIS Method uses a fixed set of attributes of the **Annotation** type to represent such a construct at ARIS connection definitions.



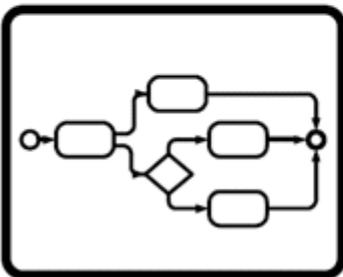
3.5.2.4.6.13.13 How to handle activities of the Call activity type



A Call activity object calling a global task



A Call activity object calling a process (collapsed)



A Call activity object calling a process (expanded)

The concept of the activity of the **Call activity** type is an approach for reusable processes and tasks. An activity of the **Call Activity** type serves as a wrapper for a global task or process. This wrapper can remove the properties and attributes of the global task.

In ARIS, an activity of the **Call activity** type is a separate symbol that can be placed directly. An object definition or model that represents the global task or process can be assigned to this activity.

3.5.2.4.6.13.13.1 Activity of the Call activity type for a global task

In ARIS, the reference of an activity of the **Call activity** type is mapped to its global task via a connection between the object definition of the activity of the **Call activity** type and the object definition of the global task. In addition, the associated target object cannot have any object occurrences.

Both the connection and associated target object are protected when a database is reorganized.

3.5.2.4.6.13.13.2 Activity of the Call activity type for a global process

In ARIS, the referenced process is assigned as a model of the **BPMN collaboration diagram (BPMN 2.0)** type to the activity of the **Call activity** type.

3.5.2.4.6.13.13.3 What happens when you expand and collapse?

When you collapse an object of the **Call activity** type a model of the **BPMN collaboration diagram (BPMN 2.0)** type is created.

If you want to create an assignment to a model of the **BPMN process diagram (BPMN 2.0)** type, you must create an assignment manually. Only models of the **BPMN collaboration diagram (BPMN 2.0)** type are offered in the dialog for selecting a global reference.

If only one assigned model exists, the objects of the assigned model are displayed in the object of the **Call activity** type when an object of the **Call activity** type is expanded.

If an assigned model of the **BPMN collaboration diagram (BPMN 2.0)** type exists, as well as an assigned model of the **BPMN process diagram (BPMN 2.0)** type, the objects of the assigned model of the **BPMN collaboration diagram (BPMN 2.0)** type are displayed when an object of the **Call activity** type is expanded.

3.5.2.4.6.13.14 What constraints apply to connections?

BPMN diagrams may include ARIS connections that are always visible (**Message flow** and **Sequence flow**) as well as ARIS connections that are never visible (**belongs to** and **can trigger** connections).

These constraints, which do not occur in ARIS Method, are automatically observed and enforced when modeling BPMN diagrams.

These constraints specify which conditions an ARIS connection must meet:

- A connection must exist as a visible occurrence (in a message flow, regardless of whether or not message items occur between events, and in sequence flows or associations in BPMN and process schedule models only).
- A connection may exist as a visible occurrence and is allowed in all embedded states (normal ARIS connections).
- A connection may exist as a fully embedded occurrence only (**belongs to** connections, only in BPMN and process schedule models).
- A connection may exist as a partly embedded occurrence only (**can trigger** connection) and can be created only if objects overlap. It cannot exist if an object is fully embedded in the wrapper object.
- A connection may exist as an invisible occurrence only, but the objects have no embedded relationships (**belongs to** connection for a group object (page 724)).
- Connections that exist as an embedded occurrence only are not displayed when you manually create connections.

3.5.2.4.6.13.15 How are connections handled for movement, size change, and placement operations?

In a BPMN diagram, certain connections have an explicit semantic meaning. They are exclusively invisible or embedded connections.

Such connections are automatically created and deleted if objects are moved or resized.

Changes to visual relationships between an embedding object and an embedded object trigger the automatic creation or deletion of connections. These are:

- Move
- Change of size
- Placement of an object
- Create a definition copy
- Create an occurrence copy
- Use of drag and drop to drag an object into a BPMN diagram (in the **Explorer**)

3.5.2.4.6.13.16 How are objects within objects handled in BPMN diagrams?

Since the types of connections that may be used in BPMN diagrams are subject to certain constraints, only allowed connections or connections that have not already been automatically created are offered for selection.

The dialog for selecting connections for an object within another object is only displayed if more than one connection is available for selection.

If there is only one possible connection, it is used.

3.5.2.4.6.13.17 What constraints also apply to sequence and message flows?

In BPMN, the following constraints apply to sequence and message flows:

- A sequence flow may not extend beyond process or pool boundaries.
- A message flow may not extend beyond a process boundary and may not be used within the same process or pool.
- When a boundary object is selected, then only one of the four Smart modeling buttons is visible

The BPMN diagram of an item from ARIS modeling can be determined as follows:

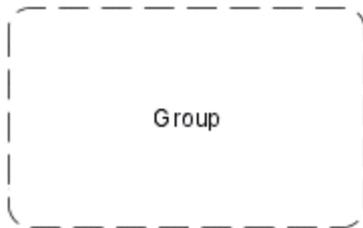
- In the BPMN diagram, each object of the **Pool** type represents a process.
- Items that have a connection of the **belongs to** type to another item belong to the same process as the item that is the target of this connection.

If objects are moved to another object of the **Pool** type in the BPMN diagram, other constraints may also take effect. In this case, the user can decide whether he or she wants to cancel the move or delete the invalid connections.

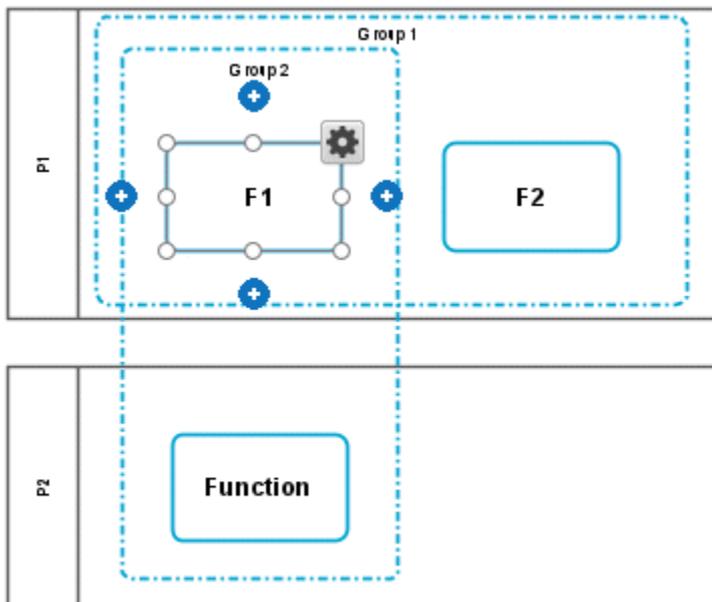
3.5.2.4.6.13.18 How are group objects handled?

Elements are assigned (page 723) to a process via a connection of the **belongs to** type. A process is represented by an object of the **Pool** or **Lane** type.

The figure shows a group object.



If the group is arranged in an object of the **Pool** or **Lane** type, an element that belongs to this group has at least two connections of the **belongs to** type. An element has connections of the **belongs to** type to each group to which it belongs and also a connection of the **belongs to** type to the object of the **Pool**, **Lane**, or **Subprocess** type to which it belongs.



MOVE

- If the process is moved, all of the elements that are linked via a connection of the **belongs to** type are also moved.
- In a BPMN diagram, you can create visual groups that do not have any syntactic meaning. They are for arrangement purposes only. Elements that belong to this group object are linked with this group via an invisible connection of the **belongs to** type. In this case, there is no embedded relationship between the BPMN element and the group.
- The connection of the **belongs to** type is automatically created if an element is moved to a group.

- If the group is moved, the elements linked to the group via a connection of the **belongs to** type are not moved. If you move the group so that it no longer encloses its elements, the connection of the **belongs to** type between the group and the elements is automatically removed.

DELETE

If a group is deleted, the elements remain. However, if a pool is deleted, all of the elements in the pool are also deleted.

COPY OR CUT

When you copy or cut the group, its elements are not copied or cut.

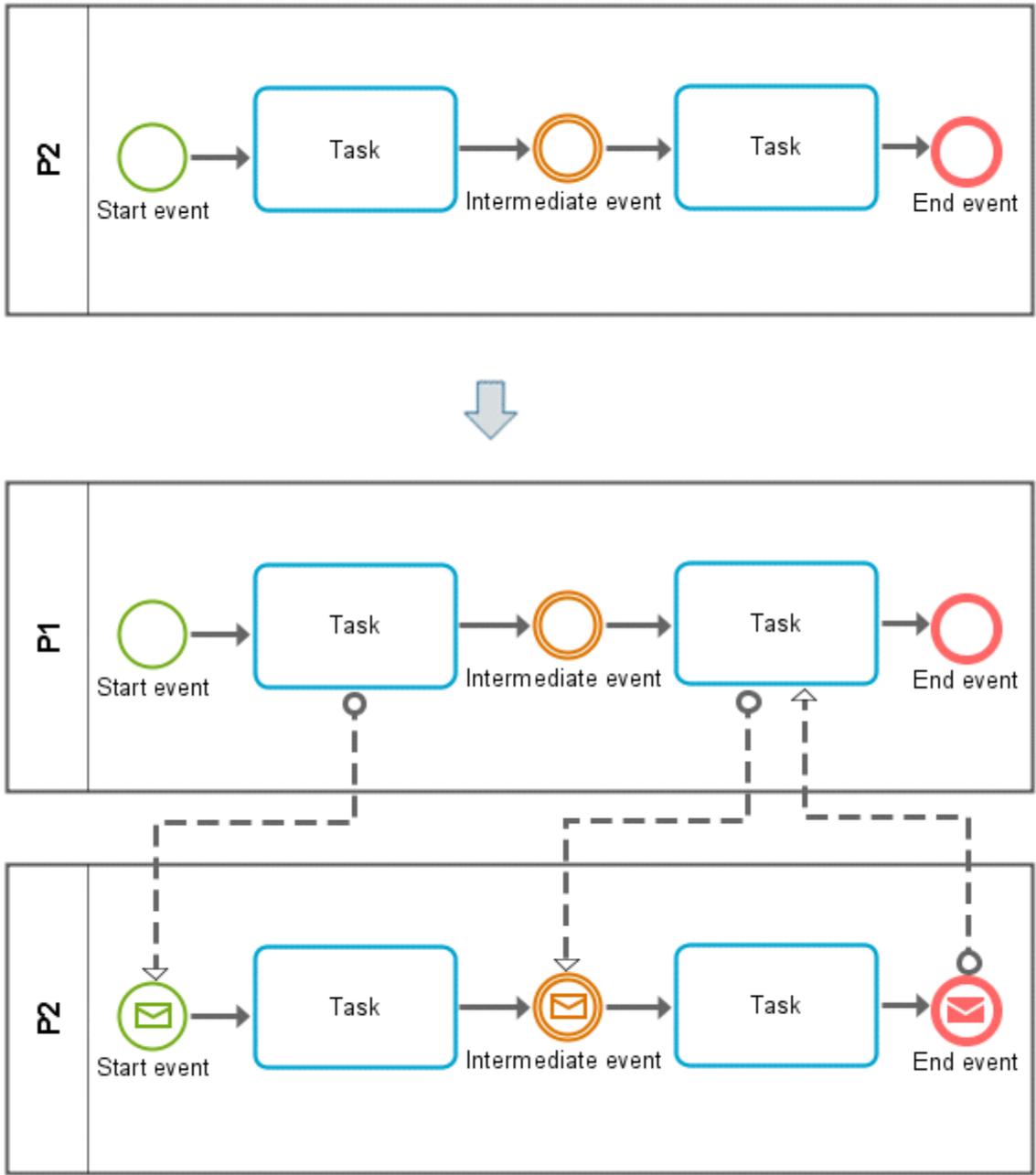
3.5.2.4.6.13.19 How are object symbols changed according to their semantics?

Events that have an incoming or outgoing connection of the Message flow type are considered to be events of the **Message** type. Events of the **Message** type have special symbols:

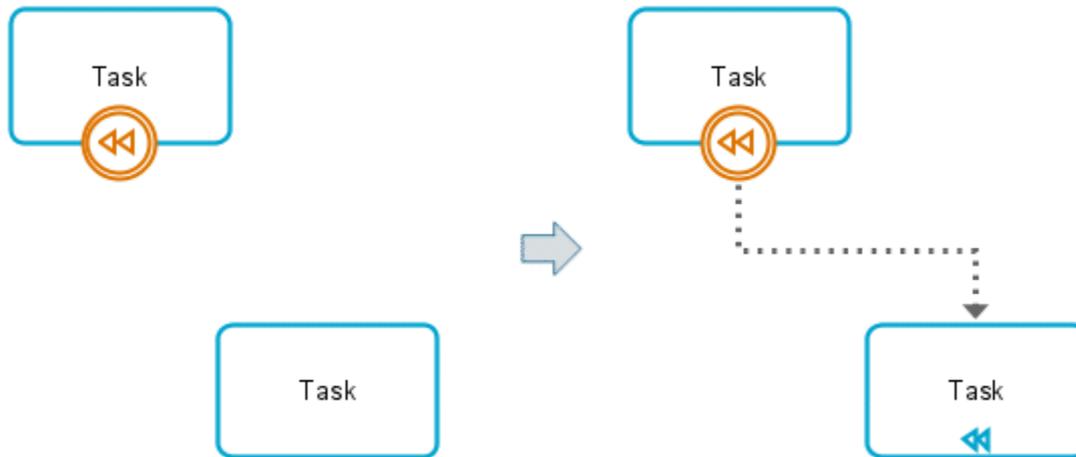
Symbol	Name
	Message (start event)
	Message (intermediate event)
	Message (end event)

The symbols for objects that do not have any particular semantics (**None** event type) are automatically adjusted depending on whether a connection of the **Message flow** type is added or removed.

The graphic shows how the symbols change if you add a connection of the **Message flow** type.



The following graphic shows how the symbol changes if you place an element of the **Compensation (intermediate event)** type on an activity and draw a connection to another activity.



3.5.2.4.6.13.20 What constraints apply to size changes?

3.5.2.4.6.13.20.1 Constraints for size changes

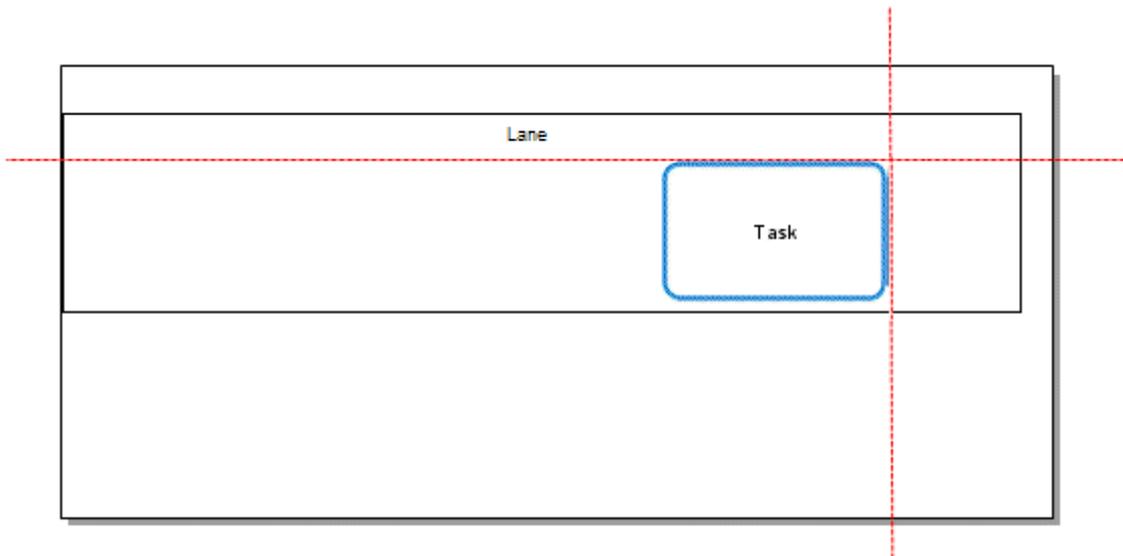
The following object types do not represent container objects:

- Activity
- Event
- Subprocess
- Gateway
- Annotation

These objects can be part of a container object. The following objects represent container objects:

- Pool
- Lane
- Subprocess

You can resize container objects. However, a container object may not be smaller than the objects placed in it.



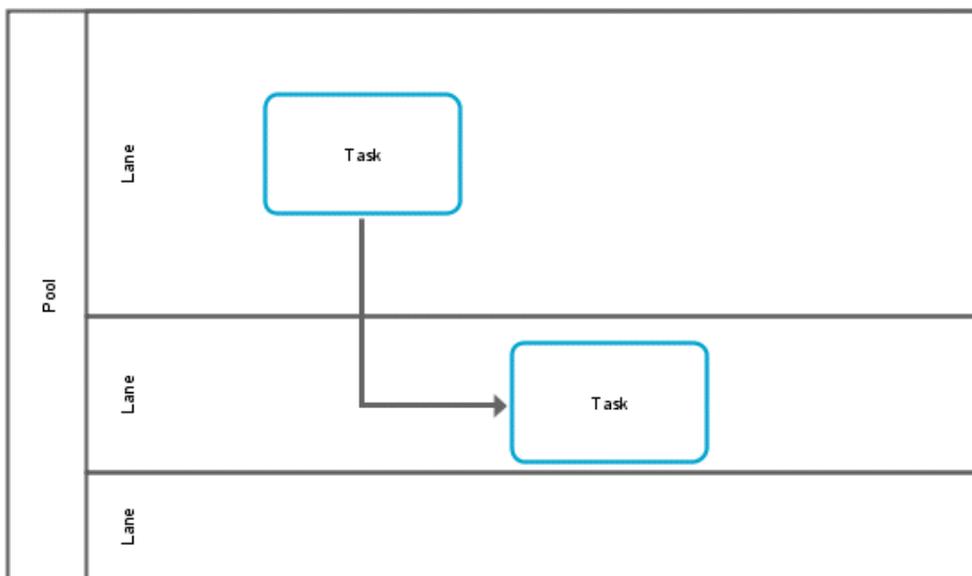
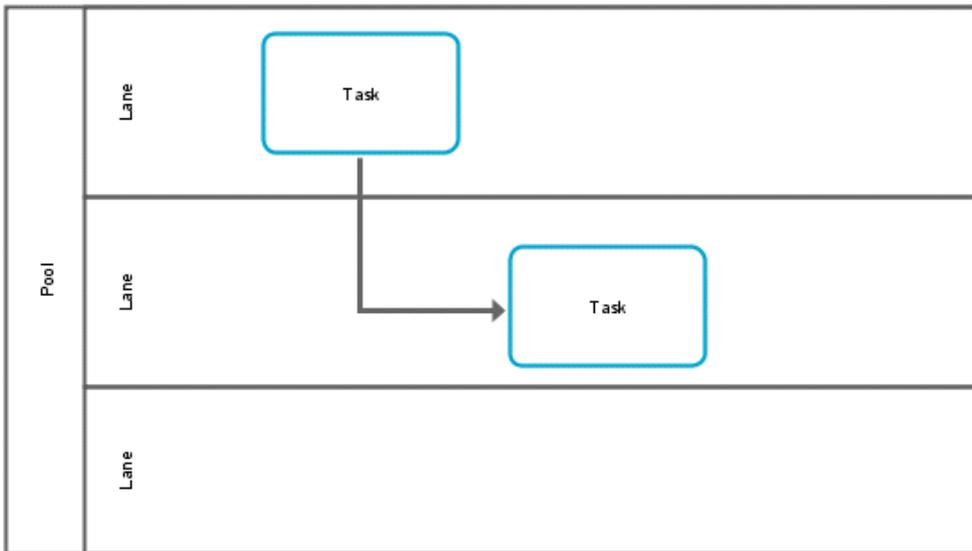
Example

If a pool has two lanes, and five tasks have been placed in each lane, the minimum size is restricted by the arrangement of the five objects of the **Task** type. The wrapper pool cannot be smaller. The lane objects are therefore resized accordingly.

3.5.2.4.6.13.20.2 Move any lane

If you resize an object of the **Lane** type in such a way that it causes this lane to overlap with another lane, the affected lane is moved, and the embedding object is enlarged accordingly. Consequently, the lanes remain embedded in their pool. The pool in which the lanes are embedded is also enlarged, if necessary. The opposite is true if you reduce the size of an object.

If insufficient space is available when enlarging the pool, it may overlap objects after being enlarged.



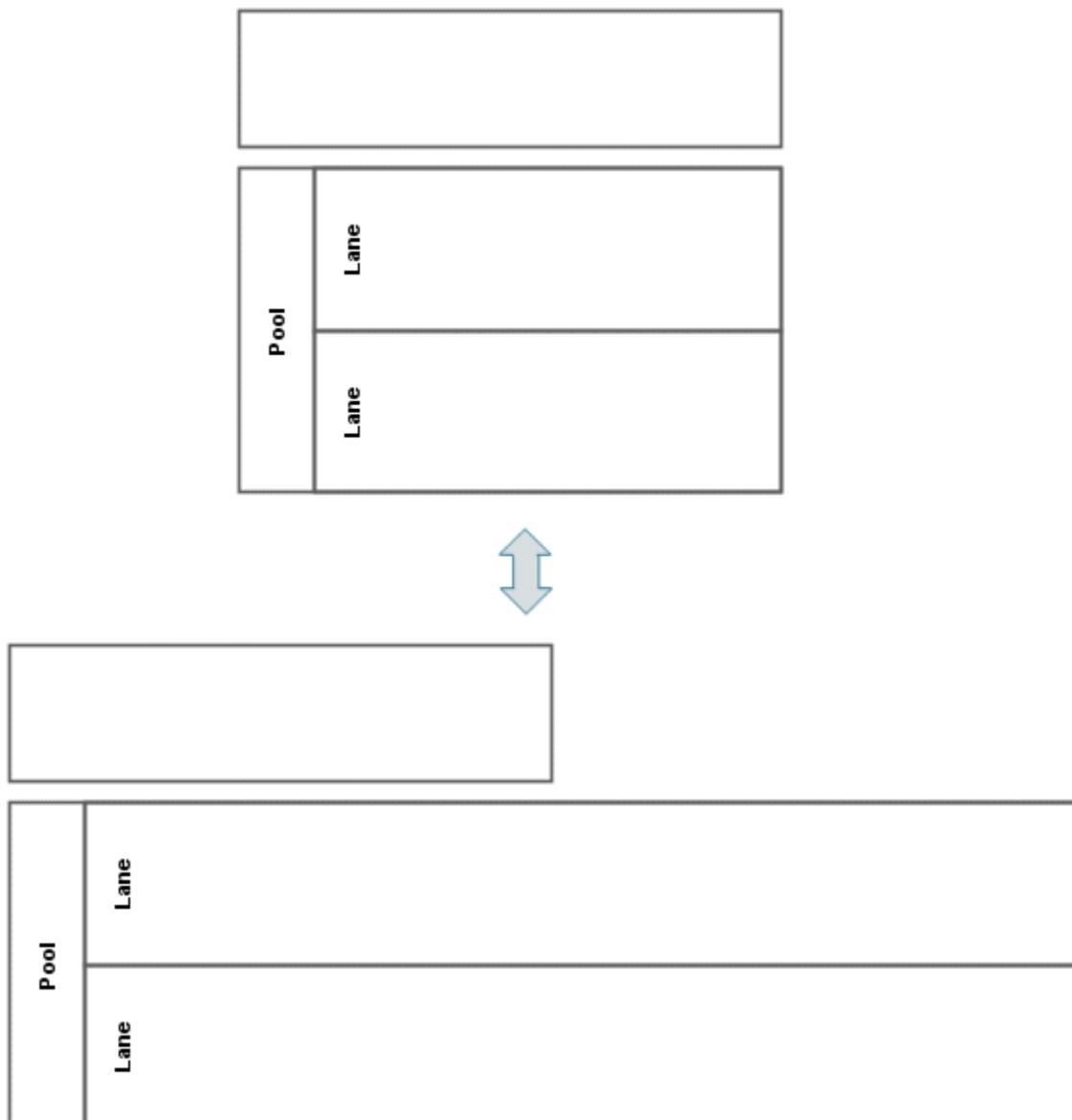
3.5.2.4.6.13.20.3 How does the cursor change?

Symbols are offered to you for selection when you drag and drop symbols from the **Navigation** bar, or if you copy, move, or create objects and symbols.

If multiple symbols are allowed, they are offered for selection. If only one symbol is allowed, it is placed. If no symbol is allowed, an error message is displayed when placing the symbol.

3.5.2.4.6.13.20.4 Change of size and position of embedded container objects

If you enlarge or reduce a container object (pool), the embedded containers (lanes) are resized accordingly. Their new height and width fill the space now available.



3.5.2.4.6.13.20.5 Automatic enlargement of containers when an object is placed

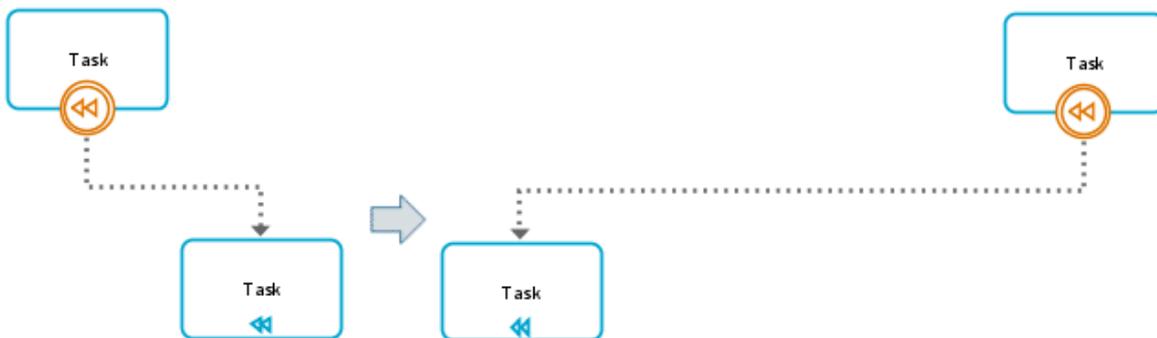
Lanes are always fully embedded in a pool or do not have a connection with a pool (lane without a pool). The same applies to tasks, subprocesses, gateways, start events, and end events.

If you place an object at the boundary of a container object, the container object is automatically enlarged. The newly placed object is fully enclosed within the container object. A connection of the **belongs to** type to the container object is automatically created.

3.5.2.4.6.13.20.6 Partly embedded objects

If you place an intermediate event at the border of an activity during modeling, a connection is automatically created.

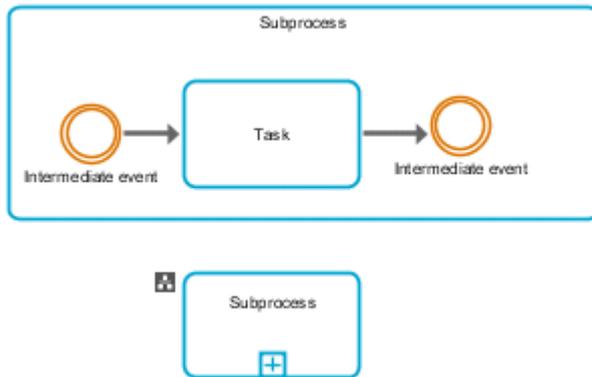
If you now move the activity that is not fully wrapped by an intermediate event, the intermediate event placed on the connection is also moved. The graphic shows how this scenario is handled.



If you place an intermediate event within an activity during modeling, it is automatically placed on the border and can only be moved on the border. You can no longer move the intermediate event to an area outside the activity.

3.5.2.4.6.13.20.7 Subprocess

In BPMN, a distinction is made between objects of the **Subprocess (expanded)** type and objects of the **Subprocess (collapsed)** type.



In BPMN diagrams, an expanded subprocess can be transformed into a collapsed subprocess to which a model is assigned. The symbol displayed changes accordingly.

3.5.2.4.6.13.21 What to consider when using services?

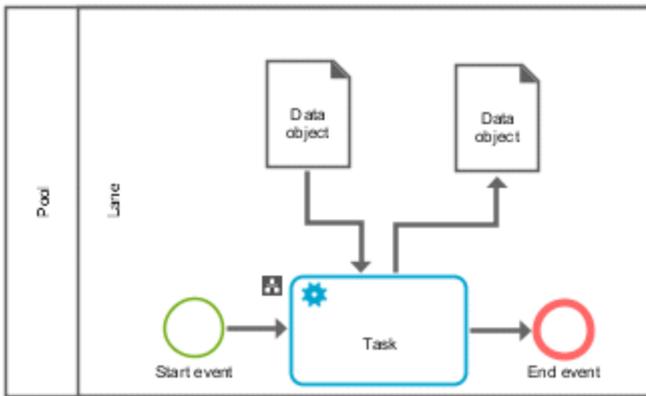
If services, for example, from CentraSite, were imported, the data must either be generated or modeled.

When modeling make sure that objects of the **Data object** type in the BPMN diagram correspond to the attributes of the software service type modeled in the assigned function allocation diagram. At least one data object must be modeled for data input or data output. However, several data objects can be modeled for in or output.

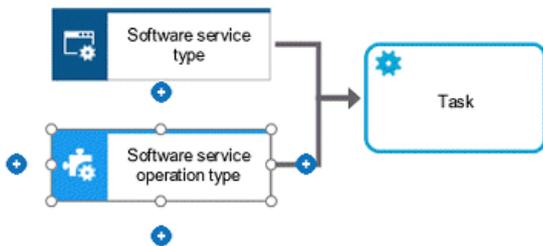
To check whether the BPMN diagram to be exported is correctly modeled a semantic check is available with which the BPMN diagram can be validated.

Example

The figure shows a BPMN collaboration diagram (BPMN 2.0).



A function allocation diagram is assigned to the object of the **Service task** type. Input, as well as output data is specified for the software service operation type.



Properties - Object: Software operation type

Attributes	
Attribute name	Software service operation type (English - Alternative language)
Name	Software service operation type
Type	IT function type
Time of generation	15.01.2020 16:50:31
Creator	system
Last Updated Date	15.01.2020 16:50:31
Last Updated By	system

More attributes...

OK Cancel Preview Reset

3.5.2.4.6.13.22 How to export a BPMN diagram

You can export a BPMN 2.0 diagram and import it into another platform, for example, to implement an executable process there. The model is exported in BPMN2 serialization format. The file has the **.bpmn** file extension.

Models of the **BPMN process diagram (BPMN 2.0)** and **BPMN collaboration diagram (BPMN 2.0)** type can be exported.

If services should be integrated during the BPMN serialization you require CentraSite. The services must be synchronized with CentraSite and a function allocation diagram must be assigned to the object of the **Service task** type, in which this service (software service type) is modeled with one of its operations (software service operation type).

If the service has input and output data, at least one object of the **Data object** type must be modeled on the object of the **Service task** type at BPMN diagram level for this data. You can check the BPMN diagram and/or generate the data objects.

3.5.2.4.6.13.22.1 BPMN document structure

'DEFINITIONS' ELEMENT

The **Definitions** element represents the top XML element. It contains the namespaces required for BPMN 2.0:

- **Semantic**
The **Semantic** element defines the namespace for the semantic elements.
- **bpmndi**
The **bpmndi** element defines the namespace for the graphic elements.
- **dc**
The **dc** element defines the elements for the graphic style.
- **di**
The **di** element defines the elements for the textual style.

The **Semantic** element defines the namespace for the semantic elements.

The ID consists of the **ARISBPMN_** string and the GUID of the BPMN diagram. In addition, the target namespace **http://www.softwareag.com/bpmn2Serialisation/** is specified and the name of the model attached.

```
<?xml version="1.0" encoding="UTF-8"?>
<semantic:definitions xmlns:semantic="http://www.omg.org/spec/BPMN/20100524/MODEL"
  xmlns:bpmndi="http://www.omg.org/spec/BPMN/20100524/DI"
  xmlns:dc="http://www.omg.org/spec/DD/20100524/DC"
  xmlns:di="http://www.omg.org/spec/DD/20100524/DI"
  id="ARISBPMN_e07f8d50-e4b6-11de-5e2f-ddcdfa499890"
  targetNamespace="http://www.softwareag.com/bpmn2Serialisation/Modelname">
</semantic:definitions>
```

This definition element is a container element for all other elements and their subordinate elements.

'COLLABORATION' ELEMENT

The **Collaboration** element serves as a container element for modeling collaborations. Collaborations are a collection of objects of the **Participant** type and their interactions using objects of the **Message flow** type.

An element of the Collaboration type is generated as a superior element for the individual collaborations for each BPMN diagram. The ID consists of the **COLLABORATION_** string and the GUID of the model.

```
<semantic:collaboration id="COLLABORATION_a8219770-e4b9-11de-5e2f-ddcdfa499890">
  ...
</semantic:collaboration>
```

'POOL' ELEMENT

A pool represents an organizational element. If a model of the **BPMN collaboration diagram (BPMN 2.0)** type does not contain a pool or if a flow element is not embedded in a pool, the model of the **BPMN collaboration diagram (BPMN 2.0)** type represents this organizational element.

If there is a pool that represents an organizational element, an element is generated that consists of the **FLOWNODE_** string and the GUID of the pool. Otherwise the GUID of the model of the **BPMN collaboration diagram (BPMN 2.0)** type is used.

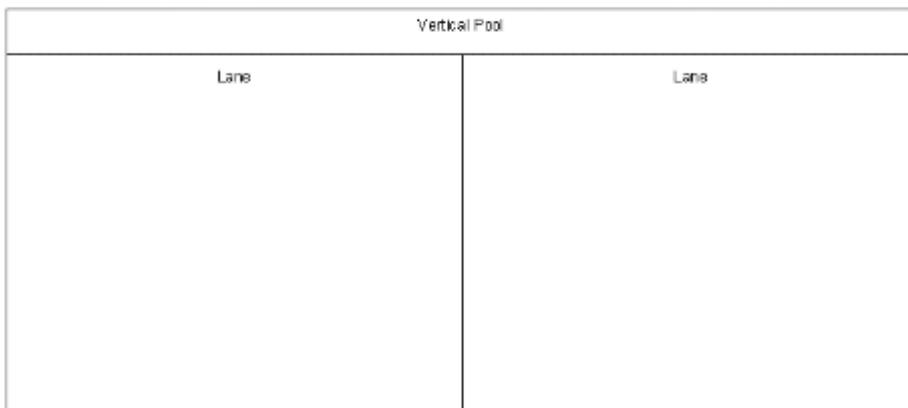
The pool defines a process if it has at least one flow element or a lane. The **processRef** attribute is added to the **Participant** element and references the process defined by the pool. The **processRef** attribute consists of the **PROCESS_** string and the external GUID of the pool. If the process is defined by a BPMN diagram without a pool or only by a flow element, the GUID of the BPMN diagram is used.

```
<semantic:collaborationid="COLLABORATION_a8219770-e4b9-11de-5e2f-ddcdfa499890">
  <semantic:participantid="FLOWNODE_a9a805f2-0bb6-11e1-22af-902a09a50c00" name="Pool" processRef="PROCESS_a9a805f1-0bb6-11e1-22af-902a09a50c00"/>
  <semantic:participantid="FLOWNODE_bb13d19c-30e0-11df-3662-9e894136b235" name="Pool" processRef="PROCESS_bb13d19b-30e0-11df-3662-9e894136b235"/>
</semantic:collaboration>
```

'LANE' ELEMENT

Lanes are part of a process and are used to structure it, however they have no defined semantic. They are usually embedded in a pool, but can also be used in the BPMN diagram directly.

Lanes can be arranged horizontally or vertically, which makes no difference for the semantics. The orientation of lanes is defined in the **bpmndi** part of the BPMN file.



An element of the **process** type, which contains an element of the **laneset** type is generated for each pool. The ID of the element of the **laneset** type is composed of the **LANESET_** string and the external GUID of the pool. If the lanes are directly in the BPMN diagram the GUID of the model is used. The element of the **laneset** type contains a **lane** element whose ID is

composed of the **FLOWNODE_** string and the external GUID of the lane. The **name** attribute contains the name of the lane.

```
<semantic:process id="PROCESS_a688081f-30de-11df-3662-9e894136b235" isExecutable="false" name="Horizontal Pool">
  <semantic:laneSet id="LANESET_a688081f-30de-11df-3662-9e894136b235">
    <semantic:lane id="FLOWNODE_a10cd94d-e41a-11de-5e2f-ddcdfa499890" name="Lane1" />
    <semantic:lane id="FLOWNODE_a10cd94e-e41a-11de-5e2f-ddcdfa499890" name="Lane3" />
    <semantic:lane id="FLOWNODE_a10cd94f-e41a-11de-5e2f-ddcdfa499890" name="Lane2" />
  </semantic:laneSet>
</semantic:process>
<semantic:process id="PROCESS_3b2bd7f7-0f68-11e1-22af-902a09a50c00" isExecutable="false" name="Vertical Pool">
  <semantic:laneSet id="LANESET_3b2bd7f7-0f68-11e1-22af-902a09a50c00">
    <semantic:lane id="FLOWNODE_3b2bd7fc-0f68-11e1-22af-902a09a50c00" name="Lane" />
    <semantic:lane id="FLOWNODE_3b2bd7fa-0f68-11e1-22af-902a09a50c00" name="Lane" />
  </semantic:laneSet>
</semantic:process>
```

If a flow element, such as an object of the **Business rule task** type is embedded in a lane, an element of the **flowNodeRef** type that references the flow element is generated in the element of the **lane** type.

```
<semantic:process id="PROCESS_2ff0ea12-013f-11e0-5ad9-b71f5c223e46" isExecutable="false" name="Pool">
  <semantic:laneSet id="LANESET_2ff0ea12-013f-11e0-5ad9-b71f5c223e46">
    <semantic:lane id="FLOWNODE_2ff0ea16-013f-11e0-5ad9-b71f5c223e46" name="Lane">
      <semantic:flowNodeRef>FLOWNODE_2ff0ea1c-013f-11e0-5ad9-b71f5c223e46</semantic:flowNodeRef>
    </semantic:lane>
  </semantic:laneSet>
  <semantic:businessRuleTask id="FLOWNODE_2ff0ea1c-013f-11e0-5ad9-b71f5c223e46" name="Task" />
</semantic:process>
```

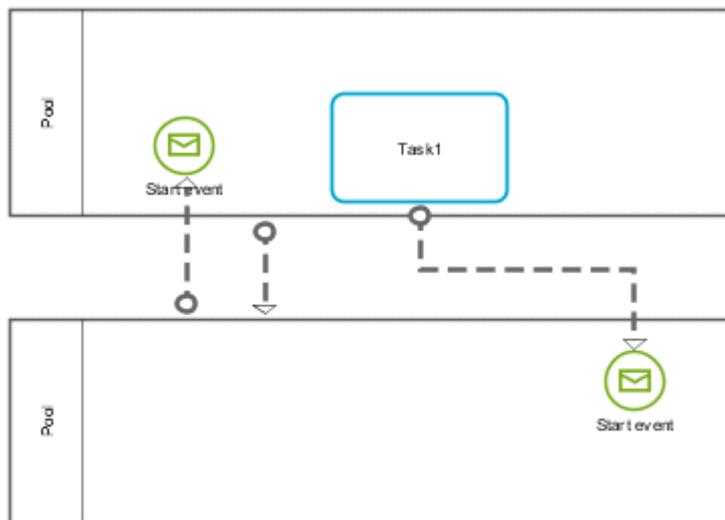
Lanes can also contain lanes. The depth of the hierarchy is unlimited. If subordinate lanes are used, a **childLaneSet** element containing all of the subordinate elements of the **lane** type is generated for each lane with subordinate lanes.

```
<semantic:laneSet id="LANESET_7a299d80-5bc8-11e1-7724-8310ef1a3de4">
  <semantic:lane id="FLOWNODE_d6ba10f8-598b-11e1-7724-8310ef1a3de4" name="Lane1">
    <semantic:childLaneSet id="CHILD_LANESET_d6ba10f8-598b-11e1-7724-8310ef1a3de4">
      <semantic:lane id="FLOWNODE_d6ba10fb-598b-11e1-7724-8310ef1a3de4" name="Sublane1" />
      <semantic:lane id="FLOWNODE_d6ba10fd-598b-11e1-7724-8310ef1a3de4" name="Sublane2" />
    </semantic:childLaneSet>
  </semantic:lane>
</semantic:laneSet>
```

'MESSAGE FLOW' ELEMENT

The following example shows all possible variations of a message flow:

- Message flow between a flow element and a pool
- Message flow between two pools
- Message flow between two flow elements



A **messageflow** element whose ID is composed of the **FLOW** string and the GUID of the connection is generated for each message flow. The elements of the **sourceRef** and **targetRef** type contain the corresponding ID of the flow element or the pool.

```
<semantic:collaboration id="COLLABORATION_b650f9e0-5bd4-11e1-7724-8310ef1a3de4">
  <semantic:participant id="FLOWNODE_d6ba1101-598b-11e1-7724-8310ef1a3de4" name="Pool" processRef="PROCESS_d6ba1100-598b-11e1-7724-8310ef1a3de4" />
  <semantic:participant id="FLOWNODE_d6ba1103-598b-11e1-7724-8310ef1a3de4" name="Pool" processRef="PROCESS_d6ba1102-598b-11e1-7724-8310ef1a3de4" />
  <semantic:messageFlow id="FLOW_d6ba1110-598b-11e1-7724-8310ef1a3de4" name="" sourceRef="FLOWNODE_d6ba1101-598b-11e1-7724-8310ef1a3de4"
    targetRef="FLOWNODE_d6ba1103-598b-11e1-7724-8310ef1a3de4" />
  <semantic:messageFlow id="FLOW_d6ba110d-598b-11e1-7724-8310ef1a3de4" name="" sourceRef="FLOWNODE_d6ba1103-598b-11e1-7724-8310ef1a3de4"
    targetRef="FLOWNODE_d6ba110b-598b-11e1-7724-8310ef1a3de4" />
  <semantic:messageFlow id="FLOW_d6ba110e-598b-11e1-7724-8310ef1a3de4" name="" sourceRef="FLOWNODE_d6ba1105-598b-11e1-7724-8310ef1a3de4"
    targetRef="FLOWNODE_d6ba1108-598b-11e1-7724-8310ef1a3de4" />
</semantic:collaboration>
<semantic:process id="PROCESS_d6ba1100-598b-11e1-7724-8310ef1a3de4" isExecutable="false" name="Pool">
  <semantic:task id="FLOWNODE_d6ba1105-598b-11e1-7724-8310ef1a3de4" name="Task1" />
  <semantic:startEvent id="FLOWNODE_d6ba110b-598b-11e1-7724-8310ef1a3de4" name="Start Event">
    ...
  </semantic:startEvent>
</semantic:process>
<semantic:process id="PROCESS_d6ba1102-598b-11e1-7724-8310ef1a3de4" isExecutable="false" name="Pool">
  <semantic:startEvent id="FLOWNODE_d6ba1108-598b-11e1-7724-8310ef1a3de4" name="Start Event">
    ...
  </semantic:startEvent>
</semantic:process>
```

In ARIS, a message flow can be divided up into a part that contains the message flow and a part that contains the exchanged message. Because this does not correspond to the BPMN 2.0 specification (<http://www.bpmn.org/>) exactly, such message flows are not included in a BPMN file during export.

'PROCESS' ELEMENT

A **process** element is generated if there is a pool in the BPMN diagram that contains at least one flow element or if the BPMN diagram has no pool at all. This element contains all other flow elements that define the process details. Its ID consists of the **PROCESS_** string and the GUID of the BPMN diagram.

```
<semantic:process id="PROCESS_a688081f-30de-11df-3662-9e894136b235" isExecutable="false" name="Horizontal Pool">
  ...
</semantic:process>
```

Because groups can contain elements that can be a part of several pools, a **process** element is generated for such groups.

'FLOWELEMENTCONTAINER' ELEMENT

Elements of the **FlowElementContainer** type are elements of the **Process**, **SubProcess**, **Choreography** and **Sub-Choreography** type. Only elements of the **Process** and **Subprocess** type are relevant.

The element of the **FlowElementContainer** type serves as a superior element for all flow elements of a process or subprocess. Elements of the **FlowElementContainer** type are objects of the **Activity**, **Event**, **Gateway**, **Sequence flow**, **Data store** and **Data object** types.

If a subprocess contains one of these elements or has an assignment to a model in which one of these elements is modeled, these elements are added to the element of the **FlowElementContainer** type. If these elements are not part of a subprocess they are added under the **process** element that is defined by a pool or a BPMN diagram.

ORGANIZATIONAL ELEMENTS AS A RESOURCE

If an object of the **Task** type is connected to an organizational element in an assigned function allocation diagram, the **resource** element is generated. If the type of task is a **Manual task** or **User task**, an element of the **potentialOwner** type is added. This subordinate element contains an element of the **resourceRef** type that references the resource.

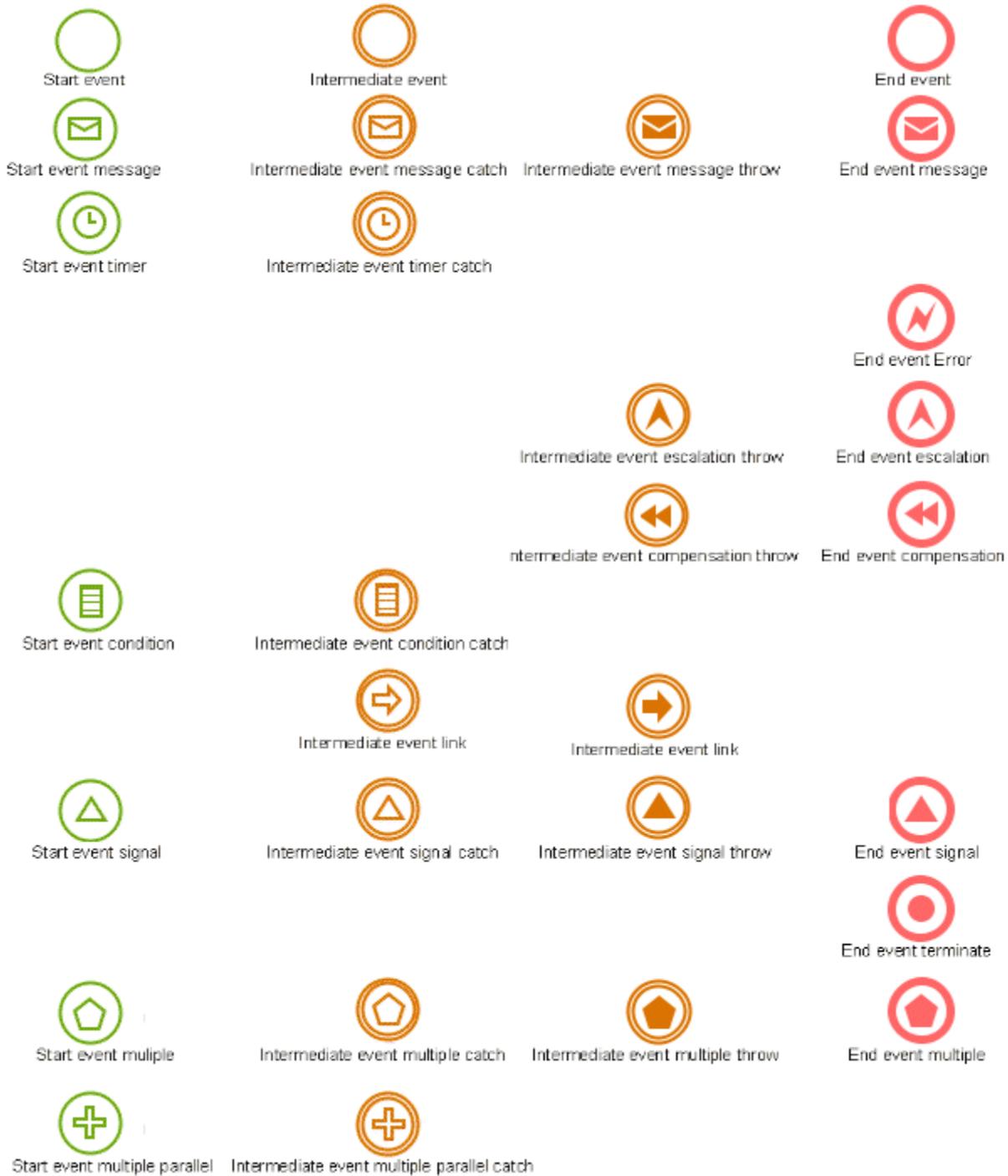
```
<semantic:process ...>
  <semantic>manualTask id="FLOWNODE_04e4db82-e4be-11de-5e2f-ddcdfa499890" name="Person type reuse">
    <semantic:potentialOwner>
      <semantic:resourceRef>RESOURCE_8e49621a-a81f-11de-0f70-005056c00001</semantic:resourceRef>
    </semantic:potentialOwner>
  </semantic>manualTask>
</semantic:process>
<semantic:resource id="RESOURCE_8e49621a-a81f-11de-0f70-005056c00001" name="Person type" />
```

3.5.2.4.6.13.22.2 Semantic process elements

'EVENT' ELEMENTS

NORMAL 'EVENT' ELEMENT

The graphic shows all four types of events.



The following elements are generated in the BPMN file for these events:

```
<semantic:startEvent id="FLOWNODE_580c2d74-1986-11e0-2f2d-fa42076c9609" name="Start event" />
<semantic:intermediateThrowEvent id="FLOWNODE_580c2d77-1986-11e0-2f2d-fa42076c9609" name="Intermediate event" />
<semantic:intermediateCatchEvent id="FLOWNODE_580c2d86-1986-11e0-2f2d-fa42076c9609" name="Intermediate event message catch" />
<semantic:endEvent id="FLOWNODE_580c2d7a-1986-11e0-2f2d-fa42076c9609" name="End event" />
```

Subtypes of objects of the **Event** type are defined via a specific **eventDefinition** element. A **messageEventDefinition** element is generated for each object of the **Message event** type. In ARIS connected messages are not used and therefore an empty message is generated.

```
<semantic:message id="MESSAGE_580c2d83-1986-11e0-2f2d-fa42076c9609" />
<semantic:message id="MESSAGE_580c2d86-1986-11e0-2f2d-fa42076c9609" />
<semantic:message id="MESSAGE_580c2d89-1986-11e0-2f2d-fa42076c9609" />
<semantic:message id="MESSAGE_580c2d8c-1986-11e0-2f2d-fa42076c9609" />
...
<semantic:startEvent id="FLOWNODE_580c2d83-1986-11e0-2f2d-fa42076c9609" name="Start event message">
  <semantic:messageEventDefinition messageRef="MESSAGE_580c2d83-1986-11e0-2f2d-fa42076c9609" />
</semantic:startEvent>
<semantic:intermediateCatchEvent id="FLOWNODE_580c2d86-1986-11e0-2f2d-fa42076c9609" name="Intermediate event message">
  <semantic:messageEventDefinition messageRef="MESSAGE_580c2d86-1986-11e0-2f2d-fa42076c9609" />
</semantic:intermediateCatchEvent>
<semantic:intermediateThrowEvent id="FLOWNODE_580c2d89-1986-11e0-2f2d-fa42076c9609" name="Intermediate event message">
  <semantic:messageEventDefinition messageRef="MESSAGE_580c2d89-1986-11e0-2f2d-fa42076c9609" />
</semantic:intermediateThrowEvent>
<semantic:endEvent id="FLOWNODE_580c2d8c-1986-11e0-2f2d-fa42076c9609" name="End event message">
  <semantic:messageEventDefinition messageRef="MESSAGE_580c2d8c-1986-11e0-2f2d-fa42076c9609" />
</semantic:endEvent>
```

A **timerEventDefinition** element that contains one of the possible subordinate elements **timeDate**, **timeDuration** or **timeCycle** is generated for objects of the **Timer event** type.

```
<semantic:startEvent id="FLOWNODE_580c2d8f-1986-11e0-2f2d-fa42076c9609" name="Start event timer">
  <semantic:timerEventDefinition>
    <semantic:timeDate>2011-03-11T12:13:14</semantic:timeDate>
  </semantic:timerEventDefinition>
</semantic:startEvent>
<semantic:intermediateCatchEvent id="FLOWNODE_63d0d3c0-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event timer catch">
  <semantic:timerEventDefinition>
    <semantic:timeDate>2011-03-11T12:13:14</semantic:timeDate>
  </semantic:timerEventDefinition>
</semantic:intermediateCatchEvent>
```

You can specify a duration that should pass until the object of the **Timer event** type starts. This generates a sub element within the **timerEventDefinition** element. In the example, this is 20 days.

```
<timerEventDefinition>
  <timeDuration>P20D</timeDuration>
</timerEventDefinition>
```

The third option defines a time cycle, a repetitive interval. In the example, this is 10 hours.

```
<timerEventDefinition>
  <timeCycle>R3/PT10H</timeCycle>
</timerEventDefinition>
```

An element of the **escalationEventDefinition** type is generated for an object of the **Escalation event** type.

```
<semantic:intermediateThrowEvent id="FLOWNODE_63d0d3c6-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event escalation throw">
  <semantic:escalationEventDefinition />
</semantic:intermediateThrowEvent>
<semantic:endEvent id="FLOWNODE_63d0d3c9-1a54-11e0-2f2d-fa42076c9609" name="End event escalation">
  <semantic:escalationEventDefinition />
</semantic:endEvent>
```

An element of the **compensateEventDefinition** type is generated for an object of the **Compensation event** type.

```
<semantic:intermediateThrowEvent id="FLOWNODE_63d0d3cf-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event compensation throw">
  <semantic:compensateEventDefinition />
</semantic:intermediateThrowEvent>
<semantic:endEvent id="FLOWNODE_63d0d3d2-1a54-11e0-2f2d-fa42076c9609" name="End event compensation">
  <semantic:compensateEventDefinition />
</semantic:endEvent>
```

An element of the **conditionalEventDefinition** with a subordinate element containing the condition is generated for an object of the **Conditional event** type. This element is only generated if a condition is defined in ARIS.

```
<semantic:startEvent id="FLOWNODE_63d0d3d5-1a54-11e0-2f2d-fa42076c9609" name="Start event condition" >
  <semantic:conditionalEventDefinition>
    <semantic:condition>the condition<semantic:condition />
  </semantic:conditionalEventDefinition />
</semantic:startEvent />
<semantic:intermediateCatchEvent id="FLOWNODE_63d0d3d8-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event condition catch" >
  <semantic:conditionalEventDefinition>
    <semantic:condition>the condition<semantic:condition />
  </semantic:conditionalEventDefinition />
</semantic:intermediateCatchEvent />
```

A **linkEventDefinition** element is generated for objects of the **Link event** type. In ARIS occurrence copies of the same object definition are used to represent the relationship between two linked events. Therefore, source and target element cannot be created in the **linkDefinition** element.

```
<semantic:intermediateThrowEvent id="FLOWNODE_7d4a9a81-2b1e-11e1-7724-8310ef1a3de4" name="Intermediate event link">
  <semantic:linkEventDefinition name="Intermediate event link" />
</semantic:intermediateThrowEvent>
<semantic:intermediateCatchEvent id="FLOWNODE_63d0d3db-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event link">
  <semantic:linkEventDefinition name="Intermediate event link" />
</semantic:intermediateCatchEvent>
```

A **signalEventDefinition** element is generated for an object of the **Signal event** type.

```
<semantic:startEvent id="FLOWNODE_63d0d3e1-1a54-11e0-2f2d-fa42076c9609" name="Start event signal">
  <semantic:signalEventDefinition />
</semantic:startEvent>
<semantic:intermediateCatchEvent id="FLOWNODE_63d0d3e4-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event signal catch">
  <semantic:signalEventDefinition />
</semantic:intermediateCatchEvent>
<semantic:intermediateThrowEvent id="FLOWNODE_63d0d3e7-1a54-11e0-2f2d-fa42076c9609" name="Intermediate event signal throw">
  <semantic:signalEventDefinition />
</semantic:intermediateThrowEvent>
<semantic:endEvent id="FLOWNODE_63d0d3ea-1a54-11e0-2f2d-fa42076c9609" name="End event signal">
  <semantic:signalEventDefinition />
</semantic:endEvent>
```

A **terminateEventDefinition** element is generated for objects of the **Terminate event** type.

```
<semantic:endEvent id="FLOWNODE_63d0d3ed-1a54-11e0-2f2d-fa42076c9609" name="End event terminate">
  <semantic:terminateEventDefinition />
</semantic:endEvent>
```

In ARIS multiple event definitions can be added as symbols. However, because these events do not contain a description of all events to be included, they are ignored by the BPMN2 serialization.

```
<semantic:startEvent id="FLOWNODE_63d0d3f0-1a54-11e0-2f2d-fa42076c9609" name="Start event multiple" />
<semantic:intermediateCatchEvent id="FLOWNODE_a8378cb1-1a55-11e0-2f2d-fa42076c9609" name="Intermediate event multiple catch" />
<semantic:intermediateThrowEvent id="FLOWNODE_a8378cb4-1a55-11e0-2f2d-fa42076c9609" name="Intermediate event multiple throw" />
<semantic:endEvent id="FLOWNODE_a8378cb7-1a55-11e0-2f2d-fa42076c9609" name="End event multiple" />

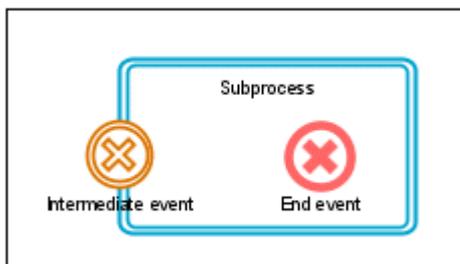
<semantic:startEvent id="FLOWNODE_a8378cba-1a55-11e0-2f2d-fa42076c9609" name="Start event multiple parallel" />
<semantic:intermediateCatchEvent id="FLOWNODE_a8378cbd-1a55-11e0-2f2d-fa42076c9609" name="Intermediate event multiple parallel catch" />
```

An **errorEventDefinition** is generated for an object of the Error event type. Because ARIS does not consider the error reference, this reference does not exist in the BPMN file.

```
<semantic:endEvent id="FLOWNODE_fc22009-1a5a-11e0-2f2d-fa42076c9609" name="End event Error">
  <semantic:errorEventDefinition />
</semantic:endEvent>
```

'CANCEL EVENT' ELEMENT

Objects of the **Cancel event** type are used in transaction subprocesses and can be modeled as objects of the **Intermediate boundary event** or **End event** types that are embedded in a task.

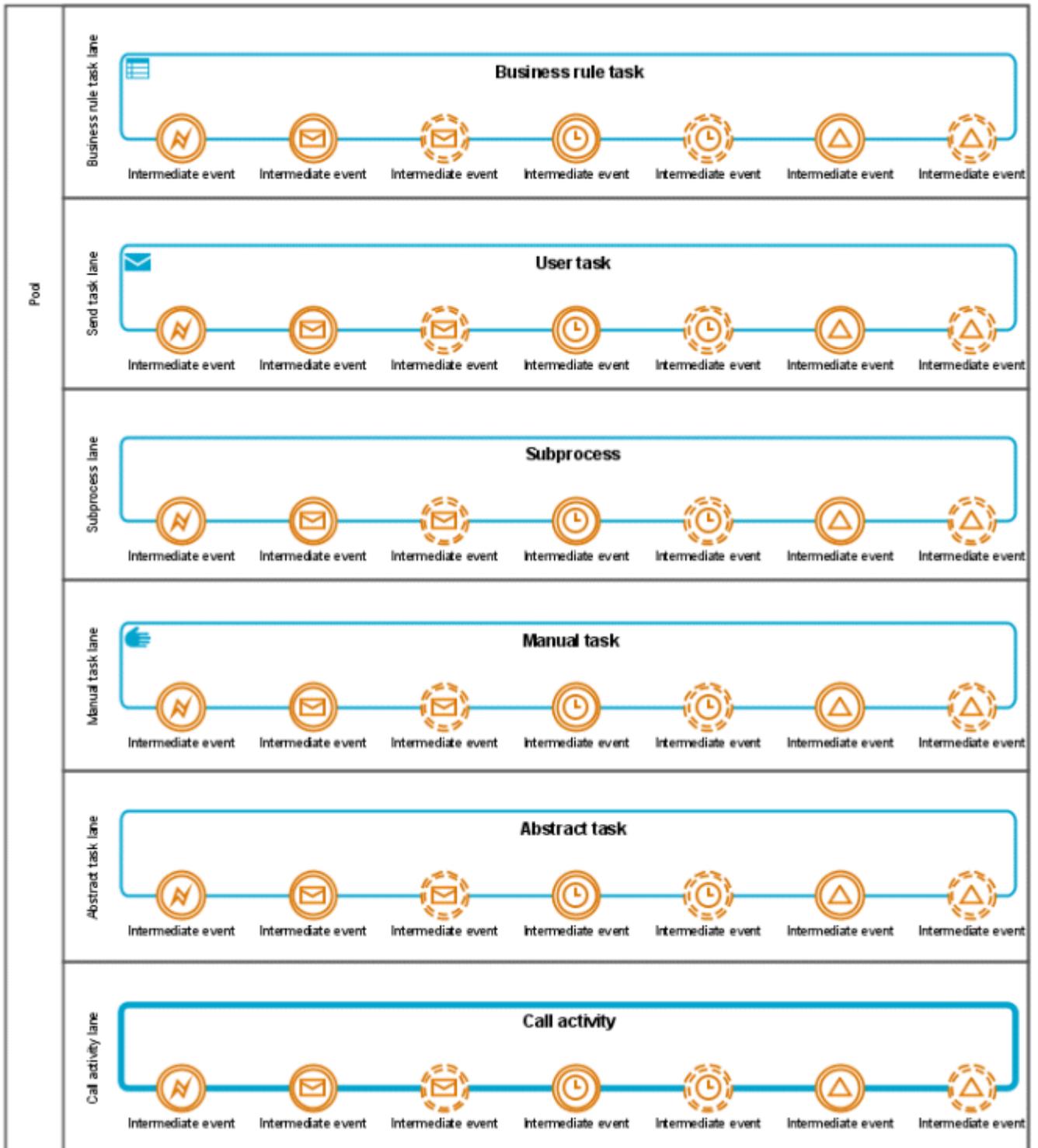


If it is an object of the **Boundary event** type, a **boundaryEvent** element is generated that has a reference to the transaction. If it is an embedded end event, a subordinate **endEvent** element is generated within the transaction element.

```
<semantic:boundaryEvent attachedToRef="FLOWNODE_2955044f-23c3-11e0-0cda-f0f446c87b28" id="FLOWNODE_0fb08132-23c5-11e0-0cda-f0f446c87b28" name="Intermediate event">
  <semantic:cancelEventDefinition />
</semantic:boundaryEvent>
<semantic:transaction id="FLOWNODE_2955044f-23c3-11e0-0cda-f0f446c87b28" name="Subprocess">
  <semantic:endEvent id="FLOWNODE_0fb08132-23c5-11e0-0cda-f0f446c87b28" name="End event">
    <semantic:cancelEventDefinition />
  </semantic:endEvent>
</semantic:transaction>
```

'BOUNDARY EVENT' ELEMENT

The graphic shows a combination of objects of the **Boundary event** type.



A **boundaryEvent** element is generated for all types of objects of the **Boundary event** type during the serialization. This element has an **attachedToRef** attribute that contains the reference to the object on whose border it was placed. The elements of the **eventDefinition** type are generated as described above.

```
<semantic:businessruletask id="FLOWNODE_29ffe94e-547c-11e0-7c1d-87bac20c8b29" name="Business Rule Task" />
<semantic:boundaryEvent attachedToRef="FLOWNODE_29ffe94e-547c-11e0-7c1d-87bac20c8b29" id="FLOWNODE_29ffe951-547c-11e0-7c1d-87bac20c8b29" name="Intermediate Event">
  <semantic:messageeventDefinition messageRef="MESSAGE_29ffe951-547c-11e0-7c1d-87bac20c8b29" />
</semantic:boundaryEvent>
```

'SUBPROCESS EVENT' ELEMENT

Objects of the **Event** type that are positioned on an element of the **Subprocess** type control this object. The graphic shows all possible combinations of event types and objects of the **Event subprocess** type.



The **Event** element is embedded in the associated **subProcess** element. The **subProcess** element contains a **triggeredByEvent** attribute with the **true** value. This attribute is only available if an event is embedded in a subprocess. If the event is of the **Non-interrupting** type, the **Event** element has an **isInterrupting** attribute with the value **false**.

```
<semantic:subProcess id="FLOWNODE_29558421-23c3-11e0-0cda-f0f446c87b28" name="Subprocess" triggeredByEvent="true">
  <semantic:startEvent id="FLOWNODE_99943781-23c2-11e0-0cda-f0f446c87b28" name="Start event">
    <semantic:signalEventDefinition />
  </semantic:startEvent>
</semantic:subProcess>
<semantic:subProcess id="FLOWNODE_29558423-23c3-11e0-0cda-f0f446c87b28" name="Subprocess" triggeredByEvent="true">
  <semantic:startEvent id="FLOWNODE_9994377f-23c2-11e0-0cda-f0f446c87b28" isInterrupting="false" name="Start event">
    <semantic:signalEventDefinition />
  </semantic:startEvent>
</semantic:subProcess>
```

'ACTIVITY' ELEMENTS

SIMPLE 'TASK' ELEMENT

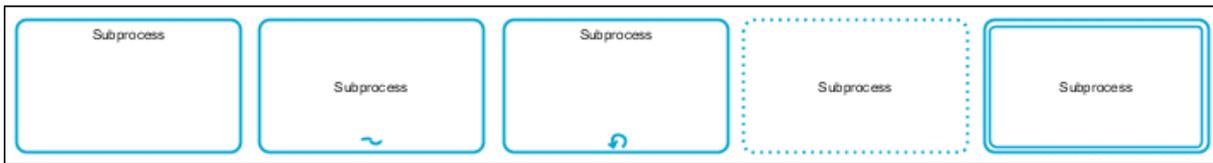
The graphic shows all simple tasks.



Each of these objects of the Task type generates a Task element of the respective type in the BPMN file.

```
<semantic:task id="FLOWNODE_98f77038-e4b5-11de-5e2f-ddcdfa499890" name="AbstractTask" />
<semantic:businessRuleTask id="FLOWNODE_541fe0a1-ea1d-11de-0cdd-efe46bf6366f" name="BusinessRuleTask" />
<semantic>manualTask id="FLOWNODE_541fe0a4-ea1d-11de-0cdd-efe46bf6366f" name="ManualTask" />
<semantic:receiveTask id="FLOWNODE_541fe0a7-ea1d-11de-0cdd-efe46bf6366f" name="ReceiveTask" />
<semantic:scriptTask id="FLOWNODE_541fe0aa-ea1d-11de-0cdd-efe46bf6366f" name="ScriptTask" />
<semantic:sendTask id="FLOWNODE_541fe0ad-ea1d-11de-0cdd-efe46bf6366f" name="SendTask" />
<semantic:serviceTask id="FLOWNODE_541fe0b0-ea1d-11de-0cdd-efe46bf6366f" name="ServiceTask" />
<semantic:userTask id="FLOWNODE_541fe0b3-ea1d-11de-0cdd-efe46bf6366f" name="UserTask" />
```

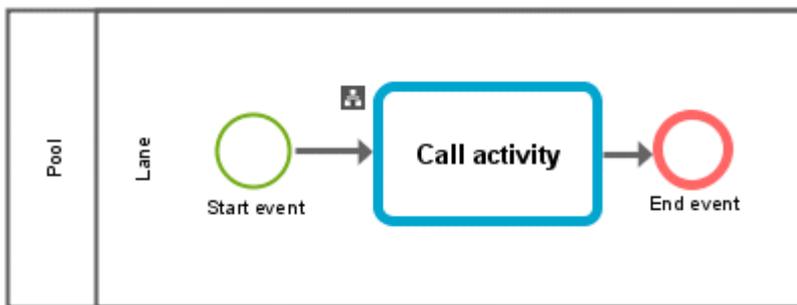
'SUBPROCESS' ELEMENT



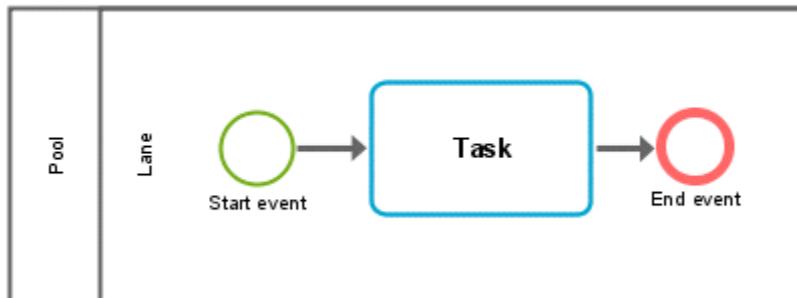
```
<semantic:subProcess id="FLOWNODE_d6ba10f0-598b-11e1-7724-8310ef1a3de4" name="Subprocess" />
<semantic:adHocSubProcess id="FLOWNODE_d6ba10f2-598b-11e1-7724-8310ef1a3de4" name="Subprocess" />
<semantic:subProcess id="FLOWNODE_d6ba10f4-598b-11e1-7724-8310ef1a3de4" name="Subprocess" triggeredByEvent="true" />
<semantic:transaction id="FLOWNODE_d6ba10f6-598b-11e1-7724-8310ef1a3de4" name="Subprocess" />
```

'CALL ACTIVITY' ELEMENT

The graphic shows an object of the Call activity type that is assigned a global process.



The following graphic shows the global, called process.



An element of the **Process** type is generated on the same level for both processes during export to a BPMN file. The first element contains a Call activity element with reference to the global, called process. If the invoked process contains more than one pool, the first pool (upper left pool) is accepted as the invoked process.

```
<semantic:process id="PROCESS_0d6bd530-fd61-11df-4e88-f12721823d33" isExecutable="false" name="Pool">
  ...
  <semantic:callActivitycalledElement="PROCESS_3626c546-2230-11e0-6c49-a34832b7c31a" id="FLOWNODE_0d6bd53d-fd61-11df-4e88-f12721823d33"
    name="Call activity">
  ...
  </semantic:callActivity>
  ...
</semantic:process>
<semantic:process id="PROCESS_3626c546-2230-11e0-6c49-a34832b7c31a" isExecutable="false" name="Pool">
  ...
</semantic:process>
```

GLOBAL 'TASK' ELEMENT

A global object of the **Task** type can be invoked by an object of the **Call activity** type. The graphic shows the possible global objects of the **Task** type.

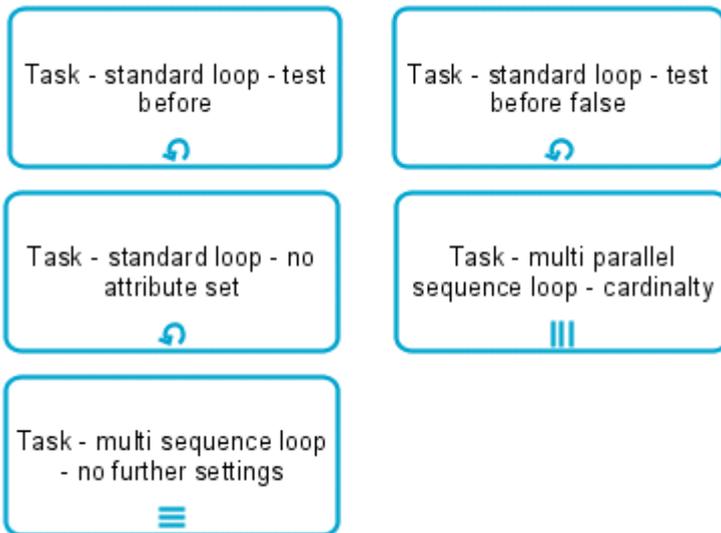


An element of the **globalTask** type is generated for the respective type when exporting to a BPMN file. The following elements are possible: **globalUserTask**, **globalTask**, **globalBusinessTask**, **globalManualTask** and **globalScriptTask**.

These elements are invoked by the associated object of type **Call activity**.

```
<semantic:globalUserTask id="_GT_37d04b23-a6f9-11e0-3c6a-005056c00001" name="Global Task - Call Activity User Task" />
<semantic:globalTask id="_GT_37d04b24-a6f9-11e0-3c6a-005056c00001" name="Global Task - Call Activity Task" />
<semantic:globalBusinessRuleTask id="_GT_37d04b25-a6f9-11e0-3c6a-005056c00001" name="Global Task - Call Activity Business Rule Task" />
<semantic:globalManualTask id="_GT_37d04b29-a6f9-11e0-3c6a-005056c00001" name="Global Task - Call Activity Manual Task" />
<semantic:globalScriptTask id="_GT_37d04b26-a6f9-11e0-3c6a-005056c00001" name="Global Task - Call Activity Script Task" />
<semantic:process id="PROCESS_379f7739-a6f9-11e0-3c6a-005056c00001" isExecutable="false" name="Pool">
  <semantic:callActivity calledElement="_GT_37d04b23-a6f9-11e0-3c6a-005056c00001" id="FLOWNODE_37d04b23-a6f9-11e0-3c6a-005056c00001" name="Call Activity User Task" />
  <semantic:callActivity calledElement="_GT_37d04b24-a6f9-11e0-3c6a-005056c00001" id="FLOWNODE_37d04b24-a6f9-11e0-3c6a-005056c00001" name="Call Activity Task" />
  <semantic:callActivity calledElement="_GT_37d04b25-a6f9-11e0-3c6a-005056c00001" id="FLOWNODE_37d04b25-a6f9-11e0-3c6a-005056c00001" name="Call Activity Business Rule Task" />
  <semantic:callActivity calledElement="_GT_37d04b29-a6f9-11e0-3c6a-005056c00001" id="FLOWNODE_37d04b29-a6f9-11e0-3c6a-005056c00001" name="Call Activity Manual Task" />
  <semantic:callActivity calledElement="_GT_37d04b26-a6f9-11e0-3c6a-005056c00001" id="FLOWNODE_37d04b26-a6f9-11e0-3c6a-005056c00001" name="Call Activity Script Task" />
</semantic:process>
```

'LOOP TYPE' ELEMENT



For objects of the **Loop type** type, elements of the respective loop types (**standardLoopCharacteristic** or **multiInstanceLoopCharacteristic**) are generated during export to a BPMN file.

```
<semantic:task id="FLOWNODE_05ef1709-f617-11df-294d-9a065921264f" name="Task - standard loop - test before">
  <semantic:standardLoopCharacteristics id="LOOP_05ef1709-f617-11df-294d-9a065921264f" loopMaximum="10" testBefore="true">
    <semantic:loopCondition>error=false</semantic:loopCondition>
  </semantic:standardLoopCharacteristics>
</semantic:task>
<semantic:subProcess id="FLOWNODE_05ef170d-f617-11df-294d-9a065921264f" name="Subprocess - standard loop - test before false">
  <semantic:standardLoopCharacteristics id="LOOP_05ef170d-f617-11df-294d-9a065921264f" testBefore="false" />
</semantic:subProcess>
<semantic:task id="FLOWNODE_3138acc0-f618-11df-294d-9a065921264f" name="Task standard loop - no attributes set">
  <semantic:standardLoopCharacteristics id="LOOP_3138acc0-f618-11df-294d-9a065921264f" testBefore="false" />
</semantic:task><semantic:task id="FLOWNODE_05ef1719-f617-11df-294d-9a065921264f" name="Task - mi parallel loop - cardinality">
  <semantic:multiInstanceLoopCharacteristics id="LOOP_05ef1719-f617-11df-294d-9a065921264f" isSequential="false">
    <semantic:loopCardinality>10</semantic:loopCardinality>
  </semantic:multiInstanceLoopCharacteristics>
</semantic:task>
<semantic:subProcess id="FLOWNODE_05ef171d-f617-11df-294d-9a065921264f" name="Subprocess - mi sequential loop - no further settings">
  <semantic:multiInstanceLoopCharacteristics id="LOOP_05ef171d-f617-11df-294d-9a065921264f" isSequential="true" />
</semantic:subProcess>
```

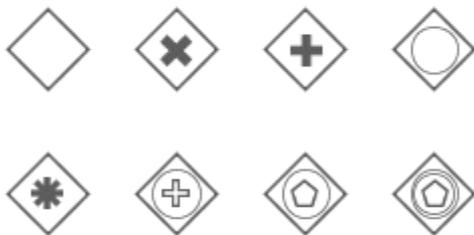
'COMPENSATION' ELEMENT

If an object of the Task type is marked as Compensation, this is realized in an attribute in the BPMN file.

```
<semantic:subProcess id="FLOWNODE_da7ec401-f8a4-11df-2af7-f7f57f92e6c5" isForCompensation="true"
  name="Subprocess with marker true">
</semantic:subProcess>
```

'GATEWAY' ELEMENTS

The graphic shows all possible gateways.

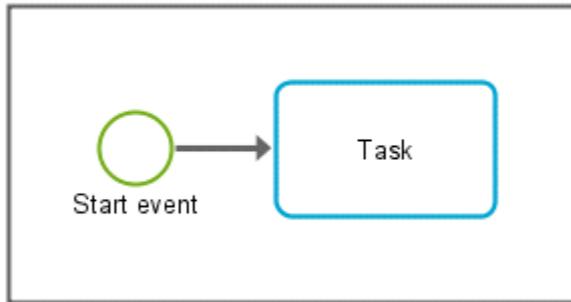


During export a corresponding element is generated for each object of the **Gateway** type in the BPMN file.

```
<semantic:exclusiveGateway id="FLOWNODE_98f77043-e4b5-11de-5e2f-ddcdfa499890" name="Gateway" />
<semantic:exclusiveGateway id="FLOWNODE_98f77045-e4b5-11de-5e2f-ddcdfa499890" name="XOR (data-based)" />
<semantic:parallelGateway id="FLOWNODE_98f77047-e4b5-11de-5e2f-ddcdfa499890" name="AND" />
<semantic:inclusiveGateway id="FLOWNODE_98f77042-e4b5-11de-5e2f-ddcdfa499890" name="OR (inclusive)" />
<semantic:complexGateway id="FLOWNODE_98f77046-e4b5-11de-5e2f-ddcdfa499890" name="Complex" />
<semantic:eventBasedGateway eventGatewayType="Parallel" id="FLOWNODE_8a10f764-ea29-11de-0cdd-efe46bf6366f" instantiate="true" name="Gateway" />
<semantic:eventBasedGateway eventGatewayType="Exclusive" id="FLOWNODE_98f77041-e4b5-11de-5e2f-ddcdfa499890" instantiate="false" name="XOR (event-based)" />
<semantic:eventBasedGateway eventGatewayType="Exclusive" id="FLOWNODE_8a10f761-ea29-11de-0cdd-efe46bf6366f" instantiate="true" name="Gateway" />
```

'SEQUENCE FLOW' ELEMENT

The graphic shows a simple sequence flow that consists of a start event and a task.

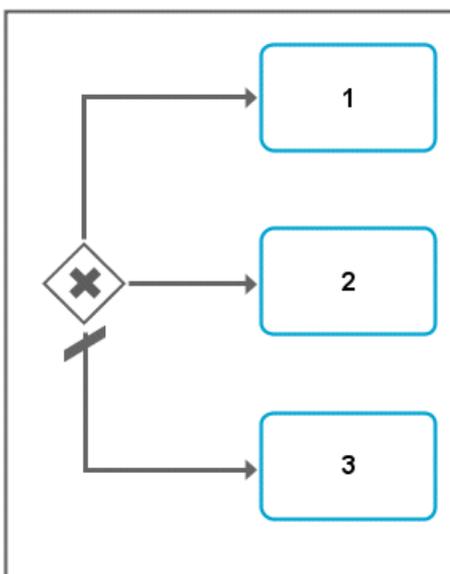


A subordinate element of the **outgoing** type is generated in the flow element with the outgoing connection. A subordinate element of the **incoming** type is generated in the target element. Both elements reference the same element of the **sequenceFlow** type that has a **sourceRef** attribute and a **targetRef** attribute in which the respective flow element is referenced. The ID of the element of the **sequenceFlow** type consists of the **FLOW_** string followed by the GUID of the connection.

```

<semantic:startEvent id="FLOWNODE_d6ba1115-598b-11e1-7724-8310ef1a3de4" name="Start Event">
  <semantic:outgoing>FLOW_d6ba1118-598b-11e1-7724-8310ef1a3de4</semantic:outgoing>
</semantic:startEvent>
<semantic:task id="FLOWNODE_d6ba1117-598b-11e1-7724-8310ef1a3de4" name="Task">
  <semantic:incoming>FLOW_d6ba1118-598b-11e1-7724-8310ef1a3de4</semantic:incoming>
</semantic:task>
<semantic:sequenceFlow id="FLOW_d6ba1118-598b-11e1-7724-8310ef1a3de4" sourceRef="FLOWNODE_d6ba1115-598b-11e1-7724-8310ef1a3de4" targetRef="FLOWNODE_d6ba1117-598b-11e1-7724-8310ef1a3de4" />
  
```

An element of the **sequenceFlow** type can contain a condition or be marked as a standard flow element. Several elements of the **outgoing** type may exist. The sequence flow in the graphic has three outgoing connections. One of the flows is marked as the default flow.



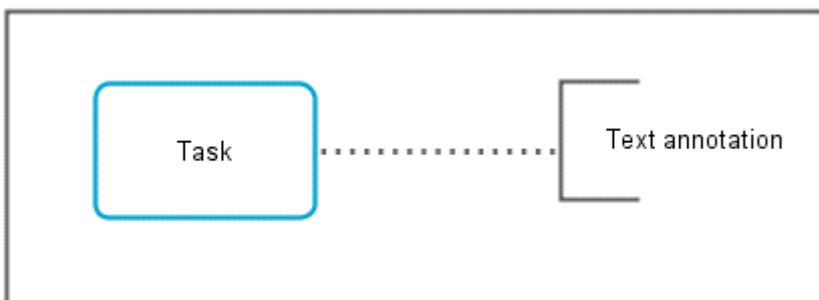
In the **exclusiveGateway** element, the **default** attribute has the reference to the default connection as a value. A subordinate **conditionExpression** element that contains the text of the condition is generated for conditional flows.

ARIS does not support formal conditions.

```
<semantic:exclusiveGateway default="FLOW_d9fdf8d9-a69d-11de-0f70-005056c00001" id="FLOWNODE_b16a9b1c-e4b9-11de-5e2f-ddcdfa499890" name="XOR (data-
  <semantic:outgoing>FLOW_d9fdf8d1-a69d-11de-0f70-005056c00001</semantic:outgoing>
  <semantic:outgoing>FLOW_d9fdf8d5-a69d-11de-0f70-005056c00001</semantic:outgoing>
  <semantic:outgoing>FLOW_d9fdf8d9-a69d-11de-0f70-005056c00001</semantic:outgoing>
</semantic:exclusiveGateway>
<semantic:task id="FLOWNODE_b16a9b19-e4b9-11de-5e2f-ddcdfa499890" name="1">
  <semantic:incoming>FLOW_d9fdf8d1-a69d-11de-0f70-005056c00001</semantic:incoming>
</semantic:task>
<semantic:task id="FLOWNODE_b16a9b1d-e4b9-11de-5e2f-ddcdfa499890" name="2">
  <semantic:incoming>FLOW_d9fdf8d5-a69d-11de-0f70-005056c00001</semantic:incoming>
</semantic:task>
<semantic:task id="FLOWNODE_b16a9b16-e4b9-11de-5e2f-ddcdfa499890" name="3">
  <semantic:incoming>FLOW_d9fdf8d9-a69d-11de-0f70-005056c00001</semantic:incoming>
</semantic:task>
<semantic:sequenceFlow id="FLOW_d9fdf8d1-a69d-11de-0f70-005056c00001" sourceRef="FLOWNODE_b16a9b1c-e4b9-11de-5e2f-ddcdfa499890"
  targetRef="FLOWNODE_b16a9b19-e4b9-11de-5e2f-ddcdfa499890">
  <semantic:conditionExpression>The Expression</semantic:conditionExpression>
  targetRef="FLOWNODE_b16a9b1d-e4b9-11de-5e2f-ddcdfa499890">
<semantic:sequenceFlow id="FLOW_d9fdf8d5-a69d-11de-0f70-005056c00001" sourceRef="FLOWNODE_b16a9b1c-e4b9-11de-5e2f-ddcdfa499890"
  targetRef="FLOWNODE_b16a9b1d-e4b9-11de-5e2f-ddcdfa499890">
<semantic:sequenceFlow id="FLOW_d9fdf8d9-a69d-11de-0f70-005056c00001" sourceRef="FLOWNODE_b16a9b1c-e4b9-11de-5e2f-ddcdfa499890"
  5e2f-ddcdfa499890" />
```

'ARTIFACT' ELEMENTS

'TEXT ANNOTATION' ELEMENT



In ARIS objects of the **Text annotation** type must not be embedded in a pool or a subprocess. Because they must be embedded in a container element, during export to a BPMN file they are embedded in the same element of the **flowContainerElement** type that the associated element of the **flowElement** type is embedded in.

```
<semantic:task id="FLOWNODE_82bdfd41-5ee0-11e1-7724-8310ef1a3de4" name="Task" />
<semantic:association associationDirection="None" id="FLOW_82bdfd44-5ee0-11e1-7724-8310ef1a3de4"
  sourceRef="FLOWNODE_82bdfd43-5ee0-11e1-7724-8310ef1a3de4"
  targetRef="FLOWNODE_82bdfd41-5ee0-11e1-7724-8310ef1a3de4" />
<semantic:textAnnotation id="FLOWNODE_82bdfd43-5ee0-11e1-7724-8310ef1a3de4">
  <semantic:text>Text Annotation</semantic:text>
</semantic:textAnnotation>
```

The ID of the **textAnnotation** element consists of the **FLOWNODE_** string and the external GUID of the object of the **Text annotation** type. The ID of the associated flow element consists of the **FLOW_** string and the GUID of the connection. The **sourceRef** attribute

references the **textAnnotation** element and the **targetRef** attribute references the **flowElement** element.

GROUPS

Groups are always embedded as subordinate elements in the element that the BPMN diagram references. If a group is contained in a separately modeled subprocess, the corresponding element is generated during export under the element that represents the subprocess.

The ID consists of the **FLOW_** string and the GUID of the group. A highest element **category** is generated whose ID consists of the **CAT** string and the GUID of the BPMN diagram. Below this element a **categoryValue** element is generated whose ID consists of the **CATV** string and the GUID of the group.

The group element references this **category** element via the **categoryValueRef** attribute. Each flow element that is contained in this group references this **category** element via a subordinate **categoryValueRef** element.

```
<semantic:category id="_CAT_6916fa50-5ee9-11e1-7724-8310ef1a3de4">
  <semantic:categoryValue id="_CATV_82bdfd45-5ee0-11e1-7724-8310ef1a3de4" value="Group" />
</semantic:category>
...
<semantic:process id="PROCESS_6916fa50-5ee9-11e1-7724-8310ef1a3de4" isExecutable="false" name="groups">
  <semantic:task id="FLOWNODE_82bdfd48-5ee0-11e1-7724-8310ef1a3de4" name="Task">
    <semantic:categoryValueRef _CATV_82bdfd45-5ee0-11e1-7724-8310ef1a3de4</semantic:categoryValueRef>
  </semantic:task>
  <semantic:group categoryValueRef="_CATV_82bdfd45-5ee0-11e1-7724-8310ef1a3de4" id="FLOWNODE_82bdfd46-5ee0-11e1-7724-8310ef1a3de4" />
</semantic:process>
```

'DATA OBJECT' ELEMENT

Connections from an object of the **Data object** type to an occurrence of a flow element, such as a task or event are only useful if you can access the flow element.

ARIS allows you to draw such connections outside pool boundaries, which is not allowed by the BPMN 2.0 specification (<http://www.bpmn.org/>). Thus, such data objects access unreachable flow elements.

In this case, the semantic check that is carried out before exporting a BPMN diagram to a BPMN file outputs an error. You can specifically validate a BPMN diagram to be exported before the export.

A **dataObject** element is generated in the BPMN file for each object of the **Data object** type.

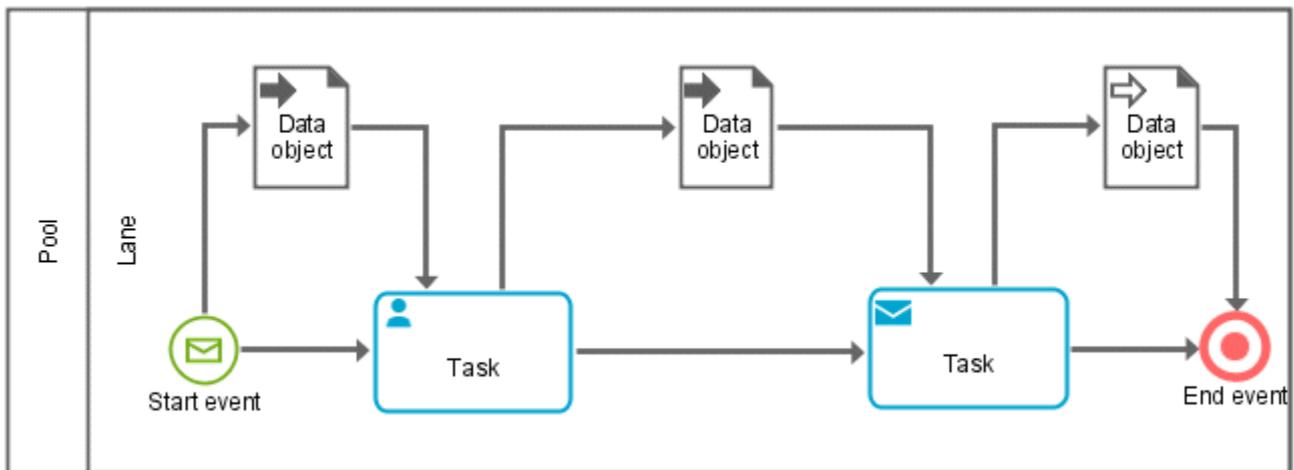
```
<semantic:definitions ...>
  <semantic:itemDefinition id="ITEM_GUID_DATAOBJECT" />
  ...
  <semantic:process id="CONTAINER_TYPE+GUID_CONTAINER" name="CONTAINER_NAME">
    ...
    <semantic:dataObject id="DATAOBJECT+GUID_CONTAINER+GUID_DATAOBJECT" itemSubjectRef="ITEM+GUID_DATAOBJECT" name="Data object B" />
    <semantic:dataObjectReference dataObjectRef="DATAOBJECT+GUID_CONTAINER+GUID_DATAOBJECT" id="FLOWNODE+GUID_DATAOBJECTOCC" />
  </semantic:process>
</semantic:definitions />
```

The descriptions of the data structure are added under the **itemDefinition** element. All elements of the **dataObject** type that are generated for the same ARIS data object have the same structure. They all reference the same **itemDefinition** element. The ID of this element consists of the **ITEM_** string and the GUID of the ARIS data object.

The container for the **dataObject** element and the associated **dataObjectReference** element can be located in different containers. In a process context, the **dataObject** element is generated in the top container. The ID of the **dataobject** element consists of the **dataobject** string, the GUID of the container object, and the GUID of the data object.

The **dataObjectReference** element represents a concrete object occurrence and is generated below the element that corresponds to the container in the BPMN diagram. The ID consists of the **FLOWNODE_** string and the GUID of the occurrence of the data object. Each **dataobjectReference** element references the associated **dataObject** element in the same process or subprocess context.

'DATAINPUT' AND 'DATAOUTPUT' ELEMENTS



In the BPMN file, the **dataInput** and **dataOutput** elements are generated for each object of the **Data object** type independent of the connection direction. The input and output data is generated below the **ioSpecification** element. The ID of this element consists of the **FLOWNODE_** string and the GUID of the ARIS object.

In addition, for objects of the **dataInput** type, a subordinate **inputSet** element is generated, which contains a **dataInputRefs** element that, in turn, references the **dataInput** element.

In addition, for objects of the **dataOutput** type, a subordinate **inputSet** element is generated, which contains a **dataOutputRefs** element that, in turn references the **dataOutput** element.

```
<semantic:itemDefinition id="ITEM_2bf0869e-2bd4-11e1-7724-8310ef1a3de4" isCollection="false" />
<semantic:itemDefinition id="ITEM_4eeb08c9-2bd5-11e1-7724-8310ef1a3de4" isCollection="false" />
<semantic:itemDefinition id="ITEM_8d587ac1-2bd5-11e1-7724-8310ef1a3de4" isCollection="false" />
<semantic:process id="PROCESS_4eeb08c1-2bd5-11e1-7724-8310ef1a3de4" isExecutable="false" name="Pool">
  <semantic:ioSpecification>
    <semantic:dataInput id="FLOWNODE_8d587ac2-2bd5-11e1-7724-8310ef1a3de4" isCollection="false"
      itemSubjectRef="ITEM_8d587ac1-2bd5-11e1-7724-8310ef1a3de4" name="Data Object3" />
    <semantic:dataOutput id="FLOWNODE_2bf0869f-2bd4-11e1-7724-8310ef1a3de4" isCollection="false"
      itemSubjectRef="ITEM_2bf0869e-2bd4-11e1-7724-8310ef1a3de4" name="Data Object2" />
    <semantic:dataOutput id="FLOWNODE_4ef234b9-2bd5-11e1-7724-8310ef1a3de4" isCollection="false"
      itemSubjectRef="ITEM_4eeb08c9-2bd5-11e1-7724-8310ef1a3de4" name="Data Object1" />
    <semantic:inputSet>
      <semantic:dataInputRefs>FLOWNODE_8d587ac2-2bd5-11e1-7724-8310ef1a3de4</semantic:dataInputRefs>
    </semantic:inputSet>
    <semantic:outputSet>
      <semantic:dataOutputRefs>FLOWNODE_2bf0869f-2bd4-11e1-7724-8310ef1a3de4</semantic:dataOutputRefs>
      <semantic:dataOutputRefs>FLOWNODE_4ef234b9-2bd5-11e1-7724-8310ef1a3de4</semantic:dataOutputRefs>
    </semantic:outputSet>
  </semantic:ioSpecification>
</semantic:process>
```

CONNECTIONS TO DATA OBJECTS

In the BPMN serialization, connections from data objects to events are dealt with differently than connections to objects of the **Activity** type.

CONNECTIONS TO EVENTS

If an object of the **Data output** type is connected to a start event, the **dataOutput**, **dataOutputAssociation** and **dataOutputSet** elements are generated under the **startEvent** element in the BPMN file.

The ID of the **dataOutput** element consists of the **DATA_OUTPUT_** string and the GUID of the object of the **Data Output** type. If the **Collection** symbol is used for the object in the BPMN diagram, the value of the **isCollection** attribute is set to **true**, otherwise it is set to **false**.

The **itemSubjectRef** attribute references the highest element **itemDefinition** that is created for each data object. Its ID consists of the **ITEM_** string and the GUID of the data object. The **dataOutputSet** element contains a **dataOutputRefs** element that references the **dataOutput** element.

In the **dataOutputAssociation** element the subordinate elements **sourceRef** and **targetRef** are generated. The first references the **dataInput** element and the second the **dataOutput** element of the process.

Because the end event is connected to an element of the **Data input** type, the subordinate elements **dataInput**, **dataInputAssociation** and **dataInputSet** are generated under the **endEvent** element. The attributes and IDs are generated similar to those for the start event.

```
<semantic:startEvent id="FLOWNODE_4ef234b2-2bd5-11e1-7724-8310ef1a3de4" name="Start Event">
  <semantic:dataOutput id="DATA_OUTPUT_4ef234b9-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234b2-2bd5-11e1-7724-8310ef1a3de4" isCollection="false"
    itemSubjectRef="ITEM_4eeb08c9-2bd5-11e1-7724-8310ef1a3de4" name="Data Object1" />
  <semantic:dataOutputAssociation id="FLOW_4eefc3c5-2bd5-11e1-7724-8310ef1a3de4">
    <semantic:sourceRef>DATA_OUTPUT_4ef234b9-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234b2-2bd5-11e1-7724-8310ef1a3de4</semantic:sourceRef>
    <semantic:targetRef>FLOWNODE_4ef234b9-2bd5-11e1-7724-8310ef1a3de4</semantic:targetRef>
  </semantic:dataOutputAssociation>
  <semantic:outputSet>
    <semantic:dataOutputRefs>DATA_OUTPUT_4ef234b9-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234b2-2bd5-11e1-7724-8310ef1a3de4</semantic:dataOutputRefs>
  </semantic:outputSet>
</semantic:startEvent>
<semantic:endEvent id="FLOWNODE_4ef234ba-2bd5-11e1-7724-8310ef1a3de4" name="End Event">
  <semantic:dataInput id="DATA_INPUT_8d587ac2-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234ba-2bd5-11e1-7724-8310ef1a3de4" isCollection="false"
    itemSubjectRef="ITEM_8d587ac1-2bd5-11e1-7724-8310ef1a3de4" name="Data Object3" />
  <semantic:dataInputAssociation id="FLOW_8d587ac5-2bd5-11e1-7724-8310ef1a3de4">
    <semantic:sourceRef>FLOWNODE_8d587ac2-2bd5-11e1-7724-8310ef1a3de4</semantic:sourceRef>
    <semantic:targetRef>DATA_INPUT_8d587ac2-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234ba-2bd5-11e1-7724-8310ef1a3de4</semantic:targetRef>
  </semantic:dataInputAssociation>
  <semantic:inputSet>
    <semantic:dataInputRefs>DATA_INPUT_8d587ac2-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234ba-2bd5-11e1-7724-8310ef1a3de4</semantic:dataInputRefs>
  </semantic:inputSet>
</semantic:endEvent>
```

CONNECTIONS TO OBJECTS OF THE 'ACTIVITY' TYPE

If an object of the **User task** type has an incoming and an outgoing connection to two objects of the **Data output** type, an **ioSpecification** element is generated below the **userTask** element during export to a BPMN file.

A **dataInput** element is generated for the incoming connection and a **dataOutput** element is generated for the outgoing connection. The respective ID consists of either the **DATA_INPUT_** or the **DATA_OUTPUT_** string and the GUID of the associated data object. Behind this the string **OF** is attached followed by the GUID of the object of the User task type. Similar to events, the **inputSet** and **outputSet** elements contain the **dataInputRefs** or **dataOutputRefs** elements that reference the data.

The **dataInputAssociation** and **dataOutputAssociation** elements connect the **dataInput** and **dataOutput** elements for the object of the **User task** type with the **dataOutput** element for the process.

```
<semantic:userTask id="FLOWNODE_4ef234b8-2bd5-11e1-7724-8310ef1a3de4" name="Task">
  <semantic:ioSpecification>
    <semantic:dataInput id="DATA_INPUT_4ef234b9-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234b8-2bd5-11e1-7724-8310ef1a3de4" isCollection="false"
      itemSubjectRef="ITEM_4eeb08c9-2bd5-11e1-7724-8310ef1a3de4" name="Data Object1" />
    <semantic:dataOutput id="DATA_OUTPUT_2bf0869f-2bd4-11e1-7724-8310ef1a3de4_OF_4ef234b8-2bd5-11e1-7724-8310ef1a3de4" isCollection="false"
      itemSubjectRef="ITEM_2bf0869e-2bd4-11e1-7724-8310ef1a3de4" name="Data Object2" />
    <semantic:inputSet>
      <semantic:dataInputRefs>DATA_INPUT_4ef234b9-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234b8-2bd5-11e1-7724-8310ef1a3de4</semantic:dataInputRefs>
    </semantic:inputSet>
    <semantic:outputSet>
      <semantic:dataOutputRefs>DATA_OUTPUT_2bf0869f-2bd4-11e1-7724-8310ef1a3de4_OF_4ef234b8-2bd5-11e1-7724-8310ef1a3de4</semantic:dataOutputRefs>
    </semantic:outputSet>
  </semantic:ioSpecification>
  <semantic:dataInputAssociation id="FLOW_4eefc3b1-2bd5-11e1-7724-8310ef1a3de4">
    <semantic:sourceRef>FLOWNODE_4ef234b9-2bd5-11e1-7724-8310ef1a3de4</semantic:sourceRef>
    <semantic:targetRef>DATA_INPUT_4ef234b9-2bd5-11e1-7724-8310ef1a3de4_OF_4ef234b8-2bd5-11e1-7724-8310ef1a3de4</semantic:targetRef>
  </semantic:dataInputAssociation>
  <semantic:dataOutputAssociation id="FLOW_2bf086a1-2bd4-11e1-7724-8310ef1a3de4">
    <semantic:sourceRef>DATA_OUTPUT_2bf0869f-2bd4-11e1-7724-8310ef1a3de4_OF_4ef234b8-2bd5-11e1-7724-8310ef1a3de4</semantic:sourceRef>
    <semantic:targetRef>FLOWNODE_2bf0869f-2bd4-11e1-7724-8310ef1a3de4</semantic:targetRef>
  </semantic:OutputAssociation>
</semantic:userTask>
```

3.5.2.4.6.13.22.3 Graphic elements (bpmndi)

'BPMNDIAGRAM' AND 'BPMNPLANE' ELEMENTS

A **BPMNDiagram** element is generated in the BPMN file for each BPMN diagram. The ID consists of the **BPMNDIAGRAM_** string and the GUID of the model.

This element always contains a **BPMNPlane** element with the **bpmnElement** attribute, whose value consists of the **COLLABORATION_** string and the GUID of the model for a model of the **BPMN collaboration diagram (BPMN 2.0)** type and of the **FLOWNODE_** string and the GUID of the subprocess for a model of type **BPMN process diagram (BPMN 2.0)**.

```
<bpmndi:BPMNDiagram id="BPMNDIAGRAM_d8770d10-f8a4-11df-2af7-f7f57f92e6c5" name="Compensation marker">
  <bpmndi:BPMNPlane bpmnElement="COLLABORATION_d8770d10-f8a4-11df-2af7-f7f57f92e6c5">
    ...
  </bpmndi:BPMNPlane>
</bpmndi:BPMNDiagram>
```

'BPMNSHAPE' ELEMENT

Each semantic element has an associated **BPMNShape** element below the **BPMNPlane** element.

The **bpmnElement** element references its associated semantic element via its ID. The ID of the **bpmnElement** element consists of the **BPMNDI_FLOWNODE_** string and the GUID of the object.

The **Bounds** element contains the coordinates of the associated symbol. The ARIS coordinate is normalized by multiplication with 274/72.

```
<bpmndi:BPMNPlane bpmnElement="COLLABORATION_d8770d10-f8a4-11df-2af7-f7f57f92e6c5">
  <bpmndi:BPMNShape bpmnElement="FLOWNODE_a10cd94d-e41a-11de-5e2f-ddcdfa499890"
    id="BPMNDI_FLOWNODE_a10cd94d-e41a-11de-5e2f-ddcdfa499890">
    <dc:Bounds height="78" width="486" x="52" y="13" />
    <bpmndi:BPMNLabel />
  </bpmndi:BPMNShape>
</bpmndi:BPMNPlane>
```

'BPMNEDGE' ELEMENT

Each connection that represents a sequence flow, a message flow or an association has a corresponding **BPMNEdge** element. This references the associated semantic elements via their IDs.

The ID of the **BPMNEdge** element consists of the **BPMNEDGE_** string and the GUID of the connection.

The **sourceElement** and **targetElement** elements reference the objects linked by the connection.

The **BPMNEdge** element has subordinate elements of the **waypoint** type that contain the x and y coordinates of the connection. The **waypoint** element is normalized by multiplication with 274/72.

```
<bpmndi:BPMNPlane bpmnElement="COLLABORATION_d8770d10-f8a4-11df-2af7-f7f57f92e6c5">
  <bpmndi:BPMNEdge bpmnElement="FLOW_2f627c45-f8a5-11df-2af7-f7f57f92e6c5"
    id="BPMNEDGE_2f627c45-f8a5-11df-2af7-f7f57f92e6c5"
    sourceElement="FLOWNODE_da7ec41f-f8a4-11df-2af7-f7f57f92e6c5"
    targetElement="FLOWNODE_2f627c40-f8a5-11df-2af7-f7f57f92e6c5">
    <di:waypoint x="345" y="78" />
    <di:waypoint x="379" y="78" />
    <bpmndi:BPMNLabel />
  </bpmndi:BPMNEdge>
</bpmndi:BPMNPlane>
```

ATTRIBUTES FOR THE 'BPMNSHAPE' ELEMENT

There are two additional attributes for the **BPMNShape** element. The first attribute specifies the orientation of the pool. If the **isHorizontal** attribute has the **true** value, the pools are arranged horizontally, if it has the **false** value, they are arranged vertically.

```
<bpmndi:BPMNShape ... isHorizontal="true">
```

The **isExpanded** attribute specifies whether a subprocess is expanded or not.

```
<bpmndi:BPMNShape ... isExpanded="true">
```

3.5.2.4.7 Matrix model

In a model of the **Matrix model** type, you can represent object connections. You can use existing objects or create new objects. You can conveniently select objects from the entire database.

3.5.2.4.7.1 Create matrix model

You can create a model of the **Matrix model** type. A matrix model is used to represent connections between objects.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The classic configuration set or modification set based on it is selected for the portal.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Click  **Create new model** on the **Quick start** area. The corresponding dialog opens.
3. Enter a name.
4. Click the **Model type** box and enter part of the model type name. All model types (page 518) are displayed whose names contain the term you entered.
5. Select **Matrix model**. The **Target** area displays the database and group names. This is where the new model will be stored.
6. Click the  group icon next of the **Groups** box.
7. If more than one database is provided, select the relevant database.
8. Navigate to the group where you want to save the model.
9. Click **OK**. The **Select target group** dialog is closed.
10. Click **OK**. The **Select target group** dialog closes.
11. Check your input.
12. Click **OK**. The **Create model** dialog closes.

The matrix model is newly created in the selected group and opened for editing on a tab.

3.5.2.4.7.2 Create matrix model from new objects

Using models of type **Matrix model** you can show existing connections between objects in a table.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The classic configuration set or modification set based on it is selected for the portal.

Procedure

1. Open a matrix model (page 760).
2. Double-click in the row or the column header. If no symbols are specified (page 761) yet, the **Add/Remove symbols** dialog opens (page 761).
3. Select the object types and click **Close**.
4. Click **Apply**.
5. Select an object and enter a name.

You have added a new object to the matrix model.

Tip

If symbol types are already specified (page 761), click a row or column header, press **F2**, select the object type using the arrow keys, press **Return** and enter a name for the object and press **Return**. Leave the row or column header using the arrow keys and press **F2** to add the next object to the matrix.

3.5.2.4.7.3 Create matrix model from existing objects

Using models of type **Matrix model** you can show existing connections between objects in a table.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The classic configuration set or modification set based on it is selected for the portal.

Procedure

1. Open a matrix model (page 760).
2. Click in the rows or the column header.
3. Click  **Insert existing object**. The corresponding dialog opens.
4. Select the object you want to insert.

You have created a matrix model from existing objects. The symbol types are added to your matrix.

Create matrix model

3.5.2.4.7.4 Open a matrix model

You can open models in different ways.

Prerequisite

- You have the **ARIS Connect Designer** license privilege.
- The model type of the model is allowed (page 528) by the method filter (page 523) in use.

Procedure

From Groups or the Processes area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click **Groups** in the **Classic** view or **Processes** in the **Default** view.
3. Select the group or process area containing the required model. The content of the selected group or process area is listed.
4. Click the name of the relevant model.
5. Click **Matrix** if this display is not enabled yet. The matrix is displayed.
6. Click  **Edit** >  **Edit model**.

From Home tab

1. Click **Home**.
2. Click  **Manage models & objects**.
3. In the database, select the group containing the relevant model. The content of the selected group is listed.
4. Click the name of the model you want to open.

From the repository

1. Click  **Repository**. The **Models & Objects** area is opened.
2. In the database, select the group containing the relevant model. The content of the selected group is listed.
3. Click the name of the model you want to open.

Using the search

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click the **Search** box (page 1131) and enter a term that is included in the model name. All models containing this term are listed immediately.
3. In the **Models** category, click the name of the model you want to open.

From the 'Recent changes' area

1. If you are authorized to use multiple databases, select the database containing the contents you want to access.
2. Click  **Recent changes** in the **Home** area. All models are listed that have recently been changed or created.
3. Click the name of the model you want to open. Depending on active configuration set, the **Groups** or **Process** area opens and the model is activated.
4. Click **Matrix** if this display is not enabled yet. The matrix is displayed.
5. Click  **Edit** >  **Edit model**.

The matrix model opens in a separate tab.

3.5.2.4.7.5 Specify symbols and connections

Before creating new objects and connections in a matrix model, you have to define the symbols and connections to be used.

3.5.2.4.7.5.1 Specify symbols for a matrix

Before you add new objects in a matrix model, you must select the symbols to be displayed.

Procedure

1. Create a matrix model. (page 758)
2. If you want to display symbols in the row header, click the row header. If you want to display symbols in the column header, click the column header.
3. Click  **Display symbols and connections** >  **Display symbols**. The corresponding dialog opens.
4. Click  **Add**. The corresponding dialog opens.
5. Enter the first characters in the **Enter symbol name** field to reduce the number of object symbols displayed.
6. Click the symbols you want to select.
7. Click **Apply** twice.

You have selected the symbols to be displayed in a matrix model.

Symbol types that are not enabled and do not have occurrences in the matrix are deleted from the menu. If you want to delete a symbol type, delete all occurrences in the model first.

3.5.2.4.7.5.2 Specify connection types for a matrix

Before you add connections to a matrix model, you must select the connection types to be used.

Prerequisite

You have modeled at least one object in the column and in the row header.

Procedure

1. Create a matrix model. (page 758)
2. Double-click in an empty cell between two objects or click  **Display symbols and connections** >  **Display connections**. The corresponding dialog opens.
3. Enter the first characters in the **Enter text to filter** field to reduce the amount of connection types displayed.
4. Move the mouse cursor over the connection type you want to add and click  **Show connection in menu**.
5. Click **Apply**.

You have selected the connection types to be used in a matrix model.

3.5.2.4.7.5.3 Specify default connection

You can specify a default connection for the matrix model.

Prerequisite

You have modeled at least one object in the column and in the row header.

Procedure

1. Create a matrix model. (page 758)
2. Click  **Display symbols and connections** >  **Display connections**. The corresponding dialog opens.
3. Enter the first characters in the **Enter text to filter** field to reduce the amount of connection types displayed.
4. Move the mouse cursor over the connection type you want to specify as default connection and click  **Use as default connection**.
5. Click **Apply**.

You have selected the default connection type to be used in a matrix model.

3.5.2.4.7.5.4 Specify an abbreviation for a connection

You can specify abbreviations for connections in a matrix model.

Prerequisite

You have modeled at least one object in the column and in the row header.

Procedure

1. Create a matrix model. (page 758)
2. Click  **Display symbols and connections** >  **Display connections**. The corresponding dialog opens.
3. Enter the first characters in the **Enter text to filter** field to reduce the amount of connection types displayed.
4. Move the mouse cursor in the  **Abbreviation for connection** column over the connection you want to specify an abbreviation for and click  **Rename**.
5. Enter a letter, a number, or a special character as a code.

This connection type will no longer be represented by a check mark in the matrix model, but by the character. If multiple connections are defined between objects, this is indicated by an asterisk in the cell in the matrix model. In a matrix model, connections are created (page 783) at definition level only.

6. Click **Apply**.

You have specified abbreviations for connections in a matrix model.

3.5.2.4.7.5.5 Remove connection types from the matrix

You can remove connections types from the list of connection types to be used in a matrix model.

Prerequisite

You have modeled at least one object in the column and in the row header.

Procedure

1. Create a matrix model. (page 758)
2. Click  **Display symbols and connections** >  **Display connections**. The corresponding dialog opens.
3. Enter the first characters in the **Enter text to filter** field to reduce the amount of connection types displayed.
4. Move the mouse cursor over the connection types where the  **Show connection in menu** icon is displayed.
5. Click  **Show connection in menu** to remove the connection type from the list.
6. Click **Apply**.

You have removed connection types from the list of connection types to be used in the matrix model.

All modeled connections of this type still exist but are not displayed in the matrix.

3.5.2.4.7.6 Create connections

In matrix models, only the definition level is visualized for connections. This means that matrix models do not contain occurrences of connections, only of objects.

The **Filter** wizard also shows connections that have no occurrences in models of the method filter. However, you can enable those connections so that they can be selected in matrix models. The advantage is that you can use them in matrix models even if the corresponding models are not available in the method filter.

3.5.2.4.7.6.1 Create new connections between objects in matrix model

Besides being able to view existing connections, you can also create new connections between objects.

Procedure

1. Open a matrix model (page 760).
2. Select a matrix cell between two objects.
3. Click  **Create connections**. If several connections are possible, the **Create connection** dialog opens.
4. Click the connection you want to create, and click **OK**.
5. To add a connection that is not displayed, click **Add connection types**. The corresponding dialog opens.

If multiple connections are defined between objects, this is indicated by an asterisk in the cell in the matrix model. In a matrix model, connections are created (page 783) at definition level only.

You have created a connection between objects in a matrix model.

Tip

Double-click a matrix cell to open the **Create Connection** dialog.

3.5.2.4.7.6.2 Draw connections using keyboard

You can draw connections between objects with the keyboard if you have defined abbreviations (page 763) for these connections.

Procedure

1. Open a matrix model (page 760).
2. Click in a cell in your matrix model.
3. In the cells where you want to create connections, enter the abbreviation for the required connection.

If there are several possible connections with the same abbreviation, the **Create connections** dialog opens. Enable the relevant connections and click **OK**.

The connections that correspond to the abbreviation are created in your matrix model. In a matrix model, connections are created (page 783) at definition level only.

Tip

If abbreviations are specified for the connections, you can move in the matrix model using the arrow keys and create connections using only the keyboard.

3.5.2.4.7.6.3 Temporarily hide connections in a matrix model

For a better overview, you can hide connections.

Prerequisite

You have modeled at least one object in the column and in the row header.

Procedure

1. Open a matrix model (page 760).
2. Click  **Display symbols and connections** >  **Display connections**. The corresponding dialog opens.
3. Enter the first characters in the **Enter text to filter** field to reduce the amount of connection types displayed.
4. Move the mouse cursor over the connection types where the  **Show connection in menu** icon is displayed.
5. Click  **Show connection in menu** to remove the connection type from the list.
6. Click **Apply**.

The connections are no longer displayed in the matrix model. These settings are saved when you close the matrix model. When it is opened again, these settings are active. You can show (page 762) these connections again.

3.5.2.4.7.6.4 Delete connections in matrix model

You can delete connections in the matrix model.

Prerequisite

The connection you want to delete must not have any occurrences in models.

Procedure

1. Open a matrix model (page 760).
2. Click the relevant cells in the matrix model and click  **Delete** or click the **Backspace** key. All connections except those that are used in other models are deleted.

The connections are deleted.

3.5.2.4.7.6.5 Delete connections using the inspector

You can delete connections in the matrix model.

Prerequisite

The connection you want to delete must not have any occurrences in models.

Procedure

1. Open a matrix model (page 760).
2. Click  if the inspector panel is not enabled yet.
3. Click the relevant cell in the matrix model.
4. In the inspector panel, select the connection to be deleted and click  **Delete**. The specific connection is deleted.

You can use the filter to reduce the number of connections displayed. If you have entered a filter and change the selection, the filter is reset.

The connection is deleted.

You can delete all connections except those that are used in other models.

3.5.2.4.7.7 Insert objects from other groups in matrix model

You can insert objects from the entire database into a matrix model.

Procedure

1. Open a matrix model (page 760).
2. Click in the rows or the column header.
3. Click  **Insert existing object**. The corresponding dialog opens.
4. Select the object you want to display in the matrix model and click **OK**.

The selected object is displayed in the matrix model.

3.5.2.4.7.8 Edit objects

3.5.2.4.7.8.1 Temporarily hide connections in the matrix model

In a matrix model, you can represent connections between objects and create new objects or connections. You can hide objects.

Procedure

1. Open a matrix model (page 760).
2. If you want to hide symbols for the row header, click the row header. If you want to hide symbols for the column header, click the column header.
3. Click  **Display symbols and connections** >  **Display symbols**. The corresponding dialog opens.
4. Disable the symbol types you want to hide temporarily.
5. Click **Apply**.

The symbol type is no longer displayed in the matrix model. These settings are saved when you close the matrix model. When it is opened again, these settings are active. The symbol type is also removed from the list if there are no occurrences in the matrix.

SHOW OBJECT AGAIN

Click  **Display symbols and connections** >  **Display symbols**. Enable the check box of the relevant symbol type.

NO LONGER DISPLAY OBJECT IN MATRIX MODEL

If the object is no longer needed, you can delete (page 774) it from the matrix model.

3.5.2.4.7.8.2 Sort objects in matrix model

New objects are always inserted in the selected row or column in the matrix model. You can change the arrangement of objects in the matrix model subsequently.

Procedure

1. Open a matrix model (page 760).
2. Select the objects you want to sort.
3. Click  **Sort**.
4. Click  **Sort ascending (A-Z)**,  **Sort descending (Z-A)**, or  **Sort by type**.

The matrix model is sorted based on your settings.

Tip

Select adjacent objects by holding down the Shift key and clicking the first and last object. You can select objects that are not adjacent by holding down the Ctrl key and clicking the relevant objects. You can extend or reduce your selection using the arrow keys.

3.5.2.4.7.8.3 Move objects in a matrix model

You can move objects within a matrix model.

Procedure

1. Open a matrix model (page 760).
2. Select the object in the matrix model.
3. Hold down the mouse button and drag the selected object to the relevant position.

The object is now displayed in the matrix model in the way you arranged it. A hierarchically grouped object is moved in its entirety.

Tip

You can move hierarchies by moving the top level.

Select adjacent objects by holding down the Shift key and clicking the first and last object. You can select objects that are not adjacent by holding down the Ctrl key and clicking the relevant objects.

3.5.2.4.7.8.4 Group objects hierarchically

You can hierarchically group any objects both in rows and in columns.

Procedure

1. Open a matrix model (page 760).
2. Select the object that you want to position below another object in a hierarchy. The objects must be arranged directly below or beside each other.
3. Click  **Down one level**.

For a row, the object is grouped hierarchically below the object that is placed directly above it. For a column, the object is grouped below the object that is placed directly to the left of it. The row or column can be reduced to the top level of the hierarchy by clicking it, that is, the subordinate rows or columns are hidden.



Tip

Select adjacent objects by holding down the Shift key and clicking the first and last object. You can extend or reduce your selection using the arrow keys.

3.5.2.4.7.8.5 Cancel hierarchical grouping of objects

You can hierarchically group any objects both in rows and in columns. All actions performed on the top object are also performed on the subordinate objects.

Procedure

1. Open a matrix model (page 760).
2. Click the arrow sign for an object to display the objects grouped below it if applicable.
3. Click the object for which you want to undo the hierarchical structure.
4. Click  **Up one level**.

The object is placed one level higher in the hierarchy.

Tip

Select adjacent objects by holding down the Shift key and clicking the first and last object. You can select objects that are not adjacent by holding down the Ctrl key and clicking the relevant objects. You can extend or reduce your selection using the arrow keys.

3.5.2.4.7.8.6 Remove symbol types from the matrix

You can remove symbols from the list of symbols to be used in a matrix model.

Procedure

1. Create a matrix model. (page 758)
2. If you want to remove symbols from the row header, click the row header. If you want to remove symbols from the column header, click the column header.
3. Click  **Display symbols and connections** >  **Display symbols**. The corresponding dialog opens.
4. Deselect the symbols you want to remove from the list of symbols to be used in a matrix.
5. Click **Apply**.

You have removed symbols from the list of symbols to be used in a matrix model. You can only remove a symbol type from the list if there are no objects of that symbol type used in the matrix.

3.5.2.4.7.8.7 Change object symbol

You can change the symbol for selected objects if various symbols are available for them.

Prerequisite

The method filter in use (page 523) includes different symbols of the objects you selected.

Procedure

1. Click an object, or hold the **Ctrl** key pressed to select multiple objects of the same type.
2. Activate the **Start** (page 574) tab bar.
3. Click  **Change symbol**. The list of object symbols available for the selected object(s) is shown.
4. Click the symbol you want to use from now on for the selected object/s in this model.

The symbol for the selected object is or the symbols of the selected objects are changed.

3.5.2.4.7.8.8 Copy objects and paste them into matrix model

You can copy objects in a matrix model and paste them into the same or another matrix model.

COPY AND PASTE OBJECTS

Procedure

1. Open (page 760) a matrix model.
2. Select one or more objects in the matrix model.
3. Click  **Copy** or use the keyboard shortcut **Ctrl + C**.
4. Click the relevant position in the matrix model.
5. Click  **Paste** or use the keyboard shortcut **Ctrl + V**.

The objects are pasted into the matrix model as occurrence copies (page 1151).

COPY AND PASTE HIERARCHICALLY GROUPED OBJECTS

Procedure

1. Open (page 760) a matrix model.
2. Select one or more objects in the matrix model. If you select the top object in the hierarchy, the entire structure is copied.
3. Click  **Copy** or use the keyboard shortcut **Ctrl + C**.
4. Click the relevant position in the matrix model.
5. Click  **Paste** or use the keyboard shortcut **Ctrl + V**.

The hierarchically grouped objects are pasted into the matrix model as occurrence copies (page 1151).

Tip

Select adjacent objects by holding down the Shift key and clicking the first and last object. You can select objects that are not adjacent by holding down the Ctrl key and clicking the relevant objects. You can extend or reduce your selection using the arrow keys.

3.5.2.4.7.8.9 Copy objects from graphical models and paste them into a matrix

You can copy objects in a matrix model and paste them into the same or another matrix model.

Procedure

1. Open (page 760) a matrix model.
2. Open (page 529) a graphical model.
3. Select one or more objects in the graphical model.
4. Click  **Copy** or use the keyboard shortcut **Ctrl + C**.
5. Click the relevant position in the matrix model.
6. Click  **Paste** or use the keyboard shortcut **Ctrl + V**.

The objects are pasted into the matrix model as occurrence copies (page 1151).

3.5.2.4.7.8.10 Delete objects from a matrix model

You can delete objects from a matrix model.

Procedure

1. Open a matrix model (page 760).
2. Click the relevant cells in the matrix model and click  **Delete** or click the **Backspace** key.

The objects are deleted from the matrix model.

3.5.2.4.7.9 Label column or row header title

You can enter a label for the column or row header title.

Procedure

1. Open a matrix model (page 760).
2. Double-click the column or row header title of the matrix model. The corresponding dialog opens.
3. Enter the title.

You have defined the label of the column or row header title.

3.5.2.4.7.10 Apply color to row or column

You can apply a color background to entire rows or columns.

Procedure

1. Open a matrix model (page 760).
2. Activate the **Start** (page 574) tab bar.
3. Click in a row or column header.

Select multiple rows or columns by holding down the Shift key and clicking the first and last row or column. You can select rows or columns that are not adjacent by holding down the Ctrl key.

4. Click  **Fill color**. The color palette opens.
5. Click the relevant color. The color palette closes.

A color background is applied to the row or column containing objects. Only those cells in which connections are not allowed have no color background.

3.5.2.4.7.11 Color columns or rows with a user-defined color

You can assign your own color to row or column headers that contain objects.

Procedure

1. Open a matrix model (page 760).
2. Activate the **Start** (page 574) tab bar.
3. Click in a row or column header.

Select multiple rows or columns by holding down the Shift key and clicking the first and last row or column. You can select rows or columns that are not adjacent by holding down the Ctrl key.

4. Click  **Fill color**. The color palette opens.
5. Click **Choose your own color**. The **Define color** dialog opens.
6. Select your own color in one of the ways described below. Your changes will be displayed in the preview window on the right:
 - a. Click the color bar and move the line to the relevant color range to select the basic color. Then click on the relevant position in the color box to select the brightness of the basic color.
 - b. Enter the respective share of each color from 0 to 255 in the **Red**, **Green** and **Blue** boxes. 0 means that the corresponding color is absent. If you enter **0** in all three boxes you have selected the color **black**.
 - c. Enter a hexadecimal color definition in the **Color code: #** box. The hexadecimal system uses the letters A to F in addition to the numerals of the decimal system, which means that it is based on the base 16. If you enter FFFF00, this sets the color to **Yellow**.

7. Click **OK**.

A color background is applied to the row or column containing objects. Only those cells in which connections are not allowed have no color background.

3.5.2.4.7.12 Reset color

You can reset the color of a row or a column if you have changed the color.

Procedure

1. Open a matrix model (page 760).
2. Activate the **Start** (page 574) tab bar.
3. Click in a row or column header.

Select multiple rows or columns by holding down the Shift key and clicking the first and last row or column. You can select rows or columns that are not adjacent by holding down the Ctrl key.

4. Click  **Fill color**. The color palette opens.
5. Click  **Reset**.

You have reset the color of the selected rows or columns to their original color.

3.5.2.4.7.13 Change size of row or column

You can change the size of a row or a column.

Procedure

1. Open a matrix model (page 760).
2. Click in a row or column header.

Select multiple rows or columns by holding down the Shift key and clicking the first and last row or column. You can select rows or columns that are not adjacent by holding down the Ctrl key.

3. Click  **Change row and column size**. The corresponding dialog opens.
4. Enter the size in pixels.

The size of the selected rows or columns is changed.

Tip

You can change the size of a single row or column by dragging its border with the mouse.

3.5.2.4.7.14 Change text orientation of row or column header

You can change the text orientation of a row or a column header.

Procedure

1. Open a matrix model (page 760).
2. Click in a row or column header.
3. Click the **Format** tab.
4. If you want a horizontal text orientation, click the row or column header and click **T** **Text orientation** > **T** **Horizontal**.

If you want a vertical text orientation, click the row or column header and click **T** **Text orientation** > **V** **Vertical**.

The text is oriented accordingly.

Example

Column header title Row header title	▶ Function 1	Column header title Row header title	Function 1 ▶
Event 1		Event 1	

3.5.2.4.7.15 Align text of row or column horizontally

You can align the text of a row or a column horizontally.

Procedure

1. Open a matrix model (page 760).
2. Click in a row or column header.
3. Click the **Format** tab.
4. If you want to align the text left, click the row or column header and click  **Align horizontally** >  **Align left**.

If you want to align the text left, click the row or column header and click  **Align horizontally** >  **Align center**.

If you want to align the text right, click the row or column header and click  **Align horizontally** >  **Align right**.

The text is aligned accordingly.

Example

Column header title Row header title	Function 1 	Column header title Row header title	Function 1 	Column header title Row header title	Function 1 
 Event 1		 Event 1		 Event 1	

3.5.2.4.7.16 Align text of row or column vertically

You can align the text of a row or a column vertically.

Procedure

1. Open a matrix model (page 760).
2. Click in a row or column header.
3. Click the **Format** tab.
4. If you want to align the text top, click the row or column header and click  **Align vertically** >  **Align top**.

If you want to align the text center, click the row or column header and click  **Align vertically** >  **Align center**.

If you want to align the text bottom, click the row or column header and click  **Align vertically** >  **Align bottom**.

The text is aligned accordingly.

Example

Column header title Row header title	Function 1 	Column header title Row header title	Function 1 	Column header title Row header title	Function 1 
 Event 1		 Event 1		 Event 1	

3.5.2.4.7.17 Export matrix model to Microsoft Excel

You can use a report to export the completed matrix model to Microsoft® Excel so that it can be prepared for use in a presentation, for example.

Procedure

1. Open a matrix model (page 760).
2. Click  **Reports**. The **Reports** bar opens.
3. Click the drop-down list box to display the list of available reports.
4. Click the **Export relationship matrix** report.
5. Click the **Start** button.
6. When the report is created, the result is listed in the **Reports** bar, and a dialog to download the result opens.
7. Click  **Download result**. Depending on your browser settings, you can specify the download folder or the result is downloaded in the default download folder.
8. To download the result later, click  **Download** in the **Reports** bar.

You have exported a matrix model as an XLS file.

You can open the file in Microsoft® Excel.

3.5.2.4.7.18 Generate a PDF file of a matrix model

You can generate a PDF file of a matrix model and use this to print the matrix, for example.

Procedure

1. Open a matrix model (page 760).
2. Click  **Reports**. The **Reports** bar opens.
3. Click the drop-down list box to display the list of available reports.
4. Select the **Export graphic as PDF** report.
5. Click the **Start** button. The corresponding dialog opens.
6. Select your settings and click **OK**.
7. When the report is created, the result is listed in the **Reports** bar, and a dialog to download the result opens.
8. Click  **Download result**. Depending on your browser settings, you can specify the download folder or the result is downloaded in the default download folder.
9. To download the result later, click  **Download** in the **Reports** bar.

You have generated a PDF of a matrix model.

3.5.2.4.7.19 Delete matrix model

You can delete a matrix model.

Prerequisite

You require the **Delete** access privilege for the groups in which the items are saved.

In order to restore the status of a database after unintentionally deleting something, please use versioned databases or back up your databases before you delete items.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Repository**.
3. Move the mouse cursor over the matrix model you want to delete. The  **More** icon is displayed beside the item name.
4. Click  **More** >  **Delete**. A confirmation prompt is displayed.
5. Click **OK**.

The matrix model is deleted.

3.5.2.4.7.20 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.4.7.20.1 What is a matrix model?

In a model of the **Matrix model** type, you can represent object connections. You can use existing objects or create new objects. You can conveniently select objects from the entire database.

You can view all existing connections, display only one connection in the matrix model, or add new connections.

In the matrix model, you can place or move objects as required, sort them alphabetically or according to methods, or arrange them hierarchically.

AREAS OF USE

- Assessment of the degree to which markets are opened up, displayed in a table (business segment matrix)
- Representation of technical and disciplinary structures and their dependencies
- Representation of hierarchies
- Quick and clear management of connections between objects

Specify connections easily and efficiently, and create models later using model generation

3.5.2.4.7.20.2 How are connections displayed?

In general, check marks indicate existing connections between objects in the matrix model. An asterisk indicates that there is more than one connection between two objects. The following display options are also available:

INDICATION OF THE DIRECTION OF THE CONNECTION

In the matrix model, a small arrow indicates the direction of a connection.

	Indicates the direction from an icon placed in the column header to an icon placed in the row header.
	Indicates the direction from an icon placed in the row header to an icon placed in the column header.

INDICATION OF ABBREVIATIONS

If an abbreviation is defined, this abbreviation is displayed instead of the check mark.

3.5.2.4.7.20.3 What are connections at definition level?

In matrix models, only the definition level is visualized for connections. This means that matrix models do not contain occurrences of connections, only of objects.

3.5.2.4.7.20.4 How to control the matrix using the keyboard

You can control the matrix using the keyboard:

Shortcut	Selection	Action
Arrow keys	▪ In the list of symbols	Moves to the next/previous symbol in arrow direction.
	▪ In the matrix	Moves to next column/row in arrow direction.
Enter	Cell	Opens the Display connection type dialog
Esc key	Dialog opened	Cancel the dialog.
F2	Cell of the row or column header	Opens the list of symbols available.
+ key	Matrix	Zooms in the matrix.
- key	Matrix	Zooms out the matrix.
0	Matrix	Zooms to 100 %

3.5.2.5 Check single models

You can use the semantic checks provided or use your own to check whether the open model or its objects meet predefined conditions.

A semantic check is a script that contains modeling conventions. It can be applied to models (page 1148) and indicates whether modeling conventions have been followed. If rules are not adhered to, detailed error descriptions, warnings, and/or notes are displayed.

Based on semantic check results, you can customize the models and thereby ensure that they are properly modeled. Modification and rework are often necessary if models are created by several people or even across department boundaries. If you use semantic checks, expensive modification efforts and rework can be avoided.

The semantic check results (page 789) of the checks used in ARIS Connect Designer can be downloaded in the format selected.

You can also run semantic checks in the repository (page 798).

3.5.2.5.1 Run semantic check for an open model

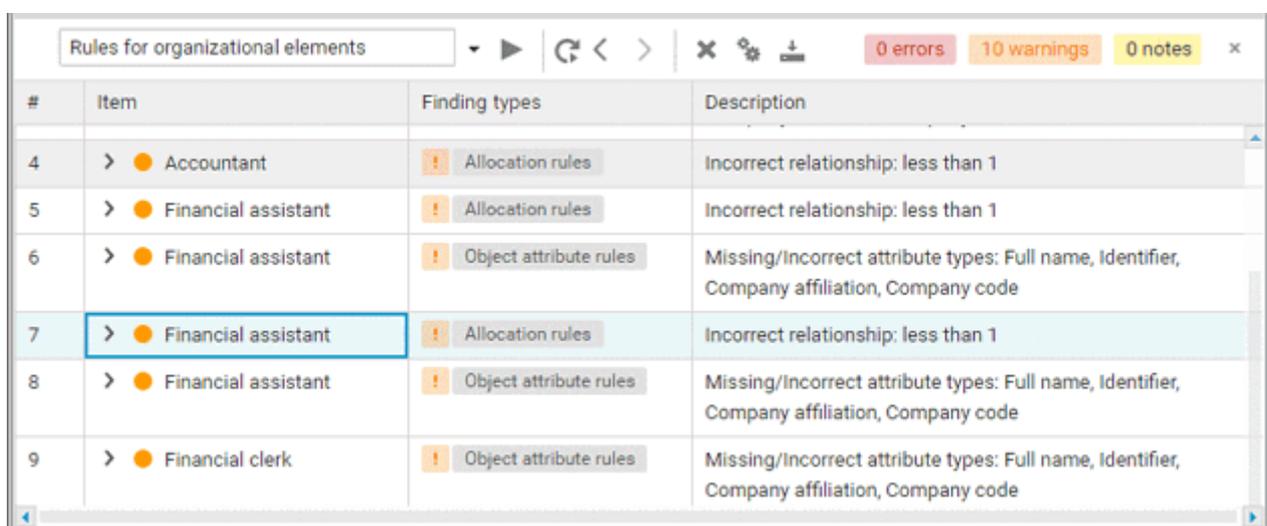
You can check whether the model complies with the modeling conventions.

When you run a semantic check, the previous semantic check results are deleted from the results list.

Procedure

1. Open a model (page 529).
2. Click  **Semantic checks** to open the **Semantic checks** bar.

Click bar button  **Semantic checks** to show the **Semantic checks** bar where you can run semantic checks for a model (page 784) or for one or more objects (page 785). Among other things, the toolbar allows you to restrict the view to errors, warnings, or notes (page 787).



#	Item	Finding types	Description
4	Accountant	Allocation rules	Incorrect relationship: less than 1
5	Financial assistant	Allocation rules	Incorrect relationship: less than 1
6	Financial assistant	Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
7	Financial assistant	Allocation rules	Incorrect relationship: less than 1
8	Financial assistant	Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
9	Financial clerk	Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code

3. Click in the semantic check list box. The relevant semantic checks are listed.
4. Select the required semantic check. You can select a semantic check to check the model or to check specific objects.

5. Click  **Run the selected semantic check**. Depending on the rules to be checked, the semantic check is executed without further input or dialogs are opened and you must make settings.

The **Semantic check** is executed and the result is displayed. Errors, warnings, and notes are listed in the **Semantic checks** bar and the corresponding objects are marked by error, warning, and note markers (page 794) in the model. The result can be downloaded (page 789) in the selected format (page 788).

3.5.2.5.2 Rerun a semantic check

You can rerun the last executed semantic check to ensure that your adjustments have fixed previous errors.

Procedure

1. Run a semantic check (page 784).
2. Fix the errors displayed by the semantic check.
3. Click  **Rerun the last semantic check**. Based on the previous profile and data, the last semantic check is performed independently of the current selection.
4. Check whether all errors have been corrected. If not, proceed with troubleshooting.

You have corrected modeling errors using the semantic check.

3.5.2.5.3 Run a semantic check using the Model tab bar

You can check whether the model or selected objects complies with the modeling conventions. When you run a semantic check, the previous semantic check results are deleted from the results list.

Procedure

1. Open a model (page 529).
2. If you want to run a semantic check for the model, ensure that no model item is selected or select objects if you want to run a semantic check for objects.
3. Click the **Model** tab bar.
4. Click  **Check diagram**. The semantic checks available for the model or for the selected objects are displayed.
5. Select the required semantic check. Depending on the rules to be checked, the semantic check is executed without further input or dialogs are opened and you must make settings.

The **Semantic check** is executed and the result is displayed. Errors, warnings, and notes are listed in the **Semantic checks** bar and the corresponding objects are marked by error, warning, and note markers (page 794) in the model. The result can be downloaded (page 789) in the selected format (page 788).

3.5.2.5.4 Review semantic check results

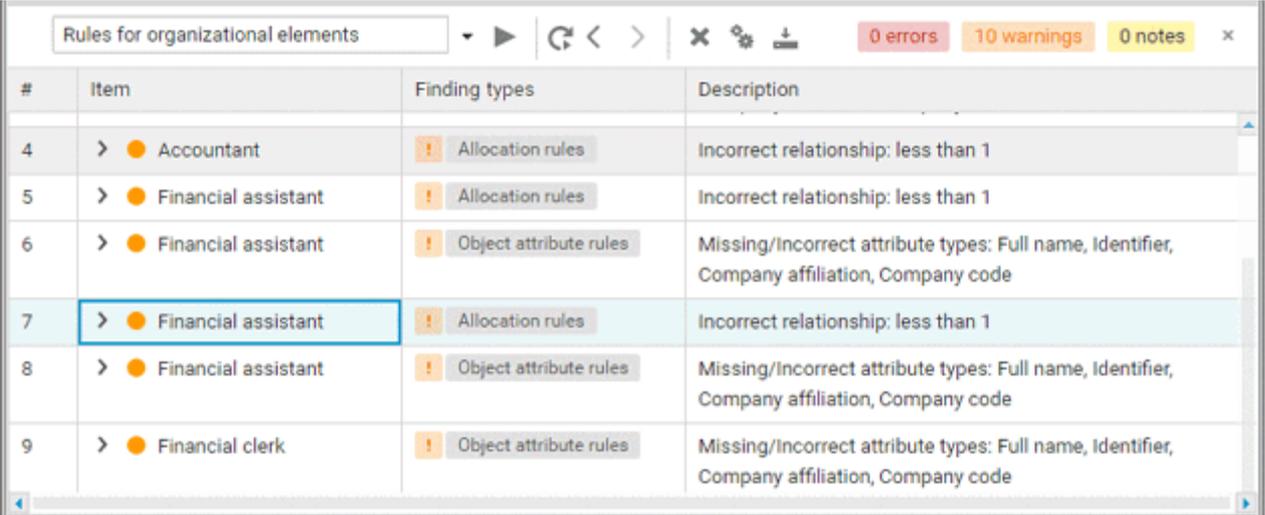
You can review semantic check results for errors, warnings, and notes.

Prerequisites

You have run a semantic check for the open model.

Procedure

1. Click  **Semantic checks** to open the **Semantic checks** bar. The result of the last executed semantic check is listed.
2. Click bar button  **Semantic checks** to show the **Semantic checks** bar where you can run semantic checks for a model (page 784) or for one or more objects (page 785). Among other things, the toolbar allows you to restrict the view to errors, warnings, or notes (page 787).



#	Item	Finding types	Description
4	> ● Accountant	! Allocation rules	Incorrect relationship: less than 1
5	> ● Financial assistant	! Allocation rules	Incorrect relationship: less than 1
6	> ● Financial assistant	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
7	> ● Financial assistant	! Allocation rules	Incorrect relationship: less than 1
8	> ● Financial assistant	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
9	> ● Financial clerk	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code

3. Click  **Go to next error, warning, or note**. The next entry is highlighted. If the corresponding object is not in the visible model section, it is moved to the visible model section.
4. Click  **Go to previous error, warning, or note**. The previous entry is highlighted. If the corresponding object is not in the visible model section, it is moved to the visible model section.

You have reviewed the listed semantic check results.

3.5.2.5.5 Restrict the result view to errors, warnings or notes

When you have performed a semantic check that returns findings, you can restrict the result to errors, warnings, or notes to focus on items you want to edit.

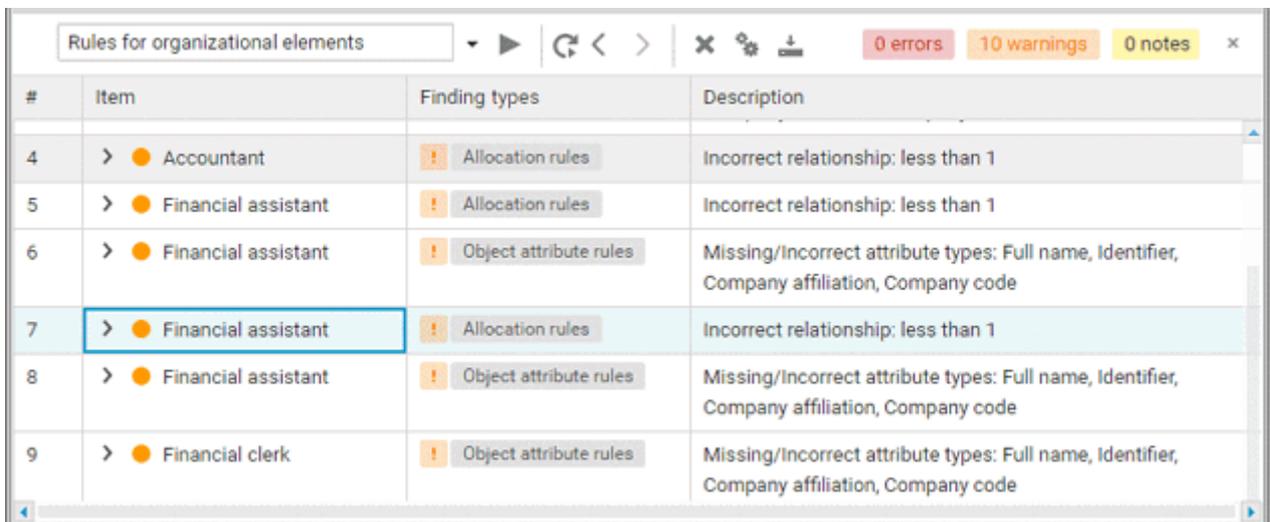
Prerequisite

- You have run a semantic check for the open model.
- The semantics check found errors, warnings, and notes.

Procedure

1. Click  **Semantic checks** to open the **Semantic checks** bar. The number of errors, warnings and notes is displayed.

26 errors
10 warnings
10 notes
2. Click bar button  **Semantic checks** to show the **Semantic checks** bar where you can run semantic checks for a model (page 784) or for one or more objects (page 785). Among other things, the toolbar allows you to restrict the view to errors, warnings, or notes (page 787).



#	Item	Finding types	Description
4	Accountant	Allocation rules	Incorrect relationship: less than 1
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9	Financial clerk	Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code

3. Move the mouse pointer over the corresponding output field and click **errors**, **warnings**, or **notes**.

Depending on your choice, only the errors, warnings, or notes are listed and marked in the model. You can display all semantic check entries again by clicking **Show all**.

26 errors
Show all

3.5.2.5.6 Show additional information for errors, warnings, and notes

You can show additional semantic check results in the model and in the **Semantic checks** bar. A marker is displayed above the corresponding object in the model, depending on the type of result. Each finding is displayed in a row in the **Semantic checks** bar.

Prerequisites

You have run a semantic check for the open model.

Procedure

1. Click the entry in the **Semantic checks** bar you want to show in the model. A marker is displayed next to the corresponding object in the model.
2. In the model, position the mouse pointer over the marker. Additional information is displayed in a pop-up.
3. In the **Semantic checks** bar, click  **Expand** of an error, warning, or note. Detailed information is displayed, such as the rule on which the entry is based.

You have shown additional information (page 587) in the model and in the **Semantic checks** bar.

3.5.2.5.7 Set up the output options of the semantic check

You can specify in which format the result of the semantic check is to be generated for downloading.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Click  **Semantic checks** to open the **Semantic checks** bar.
3. Click  **Select output format**. The corresponding dialog opens.
4. Click the  down arrow and select the output option you want to use, for example, **Output PDF**.
5. Click **OK**.

You have set up the output options for semantic check results. If you now run a semantic check and click  **Download result as a document**, the result is downloaded in the selected format.

3.5.2.5.8 Download the result of a semantic check

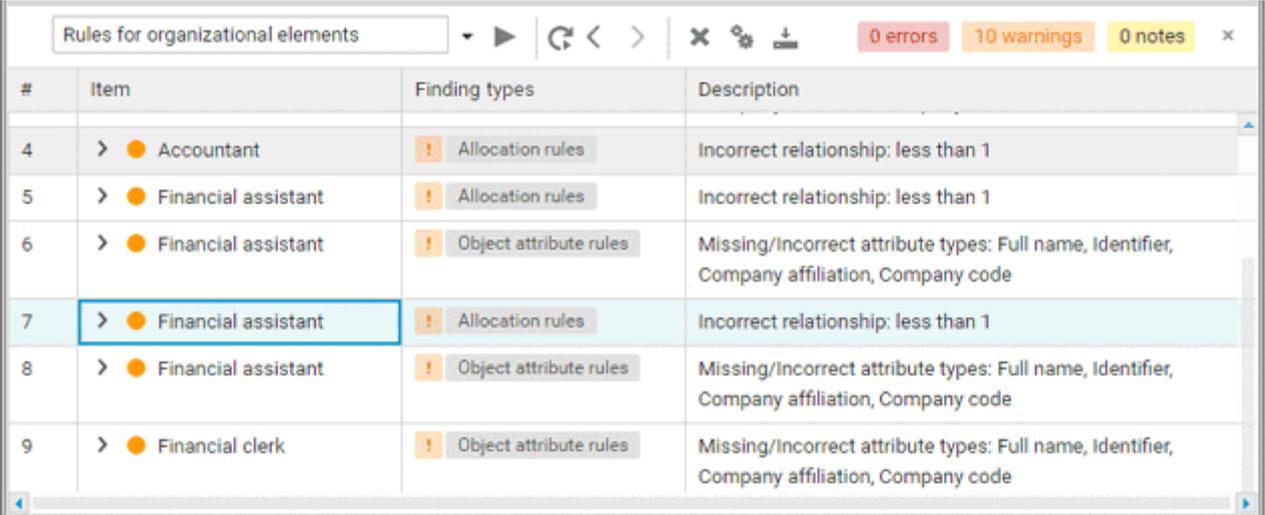
You can download the result of a semantic check that is listed in the **Semantic checks** bar.

Prerequisites

You have run a semantic check for the open model.

Procedure

1. Click  **Semantic checks** to open the **Semantic checks** bar. The result of the last executed semantic check is listed.
2. Click bar button  **Semantic checks** to show the **Semantic checks** bar where you can run semantic checks for a model (page 784) or for one or more objects (page 785). Among other things, the toolbar allows you to restrict the view to errors, warnings, or notes (page 787).



#	Item	Finding types	Description
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9	> ● Financial clerk	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code

3. Click  **Download result as a document**.

The **Save As** dialog opens and you can navigate to the folder in which you want to save the semantic checks result in the chosen format (page 788).

3.5.2.5.9 Clear the result of the last semantic check

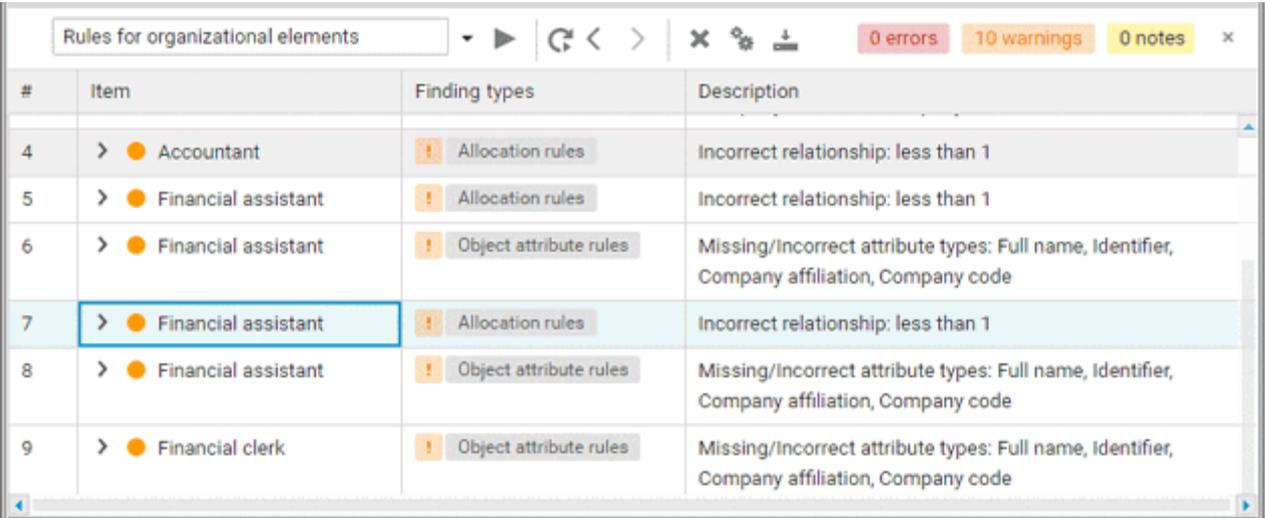
You can clear the result of the last semantic check. Therefore, you will no longer be able to download the corresponding semantic check results.

Prerequisites

You have run a semantic check for the open model.

Procedure

1. Click  **Semantic checks** to open the **Semantic checks** bar. The result of the last executed semantic check is listed.
2. Click bar button  **Semantic checks** to show the **Semantic checks** bar where you can run semantic checks for a model (page 784) or for one or more objects (page 785). Among other things, the toolbar allows you to restrict the view to errors, warnings, or notes (page 787).



#	Item	Finding types	Description
4	> ● Accountant	! Allocation rules	Incorrect relationship: less than 1
5	> ● Financial assistant	! Allocation rules	Incorrect relationship: less than 1
6	> ● Financial assistant	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
7	> ● Financial assistant	! Allocation rules	Incorrect relationship: less than 1
8	> ● Financial assistant	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code
9	> ● Financial clerk	! Object attribute rules	Missing/Incorrect attribute types: Full name, Identifier, Company affiliation, Company code

3. Click  **Clear semantic check result**.

The entries of the semantic check result for the current model are deleted.

3.5.2.5.10 Close the Semantic checks bar

You can close the **Semantic checks** bar when you no longer need it.

Procedure

Click  **Semantic checks** or click  **Close** in the **Semantic checks** bar.

The **Semantic checks** bar is closed.

3.5.2.5.11 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.2.5.11.1 What should you know about semantic checks?

You can use semantic checks to ensure correct modeling in ARIS. Your models are checked using the defined rules. These rules ensure that your business process models are logically structured in ARIS and are meaningful. Only models such as these can produce meaningful and correct analysis results in further work and be used to help make decisions.

ARIS provides standard semantic checks. You can use ARIS Architect to define your own checks and make them available to ARIS users.

Using ARIS Connect, semantic checks can be run for selected content (page 452) or the content of a group (page 453) in the repository or for an opened model (page 784) and its objects (page 785) in ARIS Connect Designer.

Certain semantic checks can be applied to different items, while others can only be applied to one item or item type, for example, only to models of one model type. This depends on which rules a semantic check verifies.

3.5.2.5.11.2 What semantic checks are available?

You can run the following semantic checks. Depending on your selection, only the semantic checks that can be applied to the selected models are available. For example, the semantic check **Validation of a BPMN model (BPMN 2.0)** is only available if you have selected models of type **BPMN 2.0**, such as **BPMN process diagram (BPMN 2.0)**.

Name	Description
Allocation rules for EPC	This profile contains allocation rules for object types of EPCs.
Automation	These rules check whether the relationships and the structure of models are correct (modeling conventions) in order to enable automation. They also check whether all required items and information are available. You can start the semantic check for Value-added chain diagrams and EPCs. Optionally, you can specify the scope of the check.
BO semantic check rules	This profile contains BO semantic check rules for objects in process models, as well as BO attribute rules for cost category and cost driver diagrams.
Consistency of service allocation	This profile contains rules that check whether the business services assigned to functions match the required capabilities and whether the software services and their operations which are

Name	Description
	assigned to the business services provide at least the same capabilities as the business services.
General structure rules for all model types	This profile contains rules for checking the structure of your models.
Mandatory semantic checks	<p>This profile contains all relevant checks for models/objects. You can call it as a predefined macro.</p> <p>The macro specifies the following attributes for checked models/objects:</p> <ul style="list-style-type: none"> ▪ Time of last semantic check ▪ Semantic check successful <p>If an error is found in a model/object: Boolean = FALSE. If no error is found or the model/object cannot be checked because the rule does not apply to the model/object: Boolean = TRUE.</p>
Rules at design specification level	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Existence rules for model types of the design specification level ▪ Allocation rules for object types of the design specification level
Rules for data elements	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Rules for checking the existence of clusters, entity types, relationship types, ERM attributes, and technical terms ▪ Rules for checking the assignments of data view elements (relationship type, entity type, generalization type, etc.) ▪ Object attribute rules for objects in the data view ▪ Allocation rules for object type ERM attribute
Rules for functions	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Rules for checking the existence of functions ▪ Rules for checking assignments of functions to which a model of type Function tree, EPC, PCD, or Function allocation diagram is assigned ▪ Allocation rules for object type Function
Rules for organizational elements	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Rules for checking the existence of Organizational units, Positions, Groups, and Persons ▪ Object attribute rules for objects in the organization view ▪ Allocation rules for object types Organizational unit, Position, Group, and Person

Name	Description
Structure rules for hierarchy models	This profile contains structure rules for hierarchy models (function trees, organizational charts, etc.).
Structure rules for models of type 'eERM'	This profile contains rules for checking the structure of eERM models.
Structure rules for process models	This profile contains rules for checking the structure of process models (EPC, Process chain diagram, etc.).
Structure rules for specific hierarchy models	This profile contains structure rules for specified hierarchy models.
Validate process schedule	This profile contains structure rules for time-based modeling.
Validation for an EPC-to-BPMN transformation	This profile contains semantic check rules for models of type EPC .
Validation of a BPMN diagram (BPMN 2.0)	Validation of a BPMN diagram (BPMN 2.0)
Validation of a service-oriented BPMN model	Validation of a service-oriented BPMN model
Validation of a service-oriented EPC	This profile contains structure rules for service-oriented EPCs.

3.5.2.5.11.3 What icons symbolize the semantic check results?

The results of semantic checks are also displayed graphically.

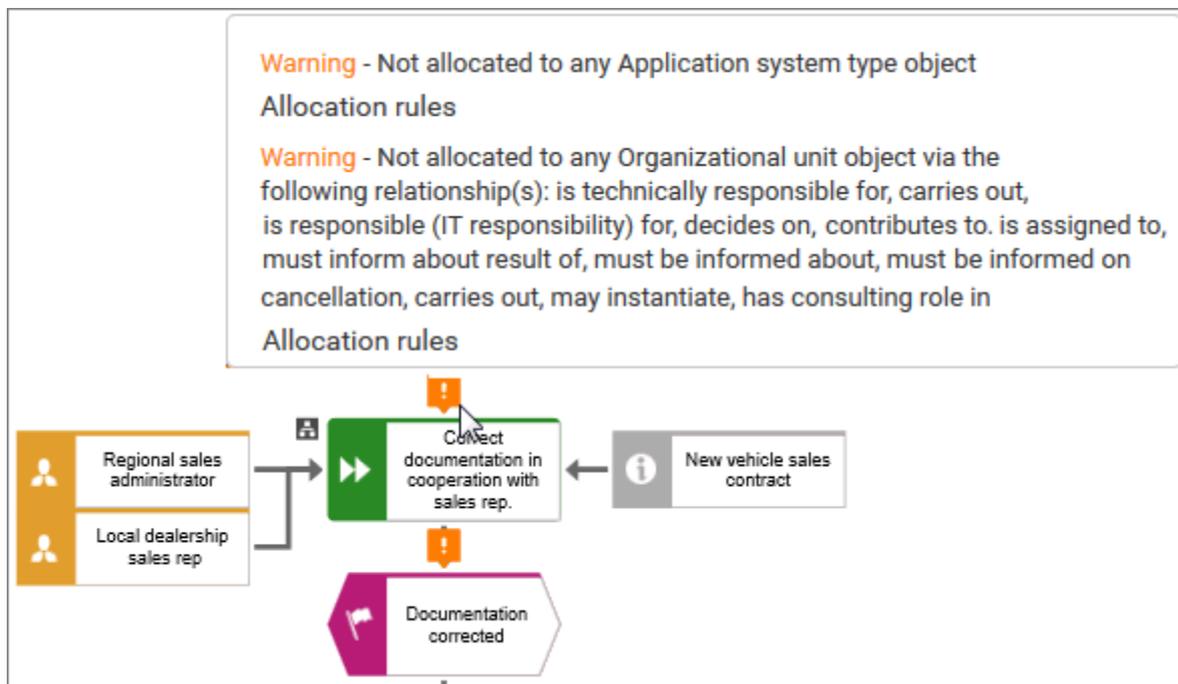
Icons	Description
	If a semantic check is executed in the  Repository without finding a rule violation, this is indicated by a green symbol.
	If a semantic check is executed in the  Repository and it finds rule violations, the number and type of rule violations are displayed. The number with a dark red background indicates the errors, the number with a light red background displays the warnings, and the number with a yellow background displays the notes.
	If a semantic check is executed using ARIS Connect Designer without finding a rule violation, this is indicated by a green symbol.
	If a semantic check is executed in ARIS Connect Designer and it finds rule violations, the number and type of rule violations are displayed. You can restrict the result view to errors, warnings, or notes.
	If you have restricted the result view in ARIS Connect Designer to errors, warnings, or notes, you can show all result entries again by clicking on Show all .

3.5.2.5.11.4 How are errors, warnings, and notes marked in the model?

If a semantic check detects errors, warnings, or notes, the corresponding object is marked in the model.

Severity	Marker
Error	
Warning	
Note	

If, for example, a warning is found, the warning marker is placed above the corresponding object. When you position the mouse pointer over the marker, additional information about the warning is displayed.



You can show detailed information in the **Semantic checks** bar by expanding an entry.

#	Item	Finding type	Description
32	 Correct documentation in cooperation with sales rep.	 Allocation rules	Not allocated to any Organizational unit object via the following relationship(s): is technically responsible for, carries out
33	 Correct documentation in cooperation with sales rep.	 Allocation rules Warning	Not allocated to any Application system type object Rule: Function can be supported by application system type (1:n) This rule checks whether at least one application system type is allocated to each function.

3.5.2.5.12 Layout options dialog

Specifies the values based on which models are designed.

Top margin

Specifies the distance to the top margin of the modeling area in millimeters.

Left margin

Specifies the distance to the left margin of the modeling area in millimeters.

Horizontal item spacing

Specifies the horizontal distance in millimeters that the items in the model should have next to each other after the layout process, and sets the default horizontal distance for Guided Modeling (page 581) and Smart Modeling (page 501).

Vertical item spacing

Specifies the vertical distance in millimeters that the items in the model should lie below each other after the layout process, and sets the default vertical distance for Guided Modeling (page 581) and Smart Modeling (page 501).

Layout orientation

Specifies the model orientation, either vertical or horizontal.

Arrange satellites

Specifies the arrangement of satellites, that is, of the objects that are assigned to structurally relevant objects (page 1154). When arranging satellites, different connection types are also included. Satellites that are connected to an object via the same connection type will be grouped together in one space.

Horizontally

The satellites are arranged from left to right. Satellites that are linked with the structurally relevant object by the same connection type are placed directly next to one another.

Quadratic

Satellites are arranged inside a square if possible. Satellites that are linked with the structurally relevant object by the same connection type are grouped together within a common space.

Vertically

The satellites are arranged from top to bottom. Satellites that are linked with the structurally relevant object by the same connection type are placed directly beneath one another.

Minimize connection anchor points

Reduces the number of anchor points in the layout. If you use the grid at the same time, you can obtain the effect of superimposing several outgoing or incoming connections.

Use as default

When you start laying out models of this type, the settings you specify here will be reused and you will not have to reenter them.

3.5.3 Check models and objects

You can use the semantic checks provided or use your own to check whether the open model or its objects meet predefined conditions.

A semantic check is a script that contains modeling conventions. It can be applied to models (page 1148) and indicates whether modeling conventions have been followed. If rules are not adhered to, detailed error descriptions, warnings, and/or notes are displayed.

Based on semantic check results, you can customize the models and thereby ensure that they are properly modeled. Modification and rework are often necessary if models are created by several people or even across department boundaries. If you use semantic checks, expensive modification efforts and rework can be avoided.

You can use the repository to check the content of a group (page 453), multiple models, and multiple objects (page 452). Errors, warnings, and notes are indicated in the **Semantic checks** bar.

The semantic check results (page 801) of the checks used in the repository can be downloaded in the format selected.

You can also run semantic checks for open models (page 784).

3.5.3.1 Set up the output options of the semantic check

You can specify in which format the result of the semantic check is to be generated for downloading.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Click  **Semantic checks** to open the **Semantic checks** bar.
3. Click  **Select output format**. The corresponding dialog opens.
4. Click the  down arrow and select the output option you want to use, for example, **Output PDF**.
5. Click **OK**.

You have set up the output options for semantic check results. If you now run a semantic check and click  **Download result as a document**, the result is downloaded in the selected format.

3.5.3.2 Run a semantic check for models and objects

You can check one or multiple models and objects for semantic correctness. When you run a semantic check, the previous semantic check results are deleted from the results list.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Select the database group which contains the models and/or objects you want to check.
4. In the detail view (page 470), enable the check boxes of the relevant models and/or objects.
5. The **Semantic checks** bar displays the name of the selected item and the corresponding semantic check. If you have selected more than one item, the **Semantic checks** bar displays the number of selected items.
6. Click in the semantic check list box. The relevant semantic checks are listed.
7. Select the required semantic check.
8. Click **Start**. Depending on the rules to be checked, the semantic check is executed without further input or dialogs are opened and you must make settings.

The **Semantic check** is executed. Previous results are deleted from the **Result** area, the current result is listed and can be downloaded (page 801) in the selected format (page 788).

3.5.3.3 Run a semantic check for the content of a group

You can check the content of a group for semantic correctness.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the relevant database.
3. Select the database group which contains the models and/or objects you want to check.
4. Click  **Semantic checks** to open the **Semantic checks** bar. The **Semantic checks** bar displays the name of the selected database group.
5. Click in the semantic check list box. The relevant semantic checks are listed.
6. Select the required semantic check.
7. Click **Start**. Depending on the rules to be checked, the semantic check is executed without further input or dialogs are opened and you must make settings.

The **Semantic check** is executed. Previous results are deleted from the **Result** area, the current result is listed and can be downloaded (page 801) in the selected format (page 788).

3.5.3.4 Jump from objects in the Semantic checks bar to the repository

You can jump from objects listed in the **Result** area of the **Semantic checks** bar to where they are stored in the repository.

Prerequisites

You have already run a semantic check.

Procedure

1. Run a semantic check (page 452).
2. Click  **Semantic checks** to open the **Semantic checks** bar.
3. Click the name of a listed object in the **Result** area.

The object is moved to the visible area of the detail view of the repository. The object is highlighted and its check box enabled.

3.5.3.5 Download the result of a semantic check

You can download the results of semantic checks that are listed in the **Semantic checks** bar.

Prerequisites

You have already run a semantic check.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Click  **Semantic checks** to open the **Semantic checks** bar.
3. Run a semantic check (page 452) for a model.
4. Click  **Download result as a document**.

The **Save As** dialog opens and you can navigate to the folder in which you want to save the semantic checks result in the chosen format (page 788).

3.5.3.6 Open a checked model in ARIS Connect Designer

You can open a model in ARIS Connect Designer for which you ran a semantic check in the repository. This provides you with the extended functionality of the **Semantic checks** bar of ARIS Connect Designer.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Click  **Semantic checks** to open the **Semantic checks** bar.
3. Run a semantic check (page 452) for a model.
4. Click the name of a model in the **Result** area.

The model is opened and the **Semantic checks** bar contains the semantic check results. Objects with errors, warnings, and/or notes are marked in the model. You can restrict the result to errors, warnings, or notes (page 787).

3.5.3.7 Clear the result of the last semantic check

You can clear the result of the last semantic check. Therefore, you will no longer be able to download the corresponding semantic check results.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Click  **Semantic checks** to open the **Semantic checks** bar. The result of the last executed semantic check is listed.
3. Click  **Clear semantic check result**.

The entries of the semantic check results for all items are deleted.

3.5.3.8 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.3.8.1 What should you know about semantic checks?

You can use semantic checks to ensure correct modeling in ARIS. Your models are checked using the defined rules. These rules ensure that your business process models are logically structured in ARIS and are meaningful. Only models such as these can produce meaningful and correct analysis results in further work and be used to help make decisions.

ARIS provides standard semantic checks. You can use ARIS Architect to define your own checks and make them available to ARIS users.

Using ARIS Connect, semantic checks can be run for selected content (page 452) or the content of a group (page 453) in the repository or for an opened model (page 784) and its objects (page 785) in ARIS Connect Designer.

Certain semantic checks can be applied to different items, while others can only be applied to one item or item type, for example, only to models of one model type. This depends on which rules a semantic check verifies.

3.5.3.8.2 What semantic checks are available?

You can run the following semantic checks. Depending on your selection, only the semantic checks that can be applied to the selected models are available. For example, the semantic check **Validation of a BPMN model (BPMN 2.0)** is only available if you have selected models of type **BPMN 2.0**, such as **BPMN process diagram (BPMN 2.0)**.

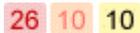
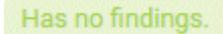
Name	Description
Allocation rules for EPC	This profile contains allocation rules for object types of EPCs.
Automation	These rules check whether the relationships and the structure of models are correct (modeling conventions) in order to enable automation. They also check whether all required items and information are available. You can start the semantic check for Value-added chain diagrams and EPCs. Optionally, you can specify the scope of the check.
BO semantic check rules	This profile contains BO semantic check rules for objects in process models, as well as BO attribute rules for cost category and cost driver diagrams.
Consistency of service allocation	This profile contains rules that check whether the business services assigned to functions match the required capabilities and whether the software services and their operations which are

Name	Description
	assigned to the business services provide at least the same capabilities as the business services.
General structure rules for all model types	This profile contains rules for checking the structure of your models.
Mandatory semantic checks	<p>This profile contains all relevant checks for models/objects. You can call it as a predefined macro.</p> <p>The macro specifies the following attributes for checked models/objects:</p> <ul style="list-style-type: none"> ▪ Time of last semantic check ▪ Semantic check successful <p>If an error is found in a model/object: Boolean = FALSE. If no error is found or the model/object cannot be checked because the rule does not apply to the model/object: Boolean = TRUE.</p>
Rules at design specification level	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Existence rules for model types of the design specification level ▪ Allocation rules for object types of the design specification level
Rules for data elements	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Rules for checking the existence of clusters, entity types, relationship types, ERM attributes, and technical terms ▪ Rules for checking the assignments of data view elements (relationship type, entity type, generalization type, etc.) ▪ Object attribute rules for objects in the data view ▪ Allocation rules for object type ERM attribute
Rules for functions	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Rules for checking the existence of functions ▪ Rules for checking assignments of functions to which a model of type Function tree, EPC, PCD, or Function allocation diagram is assigned ▪ Allocation rules for object type Function
Rules for organizational elements	<p>This profile contains the following rules:</p> <ul style="list-style-type: none"> ▪ Rules for checking the existence of Organizational units, Positions, Groups, and Persons ▪ Object attribute rules for objects in the organization view ▪ Allocation rules for object types Organizational unit, Position, Group, and Person

Name	Description
Structure rules for hierarchy models	This profile contains structure rules for hierarchy models (function trees, organizational charts, etc.).
Structure rules for models of type 'eERM'	This profile contains rules for checking the structure of eERM models.
Structure rules for process models	This profile contains rules for checking the structure of process models (EPC, Process chain diagram, etc.).
Structure rules for specific hierarchy models	This profile contains structure rules for specified hierarchy models.
Validate process schedule	This profile contains structure rules for time-based modeling.
Validation for an EPC-to-BPMN transformation	This profile contains semantic check rules for models of type EPC .
Validation of a BPMN diagram (BPMN 2.0)	Validation of a BPMN diagram (BPMN 2.0)
Validation of a service-oriented BPMN model	Validation of a service-oriented BPMN model
Validation of a service-oriented EPC	This profile contains structure rules for service-oriented EPCs.

3.5.3.8.3 What icons symbolize the semantic check results?

The results of semantic checks are also displayed graphically.

Icons	Description
	If a semantic check is executed in the  Repository without finding a rule violation, this is indicated by a green symbol.
	If a semantic check is executed in the  Repository and it finds rule violations, the number and type of rule violations are displayed. The number with a dark red background indicates the errors, the number with a light red background displays the warnings, and the number with a yellow background displays the notes.
	If a semantic check is executed using ARIS Connect Designer without finding a rule violation, this is indicated by a green symbol.
	If a semantic check is executed in ARIS Connect Designer and it finds rule violations, the number and type of rule violations are displayed. You can restrict the result view to errors, warnings, or notes.
	If you have restricted the result view in ARIS Connect Designer to errors, warnings, or notes, you can show all result entries again by clicking on Show all .

3.5.4 Lock models and objects

You can lock models and objects permanently to prevent editing by other users (page 806). You can also unlock locked items again.

Locking models and objects is useful during Release Cycle Management (RCM), for example, to perform an assessment of the required items.

The versioning (page 820) and permanent locking functions support key aspects of Release Cycle Management.

You can lock:

- objects
- models
- content of groups

3.5.4.1 Lock models

You can lock models so that they cannot be edited, for example, to perform a review. As long as the lock is enabled, only the user who applied it can edit the locked items.

Prerequisite

- The models must be closed.
- You have the **Write** access privileges for the database groups in which the model is stored.
- You have the **Lock permanently** function privilege for the database. Function privileges for databases are assigned in ARIS Architect.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the group that contains the content you want to lock. When you select the group, its contents are displayed in the detail view (page 470).
 - If you want to lock a model, move the mouse pointer to the row with the model and click  **More** >  **Lock**.
 - If you want to lock multiple models, enable the check boxes for the relevant models and click  **Lock** above the navigation bar (page 466). The lock is applied and you will be informed of the result.

You have locked models. Locked models can only be edited by you. The locked models remain locked until you unlock them again.

3.5.4.2 Lock objects

You can lock objects so that they cannot be edited, for example, to perform a review. As long as the lock is enabled, only the user who applied it can edit the locked items.

Prerequisite

- You have the **Write** access privileges for the database groups in which the objects are stored.
- You have the **Lock permanently** function privilege for the database. Function privileges for databases are assigned in ARIS Architect.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the group that contains the content you want to lock. When you select the group, its contents are displayed in the detail view (page 470).
 - If you want to lock an object, move the mouse pointer to the row with the object and click  **More** >  **Lock**.
 - If you want to lock multiple objects, enable the check boxes for the relevant objects and click the  **Lock** above the navigation bar (page 466). The lock is applied and you will be informed of the result.

Locked objects can only be edited by you. Locked objects remain locked until you unlock them again.

3.5.4.3 Unlock models

You can unlock locked models in order to release them for editing for all users with the corresponding privilege.

Prerequisite

- The models must be closed.
- You have the **Lock permanently** function privilege for the database and you have locked the selected items. Function privileges for databases are assigned in ARIS Architect.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group that contains the content you want to unlock. When you select the group, its contents are displayed in the detail view (page 470).
 - If you want to unlock a model, move the mouse pointer to the row with the model and click  **More** >  **Unlock**.
 - If you want to unlock multiple models, enable the check boxes of the relevant models and click  **Unlock** above the navigation bar (page 466). The lock is removed and you will be informed of the result.

The dialog closes and the models are unlocked.

3.5.4.4 Unlock objects

You can unlock locked objects in order to release them for editing for all users with the corresponding privilege.

Prerequisite

You have the **Lock permanently** function privilege for the database and you have locked the selected items. Function privileges for databases are assigned in ARIS Architect.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group that contains the content you want to unlock. When you select the group, its contents are displayed in the detail view (page 470).
 - If you want to unlock an object, move the mouse pointer to the row with the object and click  **More** >  **Unlock**.
 - If you want to unlock multiple objects, enable the check boxes of the relevant objects and click  **Unlock** above the navigation bar (page 466). The lock is removed and you will be informed of the result.

The dialog closes and the objects are unlocked.

3.5.4.5 What are the results of a permanent lock?

If models and/or objects are locked, they can only be edited by the user who set the lock.

The following applies to locking models:

- If users lock only the model, objects added to the model are not locked to prevent editing.
- If users lock the objects and the model, objects added to the model are immediately locked to prevent editing, as well.

3.5.5 Use variants

Variants are used to create models (page 810) and/or objects that "know" their masters by means of a variant relationship. This enables you to create models that are modeled differently or objects with different attribute assignments, which are related to one another in a variant relationship.

The master and variant can be evaluated and compared using report scripts.

3.5.5.1 Create object variants

You can create variants (page 1157) of objects.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the database group containing the objects of which you want to create variants.
3. Activate the **Objects** tab.
4. Activate the check boxes of the objects for which you want to create variants.
5. Click  **Variants** >  **Create variant**. The **Select group to save variants** dialog opens.
6. Select the group in which you want to save the variants.
7. Click **OK**.

The variants are created and saved in the selected group.

3.5.5.2 Exclude groups from variant creation

In ARIS Architect, groups can be specified whose objects are to be excluded from variant creation. If variants are created from models that contain objects in these groups, occurrences are created from these objects instead of variants.

3.5.5.3 Create model variants

You can create variants (page 1157) of models. When you create model variants, the system also creates variants of all objects contained in the selected models.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the database group containing the models of which you want to create variants.
3. Activate the **Models** tab.
4. Activate the check boxes of the models for which you want to create variants.
5. Click  **Variants** >  **Create variant**. The **Select group to save variants** dialog opens.
6. Select the group in which you want to save the variants.
7. Click **OK**.

The variants are created and saved in the selected group.

3.5.5.4 Create variants for group content

You can create variants (page 1157) of the content of one or several groups.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select one or several database groups containing the contents of which you want to create variants.
3. Click  **Variants** >  **Create variant**. The **Select group to save variants** dialog opens.
4. Select the group in which you want to save the variants. The selected group must not be a subgroup of a group you have selected for variant creation.
5. Click **OK**.

In the selected group, the variants of models and objects are stored in copies of the groups in which the master models (page 1148) and master objects (page 1148) are stored.

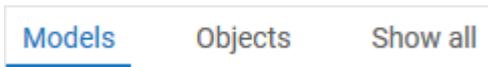
3.5.5.5 Create variant relationship

You can create variant relationships (page 1157) between existing models/objects. This makes one model/object the master (page 1148) and the others the variants (page 1157).

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the database group that contains the object or the model for which you want to create a variant relationship to another object or model.
3. Select the relevant item in the detail view (page 470). The selected item becomes the master.

Click the restrict button **Models** or **Objects** to restrict the contents displayed for models or objects.



4. Activate the check box of the object or the model for which you want to create variant relationships.
5. Click  **Variants** >  **Create variant relationship**. The **Select object(s) as variant(s)** dialog opens.
6. Navigate to the groups in which the elements to which you want to create variant relationships are stored. All objects or models of the same type as the selected one are offered for selection.
7. Select one or several elements in one or several groups.
8. Click **OK**.

The variant relationships to the selected elements are created.

3.5.5.6 Find masters and variants

You can easily find the masters and the variants of an item.

Procedure

In the portal

For process models, such as EPCs and Value-added chains, the **Overview** fact sheet displays variant relationships.

Prerequisite

The relevant database is published.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Navigate to the database group in which the relevant item is saved.
3. In the navigation bar (page 466), select the model for which you want to show the master or the variants.

The **Overview** fact sheet is displayed. If the model is a variant of another model, the section **Master** is displayed that shows the master model. If the model is the master of other models, the section **Variants** is displayed that shows its variants.

In the repository

In the repository, you can display variant relationships for models and objects.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group in which the relevant item is saved.
3. Activate the check box of the model or the object for which you want to display the variant relationships.
4. If the **Details** bar (page 472) is not open, click  **Detail** in the button bar.
5. In the **Details** bar, activate the **Variants** tab (page 472).

The master and the variants of the selected item are displayed. If you click the name of the master or of a variant, the master or variant is displayed in the group in which it is stored and its check box is activated.

You have displayed the master or the variants of the selected item.

3.5.5.7 Remove variant relationships

You can remove a variant relationship (page 1157) between models or objects.

Prerequisite

You have the **ARIS Connect Designer** license privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group in which the relevant item is saved.
3. Activate the check box of the model or object whose variant relationship you want to remove.
4. If the **Details** bar (page 472) is not open, click  **Detail** in the button bar.
5. In the **Details** bar, activate the **Variants** tab (page 472).
6. On the **Variants** tab, move the mouse pointer over the master or the relevant variant and click  **More**. The menu is displayed.
7. Click  **Remove variant relationship**. A confirmation dialog is displayed.
8. Click **Yes**.

The variant relationship is removed.

3.5.5.8 What are the special features of variants?

GROUP TREATMENT

Objects that are placed in models can be stored in various groups.

When you create variants of group contents or model variants, the group structure in which the sources are stored is duplicated in the group you select for the variants.

Variants of objects that are stored in the same group as the source models are stored in the same group as the model variant. Variants of objects stored in another group as the source models are stored in copies of the source groups.

If a target group with variants is to be created as subgroup of the source group, a message is displayed that variants cannot be created. You must select another group to save the variants.

EXCLUDED GROUPS

In ARIS Architect, groups can be specified whose objects are to be excluded from variant creation. If variants are created from models that contain objects in these groups, occurrences are created from these objects instead of variants.

3.5.5.9 What is the difference between parallel and sequential variant creation?

You can create multiple model variants at a time by selecting more than one model or selecting one or several groups (page 810) for variant creation. You can also create variants for the models individually one after the other.

If models contain the same objects, the results of the variant generation of both procedures are different.

PARALLEL VARIANT CREATION

Only one variant is created for objects that are used in more than one of the selected models. For objects that are used in more than one of the selected models, only one variant is created. This variant appears as an occurrence copy in the model variants.

SEQUENTIAL VARIANT CREATION

Each time you create a model variant, a new variant of the contained objects is created. This also applies to objects that are contained in more than one of the processed models as an occurrence copy. In this way, a new variant is created for each object, even though it exists in these models as an occurrence copy.

3.5.5.10 Compare models

You can compare models (page 815) that have variant relationships (page 1157) to other models.

3.5.5.10.1 Compare master and variant models

You can compare a master model (page 1148) to a variant model (page 1157) and vice versa. The model selected in the detail view (page 470) is the basis of the comparison. It is displayed in the modeling area (page 817) on the **Model comparison** tab. Changes in the other model that affect the selected model are displayed.

Prerequisite

The selected model has a variant relationship (page 1157).

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Select the database group that contains the model with the variant relationship to the model you want to compare.
3. Enable the check box of the relevant model in the detail view.
4. If the **Details** bar (page 472) is not open, click  **Detail** in the button bar.
5. In the **Details** bar, activate the **Variants** tab (page 472).
6. In the **Variants** tab, move the mouse pointer over the model which you want to compare. The  **More** icon is displayed beside the item name.
7. Click  **More** >  **Compare with this model**. A model comparison tab is opened. Differences found are listed in the **Model comparison** bar and displayed directly in the model.

You have compared a model with one of its variant relationships. You can change the criteria (page 819) to be compared.

3.5.5.10.2 Control the model comparison for variants

You can specify which differences are listed in the **Model comparison** bar and displayed in the model.

Prerequisite

You have performed a model comparison and activated the **Model comparison** tab (page 817).

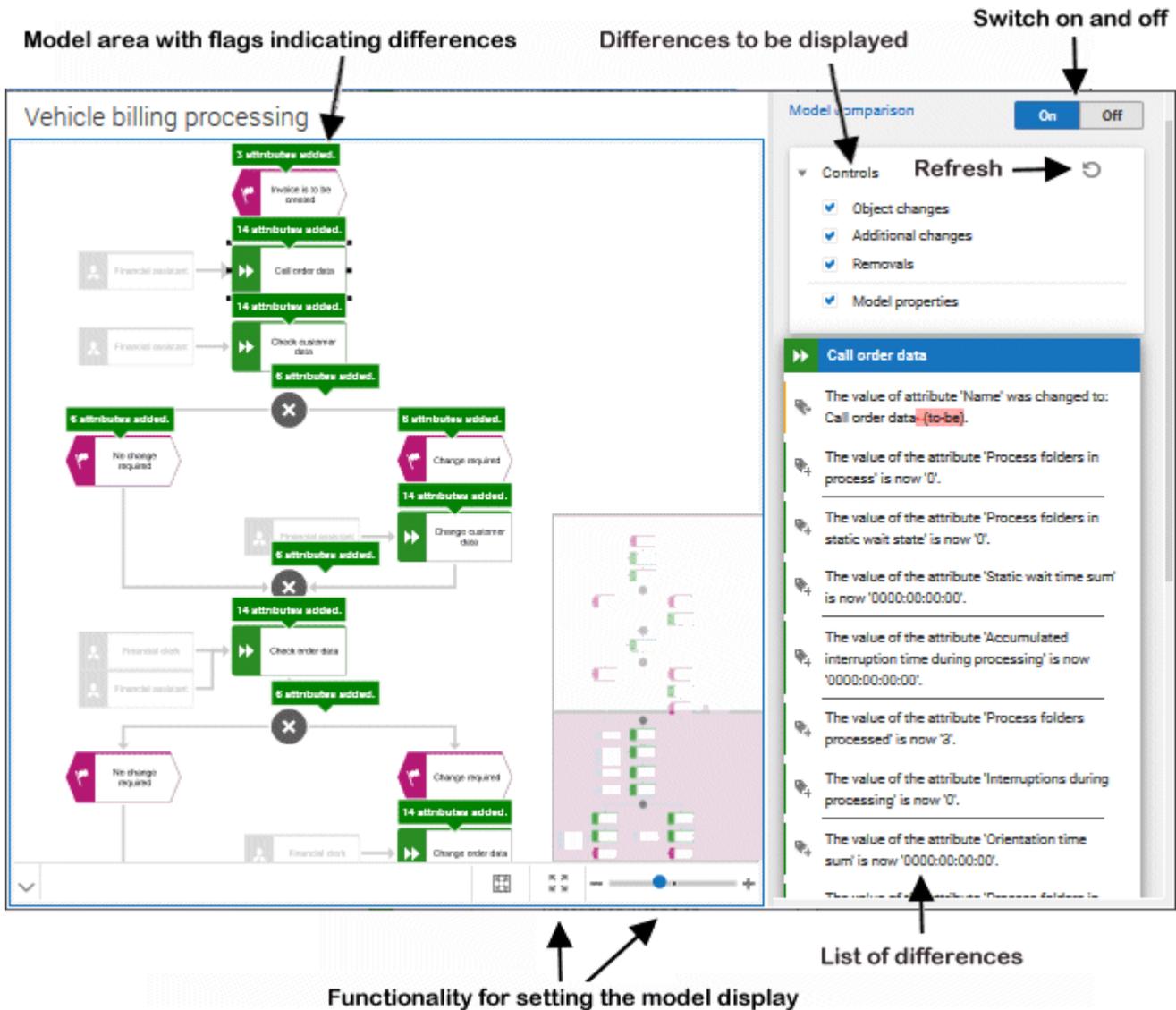
Procedure

1. Enable or disable the comparison of individual criteria (page 819) in the **Controls** area. The model display and the list of differences are updated immediately.
2. If you want to use the default setting again, click  **Restore defaults** in the **Controls** area.
3. Click the  **Controls** arrow to collapse the area to get more space for the list of differences.
4. Click a specific object in the comparison model (page 1139) to display its differences to the visible area of the list of differences.
5. Click the model background to display the differences found in the model properties.
6. Scroll to a difference in the list of differences and click the object. The object with its differences is highlighted and in the model the object is selected and moved to the visible area.

You have used the **Model comparison** tab to display specific differences.

3.5.5.10.3 How is the Model comparison tab structured?

The **Model comparison** tab consists of the modeling area and the **Model comparison** bar. You can select the differences you want to be displayed (page 819) under **Controls** in the **Model comparison** bar. Below the **Controls** area, the list of differences is displayed, which shows the differences of the item selected in the modeling area.

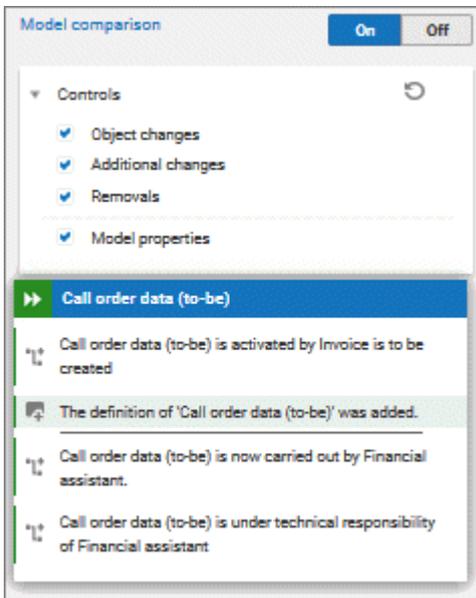


In the modeling area, the comparison model (page 1139) is displayed. Flags show the differences and give detail information. You can select the differences you want to be displayed in the **Model comparison** bar. The list of differences shows in detail how the compared models (page 815) differ.

3.5.5.10.4 How are differences highlighted in the differences list?

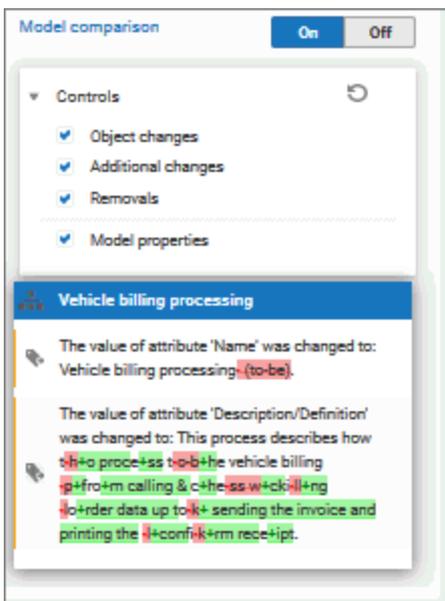
The differences displayed (page 819) in the **Model comparison** bar depend on the selected controls and the selected item.

Select the object whose differences you want to see in detail.



The differences are described.

If you click the model background, the object selection is removed and the differences in the model properties are displayed.



Differences in the text attributes are marked by plus or minus signs and highlighted in color. Added texts have a plus sign (+) as prefix and are colored green. Deleted texts have a minus sign (-) as their prefix and are colored red.

3.5.5.10.5 Which differences can be found for variants?

You can display a comparison of the following criteria (page 816) for the compared models.

OBJECT CHANGES

Displays which objects have been changed in the original model.

Examples for object changes:

- The names of objects have been changed.
- The attributes of objects have been added or deleted.

ADDITIONAL CHANGES

Displays additional differences between the original model and the comparison model.

Examples for additional changes:

- Objects have been added.
- Connections have been added.

REMOVALS

Displays items removed from the original model in the list of differences.

MODEL PROPERTIES

Displays changes of the model properties in the list of differences.

3.5.5.10.6 What kind of model comparison possibilities are there?

With an **ARIS Connect Viewer** license (page 21), you can compare model versions within a published database or between published databases. Model versions are compared in the **Diagram** fact sheet of the Portal.

With an **ARIS Connect Designer** license (page 21), you can also compare model variants (page 815), that is, the master model with the model variant, or the model variant with the master model. Model variants are compared using the **Variants** (page 472) tab of the  **Repository**.

3.5.6 Manage versions

In ARIS Connect you can version models and thus store different model states.

The different model versions can be opened for information, while the workspace model is the only one available for editing.

Within the scope of Release Cycle Management (RCM) you can identify and explain specific model versions. The change lists (page 1139) are used to continuously document the changes made to models. This means that the documentation can be used both internally and externally.

The permanent locking and versioning functions support key aspects of Release Cycle Management.

Versioning is not performed automatically when saving; it is performed when the content is suitable for versioning. "Suitable for versioning" means that a model has reached a state that is to be archived.

3.5.6.1 Version models

You can version models, for example, to use them in Release Cycle Management (RCM).

Prerequisite

- You have opened a versionable database.
- You have the **Version** access privilege.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group containing the models you want to version. When you select the group, its contents are displayed in the detail view (page 470).
3. If you want to version a model, move the mouse pointer to the row with the model and click  **More** >  **Versioning**.

If you want to version multiple models, enable the check boxes for the relevant models and click  **Versioning** above the navigation bar (page 466).

The **Enter description** dialog opens.

4. Enter a change description. This description is added to the change list (page 1139) and informs users of the changes made since the last version and why they were made.
5. Click **OK**.

The model/s is/are saved as a version (page 1157) and a change list (page 1139) including the description is created.

3.5.6.2 Show versions

You can display a list of versions (page 1157) of a model.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group containing the model whose versions you want to display. When you select the group, its contents are displayed in the detail view (page 470).
3. If the **Details** bar (page 472) is not open, click  **Detail** in the button bar.
4. Enable the check box of the relevant model.
5. Click the **Versions** tab in the **Details** bar. The versions of the selected model are listed.

All versions of the model are displayed. For each version, the change list number, version description, save date, and the user who saved the version are displayed.

3.5.6.3 Open version

You can open versions (page 1157) of a model for information purposes.

Procedure

1. Click  **Repository**. The **Models & Objects** area is opened.
2. Navigate to the database group containing the model whose versions you want to display. When you select the group, its contents are displayed in the detail view (page 470).
3. If the **Details** bar (page 472) is not open, click  **Detail** in the button bar.
4. Enable the check box of the relevant model.
5. Click the **Versions** tab in the **Details** bar. The versions of the selected model are listed.
6. Click the name of the version you want to open write-protected in ARIS Connect Designer.

The write-protected version of the model opens in a new tab and you can obtain information on the model's contents.

3.5.7 Handle documents



Models & Objects **Documents** **Dashboards & Data feeds**

In the repository, you can manage models and objects (page 444), documents, and dashboards (page 843).

This section describes how to handle documents.

ARIS document storage enables you to manage temporarily or permanently saved documents. Access restriction on folder level is possible in ARIS document storage.

3.5.7.1 Link new documents to a model or object

You can link new documents with a model or object. We strongly recommend that you check documents for malicious software before uploading.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Click **Groups** in the **Classic** view or **Processes** in the **Default** view.
2. Click the name of the model you want to edit.
3. Click  **Edit** >  **Edit model**. The model opens in ARIS Connect Designer on an individual tab (page 529).
4. Click  **Properties**. The **Properties** bar opens.
5. Activate the **Documents** tab.
6. Click in the model background to add a document to the model or the relevant object to add a document to the object.
7. Click  **Add document**. The corresponding dialog opens.
8. Navigate to the target folder.
9. Click  **Upload new document**. The **Select new document** dialog opens.
10. Click **Select file** and select a document.
11. Enter a title and, if required, specify further document properties.
12. Click **Upload**.
13. Select the relevant documents and click **OK**.

The documents are linked with the model or object.

3.5.7.2 Add existing documents to a model or object

You can link documents from ARIS document storage or a document management system with a model or object.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Navigate to a group and click a model.
3. Click **Diagram** if not enabled yet.
4. Click  **Edit** >  **Edit model**. The model opens in ARIS Connect Designer on an individual tab (page 529).
5. Click  **Properties**.
6. Activate the **Documents** tab.
7. Click in the model background or an object.
8. Click  **Add document**.
9. Click the folder containing the relevant documents.
10. Select the relevant documents and click **OK**.

The documents are linked with the model or object.

3.5.7.3 Have document, assigned to a model, approved

Ask the person in charge to approve the documents you changed so that the changed document can be made available to all users.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Open ARIS Connect and log in with your user name and password.
2. Click  **Portal** if it is not activated yet.
3. Open the model that contains the document that you want to have approved.
4. Click  **Properties**.
5. Activate the **Documents** tab.
6. Select the relevant document.
7. Click  **Request approval**. The corresponding dialog opens.
8. Click **Send**.

The person responsible receives an e-mail with the relevant information and a link to the associated task. If the person responsible approves the changes, the current version of the document is made available in ARIS Connect (status APPROVED). The document is visible in the portal on the **Documents** tab. If rejected, the document receives the status REJECTED.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.5.7.4 Share document assigned to a model

You can share documents with other users.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Open the model that contains the document you want to share.
3. Click **Diagram** if not enabled yet.
4. Click  **Edit** >  **Edit model**.
5. Click  **Properties**.
6. Activate the **Documents** tab.
7. Select the document you want to share with another user.
8. Click  **Share document**. The corresponding dialog opens.
9. Select the user you want to share the document with.
10. Enable **Send copy to me** to receive a copy of the message, if required.
11. You can also enter a subject and a comment.
12. Click **Send**.

The selected user receives an e-mail containing the information you entered and a link to the corresponding document.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.5.7.5 Remove document from a model or object

You can remove a document from a model or object.

Prerequisite

You have the **ARIS Connect Designer** license.

Procedure

1. Click  **Portal** if it is not activated yet.
2. Open the model you want to remove the document from.
3. Click **Diagram** if not enabled yet.
4. Click  **Edit** >  **Edit model**.
5. Click  **Properties**.
6. Activate the **Documents** tab.
7. Click  **Remove selected document**.

The document is removed from the model or object and no longer has any relationship to the model or object.

3.5.7.6 Have document approved in ARIS document storage

Ask the person in charge to approve the documents you changed so that the changed document can be made available to all users.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- The **Person responsible** document attribute must be specified for the relevant document with a user name that exists in user management.
- The person responsible must have the **ARIS Connect Viewer** or **ARIS Connect Designer** license.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click the document you want to have approved.
4. Click  **Request approval**. The corresponding dialog opens.
5. Enter a comment describing what you changed.
6. Click **Send**.

The person responsible receives an e-mail with the relevant information and a link to the associated task. If the person responsible approves the changes, the current version of the document is made available in ARIS Connect (status APPROVED). The document is visible in the portal on the **Documents** tab. If rejected, the document receives the status REJECTED.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.5.7.7 Share document

You can share documents with other users.

Prerequisite

- You have at least the **ARIS Connect Viewer** license privilege.
- The **Person responsible** document attribute must be specified for the relevant document with a user name that exists in user management.
- The person responsible must have the **ARIS Connect Viewer** or **ARIS Connect Designer** license.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click the document you want to share.
4. Click  **Share document**. The corresponding dialog opens.
5. Select the user you want to share the document with.
6. Enable **Send copy to me** to receive a copy of the message, if required.
7. You can also enter a subject and a comment.
8. Click **Send**.

The selected user receives an e-mail containing the information you entered and a link to the corresponding document.

This workflow is a part of ARIS Connect. It can be customized, if required. For example, you can change e-mail texts, add notifications, make changes to dialogs, etc. The integration of complex workflows (standard RCM, change management, etc.) requires the **ARIS Design Server** license or **ARIS Connect** Server extension pack: **Process Governance**.

3.5.7.8 Rename document

You can rename a document.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click  **Edit**.
6. Enter the new name in the **File name** box.
7. Click **Save**.

The name is changed.

3.5.7.9 Show links of a document

You can display the links of a document, for example, the ARIS models in which the document is used.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click  **Open properties**.
6. Click **Relations**.

The relations of the document are displayed.

3.5.7.10 Show history of a document

You can show the version history of a document. If a document is changed and uploaded again, a version history is created automatically.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click the relevant document. The **Document details** page opens.
4. Click **History**.

The history of the document is displayed. All changes to the document such as changes to metadata, locking, unlocking, and the uploading of a new version are displayed.

3.5.7.11 Find a document

You can begin the search for items directly on the start page of ARIS Connect.

Procedure

1. Click in the **Search** box.



2. Enter the relevant term.
A list with the first results (page 1131) will be shown as you enter the term. As you complete the term, the list will be updated.
3. In the list, click the entry to which you want to navigate.
4. Select **Open with** in your browser.

The document opens if the software required for opening the document is available on your local system.

3.5.7.12 Find document using the extended search

You can use the extended search to find items in ARIS document storage.

Procedure

1. In the **Search** area (page 1122), click the context field and select **Documents**.
2. Enter the relevant term.
3. A list with the first results (page 1131) will be shown as you enter the term. As you complete the term, the list will be updated.
4. Click one or more filter criteria. The selected filter criteria will be listed and the search result updated. If you have selected a filter criterion that you can define more precisely, another area with subordinate filter criteria will be added to the **Filters** area.
5. Click additional criteria. The selected criteria will be displayed in the Search area and restrict the search result.
 - d. Selected filter criteria are listed.
 - e. You will be offered different input options depending on the property type. A calendar opens so you can select a date:

The screenshot shows a search filter configuration window. At the top, it displays 'Property Created on' followed by a dropdown menu set to 'Less than or equal to' and a text input field containing '2019 Jan 14'. Below this, a calendar widget is open, showing the month of January 2019. The calendar grid has the date '14' highlighted. At the bottom of the calendar, there are two buttons: 'OK' and 'Cancel'.

6. Select whether **Selected filter criteria are listed** or **One of the following criteria met** should be used.
7. To clear a selected filter criterion, click **✕ Clear** in the line of the relevant filter criterion. The filter criterion will be cleared and the search result updated.
8. In the list, click the entry to which you want to navigate.
9. To see more search criteria, click **Show more** in the **⌵ Filters** area. The list will be extended.
10. To clear all filter criteria for an area, click **Clear subordinate filters**.

11. To clear all filters and base your search on other search criteria, click **Show all** in the **Filters** area. All previously selected search criteria will be cleared.

The list of results will be updated according to the search context and the selected criteria.

3.5.7.13 Handle document versions

3.5.7.13.1 Upload version of a document

If you have edited a document after downloading it and want to update this version in ARIS document storage, you can upload the new version in your ARIS document storage. We strongly recommend that you check documents for malicious software before uploading.

Prerequisite

- You have the **Document administrator** function privilege.
- The document has the same name and document type as the first uploaded version of this document.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click  **Upload new version of this document** in the document row.

<input type="checkbox"/>	Name	File type	Status	
<input type="checkbox"/>	 Customer acquisition.gif Last change: 28.02.2019, 16:03:00 by system	Graphics interchange format	New	    
<input type="checkbox"/>	 Customer acquisition.pdf Last change: 28.02.2019, 16:03:36 by system	Portable document format	New	

The dialog for uploading a document opens.

5. Enter the relevant optional additional information and click **OK**.

You have updated an existing document in ARIS document storage. This works for Microsoft® SharePoint 2013 as well.

3.5.7.13.2 Sort versions of a document

You can sort versions of a document.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click a document.
5. Click **Versions**.
6. Click a column title.

The document versions are sorted.

You can reverse the sort order by clicking the column title again.

3.5.7.13.3 Show version history

You can show the version history of a document. If a document is changed and uploaded again, a version history is created automatically.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click **Versions**.

The different versions of the document are displayed. The change description is in the **Comment** column.

3.5.7.13.4 Show version of a document

You can show the version history of a document. If a document is changed and uploaded again, a version history is created automatically.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click the relevant document. The **Document details** page opens.
4. Click **Versions**.
5. In the row of the relevant version, click  **Open version**.
6. Select **Open with** in your browser.

The document opens if the software required for opening the document is available on your local system.

3.5.7.13.5 Delete version of a document

If a document is changed and uploaded again, a version history is created automatically. You can delete all versions of a document except for the last.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click **Versions**.
6. In the row of the relevant version, click  **Delete**.
7. Click **Delete version**.
8. A confirmation prompt is displayed. Click **OK**.

You have deleted this version of the document from ARIS document storage.

3.5.7.14 Handle document with Document administrator privilege

3.5.7.14.1 Add document to ARIS document storage

You can manage documents in your ARIS document storage. You can add documents to your ARIS document storage. We strongly recommend that you check documents for malicious software before uploading.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click  **Upload**. The **Upload document** dialog opens.
5. Enter the relevant optional additional information and click **OK**.

You have added a document to ARIS document storage.

Administrators can import all documents in a directory to ARIS document storage.

3.5.7.14.2 Open/Download document

You can download and open documents from ARIS document storage. If a document is highlighted as locked, only the person who locked the document can open it and upload a new version. We strongly recommend that you check documents for malicious software before you open them.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.

Click  **Download** in the document row.

<input type="checkbox"/>	Name	File type	Status	
<input type="checkbox"/>	 Customer acquisition.gif Last change: 28.02.2019, 16:03:00 by system	Graphics interchange format	New	    
<input type="checkbox"/>	 Customer acquisition.pdf Last change: 28.02.2019, 16:03:36 by system	Portable document format	New	

4. Select **Open with** in your browser.

The document opens if the software required for opening the document is available on your local system.

3.5.7.14.3 Download multiple documents

You can download multiple documents. We strongly recommend that you check documents for malicious software before you open them.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Enable the check boxes in front of the relevant documents.
5. Click  **Download selected documents**.

The selected documents are packed in a ZIP archive and then downloaded.

Tip

Enable the check box in front of the **Name** column to select all documents in a directory at once.

3.5.7.14.4 Select document owner or responsible

You can edit the properties of a document.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click  **Open properties**.
6. Next to the **Owner** box, click  **Edit**.

The **Select owner** dialog opens. Start typing a user name. User names which contain the string you type are displayed. Select a user and click **OK**.

You can select the person responsible for the document.

3.5.7.14.5 Move document

You can move a document to another folder.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click  **Move to another folder** in the **Actions** bar of the relevant document. The **Move document** dialog opens.
5. Select the relevant folder, and click **OK**.

You have moved the document to another folder.

3.5.7.14.6 Move multiple documents

You can move documents to another folder.

Prerequisite

- You have the **Document administrator** function privilege.
- You have access to ARIS document storage and/or the relevant third-party document management system.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Enable the check boxes in front of the relevant documents.
5. Click  **Move to another folder**. The **Move document** dialog opens.
6. Select the relevant folder, and click **OK**.

You have moved the documents to another folder.

Tip

Enable the check box in front of the **Name** column to select all documents in a directory at once.

3.5.7.14.7 Browse ARIS document storage

You can search for a document.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Depending on your installation, you can also click  **Attributes** to refine your search so that you restrict the search to metadata, to contents, or to metadata and contents. You can also specify that the term is to be searched only in the current version.
4. Enter the search term.

Possible hits are displayed as soon as you enter the first few letters.

3.5.7.14.8 Lock document

You can lock documents that are in your ARIS document storage to prevent them from being edited by other users.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click  **Lock document**.

The document is locked to prevent it from being edited by other users. Only you or administrators can unlock the document.

3.5.7.14.9 Unlock document

You can unlock documents that are locked and thus make them available to other users for editing.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the relevant document. The **Document details** page opens.
5. Click  **Unlock document**.

The document can be edited by other users.

3.5.7.14.10 Delete document from ARIS document storage

You can remove documents from ARIS document storage.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Click the arrow to navigate in the structure, and select the folder containing the relevant document.
5. Click  **Delete** in the **Actions** bar of the relevant document. A confirmation prompt is displayed.
6. Click **OK**.

The document is no longer displayed within ARIS document storage.

Tip

Enable the check box in front of the **Name** column to select all documents in a directory at once.

3.5.7.14.11 Delete multiple documents from ARIS document storage

You can remove multiple documents from ARIS document storage in one operation.

Prerequisite

You have the **Document administrator** function privilege.

Procedure

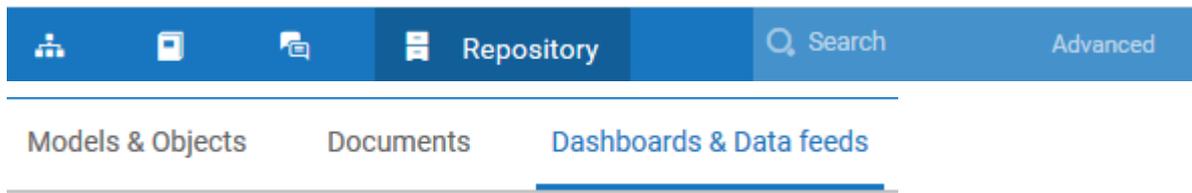
1. Click  **Repository**.
2. Click **Documents**.
3. Click a folder in the navigation.
4. Select the check boxes of the documents you want to delete.
5. In the top right screen, click  **Delete selected documents**. A confirmation prompt is displayed.
6. Click **OK**.

The selected documents are no longer displayed within ARIS document storage.

Tip

Enable the check box in front of the **Name** column to select all documents in a directory at once.

3.5.8 Use dashboards and data feed



In the repository, you can manage models and objects (page 444), documents (page 822), and dashboards.

This section describes how to use dashboards based on data feeds.

If you have an ARIS Aware license, you can use predefined dashboards that are supplied with the software, or create your own dashboards.

Dashboards visualize database internal and database external information. Information can be runtime information, performance data, and analysis data, for example. Dashboard administrators (page 998) can create (page 843) individual dashboards.

3.5.8.1 Manage dashboards

If you have **Dashboard administrator** function privileges, you can manage dashboards and data feeds.

3.5.8.1.1 Create a dashboard

ARIS Connect allows you to create your own dashboards (page 996).

By default, dashboards and the relevant data feeds are provided in the  Repository of ARIS Connect.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Dashboards**.
5. Click  **New**.
The dashboard editor is opened in edit mode.
6. Configure and save your dashboard using the dashboard editor (page 867).

7. Click  **Refresh**.

Your dashboard is created and available in the **Dashboards** list in the  Repository of ARIS Connect.

3.5.8.1.2 Open a dashboard

You can open an existing dashboard from the  Repository of ARIS Connect. The dashboard is displayed in view mode provided by the dashboard editor.

Prerequisite

- You have the **View** permission for the dashboard. See Manage dashboard permissions (page 873) for details.
- You have the **View** permission for the assigned data feeds. See Manage data feed permissions (page 992) for details.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Dashboards**.
5. To open a dashboard, click the relevant dashboard name.

The selected dashboard opens in view mode of the dashboard editor.

In edit mode, you can edit the dashboard (page 867) currently opened, provided you have the **Dashboard administrator** function privilege. Click  **Edit dashboard** in the main menu.

3.5.8.1.3 Delete a dashboard

You can delete an existing dashboard from the  Repository of ARIS Connect.

Warning

Deleted dashboards cannot be restored.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Dashboards**.
5. To delete a dashboard, move the mouse pointer over a dashboard in the dashboard list and click the  **Delete** icon in the corresponding row.
6. To delete one or more dashboards, select the dashboards you want to delete and click the  **Delete** icon on the toolbar.
7. Click **Yes** to confirm the deletion.

The selected dashboards are deleted.

3.5.8.1.4 Specify dashboard privileges

You can specify dashboard view privileges in the  Repository of ARIS Connect. You can assign view privileges to individual users or to user groups. If you assign privileges to a user group, the privileges are automatically assigned to all members of that group.

All users and user groups with the **View** privilege for the dashboard are listed in the **Associated users/user groups** box. Initially, only the creator of the dashboard has the **View** privilege for the dashboard. All not yet assigned users and user groups are listed in the **Available users/users groups** box.

All users and user groups with the **View** privilege for the dashboard has automatically the **View** privilege for all associated assets of the dashboard, such as data feeds and aliases.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Dashboards**.
5. To specify dashboard privileges, move the mouse pointer over a dashboard in the dashboard list and click the  **Specify privileges** icon in the corresponding row.
6. Enter a term in the  filter box to filter the list of available users and user groups.
7. In the **Available users/users groups** box, select the users and user groups you want to assign to the dashboard and click **Add**.
8. Click **Add all** to assign all available users and user groups to the dashboard.
9. In the **Associated users/user groups** box, select the users and user groups from whom you want to revoke the **View** privilege and click **Remove**.
10. Click **Remove all** to revoke the **View** privilege of all users and user groups.
11. Click **OK**.

The selected users and user groups have now the **View** privileges for the dashboard and the associated assets.

3.5.8.1.5 Import dashboards

You can import one or multiple dashboards into the  Repository of ARIS Connect.

Prerequisite

- You have the **Dashboard administrator** function privilege.
- You have the ARIS Connect Viewer license privilege with ARIS Aware enabled or the ARIS Connect Designer license with ARIS Aware enabled.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Dashboards**.
5. To import dashboards, click the  **Import** button.
6. Select the dashboard file to be imported. The file is in **ZIP** format and can contain one or more dashboards. The file also includes the dashboard privileges.
7. If the dashboard(s) available in the repository should be replaced, activate the **Overwrite if already exists** option.
8. If the dashboard permissions contained in the dashboard file should also be imported, activate the **Import privileges** option. This option is activated by default.
9. Click **Import**.

The selected dashboard file is imported and the new dashboards are listed on the **Dashboards** tab of the repository.

3.5.8.1.6 Export dashboards

You can export one or all dashboards available in the  Repository of ARIS Connect.

Prerequisite

- You have the **Dashboard administrator** function privilege.
- You have the ARIS Connect Viewer license privilege with ARIS Aware enabled or the ARIS Connect Designer license with ARIS Aware enabled.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Dashboards**.
5. To export a specific dashboard, click the  **Export** button of the relevant dashboard.
6. To export all dashboards, click the  **Export all** button in the main menu.

The dashboards are exported and downloaded directly to the browser as a single ZIP file.

3.5.8.2 Manage data feeds

If you have **Dashboard administrator** function privileges, you can manage dashboards and data feeds.

3.5.8.2.1 Create a data feed

ARIS Connect allows you to create your own data feeds (page 996).

By default, the available dashboards and the relevant data feeds are provided in the  Repository of ARIS Connect.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Data feeds**.
5. Click  **New**.
The data feed editor is opened.
6. Configure and save your data feeds using the data feed editor (page 986).
7. Click  **Refresh**.

Your data feed is created and available in the **Data feeds** list in the  Repository of ARIS Connect.

3.5.8.2.2 Open a data feed

You can open an available data feed in the  Repository of ARIS Connect. The data feed is opened in the data feed editor.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Data feeds**.
5. To open a data feed, click the relevant data feed name.

The selected data feed opens in the data feed editor.

You can edit the data feed currently open using the data feed editor (page 986), provided you have the **Dashboard administrator** function privilege.

3.5.8.2.3 Delete a data feed

You can delete an available data feed in the  Repository of ARIS Connect.

Warning

Deleted data feeds cannot be restored.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Data feeds**.
5. To delete a data feed, move the mouse pointer over a data feed in the data feed list and click the  **Delete** icon in the corresponding row.
6. To delete one or more data feeds, select the data feeds you want to delete and click the  **Delete** icon on the toolbar.
7. Click **Yes** to confirm the deletion.

The selected data feeds are deleted.

3.5.8.2.4 Specify data feed privileges

You can specify data feed view privileges in the  Repository of ARIS Connect. You can assign view privileges to individual users or to user groups. If you assign privileges to a user group, the privileges are automatically assigned to all members of that group.

All users and user groups with the **View** privilege for the data feed are listed in the **Associated users/user groups** box. Initially, only the creator of the data feed has the **View** privilege for the dashboard. All not yet assigned users and user groups are listed in the **Available users/users groups** box.

All users and user groups with the **View** privilege for the data feed has automatically the **View** privilege for all associated assets of the data feed, such as other data feeds and aliases.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Data feeds**.
5. To specify data feed privileges, move the mouse pointer over a data feed in the data feed list and click the  **Specify privileges** icon in the corresponding row.
6. Enter a term in the  filter box to filter the list of available users and user groups.
7. In the **Available users/users groups** box, select the users and user groups you want to assign to the data feed and click **Add**.
8. Click **Add all** to assign all available users and user groups to the data feed.
9. In the **Associated users/user groups** box, select the users and user groups from whom you want to revoke the **View** privilege and click **Remove**.
10. Click **Remove all** to revoke the **View** privilege of all users and user groups.
11. Click **OK**.

The selected users and user groups have now the **View** privileges for the data feed and the associated assets.

3.5.8.2.5 Import data feeds

You can import one or multiple data feeds into the  Repository of ARIS Connect.

Prerequisite

- You have the **Dashboard administrator** function privilege.
- You have the ARIS Connect Viewer license privilege with ARIS Aware enabled or the ARIS Connect Designer license with ARIS Aware enabled.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Data feeds**.
5. To import data feeds, click the  **Import** button.
6. Select the data feeds file to be imported. The file is in ZIP format and can contain one or more data feeds. The file also includes the data feed permissions.
7. If the data feeds available in the repository should be replaced, enable the **Overwrite if already exists** option. Activated by default.
8. If the data feed permissions contained in the data feed file should also be imported, enable the **Import permissions** option. Activated by default.
9. Click **Import**.

The selected data feed file is imported and the new data feeds are listed on the **Data feeds** tab of the repository.

3.5.8.2.6 Export data feeds

You can export a data feed available in the  Repository of ARIS Connect.

Prerequisite

- You have the **Dashboard administrator** function privilege.
- You have the ARIS Connect Viewer license privilege with ARIS Aware enabled or the ARIS Connect Designer license with ARIS Aware enabled.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Dashboards & Data feeds** tab.
4. Click  **Data feeds**.
5. To export a specific data feed, click the  **Export** button of the relevant data feed.
6. To export all data feeds, click the  **Export all** button in the main menu.

The data feeds are exported and downloaded directly to the browser as a single ZIP file.

3.5.8.3 Use the dashboard editor

You can use the graphical user interface of the dashboard editor to easily create, manage, and view dashboards. The dashboard editor offers edit mode and view mode. In edit mode, you can create, edit and manage your dashboards. The view mode allows you to view and use your dashboards interactively.

To open the dashboard editor, the **Dashboard Designer** role is required. The **Dashboard Designer** role can be assigned to users in the user administration group.

To display a dashboard in view mode, the **View** permission is required. To edit a dashboard in dashboard editor, the edit permission is required. For details, see Manage dashboard permissions (page 873).

3.5.8.3.1 Use dashboards in view mode

You can display and use your dashboards interactively in view mode.

To use a dashboard in view mode, you need the **View** permission for the dashboard. See Manage dashboard permissions (page 873) for details.

3.5.8.3.1.1 Open a dashboard in view mode

You can switch from edit mode to view mode in the dashboard editor. Your currently opened dashboards are displayed with real data in view mode.

Prerequisite

You have the required access privileges for the dashboard (page 873).

Procedure

1. Create (page 866) or open (page 866) a dashboard in edit mode in the dashboard editor.
2. Click  **View dashboard** in the dashboard editor main menu.

The dashboard is displayed with real data in view mode.

To switch from view mode to edit mode, click  **Edit dashboard** in the main menu.

3.5.8.3.1.2 Use interactive filters in dashboards

You can use interactive filters for charts and tables if the relevant filter conditions have been defined for these widgets. You can set a filter by clicking a data element of a widget, for example, a data point in a line chart. The selected data element of this widget takes effect as a filter for all associated widgets.

MULTIPLE SELECTION

Some widgets allow you to select multiple values at the same time to filter other widgets. You can select, for example, multiple rows in a table or multiple data points in a chart. Multiple selection is available if the corresponding **Multiple selection** option is enabled for a widget. The widgets providing the **Multiple selection** option are Column chart (page 1007), Bar chart (page 1002), Pie chart (page 1033), Grid (page 1017), and List (page 1029). The widget to be filtered must also support multiple selection. For details, see the chapter Define filters for widgets (page 946).

DISTRIBUTION CHARTS

In distribution charts, you can select multiple values using a selection frame by default. If you select a range of values using a selection frame, the upper end of the range is not included in the selection for filtering. For example, if you select a range from 10 to 20 and the step width is 1, the affected widget is filtered with the values 10 to 19.

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click a data element of a widget, for example, a coordinate of a line chart or a cell in a table.

The selected data element is applied as a filter to all associated widgets.

3. In distribution charts, you can use a selection frame to select multiple columns.
 - a. Click a column and drag the mouse to the left or right.
 - b. A selection frame is displayed.
 - c. Release the mouse pointer.

The selected columns are highlighted.

4. Click the  **Menu** icon > **Clear selection** to clear your filter settings. In charts, you can also click in the background of a widget to cancel the selection of your filter. The menu is available if the **Show menu** option is enabled for the widget.

The widgets are displayed with the filters selected.

You can define filters for specific widgets. See the chapter Define filters for widgets (page 946).

3.5.8.3.1.3 Use the filter panel of Process Mining context-based widgets

You can display and configure the filter panel in dashboard edit and view mode.

Using the filter panel, you can filter widgets of a dashboard whose data are based on a Process Mining context. The filter panel replaces the standard filter method used for non-context-based widgets (page 853). The filter provides all text-based and filterable numeric data columns that are not yet assigned to any other context-based widget.

- Text-based filter criteria are displayed as a list.
- Numeric filter criteria are provided as a slider in the filter panel. The basic settings are automatically preconfigured, these are range, initial selection, step width, and numeric format. You can manually adjust the minimum and maximum values of the slider widget. See **Slider (page 1039)** widget for details.

Prerequisites

The filter panel is enabled (page 888).

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click the << icon to show the filter panel on the right-hand side of the dashboard.
The panel is hidden by default and no filter columns are specified.
3. To hide the filter panel, click the >> icon.
4. If no filter is specified, add filter criteria to the filter panel.
 - a. Click the  **Add filter** icon to add an initial filter.
 - b. Click the  **Filter settings** icon to display filter options.
 - c. Enter a term in the  **Search** box to filter the column list.
The list includes all data columns of text type that have not been assigned as filter columns to the Process Mining context-based widgets. See Assign data columns to Process Mining context-based widgets (page 885).
 - d. Enable the **Selected** option to display only the data columns that have already been selected.
 - e. Select the data columns you want to use as filter criteria.
 - f. Click **OK**.
Your settings are applied. An appropriate filter criterion is added to the filter panel for each selected data column.
5. Specify further filter criteria to be used in the panel.
 - a. Click **Edit filter panel**.
 - b. Click the  **Filter settings** icon to display filter options.
 - c. Enter a term in the  **Search** box to filter the values of a filter criterion.

- d. Enable the **Selected** option to display only the filter values that have already been selected.
 - e. Select the data columns you want to use as filter criteria.
 - f. You can use the filter criteria configured for context-based widgets (page 886) in the filter panel. As long as such a filter criterion is enabled in the filter panel, the filter criterion is no longer available in the widget. These filter criteria are hidden by default.
 6. Enable the option **Show configured context filters from dashboard widgets**. The filter criteria are displayed and marked in bold.
 7. Select the context filter criteria that you want to use in the filter panel.
 - g. Click **OK**.
Your settings are applied. An appropriate filter criterion is added to the filter panel for each selected data column.
6. Click the name of a text-based filter criterion to sort the values of the criterion.
 7. Select the individual values of the text-based criteria by which you want to filter the widgets.
 8. Adjust the slider using the mouse pointer to select the numeric filter values. You can adjust the minimum and maximum values and you can move the entire selected data range with the mouse pointer.

The filter panel is configured and the filter values for the widgets are specified. The values of all widgets are filtered according to your filter settings.

3.5.8.3.1.4 Refresh data of widgets

You can manually refresh the data currently displayed in a widget.

The data is extracted from the cache or recalculated if the refresh rate of the data source has expired. The default refresh rate value is 12 h. You can set the **Refresh rate** in the Assign data (page 891) dialog.

The use of the manual **Refresh** option is independent of the **Auto Refresh** function.

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click a widget.
3. Click the  **Menu** icon > **Refresh**.

The widgets are displayed with the refreshed data.

Most of the widgets provide the **Auto refresh** option. Use this option to enable automatic data retrieval for a widget. The source data is reimported and recalculated automatically based on the refresh rate set. The **Auto refresh** option is available on the **Config** tab in the widget properties. To display the properties dialog in dashboard edit mode () , click an inserted widget.

3.5.8.3.1.5 Pause automatic data refreshing

You can pause the automatic refreshing of widget data.

The data is automatically extracted from the cache or recalculated if the refresh rate of the data source has expired. The default refresh rate value is 12 h. You can set the **Refresh rate** in the Assign data (page 891) dialog.

Procedure

1. Display a dashboard in dashboard view mode. (page 852)
2. Click a widget.
3. Click the  **Menu** icon > **Pause** to pause the automatic data update.
4. Click the  **Menu** icon > **Resume** to restart the automatic data update.

The automatic refreshing of widget data is paused.

Most of the widgets provide the **Auto refresh** option. Use this option to enable automatic data retrieval for a widget. The source data is reimported and recalculated automatically based on the refresh rate set. The **Auto refresh** option is available on the **Config** tab in the widget properties. To display the properties dialog in dashboard edit mode () , click an inserted widget.

3.5.8.3.1.6 Change column width and sort order

In dashboard view mode, you can change the initial table column width and sort order of a **Grid** widget.

Procedure

1. Open a dashboard in view mode. (page 852)
2. Click a table column header of an inserted **Grid** widget.

The first click changes the sort order to 'ascending', the second click to 'descending', and the third click to 'unsorted' if this was the initial state.

You can sort several columns simultaneously. To select more than one column, press the **Shift** key and click the required column headings. The rows are sorted by the first column header.

3. To change the width of a column, drag the boundary on the right side of the column header accordingly using the mouse.

Your settings are applied.

3.5.8.3.1.7 Save widget data as a CSV file

You can save the current data visualized in a widget as a CSV file.

The aggregation and the value rounding are taken from the column configuration set in the data assignment (page 891) (Assign data 2/2 dialog). The sorting is taken from the data feed result based on the feed definition.

Note that when exporting data from a widget, the export may fail if the stream size is too large. In this case, you can increase the **maxPostSize** value of the HTTP Connector of your **Tomcat** installation. If not already specified, you can set this attribute to 2097152 (2 megabytes). You can set this value in the **server.xml** file.

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click a widget.
3. Click the  **Menu** icon.
The menu is available if the **Widget menu** option is enabled for the widget.
4. Click **Save as CSV**.
5. Make your settings if required.
 - a. Select a separator character from the **Separator** drop-down menu. The default separator is ,.
 - b. Select a masking character from the **Masking** drop-down menu. The default masking is ".
 - c. Select an encoding type from the **Encoding** drop-down menu. The default encoding is **UTF-8**.
 - d. Enable the **Define formatting** option to change the default data format. You can select a data format for each column in the corresponding drop-down menu.
The data are saved in the default data format or in the format set in data assignment (page 891) (Assign data 2/2 dialog).
 - e. Click **OK**.

Depending on which Web browser you are using, you can select an application that you want to open to view the data, or you can save the data directly as a CSV file.

The widget data is saved as a CSV file.

Note that CSV files can pose a security risk when they are opened in MS Excel. Certain characters in the CSV file can be used for unwanted code execution.

Enclose all values beginning with =, +, -, or @ in single quotation mark before exporting as CSV file. For details, refer to <https://www.contextis.com//resources/blog/comma-separated-vulnerabilities/>.

3.5.8.3.1.8 Use multiple selection in lists and tables

You can use the multiple selection of values to filter values of other widgets (page 853).

In lists and tables, you can select individual or multiple values using your mouse and keyboard. A list also provides check boxes to select multiple values if the **Multiple selection** option is enabled. For details, see the option list of the List (page 1029) and Grid (page 1017) widgets.

Procedure

1. Open a dashboard in view mode. (page 852)
2. Click a row in a list or table to select the value contained in it.
3. To select multiple values, click a row, press the **Shift** key and click another row.
All other rows between the selected rows are now also selected.
4. Alternatively, hold down the **Ctrl** key and click individual rows in the list or table to select multiple values.
5. To select all values in a list, click the check box in the column header. Click the check box again to clear all list values.
6. To sort a list or table, click the name in the header of a column.
The first click changes the sort order to ascending, the second click to descending, and the third click to unsorted, if this was the initial state.
7. You can filter the list values.
 - a. Click the  **Search** icon in the list header.
 - b. Enter your filter term in the **Search** box.
 - c. Click **Selected** to show only the selected values in the filtered list.

Your settings are applied.

Multiple selection is also available in the widgets Column chart (page 1007), Bar chart (page 1002), and Pie chart (page 1033).

3.5.8.3.1.9 Set the step width of a distribution chart

You can change the preset step width of a distribution chart.

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click a **Distribution chart** widget.
3. Click the  **Menu** icon.
The menu is available if the **Widget menu** option is enabled for the widget.
4. Click **Set step width**.
5. Specify the step width for the distributed measure in the **Step width** input box.
6. Click **OK**.

Your settings are applied.

3.5.8.3.1.10 Create a process model on basis of process variants

In the Process Variants (page 1035) widget, you can select one or more process variants and create a process model of type **EPC** or **BPMN**. The created model is then available for further processing in ARIS Connect.

Uncategorized process variants ("v0" for combined step width and "v0-0" for precise step width) cannot be exported.

Prerequisites

The dashboard is based on a Process Mining context (page 881).

The dashboard contains a Process Variants (page 1035) widget.

You have the **ARIS data transfer** function privilege in PPM.

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click a **Process Variants** widget.
3. Select one or more variants.
4. Click the  **Menu** icon.
The menu is available if the **Show menu** option is enabled for the widget.
5. Click **Create ARIS model**.
6. Enter a model name.
7. Select a model type.
8. To specify the data base and group in which you want to save the created ARIS model, click **Change** and make your settings.

The process model is created on basis of the selected variants and is located in the specified group.

You can open and edit the model as usual in ARIS Connect.

3.5.8.3.1.11 Use the Function Flow diagram

In dashboard view mode, you can use the **Function Flow** diagram interactively.

In view mode, you can

- select individual functions and connections, for example, for filtering other widgets. Selected elements are highlighted. To select a connection, you can click it or its value. Unlike the functions, the special start and end nodes and the corresponding connections are not selectable. Functions and connections are only selectable if you have selected the **Change selection interaction** mode in the  **Settings** menu. To deselect a function or a connection, select the function or connection again or select another one.
- select multiple functions in the diagram if multiple selection mode is enabled. The option is enabled by default. You can select one function after the other in the diagram, and the corresponding filters are added and applied to the widgets. When multiple selection is enabled, the filtering of connections is disabled. Edges in the **Function Flow** diagram cannot be selected, and no edge filters can be set from outside the **Function Flow** widget. To disable your selection, click the  **Settings** icon > **Clear Selection**, or click the  **Menu icon** > **Clear Selection**, if enabled. The menu is disabled by default for the **Function Flow** widget.
- display connection values. If connection values are displayed, hovering over connections shows a tooltip which contains the column name of the shown connection value together with the corresponding value for this connection. Click the  **Settings** icon and select a measure from the **Values shown at connections** drop-down menu. The drop-down menu is provided if you have set at least one additional connection value in the **Assign data (2/2)** dialog. See Assign data sources.
- display function labels and function measures. Function name and measure value are displayed within the function. Move the mouse pointer over the function to display a tooltip containing the function name and value. If function measures are defined but there are no values available for a specific function, no value is shown.
- select the function measure whose values are to be displayed in the function. Click the  **Settings** icon and select a measure from the **Values shown at functions** drop-down menu. If only one measure is specified in the data assignment, no selection box is available, and the corresponding values are displayed automatically. If thresholds are configured, the function symbols are marked with colors that represent the state in which the corresponding measure value is currently located.
- move the entire diagram or the individual function using drag and drop. To move the complete diagram, click on an empty space within the widget and hold down the mouse button. Now the graph can be moved until you release the mouse button. The functions can be moved by dragging them to a new location. If a function has been moved, the alignment of the connection and the position of the label on the connection are automatically adjusted. The lines are drawn straight instead of the previous curved lines. If you want to move individual functions, you must select the **Adjust layout interaction** mode in the  **Settings** menu.

- resize the diagram using the mouse wheel. The diagram can be zoomed in or out related to the mouse pointer position.
- enable the magnifier. Click the  **Settings** icon and select **Enable magnifier**. The magnifier is enabled by default. The magnifier enlarges the diagram elements on mouse over.
- display the relevance slider. Click the  **Settings** icon and select **Show slider**. The relevance slider is enabled by default. If you deactivate the **Show slider** option, the slider is hidden and only the plus and minus buttons are displayed. The slider is also hidden if there is not enough space in the widget. The relevance slider is disabled in a Function flow diagram that contains only a single function.
 - The relevance slider filters the connections in the graph based on the relevance value assigned to the connections. See Assign data sources. The top and the bottom values are based on the configured sorting of the relevance column. The top value is set to 100% and the bottom value only shows the connections with the smallest value, depending on the sorting.
 - Move the mouse pointer over the plus and minus button or over the slider to display a tooltip with information about the filtered connection values.
 - The relevance slider is not supported if the widget is used as global, that is, used on more than one tab.
 - If selected objects disappear when you use the slider, the selection is retained, and an info icon is displayed indicating that selected objects are hidden. This does not apply to single functions in the diagram. Single functions are always displayed.
- reset the layout. Click the  **Settings** icon and select **Reset layout**. A layout reset does not affect the selection of objects (single or multi selection), independent of whether they are visible or hidden.
- reset the zoom factor. Click the  **Settings** icon and select **Reset zoom**.
- select the type of interaction of the function symbols when they are selected. Click the  **Settings** icon and select the interaction type in the **Node interaction** drop-down menu. The default is **Change selection**.

Note that the diagram layout has changed with version 10.4. If a widget from an older version is opened, the layout is retained if possible. A new layout is generated if new nodes are added to the data, or if you reset the layout manually.

By default, the diagram layout is recreated when new nodes or connections are added to the data (for example, by changing filters), or when the layout is reset manually. If no nodes are moved in Edit mode, the layout is always reset when the dashboard is opened. After that, the nodes remain in place as long as the dashboard is open. If nodes were moved in Edit mode, the diagram layout is saved, and the changed layout is restored, if possible, when the dashboard is opened again.

3.5.8.3.1.11.1 Create a process model on basis of a function flow diagram

In the Function flow (page 1015) widget, you can create a process model of type **EPC** or **BPMN**. The created model is then available for further processing in ARIS Connect.

Prerequisites

The dashboard is based on a Process Mining context (page 881).

The dashboard contains a Function flow (page 1015) widget.

You have the **ARIS data transfer** function privilege in PPM.

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click a **Function Flow** widget.
3. Click the  **Menu** icon.
The menu is available if the **Show menu** option is enabled for the widget.
4. Click **Create ARIS model**.
5. Enter a model name.
6. Select a model type.
7. To specify the data base and group in which you want to save the created ARIS model, click **Change** and make your settings.

The process model is created and located in the specified group.

You can open and edit the model as usual in ARIS Connect.

3.5.8.3.1.12 Use bookmarks

You can use bookmarks to save the dashboard settings that you specified in view mode, such as selections and filter settings.

A bookmark does not store the values from the data sources assigned to the widgets in the dashboard, but the configuration data of an analysis as well as the dashboard settings.

The bookmarks are stored in the separate bookmark bar. Using the bookmark bar, you can create (page 863), share (page 865), rename (page 864), update (page 865) and delete (page 864) bookmarks.

The bookmark bar is hidden by default and must be enabled.

3.5.8.3.1.12.1 Open the bookmark bar

You can open the bookmark bar in your dashboard.

The bookmark bar is hidden by default.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Click **Bookmarks** on the right side of the dashboard.

The bookmark bar opens.

To hide the bookmark bar, click **» Hide bookmark bar**.

3.5.8.3.1.12.2 Create bookmarks

You can create bookmarks to save your dashboard settings that you made in view mode, for example, your filter settings.

The bookmarks are stored in the a separate bookmark bar, which is hidden by default.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open a dashboard in dashboard view mode. (page 852)
2. Make your settings, for example, set the filter values for a widget.
3. Open the bookmark bar (page 863).
4. Click **Add bookmark**.

The bookmark is created and added to the bookmark bar.

By default, a new bookmark is marked as private. That means that only the creator of the bookmark can see it in the bookmark bar. You can, however, share your bookmarks (page 865) with any other user who has access to the dashboard.

3.5.8.3.1.12.3 Open a bookmarked dashboard

You can apply the settings you have saved as a bookmark (page 863) to the dashboard.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmark bar (page 863).
2. Click a bookmark.

The Dashboard applies the settings stored in the bookmark.

3.5.8.3.1.12.4 Rename a bookmark

You can rename an existing bookmark (page 863).

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmark bar (page 863).
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Rename**.
4. Enter a name for the bookmark.
5. Press the **Enter** key.

The selected bookmark is renamed.

3.5.8.3.1.12.5 Delete a bookmark

You can delete an existing bookmark (page 863).

Warning

A deleted bookmark cannot be restored.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmark bar (page 863).
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Delete**.
4. Click **Yes**.

The selected bookmark is deleted.

3.5.8.3.1.12.6 Update a bookmark

You can update an existing bookmark with the current settings of your displayed dashboard. The saved settings of the bookmark will be overwritten.

Warning

An updated bookmark cannot be restored.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmark bar (page 863).
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Update**.
4. Click **Yes**.

The saved dashboard settings of the selected bookmark are updated.

3.5.8.3.1.12.7 Share a bookmark

You can share your bookmarks with any other user who has access to the dashboard.

You can mark your bookmarks as follows:

- **Private** (default setting): Only the creator of the bookmark can see it in the bookmark bar.
- **Public**: Anyone who has access to the dashboard can see the bookmark.
- **Shared**: Anyone who has access to the dashboard can use the bookmark using a specific URL. You can copy the bookmark URL to the clipboard and share it with other users.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmark bar (page 863).
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Share**.
4. Make your settings.

Your settings are applied.

3.5.8.3.2 Use dashboard in edit mode

In the dashboard editor, you can manage your dashboards in edit mode.

To use a dashboard in edit mode, you need the **Edit** permission (page 873) for the dashboard.

3.5.8.3.2.1 Open a dashboard in the dashboard editor

In the dashboard editor, you can open an existing dashboard in edit mode.

Prerequisite

You have the required access privileges for the dashboard (page 873).

Procedure

1. Click **Manage** > **Open** in the dashboard editor main menu.
2. Select a dashboard in the list of available dashboards.
You can also search for a dashboard using your keyboard.
3. Click **OK**.

The selected dashboard opens in the dashboard editor.

3.5.8.3.2.2 Create a dashboard in the dashboard editor

In the dashboard editor, you can create and configure your dashboards.

Procedure

1. Click **Manage** > **Create dashboard** in the dashboard editor main menu.
A new dashboard opens.
2. Configure your dashboard.
3. Click **Manage** > **Save** in the dashboard main menu. The **Properties** dialog of the dashboard opens.
4. Enter a dashboard name in the **Name** box.

Warning

Note that when you save your dashboard using the name of an existing dashboard, conflicts may occur when you reopen the dashboard.

5. Optionally, enter a dashboard description in the **Description** box.
6. Optionally, enter comma-separated search tags in the **Tags** box. The search tags help you to find your dashboard when you are using the search function.
7. Click **OK**.

Your changes are applied.

You can edit the dashboard properties (page 872) later as needed.

To display the dashboard in view mode, click  **View dashboard** in the main menu.

3.5.8.3.2.3 Use smart dashboard edit mode

The edit mode of the dashboard editor is an easy-to-use tool to create, manage and edit your dashboards.

The edit mode provides two different dashboard workspaces, that is, a smart dashboard and a fixed-grid dashboard.

Unlike a fixed-grid dashboard, the size of a smart dashboard is automatically adapted to the screen resolutions in dashboard view mode. Depending on the space available, widgets are stretched or compressed. In case there is not enough space available, widgets are automatically re-positioned. See Use dashboards in view mode (page 852) for details.

The smart dashboard workspace is displayed by default when you create a new dashboard (page 866) or when you open an existing smart dashboard.

The workspace is divided in three rows and 12 columns in which you can place your widgets (page 890).

3.5.8.3.2.3.1 Insert new row

You can insert a new row in the dashboard.

Procedure

1. Click a row in the smart dashboard workspace.
2. Click **Insert row** in the properties dialog of the row.

A new line is inserted below the row selected.

3.5.8.3.2.3.2 Delete a row

You can delete a row from the dashboard.

Procedure

1. Click a row in the smart dashboard workspace.
2. Click **Delete** in the properties dialog of the row.

The row is deleted.

3.5.8.3.2.3.3 Resize a row

You can change the height of a row.

Procedure

1. Move the cursor to the lower boundary of a row.

The cursor will change to a resize symbol.

2. Click and drag the row boundary using your mouse.

The height of all widgets located in the row is automatically resized.

The row height is resized.

3.5.8.3.2.3.4 Lock row height

You can lock the row height set in the dashboard workspace.

By default, the row height is adapted dynamically to the screen resolution of the dashboard view mode and therefore the size of the widgets contained in the dashboard is adapted as well. If you lock the row height, the widget size is also fixed.

Procedure

1. Click a row in the workspace.
2. Enable the **Lock height** option in the properties dialog of the row.

The row height is fixed.

3.5.8.3.2.3.5 Change a row order

You can change the row order on the smart dashboard.

Procedure

1. Click a row in the workspace.
2. Move the row selected up or down using drag and drop

The row order is changed.

3.5.8.3.2.3.6 Place a widget

You can place a widget in any empty field in the dashboard workspace.

Procedure

1. Click a widget in the dashboard workspace.
2. Move the widget selected using drag and drop and place it in an empty field on the dashboard.

You cannot place more than one widget in one field.

The widget is placed in an empty field.

3.5.8.3.2.3.7 Resize widgets

You can scale the size of widgets up or down.

Procedure

1. Click a widget on the dashboard. The widget is displayed with a frame.
2. Resize the widget width by dragging the anchor point of the frame with your mouse pointer.

A widget width can be resized across multiple empty fields.

3. Resize the widget height by resizing the height of the row containing the widget. To resize the row height, drag the upper or lower row border with your mouse pointer.

The height of all widgets inserted into the same row is resized automatically.

The selected widgets are resized.

3.5.8.3.2.3.8 Avoid line break in dashboard view mode

You can avoid the automatic line break of the widgets if there is not enough space available in dashboard view mode.

Procedure

1. Click a row in the workspace.
2. Enable the **Do not break** option in the properties dialog of the row.

In view mode, the widgets are compressed and kept in the same row.

3.5.8.3.2.3.9 Group widgets

You can group widgets on the dashboard using the Layout group.

The **Layout group**  consists of two rows and 12 columns. Grouped widgets can be handled as one single widget. You can insert, move, resize, or copy a layout group like any other widget. The **Layout group** is available in the widget bar.

Procedure

1. Insert the  **Layout group** into the dashboard using drag and drop. See Insert widgets in a dashboard (page 890).
2. Resize the layout group. See Resize widgets (page 954).
3. Insert widgets in the layout group.

The layout group is placed on the dashboard.

Use the selection mode if a layout group overlaps its host cells completely and the underlying row and cells cannot be selected. Click **Options > Selection mode ON** in the dashboard main menu.

3.5.8.3.2.3.10 Set row style

You can change the style applied to a single row. The selected style specifies, for example, the background color of the row.

Procedure

1. Click a row in the workspace.
You can also select a single row in a layout group
2. Select a style template in the **Style** drop-down menu in the row properties dialog.
The row style is set.

3.5.8.3.2.3.11 Set layout group style

You can change the style applied to a layout group. The selected style specifies, for example, the background color of the layout group.

Procedure

1. Click **Group** inside a layout group.
2. Select a style template in the **Style** drop-down menu in the layout group properties dialog.
The layout group style is set.

3.5.8.3.2.3.12 Set dashboard tab style

You can change the style applied to a dashboard tab. The selected style specifies, for example, the background color of the tab.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click the  **Show menu** icon beside the tab title of the relevant tab.
3. Click the **Style** selection box and select a style.

The dashboard tab style is set.

3.5.8.3.2.3.13 Switch to fixed-grid workspace

You can switch from the smart dashboard workspace to the fixed-grid workspace.

You can only switch if you have not already inserted a widget in the smart dashboard, and you cannot switch from a fixed-grid dashboard to a smart dashboard workspace. If a dashboard was created using the fixed-grid workspace, it is automatically opened in the fixed-grid workspace.

Procedure

1. Create a dashboard (page 866).
2. Click **Manage** > **Switch to fixed grid** in the dashboard main menu.

The fixed-grid workspace is displayed.

3.5.8.3.2.4 Save a dashboard

You can save a dashboard and give it a unique name, for example, to make a copy of your dashboard.

Warning

Note that when you save your dashboard using the name of an existing dashboard, conflicts may occur when you reopen the dashboard.

Procedure

1. Click **Manage > Save** in the main menu of the dashboard editor.
You can create a copy of the currently opened dashboard by using the **Save as** option.
2. Specify your settings.

The dashboard is saved on the server.

You can change your settings by editing the dashboard (page 871).

3.5.8.3.2.5 Edit a dashboard

You can edit existing dashboards in the dashboard editor.

Depending on the dashboard edit mode used to create the dashboard, the dashboard selected is opened in smart dashboard mode or fixed-grid mode. See Using smart dashboard edit mode (page 867) for details.

Procedure

1. Click **Manage > Open** in the dashboard editor main menu.
2. Select an **Available dashboard** and click **OK**. The selected dashboard is opened in edit mode in the dashboard editor.

A warning message is displayed if local changes exist for the dashboard selected. To open the dashboard with the local changes, click **Continue with unsaved local version**.

3. Configure the dashboard.
4. Click **Manage > Save** in the dashboard main menu.

Warning

Note that when you save your dashboard using the name of an existing dashboard, conflicts may occur when you reopen the dashboard.

Your changes are applied.

To display the dashboard in view mode, click the  **View dashboard** icon in the dashboard main menu.

3.5.8.3.2.6 Delete a dashboard

You can delete dashboards from the dashboard editor.

Warning

Deleted dashboards cannot be restored.

Procedure

1. Open a dashboard to be deleted. (page 871)
2. Click **Manage** > **Delete** in the dashboard main menu.
3. Click **Yes**.

The selected dashboard is deleted.

3.5.8.3.2.7 Edit dashboard properties

You can edit the properties (name, description and tags) of existing dashboards in the dashboard editor.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Manage** > **Properties** in the dashboard main menu. The dashboard **Properties** dialog is displayed.
3. The dashboard name is mandatory and is entered in the **Name** box.
4. The dashboard description is optional and entered in the **Description** box.
5. Comma-separated search tags are optional and are entered in the **Tags** box.
6. Click **OK**.
7. Click **Manage** > **Save** in the dashboard main menu.

Your changes are applied.

3.5.8.3.2.8 Manage dashboard permissions

You can manage dashboard permissions in the dashboard editor. You can assign specific access permissions to individual users or to user groups. If you assign permissions to a user group, the permissions are automatically assigned to all members of that group.

For new users and user groups of a dashboard, you can automatically assign view permissions to all associated assets of the dashboard, such as data feeds and aliases. It is not required to assign the permissions to each asset manually. A user requires the view permission for all associated assets to display the corresponding source data in the dashboard. If view permissions are not assigned to all associated assets, a corresponding option to assign the missing view permissions is additionally displayed in the dialog.

You can assign the following access permissions for saved dashboards only.

- **Edit**
Users can display and edit dashboards in the dashboard editor.
- **View**
Users can view dashboards in the dashboard editor view mode.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Manage > Permissions** in the dashboard main menu. The **Manage dashboard permissions** dialog is displayed.
3. Enter a term in the search box and click **Search**. Clicking **Search** without any input values results in a list of all users and groups.
4. Drag a user or a user group from the **Search result** box and drop it on the **Principals with permissions** box.

By default, the creator of the dashboard already exists in the **Principals with permissions** list.

5. Enable or disable the **View** or **Edit** permissions of a user or a user group.
6. Click **Save**.

The button is available if the option **Assign the relevant view permissions to related assets** is disabled, or view permissions are already assigned to all associated assets.

7. Enable the option **Assign the relevant view permissions to related assets** to assign the required view permissions to all associated data feeds and aliases.

The option is available if view permissions are not assigned to all associated assets.

8. Click **Next**.

A new dialog opens. The first list in the dialog contains the assets whose view permissions you can update. The second list contains the assets whose view permissions you cannot change. At least one of the following prerequisites must apply to change the view permissions for data feeds or aliases.

You are an administrator who can edit the permissions for aliases.

You have permissions to view and to edit data feeds.

You have permissions to create and to edit data feeds.

Your changes are applied.

If you want to remove a user or a user group from the **Principals with permissions** list, click the **Delete** icon. Deleted permissions for a dashboard do not affect the associated data feeds or aliases.

3.5.8.3.2.9 Change the dashboard style

You can assign another style to an available dashboard. Using styles you can customize the look and feel of your dashboards, for example, colors schemes, fonts or background color.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Manage > Change style template** in the dashboard main menu.
3. Select a style in the **Dashboard** drop-down menu.
4. Click **OK**.

The selected style is applied to the current dashboard.

3.5.8.3.2.10 Use Multi-lingual dashboards

With version 10.3, MashZone NextGen supports multi-lingual dashboards. Every widget can offer different elements for translation. For example, this includes the widget title, axis title, or partition name. Date format and number patterns are automatically translated by MashZone NextGen. You can also translate certain dashboard elements, such as tab titles.

The dashboard creator can specify different translations in different languages for every widget at creation time (edit mode) and the viewer can then switch between these languages at view time (view mode).

3.5.8.3.2.10.1 Configure languages for translation

You can configure the languages supported by a dashboard. The supported languages can be used to translate individual widget elements.

You can add or remove multiple languages supported by a dashboard. Additionally, you can set the primary design language, which is used by default to create dashboards and widgets.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Manage > Languages** in the dashboard main menu. The corresponding dialog opens.
3. Click **+ Add language**.
4. Select a language in the drop-down menu.
5. To delete a language from the list, move the mouse pointer over a language in the list and click the **Delete** icon. The default language cannot be deleted.
6. To change a language, move the mouse pointer over a language in the list and select a language from the drop-down menu.
7. Click **OK**.

The languages supported by the dashboard are configured.

You can translate the content of the default language in all languages supported by the widget. (page 876)

3.5.8.3.2.10.2 Translate the widget content

You can translate the widget content in all languages supported by a dashboard (page 875). Depending on the widget, different elements can be translated. This includes for example the widget title, axis title, or partition name.

Date format and number patterns are automatically translated by MashZone NextGen.

Prerequisite

You have assigned data columns to the widget. (page 891) Widgets to which no data can be assigned are excluded, such as the **Label** widget.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The corresponding properties dialog opens.
3. Click  **Translate**.

The **Translations** dialog opens. The default language is the design language and the corresponding content cannot be changed. Only the data source columns that are assigned to widget elements (page 891), such as measures, are available for translation.

4. Enter your translation for the content of the default language column in the respective table line.
5. Click **OK**.

The widget content is translated in one or more languages.

You can select the supported languages in view mode.

3.5.8.3.2.10.3 Select the language for your dashboard

You can display your dashboard content, for example, column title, axis title, or axis format, in any language supported by the dashboard.

Prerequisites

The languages supported by the dashboard widgets are configured (page 875) and the widget contents are translated (page 876).

Procedure

1. Display a dashboard in dashboard view mode. (page 852)
2. Click **Manage > Languages** in the dashboard main menu and select a language.

The option is available if at least two languages are configured for translation. (page 875)

The dashboard is displayed in the language selected.

3.5.8.3.2.10.4 Translate the tab title

You can translate the tab titles in all languages supported by a dashboard (page 875).

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Add one or more tabs to the dashboard. (page 958)
3. Click a dashboard tab.
4. Click the  **Settings** icon beside the tab title.
5. Click **Translate**.

The **Translations** dialog opens. The default language is the design language and the corresponding content cannot be changed.

6. Enter your translation for the content of the default language in the respective table line.
7. Click **OK**.

The tab title is translated in one or more languages.

You can select the supported languages in view mode.

3.5.8.3.2.11 Manage bookmarks

In Edit mode, you can manage the created bookmarks of a dashboard (page 863).

The bookmarks are stored in the separate bookmark bar. Using the bookmark bar, you can rename (page 879), share (page 880), and delete (page 879) bookmarks, or set a bookmark as default (page 880).

The bookmark bar is hidden by default and must be enabled for it to be used.

3.5.8.3.2.11.1 Enable the bookmark bar

You can enable the bookmark bar in Edit mode. If you enable the bookmark bar in the dashboard editor, the bookmark bar is also enabled in View mode.

The bookmark bar is hidden by default.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Options** > **Bookmarks** in the main menu.

The bookmarks bar is enabled.

To open the bookmark bar (page 863), click **Bookmarks** on the right side of the dashboard.

3.5.8.3.2.11.2 Open the bookmark bar

You can open the bookmark bar in Edit mode.

The bookmark bar is hidden by default.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Bookmarks** on the right side of the dashboard.

The bookmark bar opens.

To hide the bookmark bar click **»» Hide bookmark bar**.

3.5.8.3.2.11.3 Rename a bookmark

You can rename an existing bookmark (page 863) in Edit mode.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmarks bar. (page 878)
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Rename**.
4. Enter a name for the bookmark.
5. Press the **Enter** key.

The selected bookmark is renamed.

3.5.8.3.2.11.4 Delete a bookmark

You can delete an existing bookmark (page 863) in Edit mode.

Warning

A deleted bookmark cannot be restored.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmarks bar. (page 878)
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Delete**.
4. Click **Yes**.

The selected bookmark is deleted.

3.5.8.3.2.11.5 Share a bookmark

You can share your bookmarks with any other user who has access to the dashboard.

You can mark your bookmarks as follows:

- **Private** (default setting): Only the creator of the bookmark can see it in the bookmarks bar.
- **Public**: Everyone who has access to the dashboard can see the bookmark.
- **Shared**: Everyone who has access to the dashboard can use the bookmark using a specific URL. You can copy the bookmark URL to the clipboard and share it with other users.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmarks bar. (page 878)
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Share**.
4. Make your settings.

Your settings are applied.

3.5.8.3.2.11.6 Set and reset a bookmark as default

You can set or reset a bookmark as the default bookmark to load when you open the dashboard in View mode. The bookmark settings are automatically applied to the dashboard.

Prerequisite

The bookmark bar is enabled. (page 878)

Procedure

1. Open the bookmark bar. (page 878)
2. Move your mouse pointer over a bookmark and click the  menu icon.
3. Click **Set bookmark as default**.
4. To reset the default bookmark, move the mouse pointer over a default bookmark, click the  menu icon and then **Reset default bookmark**.

Your settings are applied.

3.5.8.3.2.12 Process Mining context

The Process Mining context is an easy way to use PPM analyses as data sources for your widgets. With a Process Mining context, you can easily create dashboards based on data from a PPM sever. This allows you to directly access analytics results, such as measures and dimensions, without creating any favorite in PPM itself. In addition, dashboards based on a Process Mining context are automatically filterable, that is, it is no longer required to manually define filters across different widgets.

3.5.8.3.2.12.1 Create a Process Mining context

You can create a Process Mining context (page 881) for a new dashboard or for an already existing dashboard. The Process Mining context is automatically assigned to all new widgets on the dashboard. Widgets that have already been inserted into the dashboard retain their assigned data sources.

Prerequisites

- A PPM connection has been created for each PPM system to be used.
- The appropriate PPM client server must be running to connect to PPM. See the PPM documentation **PPM Installation** for details.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Options > Process Mining > Create context** in the dashboard main menu. The **Create Process Mining context** wizard opens.
3. Select an available PPM connection from the **PPM connection (alias)** drop-down menu. The alias is the name of the PPM connection that contains the PPM client connection data defined in ARIS Connect. See Configure PPM server for details. Only PPM connections for which you have the appropriate permissions are displayed.
4. Specify the authentication details to connect to the PPM client server. Select one of the following options.
 - d. Enable the **Single Sign-On** option to log in to the PPM client server via single sign-on (SSO) using your current ARIS Connect credentials.
 - e. Enable HTTP basic authentication and enter the required user name and password of a PPM user.
5. Click **Next**.

Your settings are applied.
6. Select the language in which you want to display the PPM data from the **Language** drop-down menu.

Only the languages specified for the PPM client of the selected PPM connection are available.
7. Select the processes to be analyzed from the **Process type** drop-down menu.

The menu provides the process types specified for the PPM client of the selected PPM connection. Depending on the process type you can select various measures and dimensions.

8. Select the relation to be analyzed from the **Relation for measures and dimensions** drop-down menu.

The menu provides the relations specified for the PPM client of the selected PPM connection.

Based on the relation you selected, the corresponding measure and dimension are provided for the context-based widgets, except for the **Function Flow** widget (see step 9).

For the Conformance check widget (page 1009) select Process and relation: 'Conformance issue'.

By default, Process and Function is selected.

Note that if you are using PPM in a version older than 10.5, the drop-down menu is not available.

9. Select the relation to be analyzed from the **Relation for Function Flow widget** drop-down menu.

The menu provides the relations available for the **Function Flow** widget that are specified for the PPM client of the selected PPM connection. Depending on the selected process type, you can choose between different relations.

Based on the relation your selected, the corresponding measure and dimension are provided for the context-based **Function Flow** widget.

By default, the **Function follows** relation is selected. If this relation is not available, the first suitable relation is selected. If no suitable relation is available for the selected process type, None is selected.

10. Select the measures and dimensions to be analyzed.

The measures and dimensions provided depend on the process type and relation you have selected. By default, all available measures and dimensions are preselected.

- f. Click **Measures** and select the required measures.
- g. Click **Dimensions** and select the required dimensions.

11. Click **OK** to exit the **Create Process Mining context** wizard.

Your settings are applied. For each selected element, for example, measures and dimensions, the corresponding data columns are created in the Process Mining context. You can now use the context as a data source for your widgets.

12. Click **Next** to manually edit the data columns of the context.

13. Enter a term in the **Search** field to filter the data columns list.

14. If required, you can add a new data column to the Process Mining context.

- a. Click **Add column**.
- b. Select the data column type, that is, measure or dimension, from the **Type** drop-down menu.

- c. Select a measure or dimension from the **Measure** or **Dimension** drop-down menu.
- d. Enter a column name.
- e. Click **Add**.

The new data column is added.

15. Click the **Edit** icon to change the settings of a data column. Make your settings and click **Change**.

Besides the type, all other properties can be changed.

16. Click the **Copy** icon to create a new data column based on the copy of the selected one. You must change at least one property. Make your settings and click **Add**.

17. Click the **Delete** icon to delete a data column from the Process Mining context.

18. Click **OK** to exit the **Create Process Mining context** wizard.

Your settings are applied.

The data columns are added to the Process Mining context and can now be assigned as data source columns.

3.5.8.3.2.12.2 Edit a Process Mining context

You can change the settings of the Process Mining context (page 881) configured for a dashboard.

Changes in the Process Mining context settings can cause an incorrect data source configuration. Therefore, the data on the dashboard might not be displayed correctly.

If the dashboard uses an older context, you might need to manually migrate the context to the current context version. See [Migrate context-based dashboard](#).

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Options** > **Process Mining** > **Edit context** in the dashboard main menu.

The last page of the **Create Process Mining context** wizard opens. The page lists all configured data columns of the Process Mining context. See [Create a Process Mining context](#) (page 881). By clicking **Previous**, you can navigate to page two and one of the wizard and change the settings.

3. Select an available PPM connection from the **PPM connection (alias)** drop-down menu.

The alias is the name of the PPM connection that contains the PPM client connection data defined in ARIS Connect. See [Configure PPM server](#) for details. Only PPM connections for which you have the appropriate permissions are displayed.

4. Enter a term in the **Search** field to filter the data column list.
5. If required, you can add a new data column to the Process Mining context.
 - a. Click **Add column**.
 - b. Select the data column type, that is, measure or dimension, from the **Type** drop-down menu.
 - c. Select a measure or dimension from the **Measure** or **Dimension** drop-down menu.

- d. Enter a column name.
- e. Click **Add**.

The new data column is created.

6. Click the **Edit** icon to change the settings of a data column. Make your settings and click **Change**.

You can change all properties except the type.

7. Click the **Copy** icon to create a new data column based on the copy of the selected one. You must change at least one property. Make your settings and click **Add**.
8. Click the **Delete** icon to delete a data column from the Process Mining context.
9. Click **OK** to exit the wizard.

Your settings are applied.

If new data columns are added to the Process Mining context, they can now be assigned as data source columns.

3.5.8.3.2.12.3 Delete a Process Mining context

You can delete a Process Mining context (page 881) configured for a dashboard.

Warning

If you delete the Process Mining context of a dashboard, the corresponding data is no longer displayed. The configured context cannot be restored.

Procedure

1. Open a dashboard in the dashboard editor (page 866).
2. Click **Options > Process Mining > Delete context** in the dashboard main menu.
3. Click **Yes**.

The Process Mining context is deleted.

3.5.8.3.2.12.4 Assign data columns to Process Mining context-based widgets

You can assign the data columns provided by a Process Mining context to widgets.

The Process Mining context is automatically assigned as a data source to all new widgets on the dashboard. You do not need to assign the data source to each widget manually (Assign data (1/2) dialog). Widgets that have already been inserted into the dashboard retain their assigned data sources. The data columns that are provided by the Process Mining context depend on your context configuration (page 881). The procedure to assign data columns is similar to the standard method for assigning data columns to widgets (page 891) (Assign data (2/2) dialog). If you do not want to use context-based data columns, you can assign any other data source provided.

Prerequisites

You have created a Process Mining context for the dashboard (page 881).

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The relevant properties dialog is displayed.
3. Click  **Assign data** to edit the data source assignment.

The Assign data (2/2) dialog opens.

4. Assign the data columns of the Process Mining context to the widget elements using drag and drop.

For details on the assignment of data columns to specific widgets, see the chapter Assign data sources to widgets (page 891) and the following chapters.

5. Click **OK** to save your settings.

The data columns are assigned to the widget elements.

- If required, you can adjust the list of data columns provided for the data columns assignment. Click **Edit context** to edit the data columns specified in the Process Mining context.
- If required, you can change the data source assigned. Click **Use other data** to assign another data source. The **Assign data (1/2)** dialog opens. For details on the assignment of a data source to a widget, see the chapter Assign data sources to widgets (page 891). If you assign another data source, you cannot reassign the Process Mining context to the widget.

3.5.8.3.2.12.5 Configure filters for Process Mining context-based widgets

You can configure filter settings for Process Mining context-based widgets.

By default, the filter conditions are also automatically set when you assign data columns of the Process Mining context to the widgets (page 885). Data columns of text and date type assigned to the widget elements are automatically used as filter columns. You do not have to configure the filter conditions manually.

A data column can be used only once in a dashboard as a filter column. Therefore, the filter column is enabled only once on the dashboard to filter across all widgets. By default, this filter column is provided by the widget to which the data column is assigned first. The filter columns used by a widget are listed on the **Context** tab in the properties dialog of the widget. Here you can enable or disable the filter columns that are based on the Process Mining context.

Prerequisites

You have created a Process Mining context for the dashboard (page 881).

Procedure

1. Open a dashboard in the dashboard editor (page 866).
2. Assign data columns to Process Mining context-based widgets (page 885).
3. Click a widget on the dashboard. The relevant properties dialog is displayed.
4. Click **Context** in the properties dialog.

The **Context** tab is available when you have assigned data columns to the elements of the widget. The tab lists all data columns that are assigned to any context-based widget on the dashboard and that can be used as filter columns. The filter columns that can be used by the selected widget are enabled. The filter columns that are used by other widgets are disabled.

5. Enable a filter column for a widget.

You can enable a filter column that is already used by a widget for another widget.

- a. Move the mouse pointer over the  icon to display a tool tip. The tool tip shows the name of the widget that uses the filter column.
 - b. Click the name of the widget that uses the filter column. The **Context** tab of the referenced widget opens.
 - c. Disable the filter column that you want to reassign.
 - d. On the dashboard, click the widget to which you want to assign the filter column.
 - e. Click **Context** in the corresponding properties dialog.
 - f. Enable the filter column that you want to use for the selected widget.
6. Cancel the selection of a filter column to disable it for filtering, if required.

The filters are configured and can be used in view mode.

You can use the filter criteria configured for context-based widgets in the filter panel (page 888). As long as such a filter criterion is enabled in the filter panel, the filter criterion is no longer available in the widget. In this case you can select the filter values only in the filter panel and not in the widget. For details, see Use the filter panel of Process Mining context-based widgets (page 854).

3.5.8.3.2.12.5.1 Configure a date filter for a Process Mining context

Using the **Date filter** (page 1010) widget, you can specify a filter column for filtering the widgets of a Process Mining context-based dashboard. You can select a context column of **Date** type to specify a single date value, such as 2018-03-25, or a time range with a start value and an end value, for example, from 2018-03 to 2018-07.

Note that if you are using a PPM version older than 10.5, the **Allow range selection** option is not available for Process Mining context-based dashboards.

Procedure

1. Click a **Date filter** widget on the dashboard. The relevant properties dialog is displayed.
2. To specify a time range, you must first enable the **Allow range selection** option on the **Configure** tab.

Do not specify the **From** and **To** parameters. They are set automatically by the context. If only one range value (the start value or the end value) is set in the context, the filter is interpreted as open range, for example, > 2010 or < 2010.

3. Click **Context** in the properties dialog to open the corresponding tab.
4. Click the drop-down menu and select a filter column.

The menu provides all filterable context columns of **Date** type. **None** is selected if a data column of date type is already used in another widget as a filter column. If you select a filter column from the drop-down menu, the column is used only by the **Date filter** widget.

The filter column is enabled for the **Date filter** widget and can be used in view mode.

Note that depending on your selection on the **Context** tab, different entries are available, if you specify an action for a widget (page 948), for example, Set selection (page 949) or Call URL (page 950).

- If you select **None** on the **Context** tab, the available entries are **from** and **to**.
- If you select a column, for example, 'Time [By month]', and the **Allow range selection** option is not enabled, the available entries are 'Time [By month]_from' and 'to'.
- If you select a column, for example, 'Time [By month]', and the **Allow range selection** option is enabled, the available entries are 'Time [By month]_from' and 'Time [By month]_to'.

3.5.8.3.2.12.6 Enable the filter panel

You can enable the filter panel for a Process Mining context-based dashboard.

Prerequisites

You have created a Process Mining context for the dashboard (page 881).

Procedure

1. Open a dashboard in the dashboard editor (page 866).
2. Click **Options > Process Mining > Filter panel** in the dashboard main menu.

The **Filter panel** option is available if you have created a Process Mining context (page 881).

The filter panel is enabled and available in view mode.

You can configure the filter panel in dashboard edit mode.

You can configure and use the panel for filtering in dashboard view mode. (page 854)

Warning

If you disable the filter panel, all your settings are lost.

3.5.8.3.2.13 Configure widgets

You can configure the visualization and the behavior for all widgets. Additionally, you can assign data sources and set filters for most widgets.

Depending on the widget type, for example, line chart, grid, or image, various options are available.

The appendix lists all available widgets (page 1001) and the relevant configurable parameters:

-  Line chart (page 1027)
-  Column chart (page 1007)
-  Bar chart (page 1002)
-  Pie chart (page 1033)
-  Bubble chart (page 1004)
-  Grid (page 1017)
-  Circular gauge chart (page 1006)
-  Horizontal and vertical gauge chart (page 1021)
-  Traffic light (page 1044)
-  Drop-down box (page 1014)
-  Input field (page 1024)
-  Image (page 1023)
-  Label (page 1026)
-  Function flow diagram (page 1015)
-  Jump to PPM (page 1042)

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The relevant widget properties dialog is displayed.
3. Click  **Assign data** to edit the data source assignment. See Assign data sources to widgets (page 891) for details.
4. Click  **Configure filter** to specify filter conditions. See Define filters for widgets (page 946) for details.
5. Click the **Config** tab and set the widget display options. See the list of widgets (page 1001) for details.
6. Specify **Actions** for the widget, if required. See Specify actions for widgets for details.
7. Specify **URL selections** for the widget, if required. See Use dynamic URL selection (page 983) for details.

Your settings are applied.

3.5.8.3.2.13.1 Set up widgets

You can configure the visualization and the behavior in dashboard view mode for all widgets. Additionally, you can assign data sources and set filters for most widgets.

Various options are available depending on the widget type, for example, line chart, grid or image.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The relevant widget properties dialog is displayed.
3. Click the  **Assign data** icon to edit the data source assignment. See Assign data sources to widgets (page 891) for details.
4. Click the  **Configure filter** icon to specify filter conditions. See Define filters for widgets (page 946) for details.
5. Click the **Config** tab and set the widget display options. See the list of widget (page 1001) for details.
6. Optionally, specify **Actions** for the widget. See Specify actions for widgets for details.
7. Optionally, specify **URL selections** for the widget. See Use dynamic URL selection (page 983) for details.

Your settings are applied.

3.5.8.3.2.13.2 Insert widgets in a dashboard

Using widgets you can create your individual dashboards and visualize your source data interactively. The dashboard editor provides you with various widgets, for example, line chart, bar chart, speedometer chart, grid, or input field.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget icon in the widget bar. The widget selected is inserted as a blank box on the dashboard and placed in the next empty field. The relevant widget properties dialog is displayed.

Alternatively, place the widget using drag and drop in any empty field on the dashboard. The relevant widget properties dialog is displayed.
3. Click the widget inserted and place it in a empty field on the dashboard using drag and drop.

The widget selected is inserted and placed on the dashboard.

3.5.8.3.2.13.3 Assign data sources to widgets

Before you can display content in a widget, you must first assign a data source to this widget. You can define dynamical and reusable input parameters for several data sources, for example, XML, JSON, or ARIS Table. See [Create input parameters](#) (page 945). Data sources are not required for **Input field** and **Image** widgets.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The relevant properties dialog is displayed.
3. Click  **Assign data** to edit the data source assignment.

The **Assign data (1/2)** dialog is displayed. Here you can edit the **Data flow** and create dynamic **Input parameters** for the widget selected. The **Data flow** box shows an overview of the data source configuration.

4. Optionally, you can create input parameters for the selected widget.
Input parameters are dynamic and reusable parameters used in several data source operators and data transformation operators. See [Create input parameters](#) (page 945).
5. Select a data source operator in the **Add a data source** bar and specify your settings. See [Data source operators](#) (page 1047) for a list of available data source operators.
6. In addition to the data source operator you can add further operators to transform the source data. In the **Add data operations** bar, select a data transformation operator, for example, **Change data type**, and specify the settings.
See [Data transformation operators](#) (page 1068) for a list of available data transformation operators.
7. To calculate a data preview of an operator, click the  **Calculate preview** icon. This allows you to track all data changes step by step. For details, see [chapter Calculate the feed data](#) (page 988).
8. Click **Next**.

The **Assign data (2/2)** dialog is displayed.

9. If you want to return to the **Assign data (1/2)** dialog to change the data source settings, click **Previous**.

The data source and transformation operators are assigned to the selected widget.

To display data in a widget (for example, line chart) you must assign the relevant data source columns to the required widget elements. In the **Assign data (2/2)** dialog you can assign data source columns to the individual widget elements. For example, you can assign separate columns to the chart axes as a dimension (X-axis) or KPI (Y-axis).

3.5.8.3.2.13.3.1 Assign data columns to line, column or bar charts

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

In a line chart (page 1027), column chart (page 1007), or bar chart (page 1002), you can display one dimension (X-axis) and several KPIs (Y-axis), or two dimensions (x-axis and partition) and one KPI (Y-axis).

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click  **Assign data** to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a **Data column** as a dimension to the **X-axis** using drag and drop.
4. Assign one or more **Data columns** as KPIs to the **Y-axis** using drag and drop.
If you have assigned a column to the **X-axis** and a column to the **Partition**, you cannot assign more than one column to the **Y-axis**.
5. Optionally, assign a **Data column** as a second dimension to the **Partition** using drag and drop.
If you have assigned more than a column to the **Y-axis** the **Partition** is no longer available.
6. Optionally, assign one or more columns to the **More columns (invisible)** element using drag and drop. The columns are not displayed in the widget. They are used for filtering widgets only. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.1.1 Set properties of widget elements

For each widget element, such as axis, dimensions or measures, you can edit the settings, for example, axis title, display name or format.

Various settings are available depending on the data type of the assigned data source column. See the Options list below for details.

Procedure

1. Click a source column assigned to the **X-axis** and specify the axis and column settings.
2. Click **Y-axis** to specify the axis settings.
 - g. Click the **Text** tab to specify the **Axis title** and **Axis format**.
 - h. Click the **Data range** tab to limit the KPI value range.
3. Click a source column assigned to the **Y-axis** and specify the settings.
4. Click the source column assigned to the **Partition** and specify the settings.
5. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
6. Click **Coloring** and then click the **Thresholds** tab to specify the KPI thresholds. See Configure KPI thresholds (page 895) for details.
7. Click **Coloring** and then click the **Rating** tab to specify the KPI rating. See Configure KPI rating (page 896) for details.
8. Click **OK** to save your settings and to close the dialog.

The chart is displayed in the dashboard with real data of the assigned data source.

Options list

Option	Description
Axis position	Specifies on which side of the chart the axis is located. Default is left.
Scale type	Specifies the scale type of the axis values. The scale type is available for axes with numeric values. <ul style="list-style-type: none"> ▪ Linear: The axis values are displayed linearly. This is the default scale type. ▪ Log (logarithmic): The maximum value of the source column is set to 100 and the minimum is set to 1. All axis values are between 100 and 1. Negative values and 0 values of the source column are not taken into account.
Axis title	Title of the X- or Y-axis. Enable the title field and enter an Axis title . By default, the Automatic option is selected and the axis title consists of the concatenated names of the assigned columns.
Axis format	Output format of the X- or Y-axis. The selected format overwrites the formats of the assigned columns. By default, Auto is selected and the

Option	Description
	individual formats are used for tooltips. Optionally, you can add a prefix or postfix to the format, for example, \$ 1,234 or 1,234 mm.
Display name (data point)	New column name displayed in the widget, for example, used for KPIs, data points, or tool tips. By default, the data source column name is used.
Format	Output format of the column values, for example, used for data points or tool tips. Available for columns of date and numeric type.
Sorting	Sorts the labels of the X-axis data points in ascending or descending order, or sorts the labels of the X-axis data points according to the order of a data column that is assigned to the chart. The option is not available in a line chart if a date column is assigned to the X-axis. The "Sort by" option is not available if a partition is assigned.
Sort by	Sorts the labels of the X-axis data points by any column assigned to the chart. The option is not available if a column is assigned to the Partition .
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.
Text tab	Enables you to specify the Axis title and Axis format .
Data range tab	Enables you to specify the minimum value (From) and the maximum value (To) of the KPI value range. If the values are not set the values are calculated automatically. You can enter specific values manually or assign data source columns for a dynamic value assignment using drag and drop.
Coloring	Enables you to specify KPI thresholds and ratings. You can set the background or the graphic color depending on the KPI values.
Thresholds tab	Enables you to specify the thresholds values range and to set the background and graphic color accordingly. You must assign at least one KPI to the Y-axis.
Rating tab	Enables you to specify the KPI rating and to set the data point color accordingly. You must assign a single KPI to the Y-axis.

3.5.8.3.2.13.3.1.2 Configure KPI thresholds

You can define thresholds for numeric and text KPIs to display their status. A colored background and graphic show the threshold range in which a KPI value is located.

Procedure

1. Click **Coloring**.
2. Click **Thresholds** to specify the KPI thresholds.
The tab is only available if at least one column is assigned to the Y-axis.
3. Click **Background** to set the chart background color or click **Graphic** to set the color scheme.
The **Graphic** tab is only available if a single KPI is assigned to the Y-axis.
4. Click a **Color** box to select a background color for each threshold.
5. Select an operator for each threshold to define the KPI value range, for example, < (less than).
6. Enter a value for each threshold.
You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric values are valid as dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.
7. Click the **+** **Plus** button to add a threshold or click the **-** **Minus** button to remove a threshold.
8. Select a threshold view style in the **Style** drop-down menu.
This option is only available for the background.
9. Enable the **Colorize axis labels** to apply the specified color scheme to the axis labels.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.1.3 Configure KPI rating

You can define a rating for numeric KPIs to display their status. A colored data point shows the rating range in which a KPI value is located.

For example, you can color the ten poorest or worst KPI values, either as an absolute or as a percentage rating.

Prerequisites

You have assigned a single KPI to the Y-axis.

Procedure

1. Click **Coloring**.
2. Click **Rating** to specify the KPI rating.
The tab is only available if a single column is assigned to the Y-axis.
3. Enable the **Absolute** or **Percentage** option to set an absolute or a percentage rating, for example, to color the top three or 30% KPI values.
The highest value is considered as 100%
4. Click a **Color** box to select a color for each rating range.
5. Select **Top** or **Bottom** in the drop-down menu to assign the selected color to the best respectively the poorest KPI values.
6. Enter a value for the rating range, for example, 5 for the five best KPI values.
7. Click the **+** **Plus** button to add a rating range or click the **-** **Minus** button to remove a rating range.
8. To color the remaining, unassigned KPI values, enable the **Others** option and select a color.
9. Enable the **Colorize axis labels** to apply the specified color scheme to the axis labels.

The rating is configured for the selected widget.

3.5.8.3.2.13.3.2 Assign data columns to a distribution chart

To display data in a distribution chart (page 1012), you must assign the relevant data source columns to the required widget elements.

The distribution chart is available only for context based dashboards.

Prerequisite

You have created a Process Mining context for the dashboard (page 881).

Procedure

1. Click a **Distribution chart** widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/3)** dialog is displayed.
3. Select a measure to be distributed on the X-axis from the **Measure to distribute** drop-down menu.
4. Specify the step width for the distributed measure in the **Step width** input box.
In view mode, you can change the step width (page 858) in the settings dialog of the distribution chart.
5. If you want to add or change the data columns provided by the Process Mining context, click **Edit context**.
6. Click **Next**.
The **Assign data (3/3)** dialog is displayed. Here you can assign the data source columns to the widget elements. The data column assigned to the X-axis is preset by your selection in the **Assign data (2/3)** dialog and cannot be changed.
7. Assign a data column to the **Y-axis** using drag and drop.
8. Optionally, assign one or more columns to the **More columns (invisible)** box using drag and drop. The columns are not displayed in the widget. They are used only for filtering widgets. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.2.1 Set properties of widget elements

For each widget element, such as axis, dimensions or measures, you can edit the settings, for example, axis title, display name or format.

Various settings are available depending on the data type of the assigned data source column. See the Options list below for details.

Procedure

1. Click the **X-axis** box to specify the X-axis settings.
2. Click the **Y-axis** box to specify the Y-axis settings.
 - a. Click the **General** tab to specify the position, title, and format of the axis.
 - b. Click the **Data range** tab to limit the KPI value range.
3. Click a source column assigned to the **Y-axis** and specify the settings.
4. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
5. Click **OK** to save your settings and to close the dialog.

The chart is displayed in the dashboard with real data of the assigned data source.

OPTIONS LIST

Option	Description
Axis position	Specifies on which side of the chart the axis is located. Default is left.
Scale type	Specifies the scale type of the axis values. The scale type is available for axes with numeric values. <ul style="list-style-type: none"> ▪ Linear: The axis values are displayed linearly. This is the default scale type. ▪ Log (logarithmic): The maximum value of the source column is set to 100 and the minimum is set to 1. All axis values are between 100 and 1. Negative values and 0 values of the source column are not taken into account.
Axis title	Title of the X- or Y-axis. Enable the title field and enter an Axis title . By default, the Automatic option is selected and the axis title consists of the concatenated names of the assigned columns.
Axis format	Output format of the X- or Y-axis. The selected format overwrites the formats of the assigned columns. By default, Auto is selected and the individual formats are used for tooltips. Optionally, you can add a prefix or postfix to the format, for example, \$ 1,234 or 1,234 mm.
Display name (data point)	New column name displayed in the widget, for example, used for KPIs, data points, or tool tips. By default, the data source column name is used.
Format	Output format of the column values, for example, used for data points or tool tips. Available for columns of date and numeric type.

Option	Description
Sorting	Sorts the labels of the X-axis data points in ascending or descending order, or sorts the labels of the X-axis data points according to the order of a data column that is assigned to the chart. The option is not available in a line chart if a date column is assigned to the X-axis. The "Sort by" option is not available if a partition is assigned.
Sort by	Sorts the labels of the X-axis data points by any column assigned to the chart. The option is not available if a column is assigned to the Partition .
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.

3.5.8.3.2.13.3.3 Assign data columns to heat matrix

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

In a Heat matrix (page 1019) chart you can display three dimension (X-axis, Y-axis, and size) and descriptive data, such as label and tooltip.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click  **Assign data** to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a data column to each of the widget elements **X-axis**, **Y-axis**, and **Size by** as a dimension using drag and drop.
4. Assign a data column to each of the widget elements **Label** and **Tooltip** as content using drag and drop.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.3.1 Set properties of widget elements

For each widget element, such as axis, dimensions or measures, you can edit the settings, for example, axis title, display name or format.

Various settings are available depending on the data type of the assigned data source column.

Procedure

1. Click the **X-axis column** box and specify the axis settings.
 - a. Click the **Display name (data point)** to specify the column name of the dimension.
 - b. Click the **Axis label** to specify the label of the dimension in the chart.
 - c. Add or delete values and labels for the dimension values with **Configured values and labels**. The value must match the values received from the data column. The label describes the value and can be created individually.
2. Click the **Y-axis column** box and specify the axis settings.
 - a. Click the **Display name (data point)** to specify the column name of the dimension.
 - b. Click the **Axis label** to specify the label of the dimension in the chart.
 - c. Add or delete values and labels for the dimension values with **Configured values and labels**. The value must match the values received from the data column. The label describes the value and can be created individually.
3. Click the **Size by** box and specify the axis settings.
 - a. Click the **Display name (data point)** to specify the column name of the dimension.
 - b. Add or delete values and percentages for the dimension values with **Configured bubble sizes**. The value must match the values received from the data column. The percentage can be created individually and represents the data point bubble size to the other bubble size.
4. Click the **Label** box element and enter the **Display name (data point)** to specify the column name of the dimension.
5. Click the **Tooltip** box element and enter the **Display name (data point)** to specify the column name of the dimension.
6. Click OK to save your settings and to close the dialog.

The chart is displayed in the dashboard with real data of the assigned data source.

3.5.8.3.2.13.3.4 Assign data columns to pie charts

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A pie chart (page 1033) can display one numeric KPI iterated via a dimension (text or date dimension).

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a numeric **Data column** to the **KPI** using drag and drop.
4. Assign a text or date **Data column** as a dimension to the **Partition** using drag and drop.
5. Optionally, assign one or more columns to the **More columns (invisible)** element using drag and drop. The columns are not displayed in the widget. They are used for filtering widgets only. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.4.1 Set properties of widget elements

You can edit the settings, for example, display name or format, for each widget element, such as measure or dimension.

Various settings are available depending on the data type of the assigned data source column. See the Option list below for details.

1. Click the source column assigned to the **KPI** and specify the settings.
2. Click the source column assigned to the **Partition** and specify the settings.
3. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
4. Click **OK** to save your settings and to close the dialog.

The chart is displayed with real data of the assigned data source.

Options list

Option	Description
Display name (data point)	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, for example, used for data points or tooltip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.

3.5.8.3.2.13.3.5 Assign data columns to bubble charts

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

In the bubble chart (page 1004) you can display one dimension and two KPIs. The two KPIs are plotted on the x- and Y-axis. The dimension is represented by various colors of the individual bubble areas. Optionally, a third KPI can be incorporated; its values determine the size of the bubble areas.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click  **Assign data** to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a **Data column** as a KPI to the **X-axis** using drag and drop.
4. Assign a **Data column** as a KPI to the **Y-axis** using drag and drop.
5. Optionally, assign a **Data column** as a KPI to the **Size by** element using drag and drop.
6. Assign a **Data column** as a dimension to the **Partition** using drag and drop.
7. Optionally, assign one or more columns to the **More columns (invisible)** element using drag and drop. The columns are not displayed in the widget. They are used for filtering widgets only. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.5.1 Set properties of widget elements

You can edit the settings, for example, axis title, display name or format, for each widget element, such as axis, dimensions or measures.

Various settings are available depending on the data type of the assigned data source column. See the Options list below for details.

1. Click the **X-axis** or **Y-axis** to specify the axis settings.
 - a. Click the **Text** tab to specify the **Axis title** and **Axis format**.
 - b. Click the **Data range** tab to limit the KPI value range.
2. Click the source column assigned to the **X-axis** and specify the axis and column settings.
3. Click the source column assigned to the **Y-axis** and specify the settings.
4. Click the source column assigned to the **Size by** element and specify the settings.
5. Click the source column assigned to the **Partition** and specify the settings.
6. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
7. Click **Coloring** to specify the KPI thresholds. See Configure KPI thresholds (page 906) for details.
8. Click **OK** to save your settings and to close the dialog.

The chart is displayed with real data of the assigned data source.

Options list

Option	Description
Scale type	<p>Specifies the scale type of the axis values. The scale type is available for axes with numeric values.</p> <ul style="list-style-type: none"> ▪ Linear: The axis values are displayed linearly. This is the default scale type. ▪ Log (logarithmic): The maximum value of the source column is set to 100 and the minimum is set to 1. All axis values are between 100 and 1. Negative values and 0 values of the source column are not taken into account.
Axis title	<p>Title of the X- or Y-axis. Enable the title field and enter an Axis title. By default, the Automatic option is selected and the axis title consists of the concatenated names of the assigned columns.</p>
Axis format	<p>Output format of X- or Y-axis. The selected format overwrites the formats of the assigned columns. By default, Auto is selected and the individual formats are used for tooltips. Optionally, you can add a prefix or postfix to the format, for example, \$ 1,234 or 1,234 mm.</p>

Option	Description
Display name (data point)	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	<p>Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value.</p> <p>The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.</p>
Text tab	Allows you to specify the Axis title and Axis format .
Data range tab	<p>Allows you to specify the minimum value (From) and the maximum value (To) of the KPI value range. If the values are not set the values are calculated automatically.</p> <p>You can enter specific values manually or assign data source columns for a dynamic value assignment using drag and drop.</p>
Coloring > Thresholds	Allows you to specify the thresholds values range and to set the background color accordingly. You must assign at least one KPI to the Y-axis.

3.5.8.3.2.13.3.5.2 Configure KPI thresholds

You can define thresholds for numeric and text KPIs to display their status. A colored background shows the threshold range in which a KPI value is located.

Procedure

1. Click **Coloring**.
2. Select the axis for which you want to define thresholds.
3. Click a **Color** box to select a background color for each threshold.
4. Select an operator for each threshold to define the KPI value range, for example, < (less than).
5. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric data columns are allowed for dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.

6. Click the  **Plus** button to add a threshold or click the  **Minus** button to remove a threshold.
7. Select a threshold view style in the **Style** drop-down menu.

This option is only available for the background.

The thresholds are configured for the widget selected.

3.5.8.3.2.13.3.6 Assign data columns to grids

To display data in the Grid (page 1017) widget, you must assign the relevant data source columns to the grid columns required.

You can assign any number of data source columns as grid columns.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign one or more **Data columns** to the **Grid columns** using drag and drop.
4. Optionally, assign one or more columns to the **More columns (invisible)** element using drag and drop. The columns are not displayed in the widget. They are used for filtering widgets only. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.6.1 Set properties of widget elements

You can edit the settings for each widget element, for example, column name or format.

Various settings are available depending on the data type of the assigned data source column. See the Options list below for details.

Procedure

1. Click one of the assigned **Grid columns** to specify the settings.
 - a. Click the **Text** tab and specify the settings.
 - b. Click the **Thresholds** tab and specify the KPI thresholds. See Configure thresholds (page 909) for details.
2. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
3. Click **OK** to save your settings and to close the dialog.

The grid is displayed with real data of the assigned data source.

Options list

Option	Description
Axis title	Title of the X- or Y-axis. Enable the title field and enter an Axis title . By default, the Automatic option is selected and the axis title consists of the concatenated names of the assigned columns.
Axis format	Output format of X- or Y-axis. The selected format overwrites the formats of the assigned columns. By default, Auto is selected and the individual formats are used for tool tip. Optionally, you can add a prefix or postfix to the format, for example, \$ 1,234 or 1,234 mm.
New column name	Replaces the data source column name, used for tooltips. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the grid. Available for numeric columns. Enabled by default.
Show cell value	Displays the values of the column. Enabled by default.
Make clickable (for actions)	Makes the column clickable for triggering actions. See Specify actions for widgets for details.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.

Option	Description
Set as key column for selection	<p>Sets the selected column as key column.</p> <p>When a selection is made and new data arrives, the selection is automatically recreated with the new data. The key column is used to ensure that the new data matches the selection. This means that if values in non-key columns have changed, the selected row remains selected even after new data arrives.</p> <p>You can select one or more columns as key columns.</p>
Text tab	Allows you to specify the New column name , Format and Aggregation .
Thresholds tab	Allows you to specify the thresholds values range.

3.5.8.3.2.13.3.6.2 Configure thresholds

You can define thresholds for numeric and text grid columns to display the status of a KPI. A colored marker shows the threshold range in which a KPI value is located.

Procedure

1. Click an assigned **Grid columns** to specify the settings.
2. Click the **Thresholds** tab.
3. Click **Background** or **Foreground** to set the KPI values and the background or foreground colors of the grid.

You can define a KPI value range for the thresholds and the corresponding colors of the grid cells background or foreground.

- a. Click a **Color** box to select a color for each threshold.
- b. Select an operator for each threshold to define the KPI value range, for example, < (less than).

The available operators differ for numeric values (for example, < (**less than**) or = (**equals to**)) and text columns (for example, **starts with** or **is equal to**).

- c. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only text data columns are allowed for dynamic threshold values. Assign the required text data column from the data source to a threshold field using drag and drop.

- d. Click the  **Plus** button to add a threshold or the  **Minus** button to remove a threshold.
- e. Enable the **Colorize row** option to apply the background or foreground color scheme to all cells in the row.

4. Click **Traffic Lights** to set KPI values and to define traffic lights.

You can define a KPI value range for the thresholds and corresponding traffic lights. The traffic lights are displayed in each cell of the rows. By default, there are three traffic light stages and one inactive stage. Additionally, you can select a different shape for each traffic light stage.

- f. Click a **Color** box to select a color and a shape for each traffic light stage.

To use custom images instead of the colored shapes for the traffic light stages, enable the **Image based Traffic Light** option, click the drop-down menu and enter an **Image URL**.

- g. Enable the **Multi State** option to show multiple states of traffic lights instead of a single traffic light.
- h. Select an operator for each threshold to define the KPI value range, for example, is equal to.
- i. Enter a value for each threshold.

You can either enter specific threshold values or you can choose numeric columns from your data source representing the threshold values. Assign a data column from the data source to a threshold field using drag and drop.

- j. Click the **+** **Plus** button to add a traffic light stage or click the **-** **Minus** button to remove a stage.
- k. Enable the **Switch position** option to place the traffic light symbol to the right of the values.
- l. Enable the **Make clickable (for actions)** option to make the traffic lights clickable for triggering actions. See Specify actions for widgets for details.
- m. Enable the **Show tooltip** option to show tool tips for each traffic light symbol.
- n. By default, the traffic light stage is also visible if it is inactive (that is, a KPI value is not available.). Disable the **Inactive state** option if the traffic light stage should not be visible. You can also change the color of the inactive traffic light stage. If you use custom images, you cannot change the color. You can only deactivate the **Show inactive state** option.

5. Click **OK**.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.7 Assign data columns to lists

To display data in the List (page 1029) widget, you must assign the relevant data source columns to the widget elements required.

You can assign one or two data source columns as list columns.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a list widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a data column to the List column box using drag and drop.
The list column is the main column by which the list can be sorted and filtered.
4. Optionally, assign a data column to the **Additional column** box using drag and drop.
The additional column shows additional values to the main column.
5. Optionally, assign one or more columns to the **More columns (invisible)** box using drag and drop. The columns are not displayed in the widget. They are used for filtering widgets only. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.7.1 Set properties of widget elements

You can edit the settings, for example, column name or format, for each widget element. Depending on the data type of the assigned data source column, different settings are available. See the **Option list** below for details.

Procedure

1. Click the assigned List column to specify the settings.
2. Click the assigned Additional column to specify the settings.
3. Click an assigned source column of the More columns (invisible) box and specify the settings.
4. Click OK to save your settings and exit the dialog.

The list is displayed in the dashboard with the data of the assigned data source.

Options list

Option	Description
New column name	Replaces the data source column name that is used by default. The column name is also used for the tool tip.
Format	Output format of the column values, for example, used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the grid. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.

3.5.8.3.2.13.3.8 Assign data columns to circular gauge charts

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A circular gauge chart (page 1006) displays a set of aggregated KPI values. The value ranges are arranged in a semicircle with a red pointer that indicates the actual value of the KPI.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a numeric **Data column** to the aggregated **KPI** using drag and drop.

A data source column is assigned to the **KPI** element.

3.5.8.3.2.13.3.8.1 Set properties of widget elements

You can define a minimum and a maximum value for the displayed KPI value range. Additionally, you can compare the actual KPI value to several threshold values. The value ranges in the speedometer are indicated by various colors.

See the Options list below for details.

1. Click the source column assigned to the **KPI** and specify the settings.
2. Click **Thresholds** to specify the KPI thresholds. See Configure thresholds (page 915) for details.
3. Click **OK** to save your settings and to close the dialog.

The chart is displayed with real data of the assigned data source.

Options list

Option	Description
Display name	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.
Min value	Minimum value of the displayed KPI value range. If the value is not set the value is calculated automatically.
Max value	Maximum value of the displayed KPI value range. If the value is not set the value is calculated automatically.

3.5.8.3.2.13.3.8.2 Configure thresholds

You can define thresholds for a numeric KPI to display their status. A colored marker shows the threshold range in which a KPI value is located.

1. Click **Thresholds**.
2. Click a **Color** box to select a color for each threshold.
3. Select an operator for each threshold to define the KPI value range, for example, < (less than).
4. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric data columns are allowed for dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.

5. Click the  **Plus** button to add a threshold or click the  **Minus** button to remove a threshold.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.9 Assign data columns to horizontal and vertical gauge charts

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A horizontal and vertical gauge chart (page 1021) displays a set of aggregated KPI values. The value ranges are arranged in a horizontal or vertical bar with a pointer that indicates the actual value of the KPI.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a numeric **Data column** to the aggregated **KPI** using drag and drop.

A data source column is assigned to the **KPI** element.

3.5.8.3.2.13.3.9.1 Set properties of widget elements

You can define a minimum and a maximum value for the displayed KPI value range. Additionally you can compare the actual KPI value to several threshold values. The value ranges in the speedometer are indicated by various colors.

See the Options list below for details.

1. Click the source column assigned to the **KPI** and specify the settings.
2. Click **Thresholds** to specify the KPI thresholds. See Configure thresholds (page 917) for details.
3. Click **OK** to save your settings and to close the dialog.

The chart is displayed with real data of the assigned data source.

Options list

Option	Description
Display name	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.
Min value	Minimum value of the displayed KPI value range. If the value is not set the value is calculated automatically.
Max value	Maximum value of the displayed KPI value range. If the value is not set the value is calculated automatically.
Thresholds tab	Allows you to specify the thresholds values range.

3.5.8.3.2.13.3.9.2 Configure thresholds

You can define thresholds for a numeric KPI to display their status. A colored marker shows the threshold range in which a KPI value is located.

1. Click **Thresholds**.
2. Click a **Color** box to select a color for each threshold.
3. Select an operator for each threshold to define the KPI value range, for example, < (less than).
4. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric data columns are allowed for dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.

5. Click the  **Plus** button to add a threshold or the click  **Minus** button to remove a threshold.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.10 Assign data columns to traffic lights

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A traffic light (page 1044) displays the status of a KPI. A colored marker shows the threshold range in which a KPI value is located.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.

The **Assign data (2/2)** dialog is displayed.

3. Assign a numeric or text **Data column** to the **KPI** element.

A data source column is assigned to the **KPI** element.

3.5.8.3.2.13.3.10.1 Set properties of widget elements

For the displayed KPI value range you can define a minimum and a maximum value. Additionally you can compare the actual KPI value against several threshold values. The value ranges in the speedometer are indicated by various colors.

See the Options list below for details.

Procedure

1. Click the source column assigned to the **KPI** and specify the settings.
2. Click **Thresholds** to specify the KPI thresholds. See Configure thresholds (page 919) for details.
3. Click **OK** to save your settings and to close the dialog.

The traffic light is displayed using the real data of the assigned data source.

Options list

Option	Description
Display name	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.

3.5.8.3.2.13.3.10.2 Configure thresholds

You can define thresholds for numeric and text columns to display the status of a KPI. A colored marker shows the threshold range in which a KPI value is located.

By default, there are three traffic light stages plus the inactive stage.

Procedure

1. Click **Thresholds**.

The option is only available if a column has been assigned to the KPI.

2. Select **Color and shape** in the drop-down menu to display the traffic light stages with various colored shapes.
3. Click a color box to select a color and a shape for each threshold stage.
4. Select **Image** in the drop-down menu to use custom images instead of the colored shapes for each traffic light stage.
5. Select an operator for each threshold to define the KPI value range, for example, < (less than).

The available operators differ for numeric values (for example, < (**less than**) or = (**equals to**)) and text columns (for example, **starts with** or **is equal to**).

6. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric data columns are allowed for dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.

7. Click the  **Plus** button to add a threshold or the  **Minus** button to remove a threshold.
8. By default, the traffic light stage is also visible if it is inactive (A KPI value is not available.). Disable the **Inactive state** option if the traffic light stage should not be visible. You can also change the color of the inactive traffic light stage. If you use custom images, you cannot change the color. You can only deactivate the **Show inactive state** option.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.11 Assign data columns to a drop-down box

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A drop-down box (page 1014) provides you with a selection of values in a drop-down menu for you to filter other widgets.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a **Data column** to the **Visible column** element using drag and drop.
4. Optionally, assign one or more columns to the **More columns (invisible)** element using drag and drop. The columns are not displayed in the widget. They are used for filtering widgets only. See Define filters for widgets (page 946) for details.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.11.1 Set properties of widget elements

For each widget element you can edit the settings, for example, display name or format.

See the Options list below for details.

1. Click the source column assigned to the **Visible column** element and specify the settings.
2. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
3. Click **OK** to save your settings and to close the dialog.

The drop-down menu is displayed with real data of the assigned data source.

Options list

Option	Description
Display name	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.

3.5.8.3.2.13.3.12 Assign data columns to labels

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A label (page 1026) displays a fixed text you have entered, or a text that is supplied dynamically by a data source.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a source **Data column** to the **Data column** element using drag and drop.

A data source column is assigned to the widget element.

If you have assigned a text or date column to the widget the values are retrieved from the first data row.

3.5.8.3.2.13.3.12.1 Set properties of widget elements

You can edit the settings, for example, display name or format for each widget element. See the Options list below for details.

Procedure

1. Click the source column assigned to the **Visible column** element and specify the settings.
2. Click a source column assigned to the **More columns (invisible)** box and specify the settings.
3. Click **OK**.

Your settings are applied. The drop-down menu in the dashboard is displayed with real data of the assigned data source.

Options list

Option	Description
Display name	New column name displayed in the widget, that is for instance used for KPI, data point or tool tip. By default, the data source column name is used.
Format	Output format of the column values, that is for instance used for data points or tool tip. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.
Initial selected value	Specifies the initial selected column value. By default, the first column value is selected.
Sort descending	Displays the column values in a descending order in the drop-down menu.

3.5.8.3.2.13.3.13 Assign data columns to a rich text area

To display data in the Rich text area (page 1036) widget, you must assign the relevant data source columns to the required widget elements.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a Rich text area (page 1036) widget in the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign one or more data source columns to the **Data column** box using drag and drop.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.13.1 Set properties of widget elements

You can edit the settings, for example, the display name or the format for each widget element.

Settings differ depending on the data type of the assigned data source column. See the option list below for details.

Procedure

1. Click an assigned column in the **Data column** box to specify the settings.
2. Click **OK**.

Your settings are applied. The drop-down menu in the dashboard is displayed with data of the assigned data source.

Options list

Option	Description
New column name	Replaces the default name of the data source column. The column name is also used for the tool tip.
Format	Output format of the column values, that is used for data points or tool tips. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values. Available for numeric columns. Enabled by default.

3.5.8.3.2.13.3.14 Assign data columns to sliders

3.5.8.3.2.13.3.14.1 Set properties of widget elements

You can edit the settings, for example, column name or aggregation, for each widget element.

Procedure

1. Click an assigned data column.
2. Specify your settings.
3. Click **OK** to save your settings and exit the dialog.

The widget is displayed with data of the assigned data source columns.

Option list

Option	Description
Display name	Replaces the data source column name that is used by default. The display name is also used for the tool tip.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.

3.5.8.3.2.13.3.15 Assign data columns to date filters

To display data in the widget, you must assign the relevant data source columns to the widget elements.

The data assigned are used to define a date range for the Date filter (page 1010) widget. You can assign data source columns of **Date** type that are used as start and end values of the date range. Optionally, you can assign columns used as default values. If you do not assign a column to a widget element, you can manually specify the required value in the widget properties. See Date filter (page 1010) for details.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a Date filter (page 1010) widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a data column to the **From** and **To** boxes under **Range** using drag and drop.
The values are initially used as start or end values of the date range.
4. Assign a data column to the **From** and **To** boxes under **Default selection** using drag and drop.
The values are used as default start or end values of the initially selected data range.
5. Click **OK** to save your settings and exit the dialog.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.16 Assign data columns to vector map

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A vector map (page 1045) allows you to interact with a vector-based online map and to visualize geographic areas of interest.

Even without any data assignments, based on the template chosen, you can select regions on the map. This allows you to trigger selection events and to filter other widgets.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a **Vector map** widget on the dashboard. The relevant properties dialog is displayed.
2. Click  **Assign data** to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a data column containing region identifiers to the **ID** element using drag and drop.
4. Assign a data column to the **Region value** element using drag and drop. The element provides numeric values for the individual regions.
5. Assign a data column to the **Region name** element using drag and drop. The element provides names for the individual regions that are used for the labels & tooltips.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.16.1 Set properties of widget elements

For each widget element, such as axis, dimensions or measures, you can edit the settings, for example, axis title, display name or format.

Various settings are available depending on the data type of the assigned data source column. See the Options list below for details.

Procedure

1. Click the source column assigned to the **ID** and specify the display name and the initial selected value.
2. Click the source column assigned to the **Region value**.
 - a. Click the **Text** tab and make your settings..
 - b. Click the **Thresholds tab** to specify the KPI thresholds. See Configure KPI thresholds (page 929) for details
3. Click the source column assigned to the **Region name** and make your settings.
4. Click **OK** to save your settings and to close the dialog.

The chart is displayed in the dashboard with real data of the assigned data source.

Options list

Option	Description
Display name (data point)	New column name displayed in the widget, for example, used for KPI, data points or tool tips. By default, the data source column name is used.
Initial selected value	Initial selected ID. If an ID is specified, the corresponding region will be selected by default.
Text tab	Enables you to specify the column settings.
Thresholds tab	Enables you to specify the threshold values range and to set the background and graphic color.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.
Format	Output format of the column values, for example, used for data points or tool tips. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.

3.5.8.3.2.13.3.16.2 Configure KPI thresholds

You can define thresholds for numeric KPIs to display their status. A colored background shows the threshold range in which a KPI value is located.

Procedure

1. Click a **Color** box to select a background color for each threshold.
2. Select an operator for each threshold to define the KPI value range, for example, < (less than).
3. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric values are valid as dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.

4. Click the  **Plus** button to add a threshold or click the  **Minus** button to remove a threshold.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.17 Assign data columns to map with markers

To display data in a widget, you must assign the relevant data source columns to the required widget elements (for example, to the X-axis).

A map with markers (page 1031) allows you to mark points of interest on a map based on geo-coordinates (latitude & longitude) defined in the assigned data.

Prerequisite

You have assigned a data source to the widget (page 891).

Procedure

1. Click a **Map with markers** widget on the dashboard. The relevant properties dialog is displayed.
2. Click  **Assign data** to edit the data source assignment.
The **Assign data (2/2)** dialog is displayed.
3. Assign a data column containing marker identifiers to the **ID** element using drag and drop.
4. Assign a data column of numeric type to the **Latitude** element using drag and drop. The assigned column should contain the required latitudes for the markers.
5. Assign a data column of numeric type to the **Longitude** element using drag and drop. The assigned column should contain the required longitudes for the markers.
6. Assign a data column of numeric, or text type to the **Marker value** element using drag and drop. The element provides numeric or text values for the corresponding markers.
7. Assign a data column of numeric, text, or date type to the **Marker label** element using drag and drop. The element provides labels for the corresponding markers.

The data source columns are assigned to the widget elements.

3.5.8.3.2.13.3.17.1 Set properties of widget elements

For each widget element, such as axis, dimensions or measures, you can edit the settings, for example, axis title, display name or format.

Various settings are available depending on the data type of the assigned data source column. See the Options list below for details.

Procedure

1. Click the source column assigned to the **ID** and specify the display name and the initial selected value.
2. Click the source column assigned to the **Latitude** and specify the display name.
3. Click the source column assigned to the **Longitude** and specify the display name.
4. Click the source column assigned to the **Marker value**.
 - a. Click the **Text** tab and make your settings.
 - b. Click the **Thresholds tab** to specify the KPI thresholds. See Configure KPI thresholds (page 932) for details
5. Click the source column assigned to the **Marker label** make your settings.
6. Click **OK** to save your settings and to close the dialog.

The chart is displayed in the dashboard with real data of the assigned data source.

Options list

Option	Description
Display name (data point)	New column name displayed in the widget, for example, used for KPI, data points or tool tips. By default, the data source column name is used.
Initial selected value	Initial selected ID. If an ID is specified, the corresponding region will be selected by default.
Text tab	Enables you to specify the column settings.
Thresholds tab	Enables you to specify the thresholds values range and to set the background and graphic color. You must assign at least one KPI to the Y-axis.
Aggregation	Specifies how the KPI value is calculated. Available for numeric columns. Default is Average value. The number of aggregation types provided by context-based widgets may differ from that of non-context-based widgets.
Format	Output format of the column values, for example, used for data points or tool tips. Available for columns of date and numeric type.
Round numerically	Displays rounded KPI values in the chart. Available for numeric columns. Enabled by default.

3.5.8.3.2.13.3.17.2 Configure KPI thresholds

You can define thresholds for numeric KPIs to display their status. A colored background shows the threshold range in which a KPI value is located.

Procedure

1. Click a **Color** box to select a background color for each threshold.
2. Select an operator for each threshold to define the KPI value range, for example, < (less than).
3. Enter a value for each threshold.

You can either enter specific threshold values or you can choose columns from your data source representing dynamic threshold values. Only numeric values are valid as dynamic threshold values. Assign the required numeric data column from the data source to a threshold field using drag and drop.

4. Click the **+** **Plus** button to add a threshold or click the **-** **Minus** button to remove a threshold.

The thresholds are configured for the selected widget.

3.5.8.3.2.13.3.18 Assign data sources to the Function flow diagram_connect

Before you can display content in a dashboard widget, you must first assign a data source to this widget. You can select PPM as data source or any desired data source available in ARIS Connect.

Procedure

1. Click the **Function Flow** widget (page 1015) on the dashboard. The relevant properties dialog is displayed.
2. Click **Assign data** to edit the data source assignment. The **Assign data (1/2)** dialog is displayed.

Here you can select a data source and specify your data source settings.

3. Click **Next**.
4. The **Assign data (2/2)** dialog is displayed.
Here you can assign the data source columns to the individual widget elements. See Settings for details.
5. Assign the data columns to the widget elements using drag and drop.
6. Click the assigned columns to specify the column settings. See Settings for details.
7. Click **OK** to save your settings.

The widget shows a **Function Flow** diagram based on the data of the assigned data source.

3.5.8.3.2.13.3.18.1 Assign data columns of a Process Mining context

If you have configured a Process Mining context for your dashboard, you need only assign the data columns provided by the Process Mining context to the elements of the dashboard widgets (**Assign data (2/2)** dialog). You do not have to assign a data source to each widget first (**Assign data (1/2)** dialog). The Process Mining context is automatically assigned to all widgets in the dashboard that have no data source assigned.

By default, the Process Mining context provides all available data columns of the PPM system. For the **Function Flow** widget, the columns are automatically filtered, and the Process Mining context provides all relevant data columns.

Procedure

1. Click the **Function Flow** widget on the dashboard. The relevant properties dialog is displayed.
2. Click **Assign data** to edit the data source assignment. The **Assign data (2/2)** dialog is displayed.
Here you can assign the data source columns to the individual widget elements. For details, see chapter Settings.
3. Assign the data columns of the Process Mining context to the widget elements using drag and drop.
4. Click the assigned columns to specify the columns settings. For details, see chapter Settings.
5. **You can configure thresholds for the function measure values.**
6. Click **OK** to save your settings.

The widget shows a **Function Flow** diagram based on the data of the assigned data source.

If you do not want to use context-based data columns, you can assign any other data source provided. You can change the data source by clicking **Use other data**. The **Assign data (1/2)** dialog opens. Here you can assign any data source provided. If you assign another data source, you cannot reassign the PPM context to the dashboard widget. For details, see chapter Assign data sources.

If required, you can adjust the list of data columns provided for the data columns assignment. Click **Edit context** to edit the data columns specified in the Process Mining context.

For details on using and configuring a Process Mining context, see the MashZone NextGen online help.

3.5.8.3.2.13.3.18.2 Configure thresholds

You can define thresholds for the function measures to display their status. In view mode, a colored marker shows the threshold range in which a function measure value is located.

Procedure

1. Click a **Function measure value** box that contains an assigned data column.
2. Under **Thresholds** click a **Color** box to select a color for each threshold.
3. Select an operator for each threshold to define the measure value range, for example, < (less than).
4. Enter a value for each threshold.
Only numeric values are allowed.
5. Click the **+** **Plus** button to add a threshold or click the **-** **Minus** button to remove a threshold.

By default, there are initially three lines to configure thresholds.

The thresholds are configured.

In dashboard view mode, you can view the colored markers for each function measure for which you have specified thresholds. (page 860)

Column matching

To facilitate the assignment of the source columns to the widget elements, the names of the source columns are automatically matched to the default names of the columns in the standard customizing (in English and German only). The matching is only done if there are no columns already assigned to some widget elements.

The following elements of the **Function Flow** widget are matched (the comparison is case insensitive):

- Start function
Contains "Function (Start)"
Contains "(Start)"
- End function
Contains "Function (Target)"
Contains "(Target)"
- Function names
Contains "Function" then
Is exactly "Function"
- Number of start functions
Contains "Number of start functions" then
Contains "Number of start functions"
- Number of end functions
Contains "Number of end functions" then

Contains "Number of end functions"

- Relevance column

Is estimated if there is only a single column with type numeric, then

Is exactly "Number of processes" then

Contains "Number of processes"

If there is no matching source column for a widget element, the widget element stays unassigned, and you must manually assign the column to be used.

3.5.8.3.2.13.3.19 Assign data columns to Conformance check widget

Before you can display content in the **Conformance check** widget (page 960), you must first assign all required data columns to this widget. The column assignment is done automatically (page 937) based on your Process Mining context (page 881) settings, but you must open the assignment dialog to confirm the settings.

The Process Mining context provides all relevant data based on the measures and dimensions configured in PPM. The required measures and dimensions for the **Conformance check** widget are only available if you have configured PPM for a conformance check accordingly. For details on configuring a conformance check, see the **PPM Process Conformance Checking with ARIS** document.

To assign the relevant data columns to the widget elements, you must first set the **Conformance issue** relation as **Relation for measures and dimensions** in the Process Mining context (page 881).

Prerequisites

You have configured PPM to perform a conformance check.

You have created a Process Mining context. (page 881)

You have specified the **Conformance issue** relation for the Process Mining context.

Procedure

1. Click the **Conformance check** widget on the dashboard. The relevant properties dialog is displayed.
2. Click **Assign data** to edit the data source assignment. The **Assign data (2/2)** dialog is displayed.

Here you can assign the data source columns to the individual widget elements. For details, see chapter Settings.

3. Assign the data columns of the Process Mining context to the widget elements using drag and drop.

By default, the relevant columns are already assigned to the widget elements.

The following widget elements are mandatory. If they are not configured, no data is displayed in the widget.

- Number of processes
- Conformance rate
- Conformance issue type
- Non-conforming function
- Preceding function

4. Click the assigned columns to specify the columns settings. For details, see chapter Settings.
5. Click **OK** to save your settings.

The widget shows a **Conformance check** based on the assigned data columns.

If required, you can adjust the list of data columns provided for the data columns assignment. Click **Edit context** to edit the data columns specified in the Process Mining context.

3.5.8.3.2.13.3.19.1 Column matching

The source columns are automatically matched to the widget elements based on keywords of the criteria. The criteria keywords are defined in the PPM settings specifically for the PPM conformance check with ARIS.

For details on configuring a conformance check, see the **PPM Process Conformance Checking with ARIS** document.

The names of the widget elements are also taken from the PPM settings. The names are in English only, but you can change them manually.

The matching is only done if there are no columns already assigned to some widget elements.

The following elements of the **Conformance check** widget are matched:

- Number of processes
Column is a process measure with keyword **PNUM**.
Is exactly "Number of processes" then
Contains "Number of processes".
- Conformance rate
Column is a process or relation measure with keyword **KI_CONFORMANCE_RATE**.
Is exactly "Conformance rate [%]" then
Contains "Conformance rate".
- Conformance issue type
Column is a relation dimension with keyword **D_CONFORMANCE_ISSUE_TYPE**.
Is exactly "Conformance issue type (Conformance issue)" then
Contains "Conformance issue type".
- Non-conforming function
Column is a relation dimension with keyword **D_NONCONFORMING_FUNCTION**.
Is exactly "Non-conforming function (Conformance issue)" then
Contains "Non-conforming function".
- Preceding function
Column is a relation dimension with keyword **D_PRECEDING_FUNCTION**.
Is exactly "Preceding function (Conformance issue)" then
Contains "Preceding function".

If there is no matching source column for a widget element, the widget element stays unassigned, and you must manually assign the column to be used.

3.5.8.3.2.13.3.19.2 Settings

The **Conformance check** widget requires assigned columns for the elements **Number of processes**, **Conformance rate**, **Conformance issue type**, **Non-conforming function**, and **Preceding function**.

You can specify the **Display name** and **Format** for the **Number of processes**, **Conformance rate**, and **Additional measures** elements. For **Additional measure**, you can additionally specify the **Aggregation**. If you enable the **Round numerically** option, the values are rounded according to the specified format, otherwise the digits are truncated.

Option list

Field	Description
Number of processes	Provides the number of conforming and non-conforming processes for each additional measure and additionally per conformance issue type. Allows only numeric columns. The values are displayed in the overview and issues area of the widget. The element is required.
Conformance rate	Provides the conformance rate (page 962) of process instances. The conformance rate distinguishes between conforming (conformance rate = 100%) and non-conforming (conformance rate = 0%) processes. Allows only numeric columns. The element is required.
Conformance issue type	Provides the conformance issue type (page 963). Allows only text columns. The values are displayed in the issues area of the widget together with the non-conforming function. Additionally, the preceding function is displayed if the issue type is "should not follow". The element is required.
Non-conforming function	Provides the non-conforming function that causes the issue type. Allows only text columns. The values are displayed together with the issue type in the issues area of the widget. The element is required.

Field	Description
Preceding function	<p>Provides the preceding function if the issue type is "should not follow". Otherwise the value of this element is not displayed.</p> <p>Allows only text columns.</p> <p>The values are displayed together with the issue type in the issues area of the widget.</p> <p>The element is required.</p>
Additional measures	<p>Provides two additional measures that can be used to display the difference of the measure regarding conforming and non-conforming process instances.</p> <p>Allows only numeric columns and columns that contain process measures.</p> <p>The values are displayed in the overview and in the issues area.</p> <p>The element is optional.</p> <p>By default, the first field is preset with the PDLZ measure if it is available. You can also add the same measure twice with different aggregations. But in this case, the display names of both fields must be different.</p>

Advanced options

Field	Description
Display name	<p>New column name displayed in the widget that is used for measure, data point, or tool tip, for example.</p> <p>By default, the data source column name is used.</p>
Aggregation	<p>Specifies how the measure value is calculated. Available for numeric columns. The preset aggregation type depends on the configuration in PPM.</p> <p>The number of aggregation types provided by context-based widgets may differ from non-context-based widgets.</p>
Format	<p>Output format of the column values that is used for data points or tool tip, for example. Available for columns of date and numeric type.</p>
Round Numerically	<p>Displays rounded measure values in the chart. Available for numeric columns. Enabled by default.</p>

3.5.8.3.2.13.3.20 Assign data sources to the Variant widget

Before you can display content in the variants widget, you must first assign a data source to this widget. You can select PPM as data source or any desired data source available in MashZone NextGen.

Procedure

1. Click the **Process Variants** widget on the dashboard. The relevant properties dialog is displayed.
2. Click **Assign data** to edit the data source assignment. The **Assign data (1/2)** dialog is displayed.
Here you can select a data source and specify your data source settings.
3. Click **Next**.
4. The **Assign data (2/2)** dialog will be displayed.
Here you can assign the data source columns to the individual widget elements. See Settings (page 943) for details.
5. Assign the data columns of the PPM context to the widget elements using drag and drop.
6. Click an assigned column to specify the column settings. See Settings (page 943) for details.
7. Click **OK** to save your settings.

The widget shows a bar chart based on the data of the assigned data source.

3.5.8.3.2.13.3.20.1 Assign data columns of a PPM context

If you have configured a Process Mining context for your dashboard, you need only assign the data columns provided by the Process Mining context to the elements of the dashboard widgets (**Assign data (2/2)** dialog). You do not have to assign a data source to each widget first (**Assign data (1/2)** dialog). The Process Mining context is automatically assigned to all widgets in the dashboard that have no data source assigned.

By default, the PPM context provides all data columns of the PPM system. For the **Process Variants** widget, the columns are automatically filtered, and the PPM context provides only the variant dimension and numeric columns available.

Procedure

1. Click the **Process Variants** widget on the dashboard. The relevant properties dialog is displayed.
2. Click **Assign data** to edit the data source assignment. The **Assign data (2/2)** dialog is displayed.

Here you can assign the data source columns to the individual widget elements. See Settings (page 943) for details.

3. Assign the data columns of the PPM context to the widget elements using drag and drop.
4. Click the assigned columns to specify the columns settings. See Settings (page 943) for details.
5. Click **OK** to save your settings.

The widget shows the variants as a bar chart based on the data of the assigned data source.

If you do not want to use context-based data columns, you can assign any other data source provided. You can change the data source by clicking **Use other data**. The **Assign data (1/2)** dialog opens. Here you can assign any data source provided. If you assign another data source, you cannot reassign the PPM context to the dashboard widget. For details, see chapter Assign data sources (page 940).

If required, you can adjust the list of data columns provided for the data columns assignment. Click **Edit PPM context** to edit the data columns specified in the PPM context.

For details on using and configuring a Process Mining context, see the MashZone NextGen online help.

Column matching

To facilitate the assignment of the source columns to the widget elements, the names of the source columns are automatically matched to the default names of the columns in the standard customizing (in English and German only). The matching is only done if there are no columns already assigned to some widget elements.

The following elements of the **Process Variants** widget are matched (the comparison is case insensitive):

- Variant dimension
Is exactly "Variant"

Contains "Variant"

- Primary measure

Is only matched if there is only a single column with numeric type.

If there is no matching source column for a widget element, the widget element stays unassigned, and you must manually assign the column to be used.

3.5.8.3.2.13.3.20.2 Settings

The **Process Variants** widget requires one column for the **Variant dimension** and one for the **Primary measure** element. Additionally, you can assign a data source column to the optional **Additional measure** element.

You can specify the **Display name** for the **Variant dimension** element. For the **Primary measure** and **Additional measure** elements, you can specify the **Display name** and the **Format**. If you enable the **Round numerically** option, the values are rounded according to the specified format, otherwise the digits are truncated. A column used as **Primary measure** cannot be used as **Additional measure** and vice versa.

If you use the PPM context for a **Process Variants** widget, you can rename the **Display name** of the **Primary measure** and **Additional measure** widget elements.

Option list

Field	Description
Variant dimension	<p>Contains the column with the names of the variants, for example, v1, v2, or v1-3. The names are displayed as labels of the bars.</p> <p>Mandatory.</p> <p>Allows only text columns.</p> <p>If the field is empty, no chart is displayed.</p>
Primary measure	<p>The values are used to compute the length of the bars and the sorting order of the variants. The data is always sorted in descending order. The order cannot be changed.</p> <p>Mandatory.</p> <p>Allows only numeric columns.</p> <p>If the field is empty, no chart is displayed.</p>
Additional measure	<p>Contains additional measure values assigned to the various variants. The values are displayed on the right side of the chart besides the bars.</p> <p>Optional.</p> <p>Allows only numeric columns.</p>

Advanced options

Field	Description
Display name	New column name displayed in the widget, that is used for measure, data point, or tool tip, for example. By default, the data source column name is used.
Aggregation	Specifies how the measure value is calculated. Available for numeric columns. The preset aggregation type depends on the configuration in PPM. The number of aggregation types provided by context-based widgets may differ from non-context-based widgets.
Format	Output format of the column values, that is used for data points or tool tip, for example. Available for columns of date and numeric type.
Round Numerically	Displays rounded measure values in the chart. Available for numeric columns. Enabled by default.

3.5.8.3.2.13.3.21 Create input parameters

You can create input parameters to enter dynamic values that are passed to the data transformation step (for example, for filtering) or passed to the data source itself.

You can use parameter sets to create dynamic URLs for your XML source and RAQL queries. The parameters are used to dynamically pass context from dashboards to applications using the URL. You can create dynamic URLs and query parameters that provide the required context to open URLs, to invoke web services, etc.

Procedure

1. Click a widget on the dashboard. The relevant properties dialog is displayed.
2. Click the  **Assign data** icon to edit the data source assignment.
The **Assign data (1/2)** dialog is displayed.
3. Click the **Input parameters** box.
4. Click the input parameter type required in the **Add input parameters** bar.
The data types **Text**, **Number** and **Date** are available for input parameters. They allow the dynamic entry of text, date or numerical values in data feed processing.
5. Enter a **Name** for your parameter set.
6. Enter an optional **Default value**.
The default value is used if no value is passed from the dashboard to the input parameter.
7. Enter a **Preview value**.
The preview value is used to calculate a data preview (debug run) in the data assignment dialog. See Assign data sources to widgets (page 891).
8. Click the **Data flow** box to display the data source assignment overview.

The input parameter is displayed in the **Input parameters** box. The defined input parameters are only available for the currently selected widget.

You can use the input parameters for the **XML**, **CSV**, **MS Excel**, and **ARIS Table** data sources. Available input parameters are provided by the data source operator via an additional button.

If you use the input parameter in an XML data source URL, you can specify that the value of the parameter must be URL encoded. For an input parameter of **Date** or **Number** type, you can additionally specify the format pattern in the data source operator.

To specify the parameter properties click the inserted input parameter and select the option required.

Input parameters can also be used as filter elements for several data transformation operators, for example, Insert column, to enter dynamic values in columns. The list of parameters provided, depends on the selected data type of the relevant column.

The input parameters are also provided as filter elements by the widget. See Define filters for widgets (page 946) for details.

3.5.8.3.2.13.4 Remove widgets from dashboard

You can remove widgets from a dashboard.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Select one or more widgets on the dashboard. A corresponding pop-up menu is displayed.
3. Click the **Delete** icon in the pop-up menu.
4. Click **Delete**.

The widgets selected are deleted from the dashboard.

3.5.8.3.2.13.5 Define filters for widgets

In dashboard edit mode, you can define relations between widgets by specifying filter conditions for selected widgets. The defined filters can be used in dashboard view mode (See Use interactive filters in your dashboards (page 853)).

Most widgets support data filters. Especially, the **Drop-down box** (page 1014), **Input field** (page 1024) and **List** (page 1029) widgets can be used for filtering other widgets. (See Insert widgets to a dashboard (page 890)).

FILTERING USING MULTIPLE SELECTION

Multiple selection allows you to filter widgets by selecting multiple values, such as multiple rows or data points, in a widget. See Use interactive filters in dashboards (page 853) for details.

In particular, the List (page 1029) widget is provided for filtering using multiple selection.

The values selected in a widget are processed as a list and passed on to the widget to be filtered. The widget to be filtered must also support multiple selection. This means that the filtered widget is enabled to process a list of values

and not only a single value. You can enable a widget and, respectively, the assigned data feed to receive and process a value list by inserting user inputs (input parameters (page 945)) of **List** type in the data feed, Date user input (List) (page 1112), Number user input (List) (page 1114), and Text user input (List) (page 1116).

If user inputs (input parameters) of List type have been defined, they are listed below the **Source columns** of a widget. They are identified by their own list icon.

Note that user inputs (input parameters) of **List** type cannot be used to filter single values. For details see Configure filters for Process Mining context-based widgets (page 886) and Use the filter panel of Process Mining context-based widgets (page 854).

PROCESS MINING CONTEXT-BASED DASHBOARDS

The filter definition method described below is not supported by Process Mining context based widgets. The filter conditions are automatically set when you assign data columns of the Process Mining context to the widgets.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. If you have placed a widget on several tabs, select the tab containing the widget for which you want to set a filter. You cannot change the tab in the filter dialog. See Display widgets on several dashboard views (page 956) for details.
3. Click a widget on the dashboard. The relevant properties dialog is displayed.
4. Click the  **Filter** icon to edit the filter configuration. The filter dialog of the selected widget displays the **Source columns** assigned to the widget and the **Select filter widget** bar. See Assign data sources to widgets (page 891) for details.

If applicable, input parameters are displayed as additional filter widgets. If input parameters have been defined, they are listed below the **Source columns** of a widget. See Create input parameters (page 945) for details.

If invisible columns have been defined, they are listed as **Source columns**. Invisible columns are not displayed in the widget, but they can be used as a filter criterion. See Assign data sources to widgets (page 891) for details.

5. Drag the column that you want to filter from the **Source columns** box and drop it into the **Drop here to define a new filter** field. The **Define filter condition** dialog is displayed. All widgets that can be used as a filter are highlighted. The columns in the **Available coordinates** box for each widget can be used as filter condition values.

6. Define the filter condition.

You can use a column or a constant value as filter condition.

- a. Select a condition from the drop-down menu, for example, **is equal to**.
- b. Drag a coordinate from the **Available coordinates** box of the widget that you want to use as filter widget and drop the selected coordinate into the empty filter condition field.
- c. Alternatively, you can enter a constant value as filter condition.
- d. To enable case sensitivity, click the  **Match case / Ignore case** icon. This option is available only for coordinates or values of type **Text**.
- e. If the filter conditions are considered to be fulfilled, even if the selected values are empty, click the  **Empty compare values are accepted** icon.
- f. Click the **Add** icon to add a filter condition.
- g. Enable the **block values** option to block the rows that meets the condition.

7. Click **Add an additional filter** to add filters to other source columns.

8. Click **Save filter**.

Your filter conditions are saved and can be applied to your dashboards (page 853).

3.5.8.3.2.13.6 Specify actions for widgets

You can assign actions to specific widgets (for example, charts, traffic light, label, image). The actions either select and apply data in widgets, or open another dashboard tab, or open a specific URL.

You can specify a data selection for a specific widget on a dashboard tab, for example, a column in a table. The widget is then displayed with the selected data applied. If the selected data also serves as a filter for other widgets, these widgets are filtered accordingly.

Depending on the selected widget, the actions are triggered by clicking a widget, by a mouse over event or by a selection change event.

On mouse over events are performed if you move your mouse pointer over a data point of a widget, for example, a coordinate of a line chart. **On selection change** events are performed if you click a data point in a chart or if you delete a data selection in a widget.

For the **Grid** widget additional trigger options can be available, depending on your **Grid** widget settings. That are **On "item" click** and **On "item" traffic light click**. Whereby "item" is a placeholder for a column name. In the Grid widget settings you can make column cells clickable for triggering actions. See Assign data columns to grids (page 906) for details.

You can use the defined action in the dashboard view mode. See Open a dashboard in MashZone NextGen. Depending on the widget, you can delete a selection by clicking in the background or selecting the **Clear selection** option in the pop-up menu () of the widget.

3.5.8.3.2.13.6.1 Change tab

By triggering, the action calls another dashboard tab.

The action is only available if you have added one or more views in the dashboard. See Add dashboard tabs (page 958).

If you deactivate the option, the action will not be deleted but deactivated in view mode.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a chart widget on the dashboard that supports actions. The relevant properties dialog is displayed.
3. Click the **Action** tab.
4. Select the action trigger event in the **Trigger** drop-down menu.
The actions available dependent on the widget selected.
5. Activate the **Change** tab option.
6. Select the target tab in the drop-down menu.

Your settings are applied and your action is specified for the selected widget.

3.5.8.3.2.13.6.2 Set selection

By triggering, the action sets a data selection in a target widget. The target widget is displayed applying the data selected.

This action sets a specific selection, for example, a column in a table or a data point in a chart, in one or several target widgets. The target widgets can be placed on any tab available in the dashboard. If the data selected also represents filter values for another widget, this widget is filtered accordingly.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a chart widget on the dashboard that supports actions. The relevant properties dialog is displayed.
3. Click the **Action** tab.
4. Select the action trigger event in the **Trigger** drop-down menu.
The actions available dependent on the widget selected.
5. Enable the **Set selection** option.
If you deactivate the option, the action will not be deleted but deactivated in view mode.
6. Configure the **Set selection** action.
 - a. Click **Configure** to set the action configuration.
Initially, all **Available coordinates** of the target widgets are displayed.
 - b. Set the coordinates of the widget that you want to select by your action. For this, drag the relevant coordinate and drop it in the field in the **Select selection component** area.
 - c. Set the values that should be selected. You can enter a constant value or you can assign the values of a coordinate of another widget. Select a tab, drag the relevant widget coordinate, and drop it in the **Selection** box of the previously set coordinate.
Only the coordinates with the fitting values are provided.
 - d. Click **Add an additional selection** to define a further selection.
 - e. Click **Save action**.

Your settings are applied and your action is specified for the selected widget.

3.5.8.3.2.13.6.3 Call URL

By triggering, the action calls a specific URL.

The target widgets can be placed on any tab available in the dashboard.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a chart widget on the dashboard. The relevant properties dialog is displayed.
3. Click the **Action** tab.
4. Select the action trigger event in the **Trigger** drop-down menu. The actions available dependent on the widget selected.
5. Enable the **Call URL** option.

If you disable the option, the action is not deleted but it is deactivated in view mode.

6. Set the action configuration.

- a. Click **Configure**.

- b. Enter the target URL in the **URL** input box of the **Enter target URL** area.

You have the option to create a dynamic URL by adding available coordinates to the URL. For this you can insert the coordinates from several widgets via drag and drop. A selected coordinate will be placed on the current cursor position in the **URL** input field.

You can also add coordinates of widgets placed on any tab available in the dashboard. In this case select a tab first and then insert the relevant **Available coordinates** in the **URL** input field via drag and drop.

In case of a coordinate of type **number** or **date**, click the inserted coordinate and select a format pattern.

To ensure that a coordinate is URL encoded, click the inserted coordinate and activate the **Use URL encoding** option.

- c. In the Target window field you can enter a name of the window where the URL should be opened, or you can select a target attribute in the drop-down menu. Available attributes are **_blank** (new window), **_self** (self window), **_parent** (parent window), and **_top** (entire window).

- d. Click **Save action**.

Your settings are applied and your action is specified for the selected widget.

3.5.8.3.2.13.6.4 Specify an image source URL

You can configure the source of an image (page 1023) to be displayed on a dashboard. You can specify a specific URL or select a URL alias as image source. You can also define a dynamic URL to use in view mode.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click an inserted image on the dashboard. The relevant properties dialog is displayed.
3. Click the  **Source URL** icon. The corresponding dialog opens.
4. To define a specific URL, select **URL** from the **Source** drop-down menu and enter a URL in the URL input field.
5. To select a URL alias, select **URL alias** from the **Source** drop-down menu and select an alias from the **Path prefix (alias)** drop-down menu.

The **Path prefix (alias)** drop-down menu provides aliases configured in the administration. Only URL aliases without basic authentication are provided. Only the URL aliases for which you have the appropriate permissions are provided.

6. Enter a URL in the **Default source** input box to specify an image to be displayed when no selection is made. The image is also displayed in edit mode. If this box is left empty, no image is shown.
7. Define a dynamic URL using selections (coordinates). The dynamic URL takes effect only in view mode.
 - a. You can create a dynamic URL by adding available coordinates to the URL. For this you can insert the coordinates from several widgets using drag and drop. A selected coordinate is placed at the current cursor position in the URL input field.
 - b. You can also add coordinates of widgets placed on any tab available in the dashboard. In this case, select a tab first and then insert the relevant available coordinates in the URL input field using drag and drop.
 - c. Click **Configure input** to change the format of a coordinate to type **Date** or **Number**. The option is enabled only if at least one coordinate is inserted in the URL input field.
 - d. In case of a coordinate of type **number** or **date**, click the inserted coordinate and select a format pattern.
 - e. To ensure that a coordinate is URL encoded, click the inserted coordinate and activate the **Use URL encoding** option.

8. Click **OK**.

Your settings are applied and the URL is specified for the selected image.

3.5.8.3.2.13.6.5 Post data

The action creates an outbound API to pass data from MashZone NextGen dashboards to an embedding system, for example, an external web application.

The API data structure consists of the dashboard id, the specified external widget id (**URL-ID**, see: Use dynamic URL selection (page 983)), the selected coordinate names (columns), the selected coordinate values, and the name of the event triggering the outbound data push. See the **MZNG outbound data structure** example below.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click an inserted chart widget that supports actions. The relevant properties dialog is displayed.
3. Click the **Action** tab.
4. Select the action trigger event in the **Trigger** drop-down menu.

The available actions depend on the selected widget.

5. Activate the **Post data** option.

If you disable the option, the action is not deleted but it is deactivated in view mode.

6. Click **Configure** to set the action configuration.
 - a. Select the coordinates that you want to add to the outbound data.

The coordinates selected are added to the outgoing data, that is displayed in the Outbound data preview box.
 - b. Click **Save action**.

Your settings are applied and your action is specified for the selected widget.

Example

The outbound data is structured as follows:

```
{
  "dashboardGUID": "d216bf4a-bd12-476d-aa5d-2a07a3efd4bf",
  "outbound Widgets": [
    {
      "extId": "widget2",
      "outboundData": [
        { "name": "ARTIST",
          "value": "Bob Dylan",
          "type": "TEXT"
        },
        {
          "name": "PRICE",
          "value": "11.0",
          "type": "NUMERIC"
        }
      ]
    },
    { "trigger": "onSelectionChange" }
  ]
}
```

By triggering the **Post data** action, MashZone NextGen sends the configured outbound data using **window.postMessage()** events. In order to receive the events in an embedding system a listener function must be implemented as in the example below:

```
function listener(event){
// The origin of the window that sent the message
// at the time postMessage was called
// Format: protocol://host:port var origin = event.origin
// A reference to the window object that sent the message var source =
event.source;
// The posted data object var data = event.data;
}
if (window.addEventListener){ addEventListener("message", listener, false) }
else { attachEvent("onmessage", listener) }
```

3.5.8.3.2.13.7 Hide or display widget header and border

You can hide the header and the outline of the widget container.

The header and the outline of certain widgets are hidden by default, for example, Input field and Combobox.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. A corresponding pop-up menu is displayed.
3. Click the **Config** tab to set the display options.
4. Click **More options**.
5. Set the **Container** header and border.
 - Click the **Hide header** icon. This option hides the header and the title of the widget and resizes the content. To unhide the header, click the icon again.
 - Click the **Hide border** icon. This option hides the outline of the widget container. To unhide the outline, click the icon again.

The header and outline of the widget are hidden or displayed.

3.5.8.3.2.13.8 Resize widgets

You can scale the size of widgets.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The widget is displayed with a frame.
3. In smart dashboards
 - a. Resize the widget width by dragging the anchor point of the frame with your mouse pointer.

A widget width can be resized across multiple empty fields.

- b. Resize the widget height by resizing the height of the row in which the widget is inserted. To resize the row height, drag the upper or lower row border with your mouse pointer.

The height of all widgets that are inserted into the same row is resized automatically.

4. In fixed-grid dashboards drag the anchor point of the frame with your mouse pointer.

The selected widgets are resized.

3.5.8.3.2.13.9 Move widgets to the foreground or background

On the dashboard, you can move widgets to the foreground or background. For example, you can display a chart in the background of the dashboard and place several widgets on top of it. This option is only available in fixed-grid dashboard mode. See [Switch to fixed-grid workspace \(page 870\)](#) for details.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Select one or more inserted widgets in the dashboard. A corresponding pop-up menu is displayed.
3. Set **Layering**
 - Click **Bring to front**. Displays the widget in front of one or more other widgets.
 - Click **Bring forward**. Brings the widget one level forward.
 - Click **Send backward**. Brings the widget one level backward.
 - Click **Send back**. Displays the widget behind one or more other widgets.

The selected widgets are moved forward or backward on the dashboard.

3.5.8.3.2.13.10 Copy and paste widgets in dashboards

You can copy or cut widgets and paste them in the same or in any other tab of the dashboard.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. A corresponding pop-up menu is displayed.
3. Click the **Copy** icon in the pop-up menu to copy the selected widgets to the clipboard.
4. Click the **Paste** icon in the pop-up menu to insert the copied widgets in the same tab of the dashboard.
5. Click the **Cut** icon in the pop-up menu to cut the selected widget and copy it to the clipboard.
6. Open any tab of the dashboard and press **Ctrl+V**.

Filter relations between copied widgets are retained.

The widget selected is copied to the clipboard and pasted in the selected dashboard tab.

3.5.8.3.2.13.11 Display widgets on multiple dashboard tabs

You can display a widget on multiple views of a dashboard.

A widget that is placed on multiple tabs can be used for filtering other widgets and for triggering selection events across multiple tabs. At the same time, the global placed widget can be filtered and triggered by other widgets. If a global widget is selected (for example, if you click a data point of a line chart), the selection is shown on all tabs on which the widget is placed. The dependent filters and actions are triggered for the entire dashboard.

The option is only available for dashboards that use the fixed grid work space.

On each tab, the widget has the same features such as position, size, configuration and filter conditions etc., except for the widget layering. See *Move widgets to the foreground or background* (page 954).

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget. The relevant properties dialog is displayed.
3. Click **More options**.
4. Click **Select tabs** and select the tabs on which the widget should be placed.

Before you can display a widget on several views, you must first add one or more tabs. See *Add dashboard tabs* (page 958) for details.

5. To remove a widget from a tab, deselect the relevant tab in the **Select tabs** menu.
You cannot remove a widget from the currently activated tab.
6. To delete a widget click **Delete** in the pop-up menu.

If you delete a widget on a tab, the widget is deleted on all tabs on which it is used.

The widget is placed on several tabs and displayed on the corresponding dashboard tabs.

You can use an action defined in dashboard view mode. See *Use dashboards in view mode* (page 852).

3.5.8.3.2.13.12 Change the widget style

You can assign a different style to a widget on your dashboard. Using styles you can customize the look and feel of your widgets, for example, colors schemes, fonts or background color.

The styles provided for the selected widget are part of the style template that is assigned to the current dashboard (page 874).

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget on the dashboard. The relevant properties dialog is displayed.
3. Click **More options**.
4. Select a style in the **Style** drop-down menu.

The selected style is applied to the current widget.

3.5.8.3.2.14 Configure dashboard tabs

You can configure the individual dashboard tabs in the dashboard editor.

3.5.8.3.2.14.1 Add dashboard tabs

You can add additional dashboard tabs. The individual views are displayed on separate tabs.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click the  **New tab** icon beside the tab name.

A new tab is added. The tab is displayed as a separate dashboard tab in view mode.

3.5.8.3.2.14.2 Delete dashboard tabs

You can delete any view from a dashboard. A dashboard tab is displayed as a separate tab in the dashboard editor.

Warning

Deleted dashboard tabs cannot be restored.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click  **Show menu** beside the relevant tab title.
3. Click **Delete** in the pop-up menu.
4. Click **Delete**.

The selected dashboard tab is deleted.

3.5.8.3.2.14.3 Set dashboard tab properties

You can set the properties of a dashboard tab. You can specify a name for the dashboard tab, select a style and set the selected view as default.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a dashboard tab.
3. Click the  **Settings** icon beside the tab title.
4. Enter a text in the **Name** box in the pop-up menu.
5. To set the dashboard tab style, click the **Style** selection box and select a style.
This option is only available for smart dashboards.
6. To set the dashboard tab background, click the color selection box and select a background color.
This option is only available for fixed-grid dashboards.
7. Click **Set tab as default** to set the current selected tab as the default view.
The default view is displayed initially when you open the dashboard in view mode.

The dashboard tab properties are set.

3.5.8.3.2.14.4 Set dashboard tab style

You can change the style, for example, the background color, applied to the dashboard tab.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click  **Show menu** beside the tab title of the relevant tab.
3. Click the **Style** selection box and select a style.

The dashboard tab style is set.

3.5.8.3.2.14.5 Set dashboard tab as default

You can set the current selected tab as the default tab. The default tab is displayed initially when you open the dashboard in view mode.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click  **Show menu** beside the tab title of the relevant tab.
3. Click **Make default**.

The dashboard tab is set as default view.

3.5.8.3.2.15 Conformance check widget

The **Conformance check** widget displays the result of a process conformance check performed in PPM. A process conformance check analyzes whether an executed and measured process instance is compliant with a designed process model in ARIS.

The Conformance check (page 1009) widget shows conformance issues and the influences of the processes with conformance issues compared to the modeled to-be processes.

For details on performing a performance check, please refer to the **PPM conformance checking with ARIS** document.

The widget provides an overview area and an issue area.

OVERVIEW AREA

By default, the overview area displays the values of the **Number of processes** measure and up to two additional measures, if these have been configured.

If the aggregation of the measure is average, the impact of the measure is displayed as well.

If no measured values for the additional measures exist for non-compliant or compliant processes, this is indicated by hyphen "-", and no impact is displayed.

If only non-conforming processes exist, no impact is calculated and only the value of the non-compliant processes is displayed for all additional measures.

If no non-conforming issues exist, only the **Number of processes** measure is displayed with the value "0 vs <Number of processes of conforming processes>".

ISSUE AREA

The issue area shows the different issue types and the function that caused the issue. You can select an issue type in the corresponding drop-down menu to filter the issue list. A tooltip displays additional information. The drop-down menu provides all identified issue types. Initially, all available issue types are displayed.

The bar displays the relative value of the non-conforming processes of an issue in relation to the overall non-conforming processes. In the example below, the issue **Create contract should not start process** was caused by 66% of the non-conforming issues (4833 out of 7303 non-conforming issues).

For measures with an **Average** aggregation specified, the value next to the bar displays the impact of non-conforming processes compared to the conforming processes.

For measures with a different aggregation type, only the resulting measure value for this issue is displayed.

A hyphen "-" indicates that no measure value could be retrieved. A tooltip displays additional information.

CONTEXT FILTER

You can use the **Conformance check** widget to set a context filter (page 886), and the widget can be filtered by a context filter of another widget. To set a context filter in the widget, select an issue in the issue list. The widget currently provides the coordinates **Non-conforming function**, **Conformance issue type**, and **Preceding function** for context filter. For details on how to define a context filter, refer to the chapter Configure filters for Process Mining context-based widgets (page 886).

ACTIONS

The **Conformance check** widget supports various actions (page 948).

SELECTION

The widget supports the selection from other widgets, that is, other widgets can be used to set a selection (page 949) in the **Conformance check** widget. At least the criteria **Conformance issue type** and **Non-conforming function** must be configured, otherwise it is not possible to select a specific line in the **Conformance Check** widget.

Example: Conformance check widget

3.5.8.3.2.15.1 Conformance rate

The output of the conformance calculation is the **Conformance rate** measure aggregated by average, with the two possible values 0.0 (non-conformant) and 1.0 (conformant). The conformance rate, for example, could have a value of 0,87, that is 87%, of all process instances available are conformant to the reference process.

The ARIS reference model establishes the order in which functions should be executed. This order is not a simple linear sequence, however, because the model may contain splitting AND rules. The branches emanating from such rules may be executed in parallel, so that there are many execution sequences that are compatible with such a rule. Joining rules, on the other hand, are synchronization points: They indicate that execution of all functions in the incoming branches must have terminated before any function that follows a joining rule is executed.

The conformance check converts a process instance into a linear sequence of functions. It then determines whether each step in the functional sequence corresponds to the order of these functions in the reference model. If one or more PPM functions are excluded from the conformance check, the corresponding functions are also removed from the sequence of functions of the process instance. If all functions have been excluded, PPM cannot calculate the conformance rate. Furthermore, in order to be considered conformant, the last step must terminate in one of the end events modeled for the process. This implies that unfinished processes (that is, processes that require further imports to be completed) are most likely classified as non-conformant.

The conformance check distinguishes between different reasons for the non-conformance of process instances (page 963).

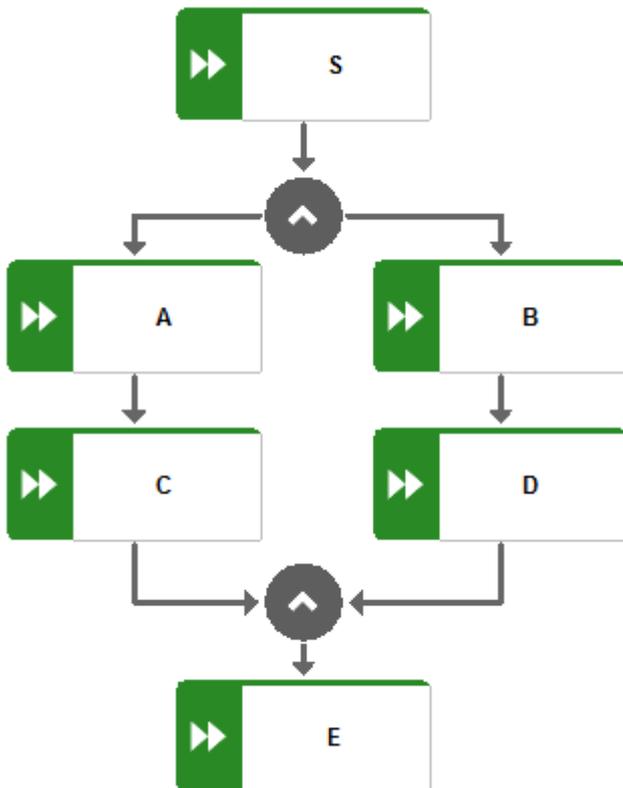
3.5.8.3.2.15.2 Conformance issues

The conformance check identifies possible reasons why a sequence of functions does not conform to a reference model. The reasons for the non-conformance are called **conformance issues**.

There are four different types of conformance issues.

Example

The following figure shows a schematic EPC with the start function **S** and the end function **E**. The EPC is the reference model for the examples of the non-compliance types described below.



- Non-compliance type I
A particular pair of functions occurs in the wrong order.
This issue is signaled by the dimension value **ShouldNotFollow**.

Example

The process step A **should not follow** process step C.

non-conformant function order: S,C,A,B,D,E

- Non-compliance type II
The process instance starts with a wrong function.
This issue is signaled by the dimension value **ShouldNotStartProcess**.

Example

Process instance **should not start with** process step E.

non-conformant function order: E,A,C,B,D,E

- Non-compliance type III

All steps of the process instance are terminated, but no end event is reached. This indicates an incomplete process.

This issue is signaled by the dimension value **ShouldNotEndProcess**.

Example

The process instance **should not end with** process step D.

non-conformant function order: S,A,C,B,D

- Non-compliance type IV

A function in the process instance is not part of the function mapping and therefore cannot match any model function.

This issue is signaled by the dimension value **ShouldNotOccur**.

Example

Process type Z **occurs**. If Z is not part of the model, any process that includes Z falls into this category.

non-conformant function order: S,A,C,B,Z,D,E

Note that due to the algorithmic complexity, the conformance issues are reported on a best-guess basis. This means, there may be more reasons for non-conformance than PPM reports. The conformance issue types are contained in the **Conformance issue type** dimension. The conformance issue itself is characterized by the type and one or two PPM function names contained in the dimensions **Non-conforming function** and **Preceding function** (only for ShouldNotFollow).

Example

In the example below, there are two conformance issues. Both are caused by the **Authorize payment** function that follows the **Create contract** function in the process instance, although the process was modeled in a different order.

Non-conforming function	Conformance issue type	Preceding function	Number of conformance issues
Authorize payment	ShouldNotFollow	Create contract	2

3.5.8.3.2.16 Root Cause Miner

PPM provides the **Root Cause Miner** (page 1038) widget to analyze the visible data on a dashboard.

If you observe unusual symptoms on a dashboard, that is, interesting data points that need to be investigated, you can use the **Root Cause Miner** widget to analyze these symptoms. For example, you observe that the number of complaints in some distribution regions is too high and you want to investigate the symptom.

3.5.8.3.2.16.1 Start a root cause analysis

You can use the **Root Cause Miner** widget to do a root cause analysis.

Technically, a root cause is a dimension value that affects a symptom observed in the dashboard. The root causes are divided into two categories: Root causes that have a promoting effect and root causes that have an inhibiting effect on the observed symptom.

Currently the **Root Cause Miner** widget only supports process filters as symptoms. Symptoms that are based on a process-by-detail filter or on a filter at function or relation level are not selectable in the **Root Cause Miner** widget. They are listed at the end of the symptom list. These filters cannot be selected, but are taken into account when data is calculated and retrieved from PPM. For process-by-detail filters, multiple values are linked with the **AND** operator instead with the **OR** operator, as is the case with other filters.

Prerequisites

- You have configured a Process Mining context.
- You have enabled the filter panel.

Procedure

1. Open a dashboard in the dashboard editor (page 866).
2. Insert a **Root Cause Miner** widget in the dashboard.
3. Specify the widget settings.

Only basic settings are available for the **Root Cause Miner** widget. The  **Assign data** and  **Filter** options are not available. To enable the  Translate option, you must add a further language to the dashboard. For details on how to add a language, see the MashZone NextGen online help.

4. Click  **View dashboard** to open the dashboard in view mode.
5. Click **New** on the **Root Cause Miner** widget to start a new root cause mining. The **New** option is available if a Process Mining context has been configured and the filter panel is enabled.

The opened dialog shows all Process Mining context related filters that are set in the dashboard, either in dashboard widgets or in the filter panel.

6. Select the filter for the symptom that you want to analyze. You can select only one filter from the list.

You must have specified at least one filter in your analysis, otherwise the filter list is empty.

- If you only want to view process instances that are above a certain threshold value, you can hide results that only occur in a small number of processes and that are of less interest. Root causes that cover more processes are potentially more interesting than those that cover only a few.

Click **Show options** and enter a threshold value in the **Ignore results that occur in fewer instances than** input box. Root causes found in fewer than the set threshold are ignored in the analysis.

- Click **Start** to start the data request to PPM.

The **Start** option is only available if a filter is selected and the entered threshold value is in the correct format.

After you started the root cause analysis, the widget sends an analysis request to PPM.

You can cancel the running request by clicking **Abort**.

After the request has finished, the **Result** option is enabled.

The Root Cause Miner widget stores your settings as an internal bookmark. These settings are the starting point for your further analyses. You can view the result and perform further analyses (page 967).

Example

Root Cause Miner

Select the symptom you are interested in
You may choose the symptom from the filters specified in your analysis:

Color is blue or grass-green

Process costs [EUR] is between 190 and 4,500

Production location is Sao Bernardo

Time [By month] is 2016-08

Variant [Combined] is v1 or v2 or v3 or v5 or v6 or v8

The remaining entries will serve as the filters for the Root Cause Miner.

Show options ▼

3.5.8.3.2.16.2 Analyze the Root Cause Miner results

You can analyze the results returned from your PPM request. As soon as the results are available in MashZone NextGen, you can display the results in a separate dialog. The result contains possible root causes that affect the symptom.

Prerequisites

You have started a root cause analysis. (page 965)

Procedure

1. Click **Result** on the **Root Cause Miner** widget. The result dialog opens.

The dialog shows information on the query at the top: The used symptom for the root cause analysis (for example, Process costs [EUR] is between 2.500 and 3.680) and the total instances with the percentage of instances leading to the symptom. The total instances are all instances which were analyzed, including all instances of the process type configured in the context filtered by the other filters available in the dashboard which were not chosen for analysis.

Additionally, the points are displayed in the bar for each root cause. The points indicate the strength of the promoting or inhibiting association of the root cause with the symptom. It does not necessarily correspond to the percentage of symptomatic processes. The points are displayed logarithmically inside the bar.

If you move the mouse pointer over the score bar, a tooltip is displayed.

2. Select **Root causes promoting the symptom** in the drop-down menu to display only the root causes that promote the symptom.
3. Select **Root causes inhibiting the symptom** in the drop-down menu to display only the root causes that inhibit the symptom.
4. For further analysis in the dashboard, you can select one root cause in the result list and apply it as a filter to the dashboard. Select a root cause and click **Apply**.

Your settings are applied and the selected root cause is transferred as filter to the filter panel.

You can extend your analysis, for example, by adding new filters or performing a new result analysis. When you start a new result analysis, all the settings you made are reset to the settings stored in the internal bookmark set after the symptom analysis (page 965).

Example

Root Cause Miner

Analyzed symptom: **Color is blue or grass-green**
38% of 205 instances leading to symptom.

Root causes promoting the symptom ▾

104 points	Assembly location is Shanghai 44% of 85 instances leading to symptom.
80 points	Dealer (city) is Philadelphia 50% of 18 instances leading to symptom.
80 points	Variant [Combined] is v3 56% of 9 instances leading to symptom.
33 points	Dealer (city) is San Francisco 41% of 34 instances leading to symptom.

Add selected root cause to the filter panel and reset all remaining filters to the state when Root Cause Miner was started.

Apply Cancel

3.5.8.3.2.17 Function Flow widget

The **Function Flow** widget provides the PPM **Function Flow** diagram (page 969) in ARIS Connect.

3.5.8.3.2.17.1 What is the Function Flow diagram?

The **Function Flow** diagram enables you to analyze the sequence of activities within your business processes. You can use the **Function Flow** diagram to clearly display and evaluate the process structure and the relationship between the activities.

DIAGRAM LAYOUT

NODES AND CONNECTIONS

A **Function Flow** diagram begins with a start node and has only outgoing connections (except self-loops). The end node of the diagram has only incoming connections (except self-loops). All other functions have at least one incoming and one outgoing connection.

If the number of start and end functions is configured, special start and end nodes are displayed in the graph. The outgoing and incoming connections of the special start and end nodes are drawn with a dashed line. The value on the connections shows the number of times the function was a start or end function in an EPC.

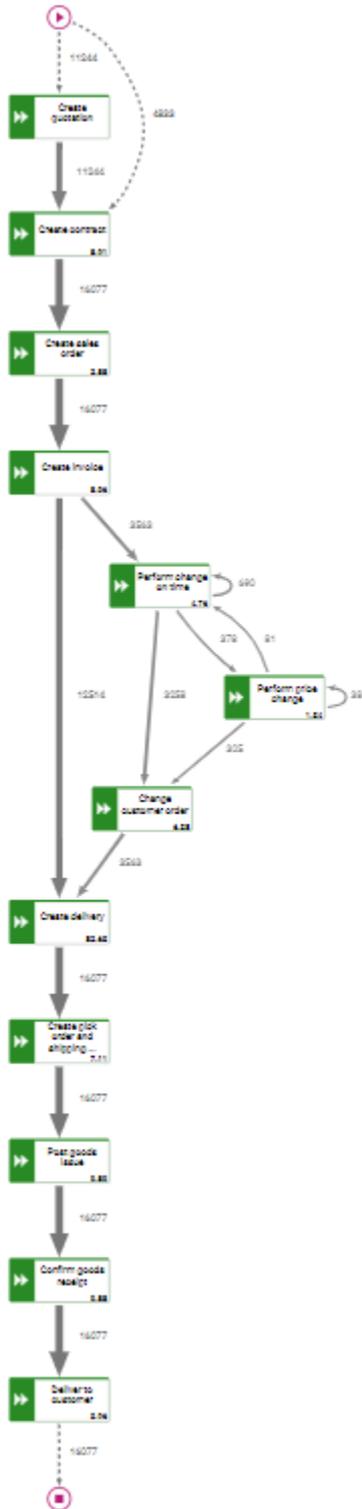
The line weight of a connection is defined by its relevance value. In addition to the stroke-size, the line transparency of the connections also depends on their relevance. Connections of start and end nodes always have the same line weight and are not displayed transparently.

SYMBOLS

The **Function Flow** diagram can be displayed with symbols of **EPC** or **BPMN** style. The symbol size is fixed, and the function name within a symbol is automatically adjusted. If the visualization of the function measure value is configured, the measure value is displayed in the bottom right corner of a symbol. In addition, a tooltip containing the complete function name and the measure is displayed on each node.

Example

Function Flow diagram with EPC symbols and special start and end nodes.



3.5.8.3.2.17.2 Specify the widget settings

You can specify the widget settings in the widget properties dialog.

Procedure

1. Click the **Function Flow** widget on the dashboard. The relevant properties dialog is displayed.
2. Specify your settings. See the display options list below.
3. Click the **Interactive mode** icon to activate the interactive mode. In interactive mode, you can edit the diagram layout. See the display options list below.

The **Function Flow** diagram is laid out automatically. But you can change the diagram layout in interactive mode manually.

4. You can preselect the measure that is to be displayed initially in the functions in view mode.

Select a measure from the **Values shown at functions node** drop-down menu and save the dashboard. If only one measure is specified in the data assignment, no selection box is available, and the corresponding values are displayed automatically.

5. To set the **Process Mining context** options, click **Context**.

Your settings are applied.

Display Options

General Options	Description
Name	Optional widget name.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Auto refresh	Specifies the automatic data retrieval for the component.

General Options	Description
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific Function Flow widget options	Description
Edit widget	<p>Activates the interactive mode. The interactive mode () enables you to perform the following actions.</p> <ul style="list-style-type: none"> - You can resize the diagram using the mouse wheel. - You can move the entire diagram or the individual function symbols using drag and drop. To move the complete graph, click an empty space within the widget and hold down the mouse button. You can move the graph until you release the mouse button. <p>You can select a connection value. You can select a value in the widget Settings menu if you have set at least one value using the Additional connection values option in the Assign data (2/2) dialog. See Assign data sources.</p> <ul style="list-style-type: none"> - You can enable the magnifier. Click Settings and select Enable magnifier. - You can modify the relevance slider view and the relevance slider value. The slider value is not saved in the dashboard.
Symbol style	<p>Selects the style of the symbols used in the function flow diagram. The diagram can be displayed with EPC and BPMN symbols. The default symbols are of EPC style. Depending on the selected symbol style, the diagram layout changes, including the start and end nodes.</p> <p>When the symbol style is changed, the layout of the graph is automatically adjusted.</p>
Layout	Reset initial: Restores the initial diagram layout.
Zoom	Reset: Restores the initial diagram size.
Relevance slider	Enables the relevance slider in the dashboard view and edit mode. If the Function flow diagram contains only single functions, the Relevance slider component is disabled.

Specific Function Flow widget options	Description
Connection labels	Displays the connection values in the diagram. The connection values defined in the data assignment can be displayed or hidden beside the connections. By default, the relevance values are displayed beside the connections. If an additional connection value is defined, it is displayed as the connection value instead. If more than one additional connection value is defined, a drop-down menu is provided in the settings menu for you to select the values that are to be displayed beside the connections. By default, the first additional connection value is displayed.
Connection weight	Displays the connection weight in the diagram. The connection weight is indicated by the connection thickness.
Multiple selection	<p>Enables multiple selections for the Function Flow widget. In view mode, you can select multiple functions simultaneously. You can select one function after the other and the corresponding filters are added and applied to the widgets.</p> <p>The option is enabled by default.</p> <p>When multiple selection is enabled, the filtering of connections is disabled. Connections in the Function Flow diagram cannot be selected, and no connection filters can be set from outside the Function Flow widget.</p>

Context options

The following options are available on the **Context** tab. The **Context** tab is available if the Process Mining context is enabled for the dashboard.

Context options	Description
Exclude widget from being filtered.	<p>Excludes a dashboard widget from being filtered by the Process Mining context. It displays only unfiltered context data and does not respond to context filtering.</p> <p>The excluded widget can still be used to filter other context widgets.</p>

Context options	Description
Self-filtering	<p>Using the Self-filtering option, you can directly view the results of a filter that is applied. If a filter is set within the Function Flow diagram, this filter is also applied to the Function Flow diagram itself. (By default, the widget producing the filter is excluded from being filtered by this filter).</p> <p>The option is enabled by default.</p> <p>When the Self-filtering option is enabled, connections in the function flow cannot be selected. The filtering of connections is disabled.</p> <p>If there is no value in the context filter or the widget is excluded from being filtered ("Exclude widget from being filtered" is checked), the Self-filtering option will be disabled.</p>

3.5.8.3.2.17.3 Set selections and filters

The **Function Flow** widget supports the filter and selection functionalities of MashZone NextGen dashboards. You set filters and selections to define relations and interactions between several dashboard widgets.

The **Function Flow** widget can be used to set a selection or a filter in other dashboard widgets. Furthermore, single functions or connections of the widget can be selected by other widgets. Additionally, the entire widget can be filtered by other widgets.

Details on how to use filters and selections can be found in the MashZone NextGen Online Help.

For setting selections and using coordinates in other widgets, keep the following in mind:

- The **NodeName** coordinate contains the function name of the selected function. If multiple selection is enabled, the coordinate contains a list of the function names. This coordinate only contains one or more values if at least one function is selected.
- There is a coordinate for the function name value configured. This coordinate is only available if the widget runs in Process Mining context mode. The name of the coordinate corresponds to the relevant column name. The coordinate contains a list of node names if one or more functions are selected (multiple selection). The coordinate contains a single value or an array of values depending on the active selection mode (single or multiple selection).
- There is a coordinate for every function measure value configured. The name of the coordinate corresponds to the relevant column name. This coordinate only contains values when at least one function is selected. The coordinate contains a single value or an array of values depending on the active selection mode (single or multiple selection).
- The **StartNode** and **EndNode** contain the names of the respective connections. The **StartNode** coordinate contains the name of the function where the connection starts and the **EndNode** coordinate contains the name of the function where the connection ends. These coordinates only contain values when a connection is selected.
- There is one coordinate for every connection value configured. The name of a coordinate corresponds to the relevant column name. These coordinates only contain values when a connection is selected.
- The **SliderValue** coordinate contains the current filter value of the relevance slider control. This value is updated after changes to the slider itself or by pressing any of the two slider buttons. If the **SliderValue** coordinate is set, the functions and connections are filtered accordingly. The values of the other connections are only changed if the currently selected function or connection is no longer visible (in which case the selection is removed).

Functions can be selected by setting the **NodeName** coordinate or by setting the function measure coordinate. In single selection mode, the selection may be assigned ambiguously. That is, there is more than one function with the same value. In this case, a function is selected randomly. If the multiple selection mode is enabled and there is more than one function with the same value, all functions are selected.

If the widget is used in Process Mining context mode, a function can also be selected using the coordinate for the function name, similar to the **NodeName** coordinate.

Connections can be selected by setting the **StartNode**, **EndNode** or connection value coordinate or an arbitrary combination of these coordinates. Thereby, not all coordinates need to contain values. In single selection mode, the selection may be assigned ambiguously, that is, there is more than one connection with the same value or more than one connection with the same start node. In this case a connection is randomly selected. If multi selection is enabled and there is more than one function with the same value, all functions are selected.

The **SliderValue** coordinate can be set by other widgets. Then the corresponding value is set on the slider and the connections and functions are displayed or hidden accordingly.

3.5.8.3.2.17.4 How to display function data

The **Function Flow** widget allows you to display function data on nodes in the **PPM Function Flow** diagram (page 969).

The procedure is not required for PPM context-based dashboards.

Several conditions must be fulfilled.

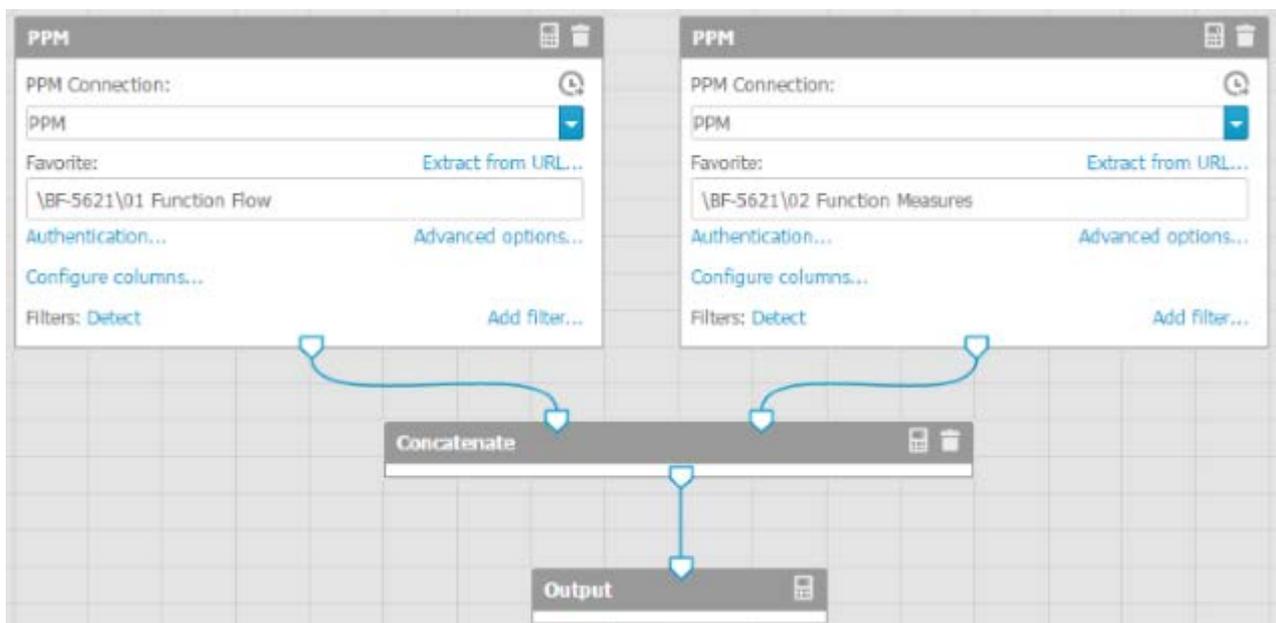
- The function data and the connection data are available in separate data tables provided by the relevant data sources.
- A column contains the function names. The data feed can supply several function measure values including start and end node information. However, only one value other than the start or end node information can be displayed in the graph.
- The data sources are connected by the **Concatenate** operator.
- The data source columns must be assigned correctly to the **Function Flow** widget elements. An incorrect assignment (for example, the function measure value is used for the relevance or vice versa), can result in no graph or no function measure values. It is not validated whether the columns have been assigned consistently.

To replace a displayed function measure value, select a different column in the assign data dialog for the function measure value.

Detailed information on how to configure data feeds and how to assign data can be found in the MashZone NextGen online help.

Example data feed for displaying function data

The example shows a working data feed configuration. The connection data is retrieved by the left PPM data source operator and the function data is retrieved by the right one. Both data sources are connected by the **Concatenate** operator.



Example feed table with concatenated tables

The result of the data feed definition is shown in the next figure.

Calculation result of operator 'Output'				
Communication freq	T Function (Start)	T Function (Target)	Number of functions	T Function
16077.0	Create sales order	Create invoice		
42.0	Perform price change	Perform price change		
84.0	Perform price change	Perform change on time		
305.0	Perform price change	Change customer order		
3563.0	Change customer order	Create delivery		
16077.0	Post goods issue	Confirm goods receipt		
11244.0	Create quotation	Create contract		
12514.0	Create invoice	Create delivery		
3563.0	Create invoice	Perform change on time		
389.0	Perform change on time	Perform price change		
877.0	Perform change on time	Perform change on time		
3258.0	Perform change on time	Change customer order		
16077.0	Create pick order and sh...	Post goods issue		
16077.0	Confirm goods receipt	Deliver to customer		
16077.0	Create contract	Create sales order		
16077.0	Create delivery	Create pick order and sh...		
			3563.0	Change customer order
			16077.0	Confirm goods receipt
			16077.0	Create contract
			16077.0	Create delivery
			16077.0	Create invoice
			16077.0	Create pick order and sh...
			11244.0	Create quotation
			16077.0	Create sales order
			16077.0	Deliver to customer
			4524.0	Perform change on time
			431.0	Perform price change
			16077.0	Post goods issue

3.5.8.3.2.18 Process Variants widget

The **Process Variants** widget enables the PPM process variants feature in ARIS Connect. The widget adapts the process variants feature to <_connet> and makes the **Process Variants** widget available in the widget bar.

The **Process Variants** widget is available from PPM version 10.1.0.2.

3.5.8.3.2.18.1 What is the Process Variants widget?

From version 10.1, PPM provides the process variants feature. The process variants feature helps you to obtain an overview of the most typical process variants, to identify irregular processes, and to analyze them (for example, to detect critical outliers).

For details on how to use the variants feature in PPM, see the **PPM Process Analysis Quick Start Guide**.

The **Process Variants** widget adapts the PPM process variants feature to the requirements and use cases of MashZone NextGen.

- The **Process Variants** widget provides a bar chart that shows the configured measure of the variants. In addition to the graphical representation, the measure values are displayed in the bars.
- On the left side of the bar chart, the values of the column assigned to the **Variant dimension** field are displayed. In most cases, these are the names of the variants.
- On the right side, optional measure values are displayed. A column with the values to be displayed can be specified as required. See Assign data sources (page 940) for details.
- When you move your mouse pointer over a bar, a tooltip displays all information for this variant.

AXIS SCALING

You can select the axis scaling in the widget properties dialog.

- **Linear axis scaling** - The X-axis values are scaled linearly from 0 to the highest value (bar completely filled).
- **Logarithmic axis scaling** - The X-axis values are scaled logarithmically.

VARIANT NAMES

The names of the variants depend on the variant dimension level selected. **Variant** has two dimension levels, **Combined variant** (rough step width) and **Precise variant** (refined step width).

The variant **v0(n/a)** contains all process instances that are not assigned to a variant.

Examples

Combined variant with rough step width: v1, v2, v3,...

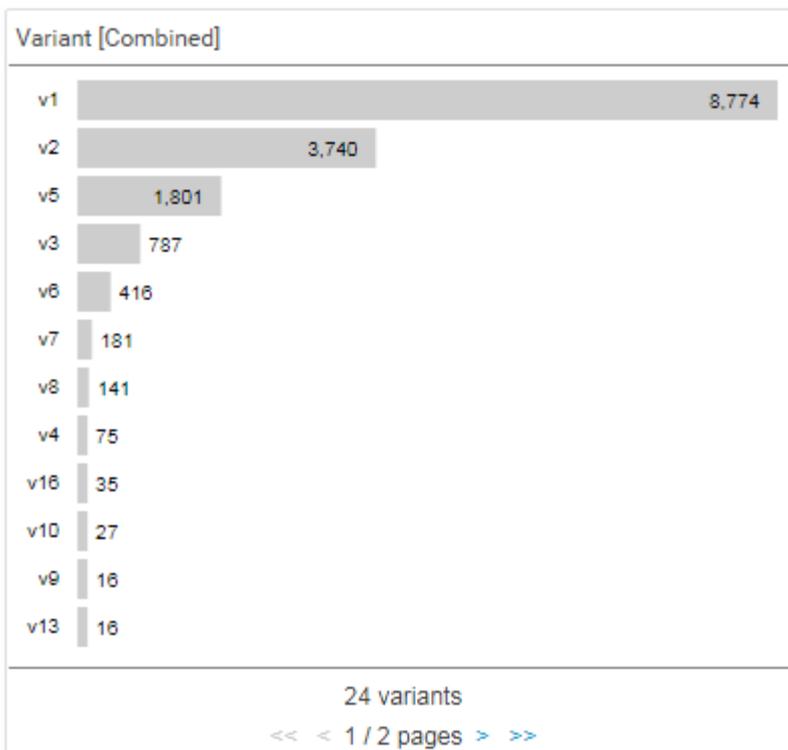
Precise variant with refined step width: v1-1, v1-2, v1-3,.... ,v2-1, v2-2, v2-3... ,v3-1, v3-2, v3-3,....

PAGINATION AND NAVIGATION

Depending on the number of variants and space available for the chart widget, the variants are displayed on multiple pages. The current page and the total number of pages are shown at the center of the page, for example, 1 / 5 pages. You can use the links <<, <, > and >> to browse the pages. With the links << and >> you can navigate to the first or the last page, respectively. With the links < and > you can navigate one page backward or forward, respectively. If you click a link, the variants of the new page are loaded immediately without resetting the selections of the previous page.

When MashZone NextGen refreshes the data of the widget, the pages are updated automatically.

Example of the Process Variants widget in MashZone NextGen



3.5.8.3.2.18.2 Specify the widget settings

You can specify the widget display settings in the widget properties dialog.

Procedure

1. Click the **Process Variants** widget on the dashboard. The relevant properties dialog is displayed.
2. Specify your settings. See the display options list below.

Your settings are applied.

Display options

General options	Description
Name	Optional widget name.
Container	<p>Show/Hide header: Shows/Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to hide/show the header.</p> <p>Show/Hide border: Shows/Hides the outline of the widget container. Click the icon again to hide/show the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific Process Variants widget options	Description
Scaling	Scaling type of the primary measure values. Select the type of scaling, Linear or Logarithmic . The bars are scaled depending on the selected scaling type.
Widget version	Displays the currently installed widget version.

3.5.8.3.2.18.3 Set selections and filters

The **Process Variants** widget supports the filter and selection functionalities of MashZone NextGen dashboards. You can set filters and selections to define relations and interactions between several dashboard widgets.

The **Process Variants** widget can be used to set a selection or a filter in other dashboard widgets. Additionally, the entire widget can be filtered by other widgets.

You can select a single variant or multiple variants at once. Click the variants you want to select. Or click a bar in the chart and drag the mouse pointer to the last variant bar that you want to select. A rectangle displayed marks your multiple selection. You can also use the rectangle to deselect variant bars.

The interactions between widgets are handled using coordinates that contain the current selection. These coordinates are then updated by the widget on every selection change and can be used to filter other widgets. The **Process Variants** widget currently only exposes one coordinate with the name **VariantList**. This **VariantList** coordinate delivers all variants which are currently selected in the **Process Variants** widget (in a special PPM syntax because MashZone NextGen currently does not support multiple selection.).

Please note the following advice:

- The filtering of other widgets is currently limited to data sources that can interpret the special PPM syntax. Therefore, only an input parameter in the feed or dashboard can be used which directly forwards the filter to PPM.
- Currently, you can only use **Process Variants** widgets to set the selection of other **Process Variants** widgets, because only **Process Variants** widgets can interpret the required PPM syntax.
- The **Process Variants** widget can be filtered by other widgets without restriction. These filters are only result filters and are not forwarded to PPM unless they are configured as input parameters for the PPM operator.
- The selection of the **Process Variants** widgets can be set by other widgets using the **VariantList** coordinate. Multiple selection is currently supported only by **Process Variants** widgets.

General information on how to use filters and selections can be found in the MashZone NextGen online help.

3.5.8.3.2.19 Other

3.5.8.3.2.19.1 Use dynamic URL selection

You can select specific elements of widgets (for example, a grid row, a combobox entry, a pie slice, etc.) dynamically by specifying URL parameters. When you use the URL to open a dashboard in view mode, the elements are automatically preselected and, if applicable, the preselected elements are used as a filter or an action trigger.

You can select the URL parameters required for dynamic URL selection in the properties menu of a widget and copy them to the clipboard. You can set a data column preselection for each widget that supports data preselection, for example, Grid, Input field, or several charts.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click a widget that supports data preselection. The relevant properties dialog is displayed.
Before you set a preselection you must assign the relevant data columns to the widget. See Assign data sources to widgets (page 891).
3. Click the **URL selection** tab.
4. You can enter a widget ID in the **URL-ID** input field. If you change the preset ID, you must choose a unique ID within your dashboard and you must save the dashboard to keep the new **URL-ID**.
5. The **URL example** field contains a URL selection of the widgets including all assigned data columns and corresponding dummy values.
6. You can edit the URL selection according to your requirements in the **URL example** field.
Expected formats:
Number: Do not use thousands separators and use dots as decimal separators.
Date / time: yyyy-MM-ddThh:mm:ss
Text: no restrictions (URL-encoded)
7. Copy the URL selection to the clipboard. If your browser supports this function, a **Copy to clipboard** button is available.
The URL parameters are copied to the clipboard of your operating system (URL-encoded).
8. Add the parameters to a URL that you want to use to open a dashboard and enter the URL in your web browser.
9. To open a specific dashboard tab, add the corresponding tab parameter to the dashboard URL.
 - a. Click  **Show menu** beside the tab title of the relevant tab.
 - b. Click the **URL selection** tab.
 - c. You can enter a tab ID in the **URL-ID** input field. If you change the preset ID, you must choose a unique ID within your dashboard.
 - d. Save your settings.

- e. Copy the URL selection to the clipboard. If your browser supports this function, a **Copy to clipboard** button is available.
- f. Add the URL selection that was copied to the clipboard to your dashboard URL.

The dashboard is displayed in view mode with the specified selection.

Example

Dashboard preselection parameters

&cn16.Time=2015-12-23&cn16.Location=New%20York

Tab preselection parameter

&tab=tab1

URL with parameters added

http://<local
host>:8080/mashzone/hub/dashboard/dashboard.jsp?editmode=false&guid=0bd1cbcc-49d2-4cb1-a5fe-72cfdc624cda **&cn16.Time=2015-12-23&cn16.Location=New%20York&tab=tab1**

These URL parameters are applied when you open the dashboard. To apply a modified preselection, you must reload the dashboard page. However, you can also apply a selection in an open dashboard without reloading the entire page. In this case, the selection string must begin with #... instead of &...

...#cn16.Time=2015-12-23&cn16.Location=New%20York

3.5.8.3.2.19.2 Set display size

You can set the display size for the currently displayed dashboard. Set the zoom factor to improve the legibility of a dashboard.

The option is only available in fixed-grid dashboards. See Switch to fixed-grid workspace (page 870) for details.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Options** in the dashboard main menu.
 - Click **Zoom In** to increase the display size.
 - Click **Zoom Out** to decrease the display size.
 - Click **Set Zoom to 100%** to restore the default display size.

The display size of the current dashboard is adjusted accordingly.

3.5.8.3.2.19.3 Set grid lines

You can set the grid lines in the desktop background. The grid lines help you to arrange the individual widgets more easily. The widgets are automatically aligned to the grid lines.

These options are only available in fixed-grid dashboards. See [Switch to fixed-grid workspace](#) (page 870) for details.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Options** in the dashboard main menu.
3. Click **Increase Grid Space**.
4. Click **Reset Grid** to restore the default grid space.
5. Click **Decrease Grid Space**.

The grid lines of the current dashboard are adjusted accordingly.

3.5.8.3.2.19.4 Hide tab bar in view mode

You can hide the tab bar in dashboard view mode.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Manage** in the dashboard main menu.
3. Click **Properties**.
4. Enable the **Hide tab bar in view mode** option.
5. Click **OK**.

Your settings are applied.

The tab bar is hidden when you open the dashboard in view mode. Only the active tab is displayed.

3.5.8.4 Use the data feed editor

The data feed editor as a graphical user interface is an easy-to-use tool to create, manage and view your data feeds without any programming knowledge.

To use the data feed editor, the **Dashboard administrator** function privilege is required.

To use data feeds on dashboards and in other data feeds, and to see the data on a dashboard, the **View** permission is required. See Manage data feed permissions (page 992) for details.

3.5.8.4.1 Create a data feed

You can create data feeds in the feed editor.

A data feed is a table that contains processed data. The data in the data feed table is calculated using a feed definition, which combines data from various data sources.

To create a data feed definition you must perform the following steps.

- Open a new data feed (page 986)
- Select data sources (page 987)
- Calculate the feed data (page 988)
- Add further operators (page 989)
- Connect the operators (page 990)
- Save the data feed (page 990)

3.5.8.4.1.1 Open the data feed editor

You can create a new data feed by using the data feed editor.

Procedure

Click **Manage > New data feed** in the data feed editor main menu.

An new data feed is opened.

When creating a data feed, the **Output** element that finalizes the feed definition, is already set. The element is mandatory and cannot be deleted.

3.5.8.4.1.2 Select data sources

You can set one or more data sources for the data feed definition, for example, MS Excel, CSV, or XML files. The data sources for a data feed can be located locally, in the LAN, or on the Internet.

The data sources are represented by data source operators. Various options are available for setting the data source depending on the data source type.

See Data source operators (page 1047) for a list of data sources and the relevant settings supported by the data feed editor.

The source files can be selected by specifying the path, and must be stored in the  Repository of ARIS Connect.

Procedure

1. Click the  symbol in the **Add data operations** bar if the symbol is not selected.
2. Click a data source, for example,  XML.
The selected operator is displayed in the data feed editor workspace.
3. Select the data source or connection type of the data source file required, for example, an URL or a local path to a XML file.
4. Enter a URL or a path to the data source file, for example, for an XML file. Or select a data source or a connection in a selection box, for example, a PPM connection.
5. Specify your additional settings.

The selected data source operator is inserted and the source data can be extracted.

3.5.8.4.1.3 Calculate the feed data

You can calculate the data for all operators of the feed definition and display the corresponding preview in a preview table. This enables you to track all data changes step by step.

The preview table provides several preview modes. For details, see the table below.

For performance reasons, the preview is limited to a maximum of 1000 rows by default.

Procedure

1. Click the  Calculate preview icon in the header of an operator.

The feed data is calculated for the selected operator of the feed definition. The result is displayed in a preview table at the lower edge of the workspace.

2. Select the preview mode in the corresponding drop-down menu in the header of the preview table.

The raw data preview (quick or full) of text-file operators (XML, JSON, CSV) is displayed in a single (non-sortable) column. The raw preview of an **Excel** operator has Excel column names (A, B, C, etc.) and an initial column that contains the line number.

3. To change the sort order of a table, click a column heading.

Click once to change the sort order to ascending.

Click twice to change the sort order to descending.

Click three times to change the sort order to default.

The result is displayed according to your settings.

The preview mode remains selected as long as the data feed (or **Assign data 1/2** (page 891) dialog) is open.

The preview table provides the following preview modes.

Preview mode	Description
Quick	<p>The selected operator returns at most 1000 rows in its result. This applies to the operator for which a preview is needed, as well as to all other operators required for calculating the preview.</p> <p>This preview mode is equal to the data preview provided in MashZone NextGen up to version 10.3.</p> <p>The Quick preview mode is preselected by default.</p>
Quick raw	<p>The preview displays the data of the source of the selected operator.</p> <p>This preview mode is supported only for the data source operators XML, JSON, CSV, and Excel. XML and JSON source data are reformatted with indentation. The results are limited to 1000 rows.</p>
Full	<p>The preview is displayed without limiting the operator results to 1000 rows. The actual limit depends on the license you use.</p>
Full raw	<p>The result of the raw data preview is displayed without limiting it to 1000 rows. The actual limit depends on the license you use.</p>

Preview mode	Description
Statistics	<p>The result table has one line per measure, an initial column containing the name of the measure, and one column for each column of the operator's result table.</p> <ul style="list-style-type: none"> ▪ Count: the count of non-NULL values for this column ▪ #Null: the count of NULL values for this column ▪ Min: the minimum value of this column ▪ Max: the maximum value of this column ▪ Avg: the average value of this column ▪ Std: the standard deviation of this column ▪ Unique: the number of unique values in this column ▪ Top: a value that has the highest frequency ▪ Freq: the frequency of the top value

3.5.8.4.1.4 Add further operators

Insert optional operators in the data feed definition to convert, calculate or transform data. For this the feed editor provides additional data transformation and user input operators.

You can use various operators to create calculation rules for calculating the data of your feeds. See Data transformation operators (page 1068) for a list of transformation operators and the relevant settings supported by the data feed editor.

Procedure

1. Click the  **Transformation** or  **Single values** icon in the **Add data operations** bar.
2. Click an operator or insert an operator using drag and drop.
The operator is displayed in the feed editor workspace.
3. Specify your settings.

The selected operator is inserted and configured.

3.5.8.4.1.5 Connect the operators

Connect the inserted operators to define the data flow of the data feed definition.

The data of an operator is forwarded to another operator using a link. The link is created as a connection between outgoing and incoming  anchor points of the individual operator. The permitted incoming anchor points are marked in blue for a selected outgoing anchor point.

User input operators are only connectable with **Single value** operators.

Procedure

1. Click the outgoing anchor point of a data source and drag it to an incoming anchor point of a transformation operator.
2. To disconnect two operators click an incoming or outgoing anchor point and drop it in the workspace.
3. Define the data flow among the inserted operators in a similar manner.
4. Connect the last transformation operator with the **Output** operator to finalize the data feed definition.

Your data feed definition is configured.

To view the calculation result of the completed data feed definition click the  **Calculate preview** symbol of the **Output** operator.

3.5.8.4.1.6 Save the data feed

You can save the data feed and give it a unique name.

Warning

Note that when you save your data feed using the name of an existing data feed, conflicts may occur when you reopen the data feed.

Procedure

1. Click **Manage > Save** in the main menu.
You can create a copy of the currently opened data feed using the **Save as** option.
2. Specify your settings.

The data feed is saved on the server.

You can change your settings by editing the data feed (page 991).

3.5.8.4.2 Edit a data feed

You can edit a data feed that is available in the data feed editor.

Prerequisite

You have the required access privileges for the data feed (page 992).

Procedure

1. Click **Manage** > **Open** in the data feed editor main menu.
2. Select an available data feed.
3. Specify your settings.
4. Click **Manage** > **Save** in the data feed editor main menu.

Warning

Note that when you save your data feed using the name of an existing data feed, conflicts may occur when you reopen the data feed.

Your settings are applied.

3.5.8.4.3 Delete data feeds

You can delete data feeds in the data feed editor.

Warning

Deleted data feeds cannot be restored.

Procedure

1. Create a dashboard (page 866) or open a dashboard (page 871) in the dashboard editor.
2. Click **Manage** > **Delete** in the data feed editor main menu.
3. Click **Delete**.

The selected data feed is deleted.

3.5.8.4.4 Edit data feed properties

You can edit the properties (name, description and tags) of existing data feeds.

Procedure

1. Create a new data feed (page 986) or open an existing data feed (page 991).
2. Click **Manage** > **Properties** in the feed editor main menu. The **Dashboard properties** dialog is displayed.
3. Enter the **Name** of the data feed.
4. Enter an optional **Description**.
5. Optionally, enter comma-separated search tags in the **Tags** field.
6. Click **OK**.

Your changes are applied.

3.5.8.4.5 Manage data feed permissions

You can manage the permissions of data feeds in the data feed editor. You can assign specific access permissions to individual users or user groups. If you assign permissions to a user group, the permissions are automatically assigned to all members of the user group.

For new users and user groups of a data feed, you can automatically assign view permissions to all associated assets of the data feed, such as aliases or other data feeds. It is not required to assign the permissions to each asset manually. A user requires the view permission for all associated assets to display the corresponding source data in the data feed. If view permissions are not assigned to all associated assets, a corresponding option to assign the missing view permissions is additionally displayed in the dialog.

You can specify the following access rights for saved data feeds.

- **Edit**
The user can use data feeds to create dashboards or to include them in other data feeds. The user can edit data feeds in the data feed editor.
- **View**
The user can use data feeds to create dashboards or to include them in other data feeds. The user can view the data of the data feed in view mode on the related dashboard.

Procedure

1. Create a new data feed (page 986) or open an existing data feed (page 991).
2. Click **Manage > Permissions** in the data feed editor main menu. The **Manage dashboard permissions** dialog is displayed.
3. Enter a term in the search field and click **Search**. If you click **Search** without specifying a search term, all users and user groups are listed.
4. Drag a user or a user group from the **Search result** field and drop it on the **Principals with permissions** field.
By default, the creator of the data feed is shown in the **Principals with permissions** list.
5. Enable or disable the **View** or **Edit** privileges of a user or a user group.
6. Click **Save**.

The button is available if the option **Assign the relevant view permissions to related assets** is disabled, or the view permissions are already assigned to all associated assets.

7. Enable the option **Assign the relevant view permissions to related assets** to assign the required view permissions to all associated data feeds and aliases.

The option is available if the view permissions are not assigned to all associated assets.

8. Click **Next**.

A new dialog opens. The first list in the dialog contains assets whose view permissions you can update. The second list contains assets whose view permissions you cannot change. At least one of the following prerequisites must apply to change the view permissions for data feeds or aliases.

You are an administrator who can edit the permissions for aliases.

You have permissions to view and edit data feeds.

You have permissions to create and edit data feeds.

Your changes are applied.

If you want to remove a user or a user group from the Principals with permissions list, click the **Delete** icon. Deleted permissions for a data feed do not affect the associated data feeds or aliases.

3.5.8.4.6 Data feed operators

The data feed editor provides a wide range of data source and data transformation operators for creating data feed definitions (page 986).

- Data source operators (page 1047)
- Data transformation operators (page 1068)
- User input operators (page 1111)

3.5.8.4.7 Upload file based data sources

You can use data sources in the dashboard and data feed editor that are file-based, such as Excel spreadsheets, CSV files or XML files. You must store the files in a resource directory in the ARIS document storage that is accessible in the  Repository of ARIS Connect.

Prerequisite

You have the **Dashboard administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click  **Repository**.
3. Activate the **Documents** tab.
4. In ARIS document storage navigation tree, select the folder where you want to store your source file.
5. Click  **Upload**. The **Upload new document** dialog is displayed.
6. Click **Select** and select the relevant resource file.
7. Enter a title in the **Title** input box.
8. Enter a description in the **Description** input box.
9. Enter a number of terms comma separated in the **Tags** input box. Tags are used for the search function.
10. Click **Upload**.

The source file is stored in the resource directory selected.

The URL of the data source file is required for the data source operator in the data feed editor. You can copy the file URL to the clipboard. For this, click the relevant data source file name to display the document details. In the document details right click the **Link** at the end of the page and select **Copy Link Location** in the context menu. The file URL is copied to the clipboard.

3.5.8.4.8 Other

3.5.8.4.8.1 Make your dashboards context-sensitive

You can make your dashboards context-sensitive by assigning dashboards to specific ARIS models or objects. For example, if you select a model in ARIS Connect, the dashboards assigned to the model are displayed and you can open any dashboard from the list.

The **Input field** widget allows you to insert variables in a dashboard. The variables are used to connect ARIS models or objects with the dashboard. The dashboard variables required are **contextguid** for the GUID of an open model and **selectionguid** for the GUID of a selected object.

When you open a model, the **selectionguid** variable is not set. However, when you make a selection in the open model, the **selectionguid** variable is set to the GUID of the selected object. When you remove the focus from the selected object, the **selectionguid** variable is set to the GUID of the opened model.

Procedure

1. Click the  **Input field** widget icon to insert an input field for each required variable.
2. Click an input field to open the properties dialog.
3. Enter the variable names **contextguid** and **selectionguid** in the **Name** input box of the relevant input field.
4. On the **URL selection** tab of the **contextguid** input field, enter **contextguid** in the **URL ID** input field.
5. On the **URL selection** tab of the **selectionguid** input field, enter **selectionguid** in the **URL ID** input field.

The relevant variables **contextguid** and **selectionguid** are inserted into the dashboard.

Tip

ARIS Aware provides the predefined data feed **Context GUID** containing the variables required. The variables defined always deliver the current selection, either the model GUID or the object GUID. You can use the data feed as an example for creating your own context-sensitive dashboards.

3.5.8.5 Valuable information

This section provides background information to assist you in carrying out the relevant procedures.

3.5.8.5.1 What are dashboards?

Dashboards are interactive applications that collect, combine, and visualize data from different data sources, for example, ARIS table or CSV files. Dashboards are composed of individual widgets (for example, line chart or grid). They obtain their data from data sources and display it.

Dashboards make it easy to visualize and analyze information. You can combine data from any original source and visualize them by means of graphic elements, filter the displayed results interactively and thus analyze them intuitively.

The dashboard editor as a graphical user interface gives you an easy graphic way to create, manage and view your dashboards. The dashboard editor provides the edit mode and the view mode. In the edit mode you can create and manage your dashboards. The view mode enables you to view and use your dashboards interactively.

See Use dashboards in view mode (page 852) for instructions.

See Create a dashboard (page 866) for instructions.

3.5.8.5.2 What are data feeds?

A data feed is a table containing prepared data. It consists of several columns that contain numerical values (for example, figures), text, or date values. Each row in the calculated result of a data feed corresponds to one data record.

The data in a data feed is calculated based on various data sources (for example, data from MS Excel, CSV, or XML files) by means of feed definitions. The source data is not an integral part of the data feed, but remains in its original sources, ensuring that it is constantly up-to-date. In addition to the external data sources, direct user entries in the data feeds can also be processed.

Data feeds are used as data sources for dashboards.

Only one data feed can be assigned to each widget, with the same data feed being able to supply the data for multiple widgets. See Assign data sources to widgets (page 891) for details.

Feed definitions aggregate, extend, transform, or calculate data from one or more data sources. A feed definition can consist of any number of operators and data sources that are linked byconnections. Data is calculated for each data source and each operator and then passed on to the operators linked to them for further processing. A feed definition delivers a data structure in the form of a list table as its result. All individual processing steps in the feed definition are based on this data structure.

The feed editor as a graphical user interface offers you an easy, visual way to create, manage, and view your data feeds, without programming knowledge being required. The feed editor

provides you with all supported data source operators, all relevant data transformation, and user input operators. The rule definitions can be created using drag and drop. See Create data feeds (page 986) for instructions.

Data feed definition and feed table

The diagram illustrates a data processing workflow. It begins with a 'Data feed' operator (Customers), which feeds into a 'Copy data feed' operator. The data then passes through two 'Filter rows' operators. The first filter is configured with 'Revenue is greater than...' and 'All conditions should match'. The second filter is configured with 'Customer is equal to...' and 'All conditions should match'. The output of the second filter is processed by a 'Column to value' operator (Revenue). The final output is shown in the 'Output' operator.

Calculation result of operator 'Data feed'	
Customer	Revenue
SAP	10000.0
Siemens	20000.0
HP	15000.0
Volkswagen	12000.0

3.5.8.5.3 Who can use or manage dashboards?

ARIS administrators can control what ARIS users can see and do. There are several user types that can use and manage dashboards and data feeds in ARIS Connect. The following user types have different license and function privileges and individual access privileges to dashboards and data feeds.

ARIS AWARE ADMINISTRATORS

- Can see dashboards if they have access to the dashboard and the dashboard is assigned to an accessible ARIS context, such as a model or the **Home** area.
- Have access to the **Dashboards and Data feeds** tab in the  **Repository**.
- Have all administrative privileges for dashboards and data feeds, for example, to create, edit, import, export, and delete dashboards and data feeds.

ARIS Aware administrators are ARIS users that have the **ARIS Connect Viewer + ARIS Aware** or the **ARIS Connect Designer + ARIS Aware** license privileges and the **Dashboard administrator** function privilege. The **ARIS Aware** license is only available if the **ARIS Connect Server Extension pack ARIS Aware** was installed.

MY DASHBOARDS USERS

- Have access to the **Dashboards and Data feeds** tab in the  **Repository**.
- Can see all dashboards and data feeds for which they have **Read** or **Write** access.
- Can edit and delete all dashboards and data feed for which they have **Write** access.
- Can create new private dashboards and data feeds. Private means that by default only this user can access them.
- Can assign **View** privileges to other users in ARIS Connect for any dashboard (page 846) and data feed (page 850) for which they have **Write** access permission.
- Can assign **Edit** privileges in MashZone NextGen for any dashboard and data feed for which they have **Write** access permission.
- Cannot import or export dashboards or data feeds.

My Dashboards users are ARIS users that have the **ARIS Connect Designer + ARIS Aware** license privileges but must not have the **Dashboard administrator** function privilege.

ARIS AWARE VIEWERS

- Can see dashboards if they have access to the dashboard and the dashboard is assigned to an accessible ARIS context, such as a model or the **Home** area.
- Have no access to the  **Repository**.
- Cannot create, edit, or delete dashboards.

ARIS Aware viewers are ARIS users that have the **ARIS Connect Viewer + ARIS Aware** license privileges but must not have the **Dashboard administrator** function privilege.

3.5.8.5.4 What is the data source for default dashboards?

In ARIS Architect, users with the **Script administrator** function privilege will find all standard reports available in this category. The reports are shown on the **Administration** >  **Evaluations** >  **Report** tab. If in the **General** properties dialog of a report script the **Available to users** option is selected, the report can be selected in the Report Wizard for execution.

In this category, you find reports required to generate data feed input for default ARIS Aware dashboards. You can not modify the code of these reports. If you want to modify the code in order to define your own dashboards (page 843), import the required reports from the ARIS installation DVD.

For some reports parameters can be specified. These parameterized reports are to be started frequently using report schedules. This keeps the dashboards up to date. The scheduled reports themselves trigger related reports. Each report collects specific pieces of information. The results are stored in ARIS document storage as XML report output files. These pieces of information are formed into dashboards. That is why dashboards correlate very closely to the set of executed reports.

3.5.8.5.5 How to make default dashboards visible

ARIS provides several default dashboards. In ARIS Connect these sample dashboards can be accessed using the most recent version of the **United Motor Group** ARIS database. You can either use these dashboards created for demonstration purposes, or create your own dashboards (page 843).

In order to make the default dashboards available in ARIS Connect, the following prerequisites must be met:

- The **dashboarding** runnable is in the **ACTIVE** state.
It is already activated if ARIS Aware has been installed. If the runnable is not active, your server administrator must activate the runnable using ARIS Cloud Controller (ACC) (see **ARIS Server Installation Guide** or **ARIS Cloud Controller (ACC) Command-Line Tool** on DVD, ARIS Download Center (<https://aris.softwareag.com/>), or Empower (<https://empower.softwareag.com/>)).
- In the User Management, a valid ARIS Server license of type **YCSAW** is available in the ARIS Administration (see ARIS Connect online help).
- In ARIS Connect, the **Feed URL** alias URL must be defined (see ARIS Connect online help; Add an alias URL for dashboards).
- The required content has been made available from the ARIS installation DVD.
- In ARIS Connect, check default data feeds for issues.

3.5.8.5.6 What is an alias of a URL?

Defining a URL alias enables you to shorten the link used in dashboards and data feeds. If you use an alias, you do not have to enter the entire URL, but only the path to the location where the data is stored.

Furthermore, adapting the alias enables you to import this kind of data to a different server.

If you have updated ARIS Connect 10.0 Service Release 1 to version 10.0 Service Release 2, you need to recreate the URL alias that have been defined for ARIS Connect 10.0 Service Release 1. Delete the URL alias at first and add a new URL alias with the same data.

3.5.8.5.7 Widgets

The dashboard editor provides a number of widgets.

See also Insert widgets in a dashboard (page 890).

3.5.8.5.7.1 Action button

Can be used to trigger an action.

The following widget options are available.

General options	Description
Name	Optional widget name.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.

Specific bar chart options	Description
Label	Label that is displayed in the widget.

3.5.8.5.7.2 Bar chart

A bar chart can display values for two iterations:

- Two dimensions and one KPI
- One dimension and multiple KPIs

The second iteration is displayed in the form of several stacked bars. If multiple KPIs are used, these are displayed in bars of different colors.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific bar chart options	Description
Chart title	Optional chart title of the chart displayed in the widget.
Column type	Selects the bar type of the bar chart. This option is only available if a data source has been assigned. Bars available are Stacked or Grouped .

Specific bar chart options	Description
Show values	Displays the measure values outside the bars by default. If the space is too limited, the values are displayed inside the bars. If the space inside the bars or stack bars is also limited, the values are not displayed at all.
Legend position	Displays a legend in the widget and sets the legend's position. The default is None , that is, no legend is displayed.
Axis	Specifies the visualization of the X- and Y-axis. Show all : Displays the axis titles and labels. Enabled by default. Hide title : Hides the axis titles and displays only the axis labels. Hide all : Hides the axes completely.
Multiple selection	In view mode, the user can select multiple values at the same time in the corresponding widget, for example, multiple rows in a table or multiple coordinates in a chart. The multiple selection can be used, for example, to filter other dashboard widgets. See Use interactive filters in dashboards (page 853) for details. The values selected are processed as a list. If the option is enabled, columns of List type are provided in the filter configuration dialog to configure filter conditions. See Define filters for dashboard widgets (page 946) for details.

3.5.8.5.7.3 Bubble chart

A bubble chart displays one dimension and two KPIs. The two KPIs are plotted on the X- and Y-axis. The dimension is represented by different colors of the individual bubble areas.

Optionally, a third KPI can be incorporated; its values determine the radii of the bubble areas.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific bubble chart options	Description
Chart title	Optional chart title of the chart displayed in the widget.
Data points	Selects the data point shape. The default is Circle . The option is available only if a Partition is assigned. See Assign data columns to bubble chart. (page 903)
Data point size	Selects the data point size. The default is Medium .
Legend position	Displays a legend in the widget and sets the legend's position. The default is None , that is, no legend is displayed.

Specific bubble chart options	Description
Axis	<p>Specifies the visualization of the X- and Y-axis.</p> <p>Show all: Displays the axis titles and labels. Enabled by default.</p> <p>Hide title: Hides the axis titles and displays only the axis labels.</p> <p>Hide all: Hides the axes completely.</p>

3.5.8.5.7.4 Circular gauge chart

A circular gauge chart displays a set of aggregated KPI values. The value ranges are arranged in a semicircle with a red pointer being displayed that indicates the actual value of the KPI.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific circular gauge chart options	Description
Scale	Displays a scale in the chart.
Scale value	Displays the scale values in the chart.
KPI name	Displays the KPI name in the chart.
KPI value	Displays the KPI value in the chart.
Threshold	Displays the threshold in the chart.
Threshold value	Displays the threshold value in the chart.
Level meter	Displays a level meter in the chart.
Percentage	Displays a scale from 0 to 100% in the chart. The KPI value is also displayed in percent.

3.5.8.5.7.5 Column chart

A column chart can display values for two iterations:

- Two dimensions and one KPI
- One dimension and multiple KPIs

The second iteration is displayed in the form of several stacked columns. If multiple KPIs are used, these are displayed in columns of different colors.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific column chart options	Description
Chart title	Optional chart title of the chart displayed in the widget.
X-axis label orientation	<p>Aligns the labeling of the X-axis.</p> <ul style="list-style-type: none"> ▪ Auto: aligns the labels depending on the available space on the X-axis. This behavior is default. ▪ Rotated: rotates the labels of the X-axis 90 degrees. ▪ Alternate: the labels of the X-axis are alternately offset.

Specific column chart options	Description
Show values	Displays the measure values outside the columns by default. If the space is too limited, the values are displayed inside the columns. If the space inside the bars or stack columns is also limited, the values are not displayed at all.
Column type	Selects the column type of the column chart. This option is only available if a data source has been assigned. Columns available are Stacked or Grouped .
Legend position	Displays a legend in the widget and sets the legend's position. The default is None , that is, no legend is displayed.
Axis	<p>Specifies the visualization of the X- and Y-axis.</p> <p>Show all: Displays the axis titles and labels. Enabled by default.</p> <p>Hide title: Hides the axis titles and displays only the axis labels.</p> <p>Hide all: Hides the axes completely.</p>
Multiple selection	In view mode, the user can select multiple values at the same time in the corresponding widget, for example, multiple rows in a table or multiple coordinates in a chart. The multiple selection can be used, for example, to filter other dashboard widgets. See Use interactive filters in dashboards (page 853) for details. The values selected are processed as a list. If the option is enabled, columns of List type are provided in the filter configuration dialog to configure filter conditions. See Define filters for dashboard widgets (page 946) for details.

3.5.8.5.7.6 Conformance check

The **Conformance check** widget displays the result of a process conformance check performed in PPM. For details, see chapter Conformance check widget (page 960).

The widget supports multi-lingual dashboards (page 874), actions (page 948), and context filters (page 886).

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific Conformance check options	Description
Widget version	Displays the currently installed widget version.

3.5.8.5.7.7 Date filter

Provides an interactive calendar for configuring a date filter. The calendar filters the values in a given date range.

In view mode, you can adjust the date range by clicking the + symbol and - symbol in the widget.

The **Date filter** widget supports values only of date type.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific date filter options	Description
Granularity	<p>Specifies the structure of the time range.</p> <ul style="list-style-type: none"> ▪ There are three possible time granularities: ▪ Year ▪ Quarter ▪ Month
Allow range selection	Enables the selection of multiple time periods in the calendar.

Specific date filter options	Description
	<p>To define a time range in view mode, select multiple periods by holding the mouse button.</p> <p>The option is enabled by default. If the option is disabled, the From and To values of the default selection are set to the same value.</p> <p>If you are using a PPM version older than 10.5, this option is not available for Process Mining context-based dashboards.</p>
Compact	<p>Hides the selected range label above the time filter.</p>
Range	<p>Specifies the initially displayed date range with a start value (From) and an end value (To).</p> <p>You can either enter the date value manually or extract it from a data feed. This option is disabled for manual entry if the date value is extracted from a data feed.</p> <p>If no data source columns are assigned to the widget, you can enter the initial range values manually.</p> <p>If data source columns are assigned, the range values are taken from the corresponding columns. The first values of the corresponding data source columns are always taken as the start or the end value of the range.</p>
Default selection	<p>Specifies the range values that are preselected by default.</p> <p>You can either enter the date value manually or extract it from a data feed. This option is disabled for manual entry if the date value is extracted from a data feed.</p> <p>If no data source columns are assigned to the widget, you can enter the default range values manually.</p> <p>If data source columns are assigned, the default values are taken from the corresponding columns.</p> <p>The first values of the corresponding data source columns are always taken as the minimum or the maximum.</p>

3.5.8.5.7.8 Distribution chart

You can use a distribution chart to identify outliers and suspected deviations for process or function instances.

In a distribution chart, you can display the frequency distribution of a distributable measure's values for a number of process or function instances.

The distribution chart is available only for context based dashboards.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific distribution chart options	Description
Chart title	Optional chart title of the chart displayed in the widget.
X-axis label orientation	<p>Aligns the labeling of the X-axis.</p> <ul style="list-style-type: none"> ▪ Auto: aligns the labels depending on the available space on the X-axis. This behavior is default. ▪ Rotated: rotates the labels of the X-axis 90 degrees. ▪ Alternate: the labels of the X-axis are alternately offset.

Specific distribution chart options	Description
Show values	Displays the measure values outside the columns by default. If the space is too limited, the values are displayed inside the columns. If the space inside the bars or stack columns is also limited, the values are not displayed at all.
Axis	Specifies the visualization of the X- and Y-axis. Show all: Displays the axis titles and labels. Enabled by default. Hide title: Hides the axis titles and displays only the axis labels. Hide all: Hides the axes completely.

3.5.8.5.7.9 Drop-down box

The drop-down box provides you with a selection of values in a drop-down menu for you to filter other widgets.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific drop-down box options	Description
No selection	Adds the No selection value to the value list as the first entry. By default, the first entry of the value list is preselected in the drop-down box for filtering. Selecting the No selection value has no effect on filtering other widgets.
No selection label	Alternative text for No selection default. The text is displayed in the drop-down box.

3.5.8.5.7.10 Function flow diagram

The **function flow diagram** enables you to analyze the sequence of activities within your business processes. Using the function flow diagram, you can clearly display and evaluate the process structure and the relationships between the activities.

A function flow diagram begins with a start function that is indicated by a green symbol and has only outgoing connections (except for self loops). The end function has only incoming connections (except for self loops) and is indicated by a red symbol. All other functions are represented by white symbols and have at least one incoming and one outgoing connection.

The weight of a connection is defined by its relevance value.

The following component options are available.

General options	Description
Name	Optional component name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the component.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific function flow diagram options	Description
Edit widget	<p>Activates the interactive mode. The interactive mode () enables you to perform the following actions.</p> <ul style="list-style-type: none"> - You can resize the diagram using the mouse wheel. - You can move the entire diagram or the individual function symbols using drag and drop. To move the complete graph, click an empty space within the widget and hold down the mouse button. You can move the graph until you release the mouse button. <p>You can select a connection value. You can select a value in the widget Settings menu if you have set at least one value using the Additional connection values option in the Assign data (2/2) dialog. See Assign data sources.</p> <ul style="list-style-type: none"> - You can enable the magnifier. Click Settings and select Enable magnifier. - You can modify the relevance slider view and the relevance slider value. The slider value is not saved in the dashboard.
Layout	Reset initial: Restores the initial diagram layout.
Zoom	Reset: Restores the initial diagram size.
Relevance slider	Enables the relevance slider in the dashboard view and edit mode.
Connection labels	<p>Displays the connection values in the diagram. The connection values defined in the data assignment can be displayed or hidden beside the connections. By default, the relevance values are displayed beside the connections. If an additional connection value is defined, it is displayed as the connection value instead. If more than one additional connection value is defined, a drop-down menu is provided in the settings menu for you to select the values that are to be displayed beside the connections. By default, the first additional connection value is displayed.</p>
Connection weight	Displays the connection weight in the diagram. The connection weight is indicated by the connection thickness.

3.5.8.5.7.11 Grid

You can use the **Grid** widget to insert a table in your dashboard.

The following widget options are available.

General options	Description
Name	Optional component name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the component.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific grid options	Description
Edit columns	<p>Enables you to edit the Grid widget interactively. Click the Configuration icon. In edit mode, the Grid widget has a blue frame.</p> <p>You can set the initial widths and the initial sort order of the columns. You can change the sort order by clicking the column header. To adapt the column width, drag the column borders using the mouse. You can change the defined column width and column sort order in dashboard view mode (page 856).</p>
Auto column width	Automatically adapts the column width to the column content. The horizontal scroll bar is no longer displayed in the widget.

Specific grid options	Description
Multiple selection	<p>In view mode, the user can select multiple values at the same time in the corresponding widget, for example, multiple rows in a table or multiple coordinates in a chart. The multiple selection can be used, for example, to filter other dashboard widgets. See Use interactive filters in dashboards (page 853) for details. The values selected are processed as a list. If the option is enabled, columns of List type are provided in the filter configuration dialog to configure filter conditions. See Define filters for dashboard widgets (page 946) for details.</p>

3.5.8.5.7.12 Heat matrix

A heat matrix chart can display values for three dimensions:

- Two dimensions by the two-dimensional matrix
- One dimension by the size of a data point bubble

If the number and size of the data points displayed in one matrix cell is too large, excess data points are shown as aggregated square.

The following widget options are available.

General options	Description
Name	Optional component name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the component.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific heat map chart options	Description
Show bubble text	Sets whether the data from Label element is displayed or not.
Show range warnings	Sets whether data outside the defined value ranges creates a warning in the chart or not.
Select cell layout	Selects the orientation and geometry of the matrix: Square or Rectangle.
Axis	<p>Specifies the visualization of the X- and Y-axis.</p> <p>Show all: Displays the axis titles and labels. Enabled by default.</p> <p>Hide title: Hides the axis titles and displays only the axis labels.</p> <p>Hide all: Hides the axes completely.</p>

Specific heat map chart options	Description
Define levels	<p>Allows you to define the qualitative levels (or heat level) to be displayed in the matrix (visible as colors of the matrix cells). Enter the subordinate attributes and click Add to create a new level.</p> <p>The levels are ordered by ID.</p> <p>The Label of the level describes the level.</p> <p>Pick a color for the level from the color picker to be displayed in the matrix.</p>
Define color matrix	Allows you to distribute the levels to the matrix cells.

3.5.8.5.7.13 Horizontal and vertical gauge chart

A gauge chart displays a set of aggregated KPI values. The value ranges are arranged in a horizontal or vertical bar with a pointer being displayed that indicates the actual value of the KPI.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific circular gauge chart options	Description
Scale	Displays a scale in the chart.
Scale value	Displays the scale values in the chart.
KPI name	Displays the KPI name in the chart.
KPI value	Displays the KPI value in the chart.
Threshold	Displays the threshold in the chart.
Threshold value	Displays the threshold value in the chart.

Specific circular gauge chart options	Description
Level meter	Displays a level meter in the chart.
Percentage	Displays a scale from 0 to 100% in the chart. The KPI value is also displayed in percent.
Scale size	Selects the scale size of the gauge chart. The default is Medium .

3.5.8.5.7.14 Image

The **Image** widget supports the file format PNG, GIF, and JPEG. The image file can be selected using a Web URL or a URL Alias.

For information about specifying the image source URL, see Specify an image source URL (page 951).

General options	Description
Name	Optional component name.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.

Specific image options	Description
Image sizing	<p>Original: Displays the image in the original size.</p> <p>Scaled: Fits the display of the image to the widget frame size.</p> <p>Aspect ratio: Keeps the aspect ratio of the image.</p>
Horizontal alignment	Aligns the image horizontally within the widget frame.
Vertical alignment	Aligns the image vertically within the widget frame.

3.5.8.5.7.15 Input field

The input field enables you to manually enter values in order to filter other widgets.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific input field options	Description
Data type	<p>Data type of the user input. The user can insert only values of the selected data type.</p> <ul style="list-style-type: none">  Text  Number  Date <p>If the input field data type is set to DATE, a  calendar icon that you can use to open a date picker is shown in the input field.</p>
Date format	<p>Format of the user input. The user can insert only values that comply with the selected format.</p> <p>The option is available only for data type Date.</p>

Specific input field options	Description
Prompt text	Displays a prompt text in the input field.
Initial value	Initial value is displayed in the input field and used as preset value. Optional
Current date/time	Uses the current date as the value that is preset by default. The widget always uses the current date and time of the dashboard at runtime. The option is available only for data type Date . The value displayed depends on the format selected.
Submit button text	Alternative text for the submit button. The default text is Ok .
Show submit button	Displays the submit button in the input field.
Submit value with each keystroke	Immediately submits the entered values with each keystroke. The input field only submits valid date or number values for Date and Number .

3.5.8.5.7.16 Label

A label displays a fixed text you have entered, or a text that is supplied dynamically by a data source.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific label options	Description
Style	Style to be used for the text displayed in the drop-down menu.
Alignment	Alignment of the text that is displayed. The default is left aligned .

3.5.8.5.7.17 Line chart

A line chart can display values for two iterations:

- Two dimensions and one KPI
- One dimension and multiple KPIs

The second iteration is displayed in the form of several stacked lines. If multiple KPIs are used, these are displayed in lines of different colors.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific line chart options	Description
Chart title	Optional chart title of the chart displayed in the widget.
Line type	Selects the line type of the line chart. Linear , Curved or Step line types are available. The default is Linear .
Data points	Selects the size of displayed data points. Line types available are Large , Small or None . The default is Large .

Specific line chart options	Description
Interpolate	Enabled: A lack of values results in a continuous line. Disabled: A lack of values results in gaps within the line.
X-axis label orientation	Aligns the labeling of the X-axis. <ul style="list-style-type: none">▪ Auto: aligns the labels depending on the available space on the X-axis. This behavior is default.▪ Rotated: rotates the labels of the X-axis 90 degrees.▪ Alternate: the labels of the X-axis are alternately offset.
Legend position	Displays a legend in the widget and sets the legend's position. The default is None , that is, no legend is displayed.
Axis	Specifies the visualization of the X- and Y-axis. Show all : Displays the axis titles and labels. Enabled by default. Hide title : Hides the axis titles and displays only the axis labels. Hide all : Hides the axes completely.

3.5.8.5.7.18 List

The **List** widget lists the values of one or two assigned data source columns.

You can use the **List** widget to select values, for example, to filter multiple values in other widgets.

In view mode, the widget provides check boxes for selection when multiple selection is enabled. You can select multiple values by pressing the **Shift** key and clicking several rows.

The following widget options are available.

General options	Description
Name	Optional component name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the component.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific list options	Description
Edit columns	Enables you to edit the List widget interactively. Click the Configuration icon. In edit mode, the List widget has a blue frame. You can set the initial widths and the initial sort order of the columns. You can change the sort order by clicking the column header. To adapt the column width, drag the column borders using the mouse. You can change the defined column width and column sort order in dashboard view mode (page 856).

Specific list options	Description
Multiple selection	<p>In view mode, the user can select multiple values at the same time in the corresponding widget, for example, multiple rows in a table or multiple coordinates in a chart. The multiple selection can be used, for example, to filter other dashboard widgets. See Use interactive filters in dashboards (page 853) for details. The values selected are processed as a list. If the option is enabled, columns of List type are provided in the filter configuration dialog to configure filter conditions. See Define filters for dashboard widgets (page 946) for details.</p> <p>The option is enabled by default.</p>

3.5.8.5.7.19 Map with markers

A map with markers allows you to mark points of interest on a map based on geo-coordinates (latitude & longitude) defined in the assigned data.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific map with markers options	Description
Base map	<p>Selects a base map. A base map provides you with context for a map. You can add information to a base map by overlaying other information on top of it.</p> <p>Default base map is Open Street Maps.</p> <p>Select a base map in the drop-down menu.</p> <p>You can add your own base maps. For details, see Upload tile servers.</p>

Specific map with markers options	Description
Default marker icon	Selects the default marker icons. Default icon is a circle. Select an icon in the drop-down menu.
Sticky active area	Adjust automatically the zoom level of the map based on the active markers to display all markers in the widget.
Show label	Displays the label of all regions if applicable.

3.5.8.5.7.20 Pie chart

A pie chart can display one numerical KPI iterated over a dimension (text or date dimension).

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific pie chart options	Description
Chart title	Optional chart title of the chart displayed in the widget.
Inner radius	Specifies a inner radius in % to display an inner circle using the specified radius.
Values	Selects the display type of the KPIs.
Values position	Selects the position of the displayed KPI values. Positions available are Inside and Outside .
Legend position	Displays a legend in the widget and sets the legend's position. The default is None , that is, no legend is displayed.

Specific pie chart options	Description
Multiple selection	<p>In view mode, the user can select multiple values at the same time in the corresponding widget, for example, multiple rows in a table or multiple coordinates in a chart. The multiple selection can be used, for example, to filter other dashboard widgets. See Use interactive filters in dashboards (page 853) for details. The values selected are processed as a list. If the option is enabled, columns of List type are provided in the filter configuration dialog to configure filter conditions. See Define filters for dashboard widgets (page 946) for details.</p>

3.5.8.5.7.21 Process Variants

The **Process Variants** widget enables the PPM process variants feature in the dashboard editor. The widget adapts the PPM variants feature to the dashboard editor and makes the **Process Variants** widget available in the widget bar of the dashboard editor.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific Process variants options	Description
Scaling	Scaling type of the primary measure values. Select the type of scaling, Linear or Logarithmic . The bars are scaled depending on the selected scaling type.
Widget version	Displays the currently installed widget version.

3.5.8.5.7.22 Rich text area

The **Rich text area** widget displays a fixed text that you have entered, or a text that is supplied dynamically by a data source or a selected element of another widget.

The widget provides a text editor in which you can enter and format text. You can also insert variable data fields to dynamically display values of a data source.

The **Rich text area** widget supports multi-lingual dashboards (page 874). You can translate the widget title into different languages, but not the contents of the widget.

Double-click the widget to open the text editor.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific Rich text area options	Description
Text style	<p>Provides options for text layout.</p> <ul style="list-style-type: none"> ▪ Text format, for example, Heading, Titel, or Normal, provided in the drop-down menu. ▪ Increase and decrease text size ▪ Bold ▪ Italic

Specific Rich text area options	Description
	<ul style="list-style-type: none">▪ Underline▪ Strikethrough▪ Text color▪ Clear text style
Paragraph	Provides options for paragraph layout. <ul style="list-style-type: none">▪ Text alignment▪ Text indent▪ Ordered and unordered list
Insert dynamic values	Inserts variable data fields at the cursor position. The variable data fields allow you to display values that are dynamically supplied by assigned columns of the data source. See Assign data columns to rich text editors.

3.5.8.5.7.23 Root Cause Miner widget

PPM provides the **Root Cause Miner** (page 1038) widget to analyze the visible data on a dashboard.

If you observe unusual symptoms on a dashboard, that is, interesting data points that need to be investigated, you can use the **Root Cause Miner** widget to analyze these symptoms. For example, you observe that the number of complaints in some distribution regions is too high and you want to investigate the symptom.

For details on using Root Cause Miner, see Use Root Cause Miner (page 965).

For further details about root cause analysis, see Root Cause Miner (page 1117).

Display options

General options	Description
Name	Optional component name.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Widget version	Displays the currently installed widget version.

3.5.8.5.7.24 Slider

Provides the user with a selection of values in the form of a slider. The slider filters the values in a given data range. You can set the maximum and minimum of the data range using indicators.

The selected minimum and maximum values of the slider are labeled. In view mode, you can manually edit the minimum and maximum values of the labels. This allows you to enter exact values for the selected data range. Click a label of an indicator and enter a value required. In addition, you can adjust the minimum and maximum values individually or you can move the entire selected data range using the mouse pointer.

The **Slider** widget supports only numeric values.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific slider options	Description
Type	<p>Selects one of the following slider types:</p> <ul style="list-style-type: none"> ▪ Single value: With this slider, you can select a single value in a defined range of values.

Specific slider options	Description
	<ul style="list-style-type: none"> ▪ Range: With this slider, you can select the minimum (From) and the maximum (To) value of a data range. ▪ Range (fixed upper): With this slider, you can select the minimum (From) value of a data range. The maximum value is fixed. ▪ Range (fixed lower): With this slider, you can select the maximum (To) value of a data range. The minimum value is fixed. ▪ Range (open): With this slider, you can select the minimum (From) value and the maximum (To) value of a data range. You can also specify an open range, that means, you can set a fixed minimum and an open maximum or an open minimum and a fixed maximum. <p>When you move the slider beyond the start and end point of the slider, the selection is removed.</p>
Display range	<p>Specifies the data range with a minimum value (From) and a maximum value (To).</p> <p>If no data source columns are assigned to the widget, you can enter the range values manually.</p> <p>If data source columns are assigned, the range values are taken from the corresponding columns. The first values of the corresponding data source columns are always taken as minimum or maximum.</p> <p>The first value of the column assigned to the data range maximum should be greater than the first value of the column assigned to the data range minimum.</p> <p>The preset values are 0 (minimum) and 100 (maximum).</p>
Initial selection	<p>Values that are preselected by default.</p> <p>For the Single type, you specify a single value.</p> <p>For the Range type, you specify the From and To values of the data range.</p> <p>For the Range (fixed upper) type, you specify the From value.</p> <p>For the Range (fixed lower) type, you specify the To value.</p> <p>For the Range (open) type, you specify the From and To value.</p> <p>If no data source columns are assigned to the widget, you can enter the initial range values manually.</p> <p>If data source columns are assigned, the initial values are taken from the corresponding columns. The first values of the corresponding data source columns are always taken as minimum or maximum.</p>

Specific slider options	Description
	By default, the slider selects the full available range.
Show ticks	Shows the step ticks. Enabled by default.
Step width	Step width of the values between minimum and maximum value. The values of the slider, starting with the minimum, are increased by this value until the maximum is reached. By default, the step width is set automatically. The minimum permissible step width is not smaller than 1/1000th of the range value. For example, if the range is 0 to 10000, the minimum step value is 10. You can enter your own value for the step width. The option is only available if the Show ticks option is enabled.
Only step values	Allows the user to select step values only. The indicator snaps to the nearest tick (step value) if the indicator is left between two ticks. Disabled by default. The option is only available if the Show ticks option is enabled.
Enable markers	Displays the selected slider value in the marker. The option is enabled by default.
Rotate axis	Displays the values at an angle of 45° on the axis if the option is enabled, otherwise displays the values horizontally. The option is disabled by default.
Numeric format	Selects the format of the values displayed in the widget. The slider widget supports only numeric values.

3.5.8.5.7.25 Jump to PPM client

The **Jump to PPM client** widget displays a customizable text which can be used to jump to PPM. Optionally, you can configured a favorite which is displayed when you jump to PPM.

The following widget options are available.

General options	Description
Name	Optional component name.
Container	<p>Hide header: Hides the header as well as the title of the component, and resizes the content of the container. Click the icon again to display the header. The header is hidden by default.</p> <p>Hide border: Hides the outline of the component container. Click the icon again to display the outline. The border is visible by default.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.
Style	Selects the style type of the component. The component styles available in the drop-down menu are part of the style template selected for the current dashboard. The Default widget style is preselected.

Specific Jump to PPM widget options	Description
PPM Connections	Alias of the PPM Connection, which contains the PPM client connection data defined in MashZone NextGen.
Favorite	Path of a PPM favorite. The favorite path represents the favorites tree including favorites folder and name, for example, \Favorites\Process cycle time.
Extract from URL	Automatically determines the connection data of the PPM data source, for example, alias, favorite path, and favorite type, click Extract from URL and insert the favorite URL created in PPM.
Favorite type	Favorite type specifies the favorite as Private or Shared .

SAML AUTHENTICATION

If a user starts PPM using the Jump to PPM widget, he is automatically authenticated against the PPM system using single sign-on (SSO), provided SSO is configured correctly for PPM and ARIS Connect. The current logon language of the user is used for PPM, if available. Otherwise, the default language of PPM is used.

There are several ways the PPM client can be open:

- PPM applet always opens in a new tab.
- PPM web start opens a new client window (If no favorite jump client window is open.).
- PPM web start reuses an open client window (If a favorite client window is open, and the languages match.).
- PPM web start opens a new windows and closes an open one (If a favorite client window is open, and the languages do not match.).

3.5.8.5.7.26 Traffic lights

A multi-color vertical, horizontal, or single traffic light shows the threshold range in which a KPI value is located. You can define thresholds in the **Assign data** dialog.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific traffic light options	Description
Type	Types available are Vertical , Horizontal and Single .

3.5.8.5.7.27 Vector map

A vector map allows you to interact with a vector-based map and to visualize geographic areas of interest.

The following widget options are available.

General options	Description
Name	Optional widget name.
More options	Displays additional options.
Container	<p>Hide header: Hides the header as well as the title of the widget, and resizes the content of the container. Click the icon again to display the header.</p> <p>Hide border: Hides the outline of the widget container. Click the icon again to display the outline.</p>
Container style	Selects the style type of the container. The container styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Style	Selects the style type of the widget. The widget styles available in the drop-down menu are part of the style template selected for the current dashboard. By default, the Default widget style is preselected.
Auto refresh	Sets the automatic data retrieval of the widget.
Show menu	Enables the widget menu in view mode. In view mode, you can display the widget menu by clicking the  Menu icon in the widget header. In the widget menu, you can, for example, clear a selection, refresh the data displayed, or save the component widget in a CSV file.

Specific vector map options	Description
Template	<p>Selects a map template of outline maps based on available GeoJSON configurations.</p> <p>Default map template is world-countries-by-name.</p> <p>Select a map template in the drop-down menu.</p> <p>You can add your own map templates. For details, see Upload geographical maps.</p>
Base map	<p>Selects a base map. A base map provides you with context for a map. You can add information to a base map by overlaying other information on top of it.</p> <p>Default base map is Open Street Maps.</p>

Specific vector map options	Description
	Select a base map in the drop-down menu.
Sticky active area	Adjust automatically the zoom level of the map based on the active regions to display all regions in the widget.
Show label	Displays the label of all regions if applicable.

3.5.8.5.8 Operators

The dashboard and data feed editor provide a wide range of data source and data transformation operators to create dashboards and data feed definitions.

- Data source operators (page 1047)
- Data transformation operators (page 1068)

3.5.8.5.8.1 Data source operators

A data source operator enables you to specify the connection to a data source and to configure the data retrieval.

The following data source operators are available in the dashboard and data feed editor.

3.5.8.5.8.1.1 ARIS table

Extracts data from an ARIS model of type **Table**.

In ARIS Architect, you can export the content of a model of the **Table** type and generate a link to the export file in the form of a URL. For more information about on how to create an ARIS table see the ARIS Architect online help. See also **Generate dashboard link** in the ARIS Architect online help.

In ARIS Architect, you can run scheduled reports to create dashboards and to generate the relevant data sources. Each report output file is automatically stored in the ARIS document storage. These documents are used as the data sources for the corresponding default data feeds that are provided in ARIS Connect. In these data feeds, **ARIS table** is set as data source operator.

The following parameters are available.

Parameters	Description
Source	<p>ARIS export file in XML format. Size limit: Unlimited.</p> <ul style="list-style-type: none"> ▪ URL: HTTP address of the source file If another operator supplies the URL dynamically, the URL cannot be edited here. Example <code>http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> ▪ URL alias: Loads the file from a resource directory. Files must be located in a defined resource directory on the server. The data source files are located in a folder or a sub-folder of the ARIS document storage accessible in the ARIS Connect Repository.

Parameters	Description
	<p>If you have updated ARIS Connect 10.0 Service Release 1 to version 10.0 Service Release 2, you need to recreate the URL alias that have been defined for ARIS Connect 10.0 Service Release 1. Delete the URL alias at first and add a new URL alias with the same data.</p> <p>Path prefix (alias): Alias of the resource directory with the path to a directory on the server. Select an alias of the local resource directory, for example, Feed URL.</p> <p>Feed URL is the alias of the resource directory of the default data feeds provided in ARIS Connect.</p> <p>In the input box, enter a path to the relevant data source file for the Path prefix (alias) selected.</p> <p>Example</p> <pre>/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</pre> <p>To configure a Path prefix (alias), see Configure Dashboard server for details.</p> <p>To store data source files in a resource directory, see Upload file based data sources (page 993) for details.</p> <p>To copy the source file URL, see Upload file based data sources (page 993) for details.</p>
Insert parameter 	Inserts user defined input parameters at the cursor position. The button is clickable only if at least one user input parameter, for example, Text user input , has been inserted in the feed definition.
Parameter options 	Enables you to set input parameter options.
Refresh rate ()	Specifies the time until the data source is read in again. Default value is 12 h.
Authentication	Specifies an HTTP basic access authentication. User name and password are required for accessing the source file.
HTTP headers	Adds HTTP headers to the URL.
Parameters: Detect	Automatically reads out potential parameters of the data source. A requested parameters list is displayed that is based on the specified ARIS table source. You can enter the parameter values required to read in the data source.
Configure columns	Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns , the column list is reloaded from the data source and all changes in the list are undone.

3.5.8.5.8.1.2 CSV

Reads the CSV file and writes the individual values (character strings) to the table columns in the data feed based on the specified parameters. A change of column is identified by the specified separator between the individual values.

The following parameters are available.

Parameters	Description
Source	<p>Text file, with values that are separated by the same separator.</p> <ul style="list-style-type: none"> ▪ URL: HTTP address of the source file If another operator supplies the URL dynamically, the URL cannot be edited here. Example <code>http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> ▪ URL alias: Loads the file from a resource directory. Files must be located in a defined resource directory on the server. The data source files are located in a folder or a sub-folder of the ARIS document storage accessible in the ARIS Connect Repository. If you have updated ARIS Connect 10.0 Service Release 1 to version 10.0 Service Release 2, you need to recreate the URL alias that have been defined for ARIS Connect 10.0 Service Release 1. Delete the URL alias at first and add a new URL alias with the same data. Path prefix (alias): Alias of the resource directory with the path to a directory on the server. Select an alias of the local resource directory, for example, Feed URL. Feed URL is the alias of the resource directory of the default data feeds provided in ARIS Connect. In the input box, enter a path to the relevant data source file for the Path prefix (alias) selected. Example <code>/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> <p>To configure a Path prefix (alias), see Configure Dashboard server for details.</p> <p>To store data source files in a resource directory, see Upload file based data sources (page 993) for details.</p> <ul style="list-style-type: none"> ▪ To copy the source file URL, see Upload file based data sources (page 993) for details.

Parameters	Description
Insert parameter ()	Inserts user defined input parameters at the cursor position. The button is clickable only if at least one user input parameter, for example, Text user input , has been inserted in the feed definition.
Parameter options ()	Enables you to set input parameter options.
Refresh rate ()	Specifies the time until the data source is read in again. Default value is 12 h.
Authentication	<p>Specifies the credentials for authenticating to access the source file.</p> <p>Single Sign-On: Enables you to access the source file using single sign-on (SSO). SSO only works within ARIS Connect and not for CSV files provided by external data sources, such as an external web page. For details on how to configure SSO, see Configure single sign-on.</p> <p>HTTP basic auth:</p> <p>Specifies an HTTP basic access authentication.</p> <p>User name and password are required for accessing the source file.</p>
HTTP headers	Adds HTTP headers to the URL.
Separator	Separates the column values in the CSV file. Comma (,), semicolon (;), space, tab and pipe () are available. Default is comma.
Get column names from row	<p>Specifies a specific row that contains the column names.</p> <p>Activate the Get column names from row option and enter the number of the relevant row.</p>
Data from row	Specifies a specific row from which the data source values extraction starts.
Advanced parsing options	<p>Charset: Character set in which the source file is coded. The default value can be changed manually if the extracted data refers to a different coding type. Default: windows-1252.</p> <p>Masking: Protects the enclosed characters against being split at the separator. If column values contain the specified separator, they can be enclosed in a pair of masking characters, for example, "1,23". Masking characters can be set as required (available masking characters: single-quote ('), double-quote ("), none).</p> <p>Remove quote characters in column value: Removes the characters used for masking from the result data. If this option is deactivated the masking characters will remain as part of the result data.</p> <p>Sanitize names: Transforms column names in such a way that they can be used as XML names, according to EMMML standards. This</p>

Parameters	Description
	<p>affects the names containing blank spaces or other special characters. If this option is deactivated, the names are left unchanged.</p> <p>Trim whitespace: Removes all leading and trailing whitespace from column values. If this option is deactivated, whitespace can be part of the result data.</p> <p>EMML parsing: Parses values in the same way as they are parsed in EMMML. This affects the parsing of numeric and date values. It affects whether a specific value is understood as a date or numeric value, because different sets of date patterns and locales are used. If this option is deactivated, dates without an explicit time zone are assigned to the server's default time zone, if this option is activated, they are assigned to GMT.</p>
Configure columns	<p>Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns, the column list is reloaded from the data source and all changes in the list are undone.</p>

If you use an absolute URL, for example,

http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580, an authentication must be set. All requests to the uploaded file are made with the specified user/password combination.

If you use a relative URL, for example, **/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580**, an authentication is not required. All requests to the uploaded file are made with the current logged in user.

3.5.8.5.8.1.3 Data feed

Extracts data from an existing data feed.

To include a data feed as data source in a dashboard or in other data feeds, the **View** permission for the data feed selected is required. See Manage data feed permissions (page 992) for detail.

The following parameters are available.

Parameters	Description
Data feed	Data feed selected. Select data feed displays a list of available data feeds.
Edit data feed	Opens the selected data feed in a new tab.
User inputs	List of user inputs used in the selected data feed. You can enter a value in the relevant input box.
Configure columns	Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns , the column list is reloaded from the data source and all changes in the list are undone.

3.5.8.5.8.1.4 Excel

Reads a worksheet of an MS Excel file and writes the individual values to table columns in the data feed based on the specified parameters. The source table can be imported as a list or cross table.

In list tables, a corresponding column is created in the data feed for every non-empty column in the source table.

In cross tables, three columns are created in the data feed: A vertical iteration column corresponding to the first source column with the header, a horizontal iteration column defined in the operator and a value column.

MS Excel cells of data type number are extracted accurately, regardless of their formatting. Therefore, the values can be more accurate than displayed in MS Excel. MS Excel cells of data type date are extracted according to the formatting information to maintain the accuracy of the time stamp.

A cell can have a maximum of 2,000 characters.

The following parameters are available.

Parameters	Description
Source	<p>MS Excel file (xls,xlsx)</p> <ul style="list-style-type: none"> ▪ URL: HTTP address of the source file If another operator supplies the URL dynamically, the URL cannot be edited here. Example <code>http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> ▪ URL alias: Alias of a URL configuration. Only URL aliases for that you have the Usage privilege are available. Select a URL alias. For details, see Manage URL aliases. ▪ File alias: Loads file from a resource directory. Files must be located in a defined resource directory on the MashZone NextGen server. Path prefix (alias): Alias of the resource directory with the path to a directory on the server. Select an alias of the local resource directory. In the input box, enter a path to the relevant data source file for the Path prefix (alias) selected. Example <code>/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code>

Parameters	Description
Browse file (alias)	Enables you to browse the resource directories with the alias defined. Click the Browse file alias (...) button and select the required source file. At least one resource directory must exist. For details, see Manage resource directories.
Insert parameter ()	Inserts user defined input parameters at the cursor position. The button is clickable only if at least one user input parameter, for example, Text user input , has been inserted in the feed definition.
Parameter options ()	Enables you to set input parameter options.
Refresh rate ()	Specifies the time until the data source is read in again. Default value is 12 h.
Sheet	Sheet in the source table to be extracted. The default value: First sheet Specification: Mandatory
List table / Cross table	Specifies the table type. The default value: List table Specification: Mandatory For cross tables, only a single vertical iteration on the left side of the table is currently supported.
Separator	Separates the column values in the CSV file. Comma (,), semicolon (;), space, tab and pipe () are available. Default is comma.
Column name from row	Determines the names of the individual columns from a specific row, the row number of which must be specified. This option is not available for cross tables.
Horizontal iteration from row	Determines the column names of the individual iteration steps from a specific row. The column name of the vertical iteration is also determined from this row.
Import values from row	Extracts all values from the source file starting with a specific row. The default value: 2 Specification: Mandatory
Import data range from/to	Area of the table from which data is to be extracted, specified using column and row coordinates, for example, A3 to H128 Specification: Optional You can only specify a single continuous data range that can contain empty rows or columns.

Parameters	Description
	If no upper limit (to) is specified for the data range, all cells above the lower limit (from) are extracted.
Configure columns	Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns , the column list is reloaded from the data source and all changes in the list are undone.

If you use an absolute URL, for example,

http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580, an authentication must be set. All requests to the uploaded file are made with the specified user/password combination.

If you use a relative URL, for example, **/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580**, an authentication is not required. All requests to the uploaded file are made with the current logged in user.

3.5.8.5.8.1.5 JDBC

Extracts data from a preconfigured JDBC database.

You can configure JDBC data sources in the ARIS Connect Administration. See [Add a JDBC data source for dashboards](#) for details.

The following parameters are available.

Parameters	Description
Data source	<p>List of available JDBC data sources.</p> <p>Only JDBC data sources for which you have the required privilege are available.</p> <p>Select a JDBC data source.</p>
Refresh rate ()	<p>Specifies the time until the data source is read in again. Default value is 12 h.</p>
SQL query	<p>Input field to enter any SQL query command, for example, <code>SELECT * FROM <table name></code>.</p>
Insert parameter ()	<p>Inserts user defined input parameters at the cursor position. The button is clickable only if at least one user input parameter, for example, Text user input, has been inserted in the feed definition. See SQL statement parameters (page 1057) for details.</p>
Expand ()/ Collapse ()	<p>Expands or collapses the query input box.</p>
Authentication	<p>Specifies an HTTP basic access authentication.</p> <p>User name and password are required for accessing the source file.</p>
Configure columns	<p>Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns, the column list is reloaded from the data source and all changes in the list are undone.</p>

3.5.8.5.8.1.5.1 SQL statement parameters

You can insert parameter references in SQL statements of the JDBC operator. They are represented by a colon, followed by the parameter name. If the name contains special characters, it must be enclosed in double quotes.

JDBC PARAMETERS

Parameters are handed over to the database server as typed values along with the SQL statement at execution time. Before a statement is handed over to the database server, it is rewritten to use JDBC parameter markers ('?') as follows:

- A single-value parameter is replaced by a single JDBC parameter marker.
- A reference of a non-empty list is replaced by a comma-separated list of JDBC parameter markers, one for each list element. This is useful for populating the values of an **IN** predicate by a list value.

Example

```
SELECT * FROM table WHERE column IN (:list)
```

with 3 elements in the list is rewritten to

```
SELECT * FROM table WHERE column IN (?, ?, ?)
```

- A reference of an empty list is replaced by a single parameter marker that refers to a **NULL** value.

The last rule provides a valid SQL statement for an empty list. Note that if the list of values is empty, both **IN** and **NOT-IN** predicates return the same result: UNKNOWN and not FALSE.

3.5.8.5.8.1.6 JSON

Extracts data from a JSON file.

The following parameters are available.

Parameters	Description
Source	<p>JSON file</p> <ul style="list-style-type: none"> URL: HTTP address of the source file If another operator supplies the URL dynamically, the URL cannot be edited here. Example <code>http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> URL alias: Loads the file from a resource directory. Files must be located in a defined resource directory on the server. The data source files are located in a folder or a sub-folder of the ARIS document storage accessible in the ARIS Connect Repository. If you have updated ARIS Connect 10.0 Service Release 1 to version 10.0 Service Release 2, you need to recreate the URL alias that have been defined for ARIS Connect 10.0 Service Release 1. Delete the URL alias at first and add a new URL alias with the same data. Path prefix (alias): Alias of the resource directory with the path to a directory on the server. Select an alias of the local resource directory, for example, Feed URL. Feed URL is the alias of the resource directory of the default data feeds provided in ARIS Connect. In the input box, enter a path to the relevant data source file for the Path prefix (alias) selected. Example <code>/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> <p>To configure a Path prefix (alias), see Configure Dashboard server for details.</p> <p>To store data source files in a resource directory, see Upload file based data sources (page 993) for details.</p> <p>To copy the source file URL, see Upload file based data sources (page 993) for details.</p>
Insert parameter 	<p>Inserts user defined input parameters at the cursor position. The button is only clickable if at least one user input parameter, for example, Text user input, has been inserted in the feed definition.</p>

Parameters	Description
Parameter options ()	Enables you to set input parameter options
Refresh rate ()	Specifies the time span before the source file is read in again. Default valueThe default value is 30 sec.
Authentication	Specifies a HTTP basic access authentication or an existing authentication defined in the administration. User name and password are required for accessing the source file.
HTTP headers	Adds HTTP headers to the URL
Repeating object: Detect	<p>Reads out the repeating object automatically. A repeating object already set by a user will not be considered. The detected columns are displayed in the Columns box depending on the repeating object.</p> <p>JSON object that is repeated for each row; You can edit the repeating object manually.</p> <p>Specify a valid XQuery 3.1 lookup expression, for example, <code>?catalog?journal?articles?*</code> <code>?data?rows?*</code> <code>?catalog?books?*</code></p> <p>A JSON document is loaded as a nested structure of maps and arrays. The above expressions use the (terse form of the) map/array lookup syntax as follows:</p> <ul style="list-style-type: none"> - The initial '?' is a unary lookup operator that selects a named member of the root map - Further '?' are postfix lookup operators - '?*' selects all members of an array, for example, '?5' selects the fifth element of an array. <p>For more information about the lookup syntax, see https://www.w3.org/TR/xquery-31/#id-lookup.</p>
Advanced parsing options	<p>Charset: Character set in which the source file is coded. This can be set manually if the extracted data refers to a different coding type.</p> <p>By default, the HTTP response encoding is used if available, otherwise UTF-8 is used.</p> <p>EMML parsing: Parses values in the same way as they are parsed in EMML. This affects parsing of numeric and date values. It affects whether a specific value is understood as a date or numeric value, because different sets of date patterns and locales are used. If this option is activated, dates without an explicit time zone are assigned to the server's default time zone. If this option is deactivated, they are assigned to GMT.</p>

Parameters	Description
Columns: Detect	Reads out the columns of the data source automatically. The requested columns lists are displayed, based on the specified repeating object.
Configure columns	Configures the columns list. Deselect a column to exclude it from the result data. If you enter a New name for a column, it is used instead of the original column name in the result. If you click Reset columns , the column list is reloaded from the data source and all changes in the list are undone.

If you use an absolute URL, for example,

http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580, an authentication has to be set. All requests to the uploaded file are made with the specified user/password combination.

If you use a relative URL, for example, **/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580**, an authentication is not required. All requests to the uploaded file are made with the current logged in user.

3.5.8.5.8.1.7 PPM

Uses the ARIS Process Performance Manager (PPM) query interface to retrieve data from favorites defined in PPM.

For every PPM system that can be used in ARIS Connect, a PPM connection must be created.

The relevant PPM client server must be running. See the PPM documentation **PPM Installation** for details.

In PPM, you can use the pop-up menu of a favorite to copy the corresponding favorite URL. Click **Use in dashboard** in the pop-up menu of a favorite. See the PPM online documentation for details.

If you have updated ARIS Connect 10.0 Service Release 1 to version 10.0 Service Release 2, you must recreate the PPM connections that were defined for ARIS Connect 10.0 Service Release 1. First delete the PPM connection and add a new PPM connection with the same data.

The following parameters are available.

Parameters	Description
PPM Connection	Alias of the PPM Connection, that contains the PPM client connection data defined in ARIS Connect. See Configure PPM server for details.
Refresh rate ()	Specifies the time until the data source is read in again. Default value is 12 h.
Favorite	Path of a PPM favorite. The favorite path represents the favorites tree including favorites folder and name, for example, \Favorites\Process cycle time
Extract from URL	Determines the connection data of the PPM data source automatically, for example, alias, favorite path, language and favorite type. Click Extract from URL and insert the favorite URL created in PPM.
Authentication	<p>Specifies the credentials for authenticating the query against the PPM client server.</p> <p>Single Sign-On: Enables you to log in to PPM client server using single sign-on (SSO), and your current credentials. For details on how to configure SSO, see Configure single sign-on.</p> <p>HTTP basic auth: Requires the user name and the password of a PPM user.</p> <p>The returned data is filtered based on the PPM user access rights. The PPM user must have access rights for the selected favorite.</p>
Advanced options	<p>Specifies further connection parameters.</p> <p>Favorite type specifies the favorite as Private or Shared.</p> <p>Language of the favorite, for example, en for English</p> <p>Request key columns separately: Extracts all key values from the list table and writes them to separate columns of the data feed.</p>

Parameters	Description
Configure columns	Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns , the column list is reloaded from the data source and all changes in the list are undone.
Filters: Detect	Reloads the dimensions and measures information from PPM
Add filter	Adds one or more filter criteria to filter the values of the PPM query. PPM supports filtering by multiple selection. For details on using multiple selections, see Use multiple selection in lists and tables (page 858). For details on configuring the PPM operator for filtering, see Add filters (page 1063).

3.5.8.5.8.1.7.1 Add filters

You can add one or multiple filter criteria to filter the values of the PPM query.

The **PPM** data source operator supports user inputs of **List** type as input parameter. Thus, widgets using the **PPM** operator allows the use of multiple selection (page 858). That means that you can select one or multiple values in another widget to filter values provided by the **PPM** data source operator. To enable multiple selection when using the **PPM** operator, you must assign at least one user input of **List** type as input parameter. You can select **Date user input (List)** and **Text user input (List)** as input parameter. **Number user input (List)** is currently not supported by the **PPM** operator.

For details on creating input parameters, see the chapter Create input parameters (page 945).

Procedure

1. In the **PPM** operator, click **Add filter**.
2. Select a dimension or measure, such as **Date** or **Process cycle time**, and click **Add**. The selected criterion is added to the PPM operator as a filter criterion.
3. Select an operator for the condition of the filter criterion in the drop-down menu, for example, **is equal to**.

For criteria of **Text** type, the **is equal to** operator is available by default. If you enable filtering by expressions, the **starts with**, **ends with**, and **contains** operators are additionally provided. For enabling filtering by expressions, see step **5** below.

For criteria of **Date** type, the operators **On**, **Before or on**, and **On or after** operators are available. The **Before or on** and **On or after** operators cannot be used with **Date user input (List)**.

4. Enter a constant filter value in the input field, or click  **Insert input parameter** and select an input parameter. The button can only be clicked if there is at least one input parameter with the same data type as the filter criterion.

To enable the multiple selection for the **PPM** operator, select a user input of **List** type as input parameter.

5. You can filter criteria of **Text** type by expressions instead of entire words. For example, if you use a place holder in the filter expression, for example, * or ?.
 - g. Click the  **Set filter properties** icon and specify the filter parameters.
 - h. Enable the **Filter using an expression** uses.
 - i. Select whether the **Key** or the **Description** of the criterion is to be used as filter value.

If you enable filtering by expressions, further operators are provided to set the filter condition. See step **3** above.

6. Click **Add condition (+)** to add further filter conditions.

If you add further filter condition, the **AND-link conditions** option is displayed. You can enable the option to link the filter condition with a logical AND. By default, the conditions are linked with a logical OR.

7. Click **Delete condition** (-) to remove a filter condition.

Your settings are applied.

3.5.8.5.8.1.8 XML

Extracts data from an XML file. The data records are identified using a recurring element. The individual values are written to the table columns in the data feed based on the specified parameters.

The following parameters are available.

Parameters	Description
Source	<p>XML file</p> <ul style="list-style-type: none"> ▪ URL: HTTP address of the source file If another operator supplies the URL dynamically, the URL cannot be edited here. Example <code>http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> ▪ URL alias: Loads the file from a resource directory. Files must be located in a defined resource directory on the server. The data source files are located in a folder or a sub-folder of the ARIS document storage accessible in the ARIS Connect Repository. If you have updated ARIS Connect 10.0 Service Release 1 to version 10.0 Service Release 2, you need to recreate the URL alias that have been defined for ARIS Connect 10.0 Service Release 1. Delete the URL alias at first and add a new URL alias with the same data. Path prefix (alias): Alias of the resource directory with the path to a directory on the server. Select an alias of the local resource directory, for example, Feed URL. Feed URL is the alias of the resource directory of the default data feeds provided in ARIS Connect. In the input box, enter a path to the relevant data source file for the Path prefix (alias) selected. Example <code>/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580?tenantid=default&revision=1</code> <p>To configure a Path prefix (alias), see Configure Dashboard server for details.</p> <p>To store data source files in a resource directory, see Upload file based data sources (page 993) for details.</p> <p>To copy the source file URL, see Upload file based data sources (page 993) for details.</p>

Parameters	Description
Insert parameter ()	Inserts user defined input parameters at the cursor position. The button is clickable only if at least one user input parameter, for example, Text user input , has been inserted in the feed definition.
Parameter options ()	Enables you to set input parameter options.
Refresh rate ()	Specifies the time until the data source is read in again. Default value is 12 h.
Authentication	Specifies an HTTP basic access authentication. User name and password are required for accessing the source file.
HTTP headers	Adds HTTP headers to the URL.
Repeating element: Detect	<p>Reads out the repeating element automatically. A repeating element already set by a user is not considered. The repeating element is displayed corresponding to the hierarchy of the XML elements, for example, <element>/<repeating element>. The requested columns are displayed in the Columns box depending on the repeating element.</p> <p>XML element that is repeated for each row (XPath to repeat element); You can edit the repeating element manually. Specify a valid XPath expression, for example, /catalog/journal/article /data/row /catalog/book</p>
Columns: Detect	Automatically reads out the columns of the data source. The requested columns list is displayed, based on the specified repeating element.
Configure columns	Configures the columns list. You can unselect a column to exclude it from the result data. If you enter a new name for a column, this name is used in the result instead of the original column name. If you click Reset columns , the column list is reloaded from the data source and all changes in the list are undone.

For detailed information on configuring the time zone used by this operator, see the chapter Configure feed processing time zone.

If you use an absolute URL, for example,

http://myhost.company:1080/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580, an authentication has to be set. All requests to the uploaded file are made with the specified user/password combination.

If you use a relative URL, for example, **/documents/rest/links/03388871-367d-4abe-a2c9-37bc9fa44580**, an authentication is not required. All requests to the uploaded file are made with the current logged in user.

3.5.8.5.8.1.9 URL parameter syntax

You can insert parameters in the input URL of the **ARIS Table**, **CSV**, **Excel**, **JSON**, and **XML** operators, as well as in the configuration of a **Call URL** action.

A parameter reference is represented by the parameter name in square brackets. If the name contains special characters, it must be enclosed in quotes.

Examples

`http://[domain]`

`["web address"]`

To represent a literal square bracket, you double the square bracket. In this way, the square bracket does not introduce a parameter reference. For example, **`http://[[:1]]:8080`** does not refer to a parameter, but represents the IPv6 loopback address literal **`[[:1]]`**.

At runtime, parameter references will be replaced by the value of their parameter.

A parameter reference can have options appended to it. Options appear inside of the square brackets and are separated by commas. The following options are supported:

- **`encode-value="true"`** causes URL encoding of the resulting parameter string
- **`format="format string"`** causes a numeric or date value to be converted to text with the given format

Examples

`http://localhost:8080/[path,encode-value="true"]`

`http://localhost:[port,format="1234"]`

3.5.8.5.8.2 Data transformation operators

In addition to the data source operators you can add further operators to transform the source data. The following data transformation operators are available in the data feed editor.

3.5.8.5.8.2.1 Aggregate

Combines rows if identical values occur multiple times in specified dimension columns. The numerical values in the remaining columns are combined using Average, Sum, Minimum, Maximum, or Number.

One or more numerical columns in a table are aggregated using none, one, or several dimension columns. In all rows with identical values in all dimension columns, the values in the columns to be aggregated are combined into one row based on an aggregation rule. That is, the result contains one row for each combination of dimension columns. This also applies if no columns are specified for aggregation. If no dimension column is specified, only a single row is created and all values in the columns to be aggregated are combined into a single value for each column. No rows are created for combinations that do not occur in the original table.

PARAMETERS

The following parameters are available.

Action	Result
Dimension column	Name of dimension column. Source: Source table Data type: Date, Number, or Text The default value: {None} Specification: Optional
Aggregation column	Name of the column to be aggregated. Source: Aggregation column is transferred from the source table. Data type: Number The default value: {None} Specification: Optional
Aggregation type	Aggregation type for the column to be aggregated: Average value, Sum, Minimum, Maximum, Count, First row and Last row. The default value: Average value, if aggregation column selected. Specification: Mandatory, if aggregation column selected.
Weighting	If the aggregation type is Average value or Sum, a numerical column for weighting of the rows can be specified for each column to be aggregated. Specification: Optional

AGGREGATION TYPE

The following aggregation operations can be applied to the columns to be aggregated.

Data type	Comparison operators
Minimum	Finds all rows that have a specific combination of values in the dimension columns and returns the lowest value that occurs in these rows in the column to be aggregated.
Maximum	Finds all rows that have a specific combination of values in the dimension columns and returns the highest value that occurs in these rows in the column to be aggregated.
Average value	Finds all rows that have a specific combination of values in the dimension columns and returns the average of the values in the column to be aggregated. For weighting purposes, an additional column can be specified for each source column, containing a weighting factor for each row. The weighting information is combined as a pair with the source column.
Sum	Finds all rows that have a specific combination of values in the dimension columns and returns the sum of the values in the column to be aggregated. For weighting, an additional column can be specified for each source column, containing a weighting factor for each row. The weighting information is combined as a pair with the source column.
Count	Finds all rows that have a specific combination of values in the dimension columns and returns the count of values in the column to be aggregated.
First row	Finds all rows that have a specific combination of values in the dimension columns and returns the value of the row with the lowest row index (according to the index column).
Last row	Finds all rows that have a specific combination of values in the dimension columns and returns the value of the row with the highest row index (according to the index column).

At least one dimension or aggregation column, or both, must be set.

If no aggregation columns or dimension columns are specified, the incoming table remains unchanged.

EXAMPLE

The following table is to be aggregated based on the **Dim 1** and **Dim 2** columns. The sum is to be calculated for the Values 1 column and the average for the Values 2 column. The Weight (values 2) column is used for weighting the Values 2 column one row at a time.

Dim 1	Dim 2	Values 1	Values 2	Weight (values 2)
A	X	1	2	3
B	Y	2	4	4
C	Z	5	6	3
A	X	7	8	4
B	Y	9	10	3
C	Z	11	12	4

Result

Dim 1	Dim 2	Sum (values 1)	Average (values 2)
A	X	8 (1+7)	5,43 (2*3 + 8*4)/(3+4)
B	Y	12 (3+9)	6,57 (4*4 + 10*3)/(4+3)
C	Z	16 (5+11)	9,43 (6*3 + 12*4)/(3+4)

3.5.8.5.8.2.2 Arithmetic

Executes various arithmetical calculations. The operator sets any number of numerical operands against each other. The values are set against each other one row at a time according to the specified calculation type. The calculation always runs from top to bottom. In other words, two operands are always set against each other one row at a time and the result from the first two operands is then set against the third operand.

Compounding can be mapped by using a separate operator for each expression in brackets.

The following parameters are available.

Action	Result
Operands	<p>One numerical operand per operation for the "Square" and "Square root" calculation types, otherwise two numerical operands.</p> <p>Source: Source table, constants, user input or incoming values from other operators.</p> <p>Data type: Number</p> <p>Specification: Mandatory</p>
Calculation type	
Addition (+)	Adds two columns row by row
Subtraction (-)	Subtracts 2 columns row by row
Division (/)	Divides the first column by the second column
Multiplication (*)	Multiplies two columns row by row
Percent (%)	Row by row, multiplies the second column with the percent value of the first column
Square (x ²)	Calculates the square of a column
Root	Calculates the square root of a column
Sine (sin)	Calculates for a column the sine value of an angle in degrees
Cosine (cos)	Calculates for a column the cosine value of an angle in degrees
Tangent (tan)	Calculates for a column the tangent value of an angle in degrees
Arcsine (asin)	Calculates for a column the arcsine of an angle in degrees
Arccosine (acos)	Calculates for a column the arccosine of an angle in degrees
Arctangent (atan)	Calculates for a column the arctangent of an angle in degrees
Logarithm (lg)	Calculates for a column the common logarithm
Logarithm (ln)	Calculates for a column the natural logarithm
Power (exp)	Calculates for a column S1 the S2nd power of S1 (S1 to the power of S2)

Action	Result
Minimum (min)	Calculates the minimum of column 1 and column 2
Maximum (max)	Calculates the maximum of column 1 and column 2
Absolute value (abs)	Calculates for a column the absolute value The default value: Addition (+) Specification: Mandatory You need to specify the source values for the trigonometric functions sin, cos, tan, asin, acos, and atan in degrees.

EXAMPLE

Example: Result = Column 1 + Column 2 - Column 3

Column 1	Column 2	Column 3	Result
1000	2000	50	2950
2000	3000	1000	4000
3000	4000	1200	5800

3.5.8.5.8.2.3 Average

Calculates the average of the values from several numerical source columns one row at a time, writes the result to a target column, and overwrites any existing values there. If the target column does not exist, it is created.

The following parameters are available.

Parameter	Description
Column	Name of the column for which the average value is calculated. Column is transferred from the source table. Data type: Number Specification: Mandatory
Weight	Weight factor, which can be specified for each column to be aggregated: a column with values, a single value from a feed (single-value operator), an input value or a constant. Data type: Number Specification: Optional
Target column	Name of the column to which the result is written. The column name can be transferred from the source table or freely entered. Data type: Number Default value: Result_1 Specification: Mandatory

3.5.8.5.8.2.4 Change data type

Changes the data types of the specified columns to the **Number**, **Text**, or **Date** data types

Action	Result
Conversion of Text to Number	<p>Numerical value of the text taking into account the decimal separator.</p> <p>If the decimal separator is set correctly, any thousands separator is detected automatically.</p>
Conversion of Number to Text	<p>Text representation of the number in the internal format, or based on the language and the specified format. You can also specify a valid number of leading zeros.</p> <p>If nothing is specified here, the results are formatted in the numerical format.</p>
Conversion of Text to Date	<p>Date value of the text in the internal format, based on the specified format and, where applicable, the language.</p> <p>The date must be in the AD era. Date values before the common era are not supported. The time format must be specified. The time format is made up of sequences of characters, which stand for date fields, for example, year, month, day of the week, or minute, in the relevant language; separated by separators. In addition, the corresponding language must be specified. Non-editable text must be enclosed in quotation marks.</p> <p>When using the Q or q symbol for quarters, all other symbols except Y and y for years are ignored. Only the order of Q/q and Y/y is relevant.</p>
Conversion of Date to Text	<p>Text representation of the date in the internal format, or based on the language and the specified format</p> <p>Non-editable text must be enclosed in quotation marks.</p> <p>The format and language specifications are optional. If no format is specified, the data is output in the internal date format. If no language is specified, English (EN) is applied as the default language.</p>
Conversion of Number to Date	Date value corresponding to the value of the number as milliseconds since 01/01/1970
Conversion of Date to Number	Number of milliseconds since 01/01/1970

Internal number format

If a user is logged in in English, the number format is Anglo-Saxon, which uses a period as the decimal separator, but no grouping characters.

Internal date format

Use yyyy-Q for specifying to the nearest quarter, otherwise use yyyy-MM-ddThh:mm:ss. The number of digits corresponds to the accuracy of the date, and the remaining digits are omitted. This is the transfer format.

Quarterly specifications

Quarterly specifications are indicated by a **Q** within the section of the format that is not in single quotation marks.

Prerequisites for conversion of text into quarterly date values:

8. It is expected that a source value containing a quarterly date consists of just two sequences of figures indicating the year and the quarter. Any non-numerical characters can occur before, after and between them, for example, Quarter 04/2009.
9. The pattern uses **Y** or **y** as the symbol for the year and **Q** or **q** for the quarter, for example, quarter Q/y or Q Y.

Procedure:

10. The (first) two sequences of digits are determined from the source value.
11. The section of the format that is not enclosed in between single quotation marks is used to determine whether **q / Q** or **y / Y** appears first.
12. If q or Q appears first, the first sequence of digits is interpreted as the quarter and the second as the year, and vice-versa.

PARAMETERS

The following parameters are available.

Parameter	Description
Column	Name of the column to be changed; Source: Source table Data type: Date, Number, or Text Specification: Mandatory
New type	New column data type Default value: Text Specification: Mandatory
Format (Date type)	Time format for conversion from Date type to Text type and vice versa. The following formatting symbols are available when converting date into text: Year: y or Y Quarter: Q Month: M Calendar week: w

Parameter	Description
	<p>Day of the week: E or e</p> <p>Day of the month: d</p> <p>Day of the year: D</p> <p>Hour: H or h</p> <p>Minute: m</p> <p>Second: s</p> <p>AM/PM: a</p> <p>Time zone: z (for example, GMT)</p> <p>RFC time zone: Z (for example, -0900)</p> <p>Era: G (must always be AD)</p> <p>Default value: MM/dd/yyyy</p>
<p>Format (Date type)</p>	<p>The following formatting symbols are available when converting text to date:</p> <p>Year: y</p> <p>Quarter: Q</p> <p>Calendar week: w</p> <p>Week of the month: W</p> <p>Day of the week: E</p> <p>Day of the month: d</p> <p>Day of the year: D</p> <p>Hour (0-23): H</p> <p>Hour (1-24): k</p> <p>Hour AM/PM (0-11): K</p> <p>Hour AM/PM (1-12): h</p> <p>Minute: m</p> <p>Second: s</p> <p>AM/PM: a</p> <p>Time zone: z</p> <p>RFC time zone: Z</p> <p>Era: G</p> <p>Default value: yyyy-MM-dd'T'HH:mm:ss;</p> <p>Permitted separators in both cases:</p> <p>Dash/minus (-), underscore (_), slash (/), period (.), colon (:), comma (,), tab character, and space.</p> <p>Specification: Mandatory</p>

Parameter	Description
Language	<p>Language if the target format is of the Date type.</p> <p>Available languages: de and en.</p> <p>Specification: Mandatory when using names of months and names of days of the week</p>
Decimal separator	<p>Separator for the decimal places, if the target format is of the Number type.</p> <p>Default value: Comma (,)</p> <p>Specification: Mandatory</p>
Format (Number source format)	<p>Number format for the conversion of the Number type to the Text type.</p> <p>You can select predefined formats or set your own format manually.</p> <p>If the numbers before the decimal separator are entered manually, they must have four digits in ascending order followed by digits in descending order. This combination can be followed by text (such as the unit "hours" or km/h).</p> <p>Default value: 1234</p> <p>Permitted separators:</p> <p>Thousands separator in German: period (.)</p> <p>Thousands separator in English: comma (,)</p> <p>Decimal separator in German: comma (,)</p> <p>Decimal separator in English: period (.)</p>
Leading zeros	<p>Number of leading zeros. The maximum number of leading zeros is the number of digits before the decimal separator.</p> <p>Example:</p> <p>Format: 1,234.12 and leading zeros: 5</p> <p>Number -> Text</p> <p>10,245 -> 00010,25</p> <p>12000,4 -> 12000,4</p> <p>89,7 -> 00089,70</p>
Specify type	<p>Automatically specifies the data type of the source values.</p> <p>If the content of a column does not correspond to its assigned data type, a row is created in the operator which specifies the data type determined for this column. Vice-versa, settings (lines) are removed from the operator, which would reset the data type of a column already typified correctly.</p>

Parameter	Description
Encoding (Text source format)	<p>Specifies the encoding of special characters, for the conversion of the Text type to the Text type, for example, "/", "&", "?".</p> <p>Apply UTF-8 encoding: encodes the entire text, using UTF-8 codes</p> <p>Decode UTF-8: decodes the entire text, using UTF-8 codes</p> <p>Apply URL encoding: keeps the URL specific characters</p> <p>For UTF-8 encoding/decoding the special characters must be masked in a valid URL. Only select this option if you are sure that all sections that make up the URL are already masked.</p>

The characters used for the time format can be combined in any order and repeated any number of times.

Exceptions:

- For a month, the number of characters must be ≥ 3 (MMM or MMMM) if the month is specified in text format (JAN, FEB, etc.) and < 3 if it is specified as a figure. In this case, a language must also be specified so that the name of the month can be transformed correctly.
- For a year format, such as 2009, y can be specified any number of times, that is, yy and yyyy return 2009.
- For a year format, such as 09, however, yyyy returns the year 9 and yy the year 2009.
- When formatting date values as days of the week for a date-to-text conversion, an e/E number < 4 returns the day abbreviations (MON, TUE, etc.), while e/E = or > 4 returns the full name of the day.
- Only the month (M), minute (m), time zone (z), RFC time zone (Z) and calendar week (w) are case-sensitive.
- When converting text to date, if the Q or q symbol is used for quarters, all other symbols except Y and y are ignored. Only the order of Q/q and Y/y is key.
- For the reverse conversion from date to text, the Q/q can be combined with any other symbols, but may only occur once (not QQ/yy)
- Quarter entries are currently only possible in the form YYYY-Q. These strings can contain only the year, separator, and quarter.
- All other strings must be enclosed in single quotation marks ('). Spaces can be inside or outside, for example, 'On' dd.MM.yy 'at' hh:mm, or 'On 'dd.MM.yy' at 'hh:mm' '.
- The space pattern in the source and target format must match, for example, "2 .3 .09" -> "d .M .y" but not "2. 3. 09" -> "d .M .y".

EXAMPLES

Source format: "22.3.2009"

Time format: "d.M.y" or "DDDD.MM.YYYY",
but not "DD.MMM.YYYY "

Source format: "03/22/09 30:24 PM"

Time format: "MM/DD/YY hh:mm a" or "M/d/y HH:mm A"
but not "M/d/y HH:MM A" or "m/d/y HH:mm A"

Source format: "Time: 2009-FEBRUARY-01T22:33:44"

Time format: "Time: 'y-MMM-d'T'h:m:s" or "'Time: ' y-MMMMM-d'T'h:m:s",
but not "'Time: 'y-MM-d'T'h:m:s"

Source format: "3. quarter 2009"

Time format: "QY" or "Q'. quarter' y or "QQ/yyyy";
but not "YQ"

3.5.8.5.8.2.5 Change data type - single value

Changes the data type of the incoming single value to the **Number**, **Text**, or **Date** data types.

Action	Result
Conversion of Text to Number	<p>Numerical value of the text taking into account the decimal separator.</p> <p>If the decimal separator is set correctly, any thousands separator is detected automatically.</p>
Conversion of Number to Text	<p>Text representation of the number in the internal format, or based on the language and the specified format. You can also specify a valid number of leading zeros.</p> <p>If nothing is specified here, the results are formatted in the numerical format.</p>
Conversion of Text to Date	<p>Date value of the text in the internal format, based on the specified format and, where applicable, the language.</p> <p>The date must be in the AD era. Date values before the common era are not supported. The time format must be specified. The time format is made up of sequences of characters, which stand for date fields, for example, year, month, day of the week, or minute, in the relevant language; separated by separators. In addition, the corresponding language must be specified. Non-editable text must be enclosed in quotation marks.</p> <p>When using the Q or q symbol for quarters, all other symbols except Y and y for years are ignored. Only the order of Q/q and Y/y is relevant.</p>
Conversion of Date to Text	<p>Text representation of the date in the internal format, or based on the language and the specified format</p> <p>Non-editable text must be enclosed in quotation marks.</p> <p>The format and language specifications are optional. If no format is specified, the data is output in the internal date format. If no language is specified, English (EN) is applied as the default language.</p>
Conversion of Number to Date	Date value corresponding to the value of the number as milliseconds since 01/01/1970
Conversion of Date to Number	Number of milliseconds since 01/01/1970

Internal number format

If the user is logged in in English, the number format is Anglo-Saxon style with a period as the decimal separator and at least one decimal place, but without grouping characters.

Internal date format

yyyy-Q for specifying to the nearest quarter, otherwise yyyy-MM-ddThh:mm:ss. The number of digits corresponds to the accuracy of the date, and the remaining digits are omitted. This is the transfer format.

Quarterly specifications

These are indicated by a **Q** within the section of the format that is not in single quotation marks.

Prerequisites for conversion of text into quarterly date values:

13. It is expected that a source value containing a quarterly date consists of just two sequences of figures indicating the year and the quarter. Any non-numerical characters can occur before, after and between them, for example, Quarter 04/2009.
14. The pattern uses **Y** or **y** as the symbol for the year and **Q** or **q** for the quarter, for example, quarter Q/y or Q Y.

Procedure:

15. The (first) two sequences of digits are determined from the source value.
16. The section of the format that is not enclosed between single quotation marks is used to determine whether **q / Q** or **y / Y** appears first.
17. If q or Q appears first, the first sequence of digits is interpreted as the quarter and the second as the year, otherwise the reverse.

PARAMETERS

The following parameters are available.

Parameter	Description
Single value	Source: Single-value operator Data type: Date, Number, or Text Specification: Mandatory
New type	New single-value data type Default value: Text Specification: Mandatory

Parameter	Description
Format (Date type)	<p>Time format for conversion from Date type to Text type and vice versa.</p> <p>The following formatting symbols are available when converting date into text:</p> <p>Year: y or Y</p> <p>Quarter: Q</p> <p>Month: M</p> <p>Calendar week: w</p> <p>Day of the week: E or e</p> <p>Day of the month: d</p> <p>Day of the year: D</p> <p>Hour: H or h</p> <p>Minute: m</p> <p>Second: s</p> <p>AM/PM: a</p> <p>Time zone: z (for example, GMT)</p> <p>RFC time zone: Z (for example, -0900)</p> <p>Era: G (must always be AD)</p> <p>Default value: MM/dd/yyyy</p>
Format (Date type)	<p>The following formatting symbols are available when converting text to date:</p> <p>Year: y</p> <p>Quarter: Q</p> <p>Calendar week: w</p> <p>Week of the month: W</p> <p>Day of the week: E</p> <p>Day of the month: d</p> <p>Day of the year: D</p> <p>Hour (0-23): H</p> <p>Hour (1-24): k</p> <p>Hour AM/PM (0-11): K</p> <p>Hour AM/PM (1-12): h</p> <p>Minute: m</p> <p>Second: s</p> <p>AM/PM: a</p> <p>Time zone: z</p>

Parameter	Description
	<p>RFC time zone: Z</p> <p>Era: G</p> <p>Default value: yyyy-MM-dd'T'HH:mm:ss;</p> <p>Permitted separators in both cases:</p> <p>Dash/minus (-), underscore (_), slash (/), period (.), colon (:), comma (,), tab character, and space.</p> <p>Specification: Mandatory</p>
Language	<p>Language if the target format is of the Date type.</p> <p>Available languages: de and en.</p> <p>Specification: Mandatory when using names of months and names of days of the week</p>
Decimal separator	<p>Separator for the decimal places, if the target format is of the Number type.</p> <p>Default value: Comma (,)</p> <p>Specification: Mandatory</p>
Format (Number source format)	<p>Number format for the conversion of the Number type to the Text type.</p> <p>You can select predefined formats or set your own format manually.</p> <p>With manual entry, the numbers before the decimal separator must have four digits ascending and then descending, for example, 1,234.321. After this, you can add text (such as the unit "hours" or km/h).</p> <p>Default value: 1234</p> <p>Permitted separators:</p> <p>Thousands separator in German: period (.)</p> <p>Thousands separator in English: comma (,)</p> <p>Decimal separator in German: comma (,)</p> <p>Decimal separator in English: period (.)</p>
Leading zeros	<p>Number of leading zeros. The maximum number of leading zeros is the number of digits before the decimal separator.</p> <p>Example:</p> <p>Format: 1,234.12 and leading zeros: 5</p> <p>Number -> Text</p> <p>10,245 -> 00010,25</p> <p>12000,4 -> 12000,4</p> <p>89,7 -> 00089,70</p>

Parameter	Description
Specify type	<p>Automatically specifies the data type of the source values.</p> <p>If the content of a column does not correspond to its assigned data type, a row is created in the operator which specifies the data type determined for this column Vice-versa, settings (lines) are removed from the operator, which would reset the data type of a column already typified correctly.</p>
Encoding (Text source format)	<p>Specifies the encoding of special characters, for the conversion of the Text type to the Text type, for example, "/", "&", "?".</p> <p>Apply UTF-8 encoding: encodes the entire text, using UTF-8 codes</p> <p>Decode UTF-8: decodes the entire text, using UTF-8 codes</p> <p>Apply URL encoding: keeps the URL specific characters</p> <p>For UTF-8 encoding/decoding the special characters must be masked in a valid URL. Only select this option if you are sure that all sections that make up the URL are already masked.</p>

The characters in the time format can be combined in any order and repeated any number of times.

Exceptions:

For a month, the number of characters must be ≥ 3 (MMM or MMMM) if the month is specified in text format (JAN, FEB, etc.) and < 3 if it is specified as a figure. In this case, a language must also be specified so that the name of the month can be transformed correctly.

For a year format such as 2009, y can be specified any number of times, that is, yy and yyyy return 2009.

For a year format such as 09, however, yyyy returns the year 9 and yy the year 2009.

When formatting date values as days of the week for a date to text conversion, an e/E number < 4 returns the day abbreviations (MON, TUE, etc.), while e/E = or > 4 returns the full name of the day.

Only the month (M), minute (m), time zone (z), RFC time zone (Z) and calendar week (w) are case-sensitive.

When converting text to date, if the Q or q symbol is used for quarters all other symbols except Y and y are ignored. Only the order of Q/q and Y/y is decisive then.

For the reverse conversion from date to text, the Q/q can be combined with any other symbols, but may only occur once (not QQ/yy)

Quarter entries are currently only possible in the form YYYY-Q. These strings can only contain the year, separator, and quarter.

All other strings must be enclosed in single quotation marks ('). Spaces can be inside or outside, for example, 'On' dd.MM.yy 'at' hh:mm, or 'On 'dd.MM.yy' at 'hh:mm' '.

The space pattern in the source and target format must match, for example, "2 .3 .09" -> "d .M .y" but not "2. 3. 09" -> "d .M .y".

EXAMPLES

Source format: "22.3.2009"

Time format: "d.M.y" or "DDDD.MM.YYYY",
but not "DD.MMM.YYYY "

Source format: "03/22/09 30:24 PM"

Time format: "MM/DD/YY hh:mm a" or "M/d/y HH:mm A"
but not "M/d/y HH:MM A" or "m/d/y HH:mm A"

Source format: "Time: 2009-FEBRUARY-01T22:33:44"

Time format: "Time: 'y-MMM-d'T'h:m:s" or "'Time: ' y-MMMMM-d'T'h:m:s",
but not "'Time: 'y-MM-d'T'h:m:s"

Source format: "3. quarter 2009"

Time format: "QY" or "Q'. quarter' y or "QQ/yyyy";
but not "YQ"

3.5.8.5.8.2.6 Column to value

Converts a data feed column into a value or value list. If the **to list** option is enabled, the resulting value is a list containing values from all rows of the column. Otherwise, the first value found is returned.

The following parameters are available.

Parameter	Description
Source column	Name of the column whose values are filtered. Source: Source table; Data type: Number, Text, Date, depending on the input column type; Specification: Mandatory
to list	Creates a value list. If enabled, the resulting value is a list of all column values. Otherwise the first value found is returned. Specification: Optional

3.5.8.5.8.2.7 Combine data feeds

Merges two data feeds by comparing the values in key columns one row at a time. The key columns for the left and right table are defined in pairs. Several pairs of key columns can be specified. Both key columns must have the same data type.

One table is defined as the main table, to which all columns from the second table are added except for its key columns. The main table is linked to the upper left anchor point.

The following parameters are available.

Parameter	Description
Left/right column	Name of the left or right key column. Source: Source tables Data type: Text, Date or Number For Text data type, the Case sensitive and Ignore spaces options are additionally available.

Options	
Include key values of left data feed	Always transfers all key values from the left data feed (main data feed), regardless of whether there are matching rows in the right data feed. Rows with matching key values are merged. Rows in the right data feed whose key values do not occur in the left table are omitted. This option is selected by default.
Include identical key values of both data feeds	Transfers only the rows whose key values match in the two data feeds, and which therefore can be merged.
Include key values of both data feeds	Always transfers the key values from both data feeds, even if their key values do not occur in the other data feed. Rows with matching key values are merged.
Allow multiple values	Allows multiple occurrences of rows with identical key values in the right table. This can lead to a large number of result rows, as all combinations of the rows with identical key values are transferred to the results. This option is unselected by default.

The key columns have the name they had in the left table.

Since the individual table columns are identified by name when being imported you need to ensure that the columns of the table area to be imported have unique names.

If other columns with identical names occur in both feeds, other than the key columns, _L or _R is appended to the names of these columns.

3.5.8.5.8.2.8 Concatenate data feeds

Adds the rows from the right-hand table after the final row of the left-hand table and merges columns of the same name and type.

For every row in the main table, a check is made as to whether there is a row in the right table that has the same values in all key column pairs. These rows are then combined into one row.

The following parameters are available.

Parameter	Description
Left/right data feeds	Two data feeds to be combined. Specification: Mandatory

3.5.8.5.8.2.9 Concatenate texts

Combines the values of the specified columns or text fragments into one text.

Appends the values from the source columns or the source values to one another one row at a time, writes the results to the target column, and overwrites any existing values there. If the target column does not exist, it is created.

The following parameters are available.

Parameter	Description
Text	Value to be linked. Source: Source table, single-value operator, input value, or a constant. Data type: Number, Text, Date; Specification: Optional
Target column	Name of the column to which the linked text is written. Source: Source table or constant. Data type: Text Default value: Result_1 Specification: Optional

3.5.8.5.8.2.10 Conditional replace

Changes the value in the specified column one row at a time if certain conditions are met.

Replaces existing values in the column with new values. Replacement must be linked to a condition, that is, you can specify whether all or at least one condition must be met. Several conditions can be specified and these are linked to each other with "AND".

The following parameters are available.

Action	Result
Column	Name of the column whose values are replaced. Source: Source table Data type: Number, Text, Date; Specification: Mandatory
New value	Value that replaces the value in the source column. Source: Column with values, single value from a feed (single-value operator), user input, or a constant. Default value: is equal to Specification: Mandatory
Replace	Values are replaced if one or all conditions is/are met.
Source column	Name of the column whose values are compared. Source: Source table Data type: Number, Text, Date; Specification: Mandatory
Comparison operator	Operator that compares the values from the source column with the comparison values. Available comparison operators depend on the data type of the source column. Default value: is equal to Specification: Mandatory
Comparison values	Values that are compared with the values from the source column. Source: Column with values, single value from a feed (single-value operator), user input, or a constant. Data type: Must be identical to that of the source column. Comparison value missing Condition met: If a comparison value is missing, the condition is assumed to be met. Condition not met: If a comparison value is missing, the condition is assumed to not be met.

Action	Result
	Specification: Mandatory

COMPARISON OPERATORS

The following comparison operators are available.

Data type	Comparison operators
Number	<ul style="list-style-type: none"> Is equal to Is not equal to Is less than Is less than or equal to Is greater than Is greater than or equal to Is empty Is not empty
Text	<ul style="list-style-type: none"> Is equal to Is not equal to Starts with Ends with Contains Does not contain Is empty Is not empty
Date	<ul style="list-style-type: none"> Before After On Before or on On or after Is empty Is not empty

3.5.8.5.8.2.11 Convert text

Converts all characters in the source column one row at a time, based on the specified transformation rule. The transformation rule includes all rows in the selected source column.

The following parameters are available.

Parameter	Description
Column	<p>Name of the column whose values are converted.</p> <p>Source: Source table</p> <p>Data type: Text</p> <p>Specification: Mandatory</p>
Conversion	<p>Transformation rule for conversion of column values:</p> <p>UPPER: Converts all characters into upper case, according to the rules of the specified language.</p> <p>LOWER: Converts all characters into lower case, according to the rules of the specified language.</p> <p>ONLY_LETTERS: Removes all figures (0-9) from the column values;</p> <p>ONLY_NUMBERS: Removes all letters from the column values.</p> <p>REMOVE_SPACES: Removes all spaces from the column values.</p> <p>REMOVE_LEADING_WHITESPACE: Removes leading whitespace from the column values.</p> <p>REMOVE_TRAILING_WHITESPACE: Removes trailing whitespace from the column values.</p> <p>Specification: Mandatory</p>
Target column	<p>Name of the column to which the conversation search result is written. This can be either a new column (typing a column name in the text field) or existing column (selecting a column from the drop-down menu).</p> <p>Data type: Text</p> <p>Default value: Result_1</p> <p>Specification: Optional</p> <p>If the target column is identical to the source column, the values in the source column are overwritten.</p>

3.5.8.5.8.2.12 Copy data feeds

Creates up to four independent copies of a data feed.

The following parameters are available.

Parameter	Description
Data feed	Data feed to be copied. Specification: Mandatory

3.5.8.5.8.2.13 Copy single value

Creates an independent copy of a value or list value, without changing the input value.

The following parameters are available.

Parameter	Description
Input value	Input value or value list to be copied. Specification: Mandatory

3.5.8.5.8.2.14 Delete column

Deletes the specified columns from the data feed.

The following parameters are available.

Action	Result
Column	Name of the column to be deleted. Source: Source table Data type: Date, Number, or Text Specification: Mandatory

3.5.8.5.8.2.15 Duplicate column

Copies the specified columns from the data feed to new or existing columns of the same type. It is possible to create multiple copies of a column, but the target columns must have different names.

If the target column does not exist, it is created. If it does exist, it is replaced. Regardless of their type, all columns can be duplicated.

The following parameters are available.

Action	Result
Source column	Name of the column to be duplicated. Source: Source table Data type: Date, Number, or Text Specification: Mandatory
Target column	Name of the new or existing column. Source: Constant Data type: Corresponds to source column. Specification: Mandatory

3.5.8.5.8.2.16 Extract text

Creates an extract from each value in a text column starting from the specified position (start index), and with the specified length, and writes the result to a target column.

Searches the source column at the specified start index, using the specified length for the string, and displays it in the target column. Start index and length must be ≥ 0 , otherwise an empty entry appears in the target column.

The following parameters are available.

Parameter	Description
Column	Name of the column whose values are searched. Source: Source table Data type: Text Specification: Mandatory
Start index	Start position of the string to be extracted. Source: Source column, single-value operator, input value, or constant. Size ≥ 0 ; Data type: Number Specification: Mandatory

Parameter	Description
Length	<p>Number of characters in the string to be extracted.</p> <p>Source: Source column, single-value operator, user input, or constant.</p> <p>Number of characters ≥ 0</p> <p>Data type: Number</p> <p>Specification: Mandatory</p>
Target column	<p>Name of the column to which the search result is written. This can be either a new column (typing a column name in the text field) or existing column (selecting a column from the drop-down menu).</p> <p>Data type: Number</p> <p>Default value: Result_1</p> <p>Specification: Mandatory</p>

3.5.8.5.8.2.17 Filter by date

Searches a date column for the latest or earliest date and transfers these rows to the results table. All other rows are filtered out. The search can be limited to specific dimensions. If one or more dimensions are specified, the operator determines the feed row with the earliest or latest date within the feed rows with identical dimension values and transfers this to the result table. If there are several feed rows with the earliest or latest date, all of them are transferred to the results table.

The following parameters are available.

Parameter	Description
Source column	<p>Name of the source column for which the earliest or latest date values are determined.</p> <p>Source: Source table</p> <p>Data type: Date</p> <p>Specification: Mandatory</p>
Earliest/latest date	<p>Determines the earliest or latest date values in the source column.</p> <p>Default value: Earliest date</p>
Dimension column	<p>Dimension for which the earliest or latest date values are determined. Acts as a filter to restrict the values determined.</p> <p>Data type: Text</p> <p>Specification: Mandatory</p> <p>Multiple dimension columns can be set.</p>

3.5.8.5.8.2.18 Filter rows

Filters the data feed one row at a time using specific conditions.

Column values of the Number, Text, or Date type are either let passed or blocked. An appropriate filter criterion can be selected depending on the data type.

The operator allows the processing of single values and value lists. You can connect the single-value user inputs and the user inputs of **List** type, see User input operators (page 1111).

Action	Result
Action	<p>Executed if particular conditions are met.</p> <p>Possible actions:</p> <ul style="list-style-type: none"> ▪ Let values pass (from source table) ▪ Block values (from source table) <p>if</p> <ul style="list-style-type: none"> ▪ all conditions are met ▪ one condition is met <p>Default value: Let values pass if all conditions are met.</p> <p>Specification: Mandatory</p>
Column	<p>Name of the column whose values are filtered.</p> <p>Source: Source table</p> <p>Data type: Number, Text, Date;</p> <p>Specification: Mandatory</p>
Comparison operator	<p>Operator that compares the values from the source column with the comparison values.</p> <p>Available comparison operators depend on the data type of the source column.</p> <p>Default value: is equal to</p> <p>Specification: Mandatory</p>
Comparison values	<p>Values that are compared with the values from the source column.</p> <p>Source: Source table, single-value operator, user input, user input (List), or a constant</p> <p>Data type: Must be identical to that of the source column.</p> <p>Comparison value missing</p> <ul style="list-style-type: none"> ▪ Condition met: If a comparison value is missing, the condition is assumed to be met. ▪ Condition not met: If a comparison value is missing, the condition is assumed to not be met. <p>Specification: Mandatory</p>

Action	Result
All conditions should match.	Combines the specified filter conditions. If the option is not enabled, the result will be a concatenation of all single filter results.

The following parameters are available.

Parameter	Description
Number	Is equal to Is not equal to Is less than Is less than or equal to Is greater than Is greater than or equal to Is empty Is not empty
Text	Is equal to Is not equal to Starts with Ends with Contains Does not contain Is empty Is not empty
Date	Before After In Before or on On or after Is empty Is not empty

COMPARISON OPERATORS PROCESSING VALUE LISTS

If a value list is processed (that is, the comparison value is a value list), either all filter values (ALL) or just a few filter values (ANY) can be applied for the filter condition (see table below). Click the  **Operator condition** icon to view the settings. The settings are also displayed in the tool tip.

- For filter conditions using the comparison operators is equal to, starts with, ends with, contains, and on the predefined applied list values are set to ANY.
- For filter conditions using the comparison operators is not equal to, does not contain, is less than, is greater than, and after the predefined applied list values are set to ALL.
- The setting of the applied filter values can be changed for all comparison operators except is equal to, is not equal to, and on. Click the  **Operator condition** icon and select the settings required.

3.5.8.5.8.2.19 Find text index

Finds the specified search text in a search column and writes the position of the text found to a numerical target column.

If the search text is not found, the position is -1.

The following parameters operators are available.

Parameter	Description
Column	Name of the column whose values are searched. Source: Source table Data type: Text Specification: Mandatory
Search text	String for which the search is performed. Source: Column values from source table, single value from a feed (single-value operator), input value, or a constant. Data type: Text Specification: Mandatory
Target column	Name of the column to which the search result is written. This can be either a new column (typing a column name in the text field) or existing column (selecting a column from the drop-down menu). Data type: Number Default value: Result_1 Specification: Mandatory
First/last hit	If multiple results are found, the first or last hit is taken as the search result.

3.5.8.5.8.2.20 Goal accomplishment

Calculates the degree of goal accomplishment of column values one row at a time, based on the rating and the two planned values for 100% and 0%.

The following parameters are available.

Parameter	Description
Calculation column value	Name of the column for which the goal accomplishment is calculated. Source: Source table Data type: Number Specification: Mandatory
Rating	Rating of the column values for which the goal accomplishment is calculated. Valid values: Positive or Negative Positive: Higher values are assessed as positive, for example, sales revenue Negative: Higher values are assessed as negative, for example, process throughput time. Data type: Text Default value: Positive: Specification: Mandatory
100% relates to	Target values that are compared with the source values. Source: Source table, single-value operator, input value, or a constant. Data type: Number Specification: Mandatory Goal accomplishment depends on the rating: Positive rating: Source values \geq target values Negative rating: Source values \leq target values
0% relates to	Target values that are compared with the source values. Source: Source table, single-value operator, input value, or a constant. Data type: Number Specification: Mandatory Goal accomplishment depends on the rating: Positive rating: Target values \leq source values Negative rating: Target values \geq source values
Target column	Name of the column to which the result is written.

Parameter	Description
	Source: Source table or constant. Default value: Result_1 Data type: Number Specification: Optional

3.5.8.5.8.2.21 Insert column

Inserts new columns of the **Text**, **Number**, or **Date** data type into the data feed. Each of the columns can be populated with an initial value.

The following parameters are available.

Action	Result
Column name	Name of the new column. Source: Constant Data type: Date, Number, or Text Specification: Mandatory
Type	New column data type; Date, Number, or Text. Default value: Text; Specification: Mandatory
Create numeric enumeration	Fills a new column with ascending values. The values start at 1 or the value entered in the Value input box and increase by a value of 1 in each subsequent row. Specification: Optional If the option is enabled the Value box is disabled and any (default) value already entered or selected is deleted. Incoming connections for dynamic values are ignored.
Value	Initial value of the new column. Source: User input, constant or source table Data type: Depends on the data type of the source column. Specification: Optional

3.5.8.5.8.2.22 Merge single texts

Concatenates multiple text values.

By default, the number of characters in a text cell is limited to 2,000. This limitation applies to text cells that are part of a feed result (also of a partial result). The limitation does not apply to individual values during feed calculation.

The following parameters are available.

Parameter	Description
Text	Any strings Source: User input, single-value operator, or constant Data type: Text Specification: Optional

EXAMPLE

An SQL statement is assembled by the **Merge single texts** operator. As long as it is handled as an individual value, this value can exceed the 2,000 characters. As soon as it is used in a table, however, it is automatically shortened to 2,000 characters.

3.5.8.5.8.2.23 Move date

Moves a date by a specified amount of time in a given direction and writes the results to a target column.

A date can only be moved by an amount of time, the unit of which is the same as or less accurate than the unit of the date itself. If the format of the moving period is more accurate than the format of the source date, the source date is retained. If you move a date by quarters, it is moved by three months for every quarter.

If a date accurate to the nearest day with a number of days > 28 is moved to a month that has fewer days, the result is the last day of the target month.

For example, you can move a date accurate to the nearest month by months, quarters or years, but not by days. A date accurate to the nearest year can only be moved by years, a date accurate to the smallest unit by any unit.

The following parameters are available.

Action	Result
Source column	Name of the source column whose date values are moved. Source: Source table Data type: Date Specification: Mandatory
Direction	Direction in which the date is moved. Valid values: Forward or Backward Data type: Text Default value: Forward Specification: Mandatory
Value	Value by which the date is moved by the selected unit. Source: Manual entry, single value or source table Data type: Number Default value: 1 Specification: Optional
Unit	Unit of time by which the date is moved. Data type: Text Default value: Second Specification: As source The information As source allows a move even if the unit of the date values is unknown at the time of creation or if it can vary.
Target column	Name of the target column to which the result is written. Data type: Date

Action	Result
	<p>Default value: Result_1</p> <p>Specification: Optional</p> <p>The target column can be identical to the source column. The values in the target column are overwritten.</p>

EXAMPLE

Source value	Value	Unit	Direction	Result
2009-12-24T16:23	10	YEAR	Forward	2019-12-24T16:23
2009-12-24	10	DAY	Forward	2010-01-03
2009-12-30	10	MONTH	Backward	2009-02-28
2009-11	1	QUARTER	Forward	2010-02
2009-11	1	DAY	Forward	2009-11
2009-01-01	3	As source	Forward	2011-01-04
2011-Q1	3	As source	Forward	2011-Q4

3.5.8.5.8.2.24 Rename column

Changes the names of the specified columns from the data feed. The data type of the column is retained.

The following parameters are available.

Action	Result
Column	Name of the column to be deleted. Source: Source table Data type: Date, Number, or Text Specification: Mandatory
New name	New name of the renamed column. Source: Constant Data type: Corresponds to source column. Specification: Mandatory

3.5.8.5.8.2.25 Replace text

Replaces text in a search column with the specified Find or Replace text one row at a time, or writes the text to a target column.

If the search text cannot be found, the search text itself is written to the target column.

The following parameters are available.

Parameter	Description
Column	Name of the column whose values are searched. Source: Source table Data type: Text Specification: Mandatory
Search text	String for which the search is performed. Source: Column values from source table, single value from a feed (single-value operator), input value, or a constant. Data type: Text Specification: Mandatory
Replacement text	String that replaces the search text. Source: Source table, single-value operator, input value, or constant. Data type: Text Specification: Optional

Parameter	Description
	If no replacement text is specified, the search text found is replaced with a empty text.
Target column	<p>Name of the column to which the search result is written. This can be either a new column (typing a column name in the text field) or existing column (selecting a column from the drop-down menu).</p> <p>Data type: Number</p> <p>Default value: Result_1</p> <p>Specification: Mandatory</p>
First/last hit	<p>IF multiple results are found, the first, last, or all hits is/are replaced.</p> <p>The specification relates to occurrence within the individual rows of the search column and not to the sequence of rows, that is, NOT "First row", "Last row" and "All rows".</p>

3.5.8.5.8.2.26 Round up/down

Rounds the values from a numerical source column to the specified number of decimal places (accuracy), writes the results to the target column, and overwrites any existing values there. If the target column does not exist, it is created.

If the accuracy itself is specified as a decimal number, the decimal places are ignored, that is, the integer value is used. Values that already have the same number or fewer decimal places than specified remain unchanged.

When rounding, the value is rounded down if the next decimal place is < 5 , otherwise it is rounded up.

The following parameters are available.

Action	Result
Source column	Name of the source column whose values are rounded. Source: Source table Data type: Number Specification: Mandatory
Precision	Numerical value specifying the number of decimal places; Source: Source table, single-value operator, input value, or a constant. Data type: Number Specification: Mandatory
Target column	Name of the column to which the result is written. The column name can be transferred from the source table or freely entered. Data type: Number Default value: Result_1 Specification: Optional

3.5.8.5.8.2.27 Round up/down date

Converts date values from a date column to a rougher time unit and writes the results to a target column.

The following parameters are available.

Action	Result
Source column	<p>Name of the source column whose values are rounded.</p> <p>Source: Source table</p> <p>Data type: Date</p> <p>Specification: Mandatory</p>
Precision	<p>Accuracy of the new date format, defined by the unit: Year, Quarter, Month, Day, Hour, Minute, or Second, and Interval: Depending on the selected unit, for example, 5 minutes or 1 year</p> <p>Data types: Numeric, Text</p> <p>Default values: 1, Minute</p> <p>If the accuracy of the source column is less accurate or the same as the target column format, the original value is retained.</p> <p>The date values are rounded according to the selected interval. Only the unit to be rounded is taken into account, for example, when rounding to minutes, the seconds are ignored.</p> <p>Rounding type: Specifies how the selected time interval is to be rounded.</p> <p>Round up for half an interval: Automatically rounds up above an interval value higher than or equal to half of the interval value</p> <p>Round down for half an interval: Automatically rounds down below an interval value lower than or equal to half of the interval value</p> <p>Always round up: Always rounds up, regardless of the interval value</p> <p>Always round down: Always rounds down, regardless of the interval value</p>
Target column	<p>Name of the target column to which the converted date is written</p> <p>Data type: Date</p> <p>Default value: Result_1</p> <p>Specification: Optional</p> <p>The target column can be identical to the source column. The values in the target column are overwritten.</p> <p>If the target column is not of the Date type, it is replaced by a new date column.</p>

EXAMPLES

Source value	Accuracy	Result
2009-12-24T16:23	Day	2009-12-24
2009-12-24T16:23	Hour	2009-12-24T16
2009-12-24	Month	2009-12
2009-12-24	Quarter	2009-Q4
2009-12-24	Year	2009

Rounding

2010-08-06T17:15:27	10 seconds	2010-08-06T17:15:30
2010-08-06T17:07:00	15 minutes	2010-08-06T17:00
2010-08-06T17:18:00	15 minutes	2010-08-06T17:15
2010-08-06T02:18:04	4 hours	2010-08-06T04:00:00

Round up

Source value	Accuracy	Result
2010-02-28T23:07:00:00 AM	15 minutes	2010-02-28T23:00
2010-02-28T23:07:30	15 minutes	2010-02-28T11:15:00 PM
2010-02-28T23:30:00	1 hour	2010-03-01T00

Round down

Source value	Accuracy	Result
1970:01:01T09:00:01	6 hours	1970:01:01T12:00:00
1970:01:01T09:00:00	6 hours	1970:01:01T06:00:00

Always round up

Source value	Accuracy	Result
2010-02-28T11:15:00 PM	15 minutes	2010-02-28T11:15:00 PM
2010-02-28T11:15:01 PM	15 minutes	2010-02-28T11:30:00 PM
2010-02-28T20:00:01	6 hours	2010-03-01T00

Always round down

Source value	Accuracy	Result
2010-02-28T 11:15:00 PM	15 minutes	2010-02-28T 11:15:00 PM
2010-02-28T 11:14:59 PM	15 minutes	2010-02-28T 23:00
2010- 03-01 T 05:59:59	6 hours	2010- 03-01 T 00

3.5.8.5.8.2.28 Runtime info

Provides system information on the logged-in user or the current date. The operator can also generate a random number.

The value type of the resulting single value changes accordingly.

The following parameters are available.

Parameter	Description
Information type	<p>The single-value operator can return the following types of information:</p> <ul style="list-style-type: none"> User data Today's date Random number <p>Default value: User data Specification: Mandatory</p>
Property	<p>Properties of the logged-in user; displayed if User data is selected as the information type.</p> <p>The following values can be selected: Login, First name, Last name, E-mail and Language</p> <p>Default value: User name Specification: Mandatory</p>
Precision	<p>Specifies the accuracy of the date, displayed if Today's date is selected as the information type.</p> <p>The following values can be selected: Minute, Hour, Day, Month, Year</p> <p>Default value: Day Specification: Mandatory</p> <p>For detailed information on configuring the time zone used by this operator, see the chapter Configure feed processing time zone.</p>
Number range	<p>Number range of the random number; displayed if Random number is selected as the information type.</p> <p>The following values can be selected: Integers, Floating point numbers</p> <p>Default value: Integers Specification: Mandatory</p>
Upper/lower limit	<p>Upper or lower limit of the value range for the random number; displayed if Random number is selected as the information type.</p> <p>Default value: 0 and 10 Specification: Mandatory</p>

3.5.8.5.8.2.29 Value to column

Converts an individual value into a column so that it can be connected to an operator.

Creates a feed table from an input value. If the input value is a list, the result contains one list element per row. Otherwise the result has a single row containing the value.

The following parameters are available.

Parameter	Description
Target column	<p>Name of the column to which the conversion result is written.</p> <p>The name of the column is initially Result. You can change the name manually if required.</p> <p>Data type: Text, Date or Number, depending on the input value.</p> <p>Default value: Result</p> <p>Specification: Optional</p>

3.5.8.5.8.3 User input operators

A user input operator is an interface to a data feed, allowing a user to enter data manually in a dashboard. The following user input operators are available in the data feed editor.

3.5.8.5.8.3.1 Date user input

The date user input enables the dynamic entry of date values in data feed processing. User input is an interface to a data feed, allowing a user to enter data manually in a dashboard.

The input has the format yyyy-MM-dd'T'HH:mm:ss (up to the required accuracy) or yyyy-'Q'Q.

The following parameters are available.

Parameter	Description
Name	Name of user input Source: Constant Data type: Text Specification: Optional The names of the individual user input must be unique within the feed definition.
Debug value	Value used for a test calculation in the Feed Editor. Source: Constant Data type: Date Specification: Optional
Preview value	The value is used if the user does not provide any input. Source: Constant Data type: Date Specification: Optional

3.5.8.5.8.3.2 Date user input (List)

The date user input enables the dynamic entry of date values in data feed processing. The operator is an interface to a data feed that can process multiple values (lists of values) at the same time. It enables the multiple selection in widgets.

The user input (list) operator can only be connected to operators that support the processing of list values (multiple selection). These operators are:

- Filter rows
- Data feed
- PPM
- JDBC
- Terracotta

The date user input has the format yyyy-MM-dd'T'HH:mm:ss (up to the required accuracy) or yyyy-'Q'Q.

The following parameters are available.

Parameter	Description
Name	Name of user input Source: Constant Data type: Text Specification: Optional The names of the individual user input must be unique within the feed definition.
Default value	Value used for a test calculation in the feed editor. Source: Constant Data type: Date Specification: Optional
Preview value	The value is used if the user does not provide any input. Source: Constant Data type: Date Specification: Optional
Edit	Enables you to enter the relevant debug and preview values in a table.

3.5.8.5.8.3.3 Number user input

The number user input enables the dynamic entry of numerical values in data feed processing. User input is an interface to a data feed, allowing a user to enter data manually in a dashboard. The input is done with a period (.) as the decimal separator and with no thousand grouping character (for example, 1234.56).

The following parameters are available.

Parameter	Description
Name	Name of user input Source: Constant Data type: Text Specification: Optional The names of the individual user input must be unique within the feed definition.
Debug value	The values is used for a test calculation in the Feed Editor. Source: Constant Data type: Number Specification: Optional
Preview value	The value is used if the user does not provide any input. Source: Constant Data type: Number Specification: Optional

3.5.8.5.8.3.4 Number user input (List)

The number user input enables the dynamic entry of numerical values in data feed processing. User input is an interface to a data feed, allowing a user to enter data manually in a dashboard. The input is done with a period (.) as the decimal separator and with no thousand grouping character (for example, 1234.56).

The user input (list) operator can only be connected to operators that support the processing of list values (multiple selection). These operators are:

- Filter rows
- Data feed
- JDBC
- Terracotta

The following parameters are available.

Parameter	Description
Name	Name of user input Source: Constant Data type: Text Specification: Optional The names of the individual user input must be unique within the feed definition.
Default value	List of value used for a test calculation in the feed editor. Source: Constant Data type: Number Specification: Optional
Preview value	List of values used if the user does not provide any input. Source: Constant Data type: Number Specification: Optional
Edit	Enables you to enter the relevant debug and preview values in a table.

3.5.8.5.8.3.5 Text user input

The text user input enables the dynamic entry of text in data feed processing. User input is an interface to a data feed, allowing a user to enter data manually in a dashboard.

The following parameters are available.

Parameter	Description
Name	Name of user input Source: Constant Data type: Text Specification: Optional The names of the individual user input must be unique within the feed definition.
Debug value	Value used for a test calculation in the Feed Editor. Source: Constant Data type: Text Specification: Optional
Preview value	The value is used if the user does not provide any input. Source: Constant Data type: Text Specification: Optional

3.5.8.5.8.3.6 Text user input (List)

The text user input enables the dynamic entry of text in data feed processing. User input is an interface to a data feed, allowing a user to enter data manually in a dashboard.

The user input (list) operator can only be connected to operators that support the processing of list values (multiple selection). These operators are:

- Filter rows
- Data feed
- PPM
- JDBC
- Terracotta

The following parameters are available.

Parameter	Description
Name	Name of user input Source: Constant Data type: Text Specification: Optional The names of the individual user input must be unique within the feed definition.
Default value	Value used for a test calculation in the feed editor. Source: Constant Data type: Text Specification: Optional
Preview value	The value is used if the user does not provide any input. Source: Constant Data type: Text Specification: Optional
Edit	Enables you to enter the relevant debug and preview values in a table.

3.5.8.5.9 Root Cause Miner

PPM provides the **Root Cause Miner** (page 1038) widget to analyze the visible data on a dashboard.

If you observe unusual symptoms on a dashboard, that is, interesting data points that need to be investigated, you can use the **Root Cause Miner** widget to analyze these symptoms. For example, you observe that the number of complaints in some distribution regions is too high and you want to investigate the symptom.

3.5.8.5.9.1 Symptoms and root causes

Symptoms are observed when a process analysis is performed, whereby the processes are analyzed with the help of a base set of filters.

Example

For example, you inspect your global sales processes of the last year and you find that a disproportionately large number of customer complaints occur in your subsidiary in **China** compared to the rest of the world. You start a process analysis to find out the cause of this asymmetry. In addition to the filters that define the **base set** of your observation (here: sales processes, last year's processes, and country) you specify the dimension value that you want an explanation for (here: complaints). This dimension value is called the **symptom**. PPM uses your settings to analyze all suitable dimensions for values with strikingly high or low numbers of occurrences in combination with the symptom. The result of the analysis is a table that lists all dimension values together with an estimate of how strongly this value affects the occurrence of the symptomatic value. This table may contain a row showing that complaints very often occur together with the value "PN4711" for the product dimension. The dimension value "PN4711" is called a **root cause**.

The following criteria can be used as symptoms.

- Single-level dimension value, as mentioned in the example
- Multi-level dimensions, which are interpreted disjunctively, such as the dimension **Equipment** with the values **basic** or **luxury**.
- KPIs
- Value ranges, for example, **Processing time** with the range **10 to 12 hours**. When the symptom contains a process measure, all process instances for which that measure is undefined are counted among the non-symptomatic processes.

The following criteria are not supported.

- Time range dimensions
- Function and relation dimensions. The symptom must be specified on process level.

SUPPORTED DIMENSIONS

- Only single-level text dimensions on process level and the variant dimension are analyzed as root causes.

Variants are analyzed on combined and precise level independently.

- Only dimensions that are available in the Process Mining context are included in the analysis.

NON-SUPPORTED DIMENSIONS

- Function and relation dimensions are not analyzed.
- Any dimension that already occurs in the symptom is ignored.
- Dimensions that contain user-defined steps or usages are ignored.

3.5.8.5.9.2 Limitations

Note the following limitations.

- Number of dimension values

PPM calculates only dimensions with less than a critical number of values in a query. Due to the risk of memory overflow, dimensions with more values are not calculated.

Normally there is no reason to analyze such dimensions. The typical use case is that of a search dimension, such as a dimension holding an order number, with one distinct value for each process instance.

- Number of dimension value occurrences

Dimension values that only occur in a few process instances are ignored in the calculation.

- Number of results

The maximal number of root causes that is returned to the client can be specified by the client as part of the query. If nothing is specified, PPM returns up to 50 results, consisting of the top 25 causes that promote the symptom and the top 25 causes that inhibit the symptom.

3.5.8.5.9.3 Score

The score output by PPM is a measure of the association between a process with the symptom and also with some other dimension value. This measure is a number between 1 and 1000. The value of the measure represents the importance of the root cause. The closer the value moves to 1000, the stronger the effect of the root cause becomes.

An association may promote the symptom, meaning that the root cause and the symptom extraordinarily often occur together, or may inhibit the symptom, meaning that they seldom occur together. In the example (page 1117) above, a customer coming from China is associated with having a complaint, so the root cause **China** promotes the occurrence of complaints.

Note that the score does not necessarily correspond to the percentage of symptomatic processes. It takes other factors besides the percentage into account, such as the relative frequencies of the dimension values.

3.5.8.5.9.4 Scaled system

The **Root Cause Miner** feature is also available in a scaled system. The sub-servers transfer counts of their symptomatic and non-symptomatic processes for each dimension value to the master. The master aggregates these results, and computes the root causes and their scores.

Note that this architecture may lead to high memory load on the sub-servers and much network traffic between the master and its sub-servers.

3.5.8.5.9.5 Permissions

No special permissions are required for performing root cause analysis. However, as usual your process and data access privileges in PPM restrict the data that you can analyze.

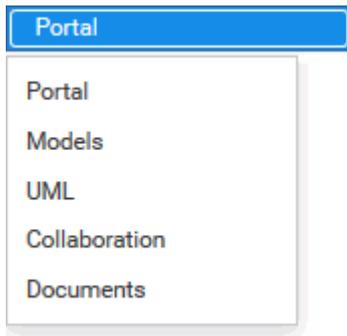
3.6 Search content



Searching in ARIS Connect enables you to conveniently find items such as models, objects, documents, groups in Collaboration, etc., throughout the system.

You can use the quick search (page 15) on the start page to access items directly. Or you can use the Search area (page 1122) to define the search context beforehand and filter the search results (page 1134).

The area to be searched and the search results depend on your license. If you use an **ARIS Connect Designer** license, you can access the following search context:



Models found in the **Models** search context can be opened for editing. Models found in the **Portal** search context can be opened read-only. Since users with **ARIS Connect Viewer** license have only read access to models, the **Models** search context is not available to them.

3.6.1 Open Search area

You can open the **Search** area (page 1132) to search for items based on filter criteria.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database your search is to be based on. You have opened the **Search** area and you can browse ARIS Connect for the relevant terms.

3.6.2 Open Search area with term

You can open the **Search** area using the term you want to find.

Procedure

1. If more than one database is provided, select the database your search is to be based on.
2. Click in the  **Search** box.
3. Enter the term you want to find.



A list with first results (page 1131) is shown as you enter the term. As you complete the term, the list will be updated.

4. Click **Show all** at the end of the list.

The Search area opens with the results for the term you entered and you can restrict the result in the **Search** area (page 1122) to the items you want to find by using the search context and filters.

3.6.3 Start quick search

You can begin the search for items directly on the start page of ARIS Connect.

Procedure

1. If more than one database is provided, select the database your search is to be based on.
2. Click in the  **Search** box.
3. Enter the relevant term.



A list with first results (page 1131) is shown as you enter the term. As you complete the term, the list will be updated.

4. In the list, click the entry of the category to which you want to navigate. The categories displayed depend on the license you are using.

The item opens. For example, if you click the name of a model, the model opens in ARIS Connect Designer. If you click a collaboration entry, it is output in Collaboration.

3.6.4 Find using the Search area

You can use the **Search** area (page 1132) to find items. The Search area offers a wide range of filter options.

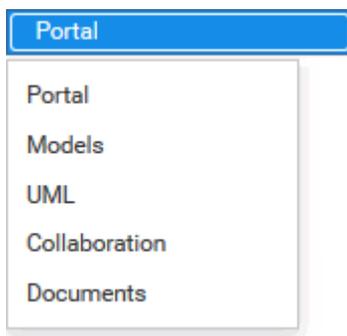
Procedure

1. Click **Advanced** in the **Search** field.



If more than one database is provided, select the database your search is to be based on.

2. Enter the term you want to find in the **Search** field of the **Search** area. The items found will be presented in a list.
3. Click the down arrow that follows the term you entered and select the search context, for example, **Portal** or **Documents**.



The search results are updated according to the search context. If filters are available for the selected context, they are listed in the **Filters** area.

4. In the **Filters** area, click the relevant filters and adjust the filter properties as necessary (page 1123).

The result of the search will be updated to reflect the search context and filter criteria you specified.

3.6.5 Jump to an item found

You can use jump to items that are listed in the **Search** area (page 1132).

Procedure

1. Perform a search (page 1122) and filter the search result (page 1123) if necessary.
2. Click the name of the relevant item, for example, the name of a model. If you performed the search in the **Model** context (page 1123), the model is opened in a new tab for editing (page 529). If you performed the search in the **Portal** context (page 1123), the fact sheets (page 1144) of the model are opened.
3. When you reopen the **Search** area, the search result is still available and you can jump to another item.

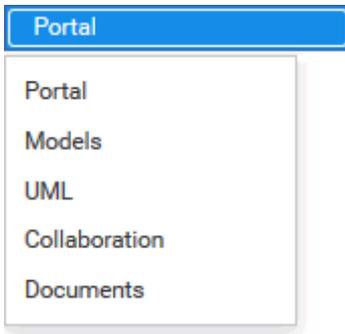
You navigated from the search result to a found item.

3.6.6 Use search context and filters

You can restrict the result in the **Search** area (page 1122) to the items you want to find by using the search context and filters.

Procedure

1. In the **Search** area, click the context field that follows the term you entered, and select, for example, **Portal**, **Models**, or **Documents**.



The search result will be restricted to the range you selected. If the search result can be filtered, filter criteria will be listed in the **Filters** area.

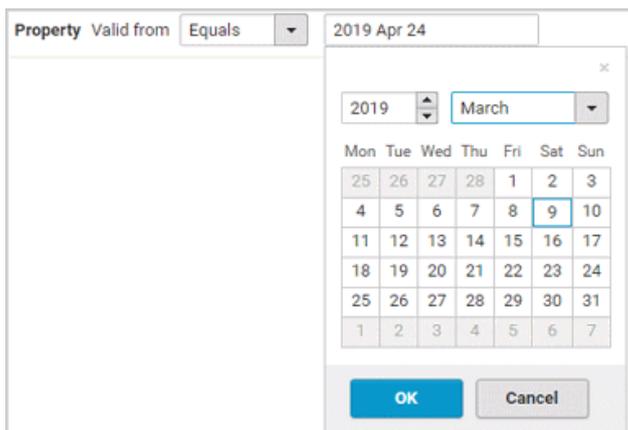
2. Click one or more filter criteria. The selected filter criteria will be listed and the search result updated. If you have selected a filter criterion that you can define more precisely, another area with subordinate filter criteria will be added to the **Filters** area.
3. Click additional criteria. The selected criteria will be displayed in the Search area and restrict the search result.
 - a. Selected filter criteria are listed:

Item **Process** × **Activity** ×

- b. You can enter properties as the search criterion for certain filter criteria, for example, **Responsible**:

Property Responsible Contains

You will be offered different input options depending on the property type. A calendar opens so you can select a date:



4. If necessary, specify the property of the search criterion.
5. To clear a selected filter criterion, click **✕ Clear**. The filter criterion will be cleared and the search result updated.
6. To see more search criteria, click **Show more** in the **⌵ Filters** area. The list will be extended.
7. To clear all filter criteria for an area, click **Clear subordinate filters**.
8. To clear all filters and base your search on other search criteria, click **Show all** in the **Filters** area. All previously selected search criteria will be cleared.

The list of results will be updated according to the search context and the selected criteria.

3.6.7 Save search as a favorite

In the **Search** area (page 1132), you can save your search settings. Thus, you can search the content based on specific settings at any time.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database your search is to be based on.
3. Select the filter criteria (page 1123) to define your search.
4. Click **☆ Save search query as a favorite**. The corresponding dialog opens.
5. Enter a name.
6. Click **OK**.

The search settings are saved in the **★ My Favorites** area. You can filter the content based on these settings (page 113) at any time from various devices.

3.6.8 Create favorite

In the **Search** area (page 1132), you can create a favorite setting and save it as favorite.

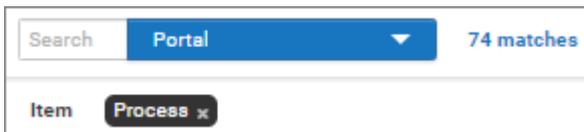
The following procedure assumes that your user name is **John Designer** and you that you are creating the **My processes (self-defined)** favorite that lists all your processes of the portal.

Procedure

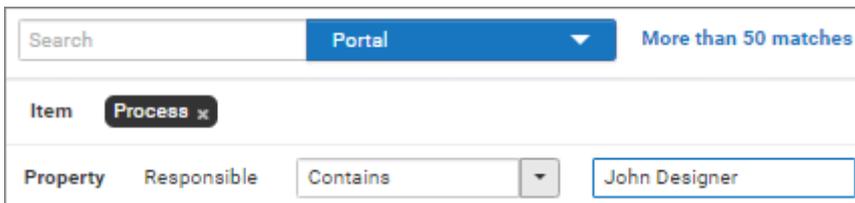
1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database your search is to be based on.
3. Click **Process** in the **Filters** area. All published models of type **EPC** of the selected database are found.



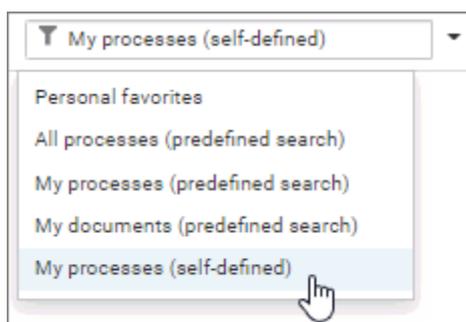
4. Click **Show more** in the **Properties** section.
5. Click **Responsible** and enter **John Designer** in the name field.



6. Click **Save search query as a favorite**. The corresponding dialog opens.
7. Enter **My processes (self-defined)**.
8. Click **OK**.

The favorite is listed.

It can be used in the **My favorites** area.



3.6.9 Use a favorite in the Search area

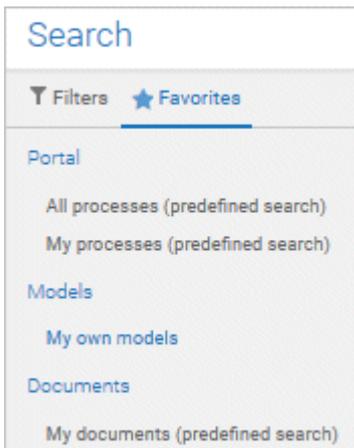
In the **Search** area (page 1132), you can open a favorite setting to filter the content based on predefined filter criteria.

Procedure

1. Click **Advanced** in the **Search** field.



2. If more than one database is provided, select the database your search is to be based on.
3. Click ★ **Favorites** in the **Filters** bar.



4. Click the favorite setting you want to use as the filter.

The filter criteria of the selected favorite setting are immediately applied and the list of filter results is updated.

3.6.10 Clear filters

You can clear filter criteria in more than one way.

Procedure

Clear a selected filter criterion

You can clear a single filter criterion.

Procedure

In the **Filter** bar, click a selected filter criterion again or click **Clear** for a filter criterion.

A screenshot of a filter bar. It shows a dark grey rounded rectangle containing the text 'EPC (column display)' in white, followed by a small white 'x' icon on a dark grey background.

The filter criterion is cleared and the list of filter results updated.

Clear criteria from the main filter area

You can clear all filter criteria from the main filter area. The main filter area is the upper part of the filter bar located to the left of the list of results.

Procedure

Click **Show all** in the **Filter** bar.

All filter criteria are cleared and the list of filter results is updated.

Clear filter criteria from the subordinate filter area

You can clear the filter criteria from the subordinate filter area. If you have selected the **Models** context for filtering, the subordinate filter criteria for models are located in the **Filter** access bar below the main filter area.

Procedure

Click **Clear subordinate filters** in the **Filter** bar under **Attribute types**.

The filter criteria of the subordinate filter area are removed and the list of filter results is updated.

Clear all filter criteria

You can clear all filter criteria.

Procedure

Click **Clear all filters** at the top right.

All filter criteria are cleared and the list of filter results is updated.

You have cleared filter criteria.

3.6.11 Open search result on separate tab

You can open the items found on a separate tab. In this way, the search result remains available, and you can process the items found one after the other.

Procedure

1. Search for an item (page 1122) using the **Search** area (page 1132).
2. Hold down the **Ctrl** key and click the name of the relevant item in the result list.

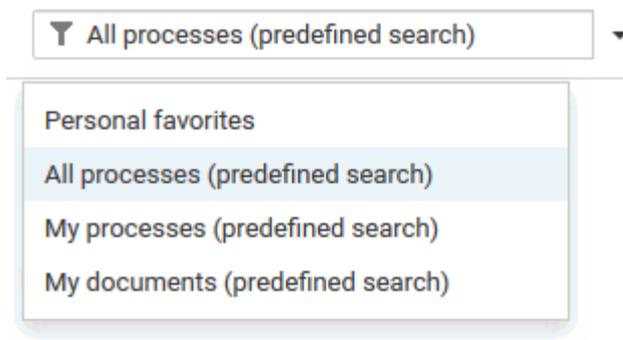
The item opens on a separate tab.

3.6.12 Filter using My Favorites

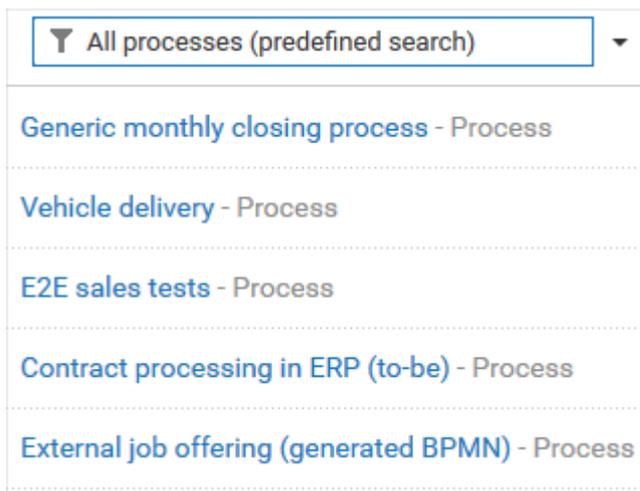
In the portal, you have direct access to all saved filter settings (page 111). The filters output the content of the selected database, while the personal favorites of all published databases are listed and can be accessed.

Procedure

1. If you have access to more than one database, select the database you want to work with.
2. Click  **My favorites** in **Home**
3. Click the ▼ **down arrow** of the **Filter selection** field.



4. Click the context caption to select the relevant filter settings, for example, **All processes (predefined search)**. The content of the selected database is filtered.



If the filter result does not fit on one page, page numbers are displayed behind the **Filter selection** field.

5. Click the page numbers to display the content of the corresponding pages.
6. Click the name of the item. The item opens.

You have filtered database content based on your filter setting and opened one of your favorites using the **Favorites** tab.

3.6.13 Delete a favorite setting

You can delete a filter setting when you no longer need it. The filter setting disappears from the **Favorites** area of the search and from the **My favorites** area.

Procedure

1. Click **Advanced** in the **Search** field.



2. Click  **Favorites**.
3. Move the mouse pointer over the favorite setting to be deleted. For user-defined settings, a  **Delete** button is displayed to the right of the filter name.
4. Click  **Delete**.

The favorite setting is deleted.

3.6.14 Valuable information

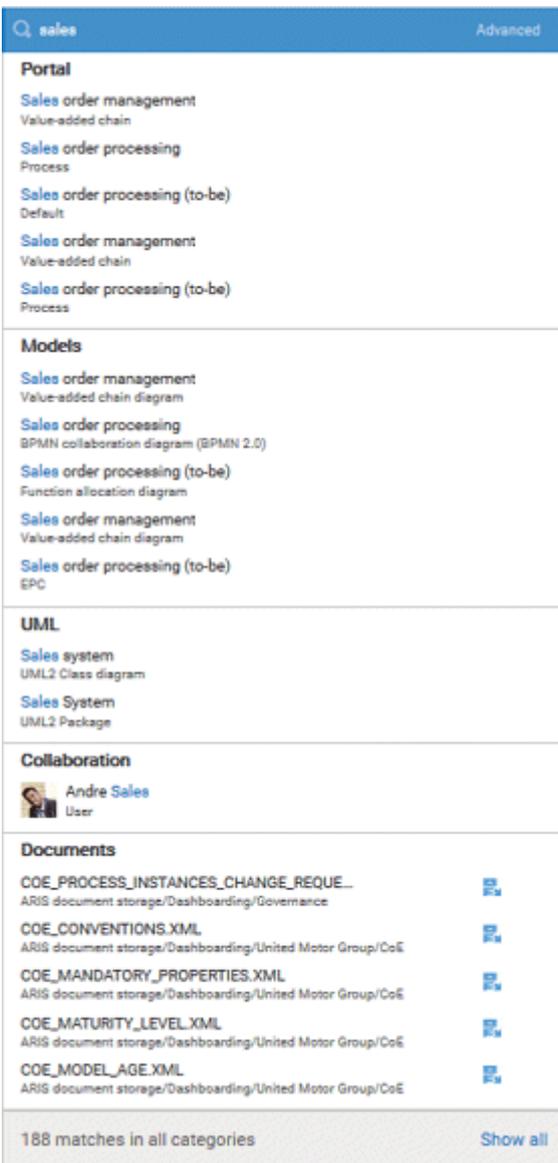
This section provides background information to assist you in carrying out the relevant procedures.

3.6.14.1 How is the quick search structured?

Quick search consists of a single input box:



A search list is compiled and displayed as soon as you have entered a search term. The first matches are output by category. The categories displayed depend on the license you are using. If you use a **Designer** license, the following categories are displayed.



The total number of matches is output at the end of the search list.

To access all matches, click **Show all**. The Search area opens (page 1132).

3.6.14.2 How is the Search area structured?

The **Search** area (page 1120) includes a list of all matches.

To the right of the search term you entered, you can select the search context, for example, **Portal** or **Documents**.

To the left of the list, the filter criteria are offered under **Filters**. If you click the filter criteria, they are listed above the matches and restrict the list of results. Clicking a selected filter criterion again or clicking **× Remove** will clear the criterion. For certain filter criteria, such as the file name, you can enter properties as the search criterion, for example, a term that should be present in the name.

You can clear filter criteria (page 1127) in several ways. You can save filter settings (page 111) and access saved filter settings (page 113) via the **★ Favorites** access bar.

If there are too many matches to display all at once, page numbers appear at the end of the list of results. If you click one of these numbers, the matches on that page will be output.

The screenshot displays the ARIS Connect Search interface. At the top, the 'ARIS Connect' logo is on the left, and 'Portal' is selected in the context dropdown. The search bar contains 'ord'. Below the search bar, there are icons for 'Favorites' and 'Remove'. The main content area shows search results for 'ord' in the 'Portal' context. The first result is 'Sales order processing - Process', with a path: '/Main group/2. Processes/2.1 Process architecture/2.1.1 Core processes/2.1.1.4a Marketing & sales/2.1.1.4a.4 Sales order management/Sales order processing/REMOVE 2.1.1.4a.4.13.1 BPMN2/Sales order processing'. The description states: 'Sales order processing follows contract processing after finalizing a contract. Within this process, the sales contract and documents are checked again as well as the customer master data. After this the regional sales administrator triggers the vehicle provisioning and places an order if it is not ...'. The last change is 'Thu Jan 16 09:18:34 CET 2014' and the name is 'Sales order processing'. The second result is 'Sales order processing (to-be) - Process', with a path: '/Main group/2. Processes/2.2 E2E scenarios/2.2.1 E2E testing/2.2.1.2 UMG_TESTS - United Motor Group SAP implementation/2.2.1.2.1 UMG sales end-to-end tests/Sales order processing (to-be)/Sales order processing (to-be)'. The last change is 'Fri Oct 03 00:12:09 CEST 2014' and the name is 'Sales order processing (to-be)'. On the left side, there is a 'Filters' panel with 'Items' selected, and a 'Properties' panel with 'Clear subordinate filters' selected.

3.6.14.3 What criteria are used for predefined filters?

You can use predefined filters to list processes or documents. If you have the privileges of the role **Designer**, you can also create favorites yourself (page 1125).

ALL PROCESSES (PREDEFINED SEARCH)

This filter lists all published models of type **EPC** and **BPMN** of the selected database.

MY PROCESSES (PREDEFINED SEARCH)

This filter lists all published models of the selected database according to one of the following criteria:

- Contains: All models of type **EPC** and **BPMN** whose attribute **Responsible** contains the user name you entered.

- Is specified: All models of type **EPC** and **BPMN** whose attribute **Responsible** contains a user name at all.

ALL DOCUMENTS (PREDEFINED SEARCH)

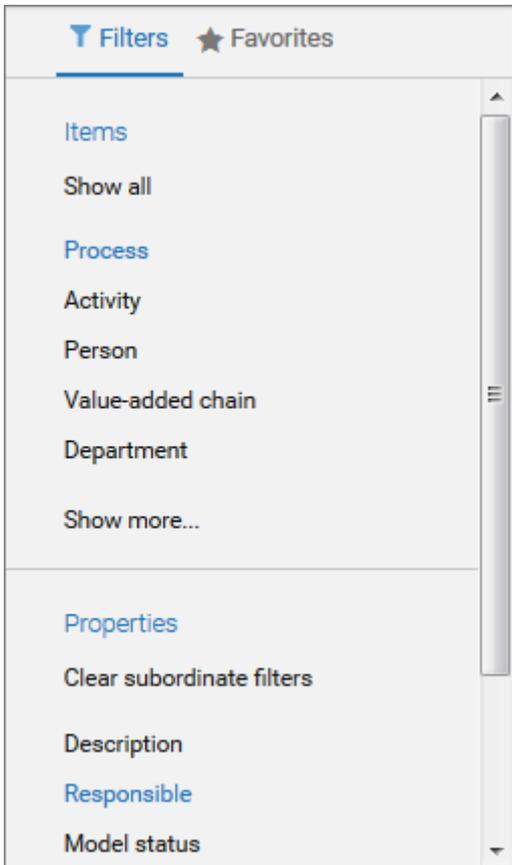
This filter lists all documents whose attribute **Owner** contains the user name you entered.

3.6.14.4 Which filter criteria are available?

If you perform a search, the search result is displayed in a specific context. The following description is based on the **Portal** context.



You can filter search results with the filter pane in the **Search** area.



If you select a filter for an item, the filter criterion is shown above the search result and the filter is applied to the search result.



In the **Portal** context, you can further restrict the search by specifying properties.



You can remove filters by clicking the **x Clear** either behind the criterion or at the end of a property.

3.6.14.5 How are favorites structured in the search?

The ★ **Favorites** area in the **Filters** bar area reflects the saved favorite settings. The favorite settings are structured by captions, for example, **Portal** or **Documents**. The saved favorites are grouped under the captions. Thus, you are able to immediately recognize the contexts of the favorites.

Supplied filters have the addition (**predefined search**) (page 117).

3.6.14.6 How can search results be influenced?

If you use quick search (page 15) or the Search area (page 1122) to find items, the list of results will be influenced by the selected database and the license you are using.

For example, if you are using an **ARIS Connect Viewer** license, the **Models** area, from which you can open models for editing in ARIS Connect Designer, will not be displayed. This area is displayed to users with the **ARIS Connect Designer** license. These users can open models for editing.

3.6.14.7 What does the search find?

The search in ARIS Connect works according to the following rules.

- In general, the search can find words and numbers. Special characters, for example, **! (\$ % &) " ' " are not considered.**
For example, the result of the search term **ser** is **Hardware server** and **Customer service process**.
- Special characters, for example, **! (\$ % &) " ' " are not considered.** Items named with special characters are found using the characters of the search terms.
For example, the result of the search term **percent** is **%Percentage**.
- The search for more than one word links the words with AND. That means that every word must be present for an item to be listed.
For example, the result of the search term **customer data** is **Customer data model**, **Input customer data**, **Create customer master data**, and **Data - customer model**.
- An exact search for several words is not possible.
- The wildcard ***** is ignored.
- The wildcard **question mark (?)** searches for any character except for special characters.
For example, the result of the search term **a?a** is **a1a**, **a2a**, and **aba**. The result of the search term **?per** does not list any item whose name contains **%Percentage**.
- Untitled items cannot be found. If items are untitled in the current language, but are named in the alternative language, they are found and listed in the alternative language.

4 Glossary

In the glossary you will find explanations of basic technical terms.

A

ACCESS PRIVILEGE

With the access privileges you can control which content is accessible to specific users or user groups. Depending on their privilege, users can see, create/edit, delete or version models and objects. You assign access privileges to users, user groups, or database groups on the properties pages. Administrators manage users, user groups, cross-database and cross-product privileges and licenses for all ARIS products in ARIS Administration.

No access (----)

Users see the group structure of the database. Group contents are not displayed.

Read (r---)

The group content is displayed. Users can open models but neither change models and objects, nor add or delete new items.

Read + Comment (rc--)

The group content is displayed. Users can use all functions of Collaboration in ARIS Connect.

Read + Write (rw--)

The group content is displayed. Users can change models and objects, add new items, delete object occurrences from models, but not object definitions.

Read + Write + Delete (rwd-)

The group content is displayed. Users can modify models and objects and add and delete items.

Read + Version (r--v)

The group content is displayed. Users can open and version models but neither change models and objects, nor add or delete new items.

Read + Comment + Version (rc-v)

The group content is displayed. Users can use all functions of Collaboration in ARIS Connect and open and version models, but they can neither change models and objects, nor add or delete new items.

Read + Write + Version (rw-v)

The group content is displayed. Users can change models and objects, add new items, delete object occurrences from models, and version models. Object definitions cannot be deleted.

Read + Write + Delete + Version (rwdv)

The group content is displayed. Users can modify models and objects, add and delete items, and version models.

ARIS MODELING ENVIRONMENT

The ARIS modeling environment is the area of an application where you can model your company-wide process architecture. ARIS modeling environments help you model processes quickly with automatic modeling functions and allows you to use data in other ARIS applications. For example, ARIS Architect, ARIS Connect, or ARIS Advanced provide an ARIS modeling environment.

ALTERNATIVE LANGUAGE

Database language used to display database content if attribute values are not specified in the database language that is currently used. When you create a database, **English (United States)** is selected automatically. On the **Administration** tab, you can change the alternative language.

API NAME

The API name is a unique identifier for database items. You can use the API name to address database items with the ARIS API (page 1137) programming interface.

Information about API names is available on the **Administration** tab below the **Method** folder structure. Specific information from the Method help is available by selecting an item, for example, an object, a connection, or a model, and pressing **Ctrl + F1**.

ARIS ADMINISTRATION

Manages users, user groups, privileges, licenses, documents, configurations, and processes for a tenant (page 1155).

ARIS API

ARIS API is a programming interface with which you can access ARIS and its data from external applications.

ARIS CONNECT GOVERNANCE INBOX

As soon as the first change request is made, the **ARIS Connect Governance Inbox** database is automatically created in ARIS. It contains a Requirements inbox for each person responsible with a model of the **Requirements tree** type. An object of the **Requirement** type is created for each change request. As the process continues, the realization status of the object is automatically changed depending on which status the person responsible has selected (**Approve**, **Reject**). This enables all change requests to be monitored in the **ARIS Connect Governance Inbox** database.

ASSIGNMENT

A model assigned to an object by an assignment relationship (page 1138).

If a model is assigned to an object, this can be indicated by an  assignment icon (page 1138). An assignment enables you, for example, to use a model to describe objects in detail and thus get from a rough plan to a detailed plan.

ASSIGNMENT ICON

Icon that shows that one or more models are assigned to an object by an assignment relationship (page 1138).

You can open assigned models by double-clicking the assignment icon. The assignment icon is displayed if you have disabled the **Hide assignment icons** option.

The assignment icon may look different and may be placed at different points in the object depending on the model template you are using.



You can also assign an assignment icon of your own to a database. It is displayed to the right of the icons.



ASSIGNMENT RELATIONSHIP

Relationship of an object to a model assigned (page 1137) to it.

You can create an assignment relationship using drag and drop or using the object properties dialog. The assignment relationship is displayed at the object by an assignment icon (page 1138).

ATTRIBUTE

Attributes are properties of items, such as models (page 1148) and objects (page 1150), that are used to describe the items in more detail. Typical attributes are **Name**, **Type**, **Description/Definition** and **Last change**. Certain attributes, such as **Name** and **Description/Definition** are set by the user, others, such as **Type** and **Last change**, are set by the system. Users cannot change attributes set by the system.

Attributes can be used in many ways. Depending on the value of the attributes, decisions can be made, for example, who is responsible for executing an activity, which follow-up activities are necessary, and in which context an item is relevant.

B

BEARER AUTHENTICATION

HTTP authentication scheme that involves security tokens. These tokens are called bearer tokens (page 1139). This authentication can be understood as **give access to the bearer of this token**.

BEARER TOKEN

Bearer tokens are used in combination with bearer authentication (page 1139).

The bearer token is a cryptic string, usually generated by the server in response to a login request. The client must send this token when request access to protected resources.

BPMN

Business **P**rocess **M**odel and **N**otation (**BPMN**) is a graphical notation used to describe business processes.

C

CHANGE LIST (VERSIONING)

Contains selected contents of a database that are versioned together and saved in a change list under a change list number (page 1139). Change lists are sorted in ascending order.

Versioned database content can include individual models, multiple models without interdependencies, related models, group content, or the entire database contents.

A description of the change list characterizes the versioned contents. The change list description records who versioned which database content, when, and why. Opening a change list (page 1157) displays the database content you selected for versioning. This can be a model, or the entire database content.

CHANGE LIST NUMBER (VERSIONING)

Number and description of a version of the database content. Change list numbers can be used to select particular versions for viewing (page 1157). You have only read access for the content.

Change lists are sorted in ascending order.

COMPARISON MODEL

Model that is generated for comparison purposes from two models that exist in different versions (page 1157) or are connected to each other by a variant relationship (page 1157).

CONFIGURATION SET

A configuration set specifies the graphical user interface of ARIS Connect. Configuration sets are based on XML files and cannot be changed within ARIS Connect, but only in the relevant XML file. By default, ARIS Connect provides the classic configuration set (page 67) and the default configuration set (page 68).

You can specify a modification set (page 1149) based on a configuration set.

CONFIRMATIONS

With confirmations, a company can prove that users were informed about published ARIS content or related changes, for example, changes in guidelines or processes, and that the employees confirmed to adhere to these. Confirmations can be used, for example, for audits, corporate governance systems, or a quality management system.

CONFIRMATION PROCESS

A confirmation process is automatically generated by the confirmation process scheduler (page 1140) at the specified start date. For detailed information, refer to What is a confirmation process (page 154).

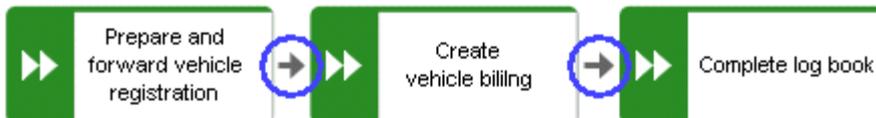
NEW TOPIC

A confirmation process scheduler automatically generates the confirmation process and the confirmations at the specified start date. It can be defined that the process is generated only once or that the process is generated recurrently, for example, quarterly or annually. For detailed information, refer to What is a confirmation process (page 154).

CONNECTION

Visible relationship (page 1152) between objects (page 1150) that shows how objects relate to each other. This graphical representation of a relationship is created during modeling.

A connection is usually represented by lines in the modeling area. If a direction is relevant, the line is added an arrow. One example is the connection of the **is predecessor of** type between functions in models of the **EPC** (event-driven process chain) type.



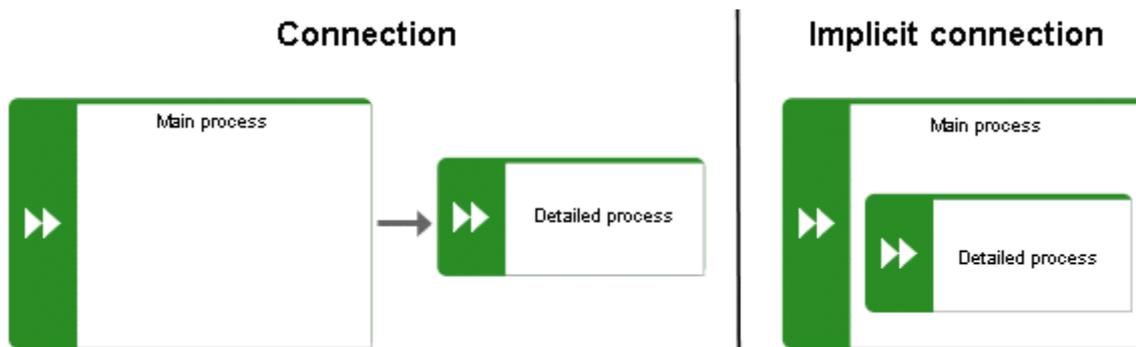
CONNECTION, IMPLICIT

Invisible connection.

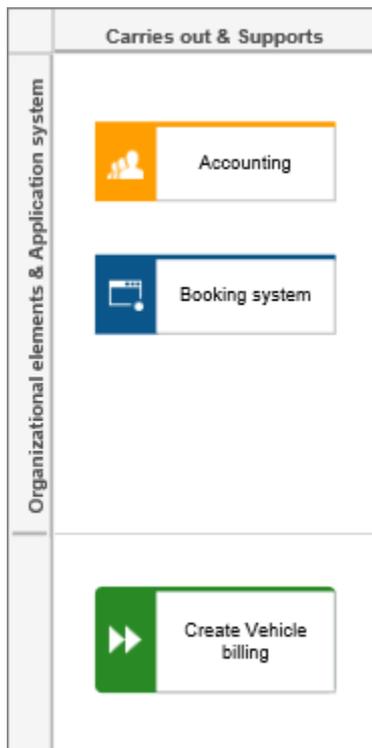
Implicit connections are created if the **Create implicit connections for overlapping objects** option is enabled and objects are placed within objects. In the displayed dialog, you can decide whether to hide any connections and, if so, which connections to hide for these objects. The difference between implicit connections and implicit relationships is that an implicit connection can be represented by a line in the modeling area. This line is displayed again, for example, if you drag an object from another object down into the free area of the modeling area.

Example of implicit connections:

Place a function on another function in a model of the **EPC** type.



In an **EPC (column display)** model type, place an organizational unit and an application system in the **Carries out & Supports** column of the **Organizational elements & Application system** row. Then place a function in this column.



Two implicit connections are created automatically. The implicit connection **is responsible for** from the organizational unit to the function and **supports** from the application system to the function.

This needs to be differentiated from implicit relationships (page 1152).

CRON EXPRESSION

String consisting of six to seven fields that is separated by a space and represents a time.

Normally, a CRON expression is used to define routine jobs that are executed automatically at certain times by the system.

Fields

- Seconds, mandatory field, valid value: **0-59**, valid characters: *****, **/**, **,**, **-**.
- Minutes, mandatory field, valid value: **0-59**, valid characters: *****, **/**, **,**, **-**.
- Hours, mandatory field, valid value: **0-59**, valid characters: *****, **/**, **,**, **-**.
- Day in month, mandatory field, valid value: **0-59**, valid characters: *****, **/**, **,**, **-**.
- Month, mandatory field, valid value: **0-12** or **JAN-DEC**, valid characters: *****, **/**, **,**, **-**.
- Day of the week, mandatory field, valid value: **0-7** or **SUN-SAT**, valid characters: *****, **/**, **,**, **-**, **?**, **L**, **C**, **#**.
- Year, not a mandatory field, valid value: **1970-2010**, valid characters: *****, **/**, **,**, **-**.

CSS

Cascading **Style Sheets** is a style sheet language used for describing the presentation HTML documents.

CURRENT VERSION/LAST VERSION (VERSIONING)

Corresponds to the last versioned database content. This version includes the entire versioned content of a database. You have only read access for the content.

In principle, this is the last change list (page 1139) created for a database (versioning state (page 1158)).

D

DASHBOARDS

Dashboards (page 82) visualize database internal and database external information. Information can be runtime information, performance data, and analysis data, for example.

DEFINITION COPY

Copy of the object definition, that is of the entire object, rather than just the occurrence (page 1151) as is the case with the occurrence copy (page 1151).

The definition copy creates a new object. The occurrence, which is created when creating the definition copy, refers to the new object.

You can create copies of objects. When copying an object, you can decide whether you wish to create a new object (a definition copy) or a new object symbol for an existing object (an occurrence copy).

It makes sense to create a definition copy for an existing object if a new object is to have properties similar to those of the source object.

For example, you have modeled the object **Plant 1** and specified its properties. You now wish to create the object **Plant 2**, which has properties similar to Plant 1. In this case, it is advisable to create a definition copy of Plant 1. Object **Plant 2** is thus given all the properties of object Plant 1, but exists independently of it. You now simply need to change the properties that differ from those of object Plant 1, for example, by changing the name to **Plant 2**.

This involves significantly less work for you than creating the object from scratch and having to enter all the properties again.

Some attributes are not copied when the definition copy is created. For example, it does not make sense to copy the identifier of an object because the identifier represents a unique ID of an object.

E

ESCALATION MANAGER

The escalation manager is the user who is notified when a human task is not completed by any executor by the due date.

F

FACT SHEETS

Fact sheets show facts about an item in various views. Facts can be displayed in text form or graphically. Facts in text form are, for example, item descriptions or lists of elements that are structured in tables. In ARIS Connect, you can assign fact sheets to various items, such as processes, functions, events, and documents.

In the **Classic** and **Default** views delivered with ARIS Connect as standard the following fact sheets are assigned to a process:

Overview (page 73)

Confirmations (page 86)

Steps (page 75)

Table (page 77)

RACI (page 78)

Diagram (page 79)

Matrix (page 80)

Dashboards (page 82)

Tasks (page 83)

Documents (page 85)

FOCUS

Selection marker that marks the item that is selected. There are certain occurrences of selection markers, such as text cursors.

The focus is usually surrounded by colored frames, which can be dashed or solid.

You can often start actions for the selected items using the **Enter** key or the space bar.

FONT

Set of text characters in a specific style and size. The type design of fonts is the typeface. For example, **ARIAL** is a typeface family, **ARIAL bold** is a typeface, and **ARIAL bold 12 point** is a font.

FULLY-QUALIFIED HOST NAME (FQHN)

The fully-qualified host name (FQHN) is the host name that is specified as the IP address of a computer or as a fully-qualified domain name (FQDN) in the following form:

my.department.example.com.

FUNCTION PRIVILEGE

Controls tasks that users can perform.

You can assign function privileges to provide users and user groups with specific functionality and thus control their authorizations across a database. Function privileges for databases are assigned in ARIS Architect on the properties pages of users or user groups. In ARIS Administration, administrators manage users, user groups, cross-database and cross-product privileges and licenses for all ARIS products.

G

GDPR

The **General Data Protection Regulation** (GDPR) protects the rights of individuals' personal data within the European Union. It also regulates the export of personal data outside the EU. GDPR is a regulation by the European Parliament, the Council of the European Union, and the European Commission.

GEOGRAPHICAL MAP

A geographical map is a representation of the Earth upon a flat surface.

GEOJSON

GeoJSON is an open format to represent geographic data. The JavaScript Object Notation is used for this.

GRAPHIC OBJECTS

Graphic elements without implicit semantic meaning. They can be used, for example, to indicate model areas, to specially highlight objects that are thematically linked, or to prepare models so that they are suitable for presentation.

Graphic objects include circles, ellipses, squares, rectangles, lines, and polygons.

GRID

Placement markings in the modeling area in the form of dots that you can show for modeling support.

These mark the minimum spacing between one model item and another. If you move an item, it is moved by increments of one gridline accordingly.

GROUPING

Grouped model items.

They can be moved, enlarged or reduced, and deleted as if they were one item.

GUID

Globally **U**nique **I**dentifier (GUID).

The GUID is a string that renders items unique anywhere in the world.

I

IMPERSONATION

Impersonation enables a user to perform actions on behalf of a different user account, for example, backup and restore tenants. This requires the creation of a user in the user management for the infrastructure tenant, for example, **master**. This user must be assigned all licenses and privileges that are needed for the action.

INFOGRAPHICS

Infographics (also **information graphics**) are visual representations of content. By combining images and text, it is easy for users to understand the information contained.

Infographics can simplify complicated topics. The data is displayed quickly and clearly.

INFRASTRUCTURE TENANT

Specifies the tenant with special privileges for managing other tenants, components, and the configuration in ARIS Administration.

By default, the **master** tenant is the infrastructure tenant. The system users **system** and **superuser** have administrative privileges, that is, they can access ARIS Administration and Tenant Management.

Users with the relevant privileges can specify other infrastructure tenants in ARIS Administration.

J

JAAS

Java **A**uthentication and **A**uthorization **S**ervice (**JAAS**).

A Java interface that enables you to provide services for authentication and access privileges in Java programs. JAAS supports user-based authentication.

JSON

Java**S**cript **O**bject **N**otation

Compact data format in an easy-to-read text form for data exchange between applications.

Any valid JSON document must be a valid JavaScript and be interpretable.

L

LANE MODEL

Synonym for **Swimlane model**.

Model represented using columns/rows or a table.

Lanes are columns and/or rows. They include only specific object types and they structure the modeled information. An implicit relationship is often created between objects in a row.

A model of the **EPC (table display)** type is a lane model.

LAST VERSION/CURRENT VERSION (VERSIONING)

Corresponds to the last versioned database content. This version includes the entire versioned content of a database. You have only read access for the content.

In principle, this is the last change list (page 1139) created for a database (versioning state (page 1158)).

LDAP

Lightweight **D**irectory **A**ccess **P**rotocol (**LDAP**).

Application protocol from network technology. LDAP enables information from a distributed, location-independent and hierarchical database in a network to be queried and modified.

LESS

Leaner **S**tyle **S**heets is a dynamic preprocessor style sheet language that can be compiled into Cascading Style Sheets (CSS) (page 1142).

In addition to the normal CSS instructions, LESS offers nesting of rules, which can avoid code repetitions.

M

MASTER

Model/Object from which a model/object is derived.

A variant relationship (page 1157) exists between the master and the derived model/object (variant (page 1157)).

METHOD FILTER

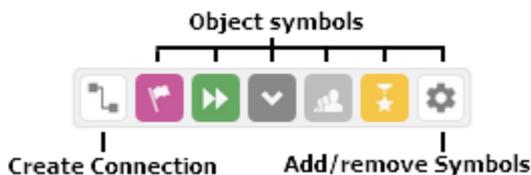
Filter restricting the total number of ARIS Method items and thus offering only those items for modeling that are actually required.

By applying a specific method filter, only the model types included in this method filter will be offered for selection when creating new models. When modeling, all object, connection, and attribute types are available for the model type that are contained in the method filter. Thus, the content offered is exactly the content you need for performing your tasks. Method filters are an effective means of supporting uniform modeling and make it possible to provide users with only the information and methods relevant to them.

MINI TOOLBAR

Toolbar of objects used for placing and drawing connections.

It is displayed if you have disabled Smart Modeling and select an object in the model.



MODEL

Models are a collection of objects (page 1150) and connections (page 1140). In this respect, models are graphic representatives of processes, structures, data, etc. of a company. Models, objects and connections are detailed by attributes (page 1138). While objects represent activities, states, data, etc., connections represent how objects relate to each other.

Models are based on model types (page 1149) that specify certain rules, such as which connections are allowed between objects and thus, how they relate to each other.

MODEL TEMPLATE

Basic settings that change the appearance and attribute placements of models all at once when being assigned. This enables you to apply settings defined once to all relevant models. Templates can be assigned additively. This means that all changes from templates assigned one after the other are valid. If, for example, you assign a template that removes the fill color of objects, and then assign a template that places the name attribute above the objects, both changes take effect.

MODEL TYPE

Template for models (page 1148) that defines which objects a model can contain and how these objects relate to other objects. It defines the context in which the derived models are relevant.

The model type **EPC**, for example, defines the context **Process** because the objects it contains reflect the sequence of states, activities, and changed states, among other things. In contrast, models derived from the model type **Organizational chart** are located in the context **Organization**; they visualize the organizational structure of a company, for example, which organizational units exist, how organizational units are linked hierarchically, who manages the organizational units, and who is assigned to them.

MODIFICATION SET

A modification set is based on a configuration set (page 1140) and specifies the graphical user interface of ARIS Connect.

Administrators create and enable custom modification sets for you based on the classic configuration set (page 67) or default configuration set (page 68) to change the appearance of the portal.

MY TASKS/TRACKING

-  **My tasks**

My tasks is used for editing tasks that are provided by Process Governance during process execution. The list of tasks that you are responsible for in terms of processing are displayed. Use the filter (page 128) to limit the list.

-  **Tracking** provides an overview of a user's active tasks.

Displays the active tasks that you triggered by starting the process. As soon as a task is completed and the next task in the process is active, the completed task is removed the list.

O

OBJECT

An element, derived from an object type (page 1150), consisting of a definition (page 1150) and an occurrence (page 1151), that is a graphical representative that is used in a model (page 1148). Several objects based on one object type can be used in a model.

OBJECT DEFINITION

Object in the database for which you specify all relevant attributes.

Object definitions are displayed in models as an object occurrence (page 1151) using the selected default symbols. All the object definitions in a database make up the object library (page 1150). When modeling, object definitions are automatically created in the group in which the model is saved. Object definitions can also be created in Explorer.

OBJECT LIBRARY

Collection of object definitions (page 1150) in a database. Object libraries provide modelers with the required objects. This ensures that only allowed objects actually occur in models.

If you are using object libraries, you should create an occurrence for each object in the library in an overview model. This ensures that all object definitions occur and are not accidentally deleted during consolidation of the database.

OBJECT TYPE

Object types characterize the type of objects (page 1150) that are permissible within a model type (page 1149). Object types of the **EPC (Event-driven process chain)** include **Event**, **Function**, and **Rule**, for example.

Object types represent different procedures, activities, states, etc. For example, the **Function** object type can represent both the **Send delivery note** activity and the **Check parts availability** activity. Therefore, it represents a technical task or activity to support one or more business objectives. You define a function by placing it in the modeling area and assigning attributes to it, for example, name, costs, or times. The function then describes a specific task. A model type contains structurally non-relevant and structurally relevant object types.

An object type can occur in multiple model types. For example, the **Function** object type occurs in the **Function tree** model type which represents the hierarchical structure of functions. Functions are also used in the **EPC** model type which represents functions in their chronological-logical order.

OCCURRENCE

Graphical representation of objects, connections, and free-form texts.

It is used to represent items in a model.

With an occurrence copy (page 1151) several occurrences of an object can be created. These can differ within a model and/or in different models, that is, object symbol, size, color, and attribute placements can be set individually and thus be different.

If the placed text attributes of an occurrence are changed, the changes are applied to all occurrences at which the text attribute has also been placed. For example, if the name of an object is changed, the change is displayed for all occurrences.

OCCURRENCE COPY

Copy of the occurrence (page 1151), that is, only the graphical representation of an object, rather than the entire object as with the definition copy (page 1143).

All occurrence copies of an object represent the underlying object definition.

You can create copies of objects. When copying an object, you can decide whether you wish to create a new object (a definition copy) or a new object symbol for an existing object (an occurrence copy).

It is helpful to create a copy of the object symbol for an existing object - that is, only a copy of the occurrence of an object - if exactly the same object is used at various positions in the model or in different models.

For example, if, in the model you are creating, Plant 1 supplies goods at various points of the model, it is advisable to use occurrence copies at these points. These refer to the same object, and any changes to this object apply to all occurrence copies.

If you want to rename Plant 1 to **Plant A**, for example, you only need to do this for ONE of the occurrences: The names of all other occurrences are simultaneously changed to **Plant A**.

OLE OBJECT

OLE objects are objects from various external applications, which can be used in ARIS. When you start the objects from within ARIS, they are opened in the external application.

For them to open, specific requirements must be met. For example, the security policy of the Web browser must allow opening, and saved objects must be stored in a local drive.

OTP

One-Time Pad (OTP).

This one-time pad is a symmetric encryption method for transferring secret messages. This encryption method is characterized by the fact that it uses a key of the same length as the message itself.

The OTP is information-theoretically secure and has proven to be impossible to crack – provided that it is used properly.

P

PERSONAS

Personas are fictional characters that characterize the features of people of a target group. Personas are used to illustrate the differences between user types.

In the customer experience (page 327) environment, a persona represents a customer segment and its main characteristics. Each persona provides a specific set of information describing that person representing a user type in more detail.

R

RELATIONSHIP

Connection that can exist between model elements and among models.

Relationships include connections (page 1140), implicit connections, implicit relationships (page 1152), assignment (page 1138), and variant relationships. Therefore, the term **relationship** is a superordinate term for all links that can exist between objects and models.

RELATIONSHIP, IMPLICIT

Assignment relationship, that is, a relationship between objects for which no visible connection is drawn.

You create this relationship by assigning a model to an object.

This needs to be differentiated from implicit connections.

REPORT

A report is a script that can be applied to database content.

A report can be used, for example, to collect database content and group it according to specific aspects, output the relationships (page 1152) between database elements, generate comparison tables, or display multiple uses of database items.

It can also be used to change database content, such as entering attribute (page 1138) values or correcting the layout of models (page 1148).

ROOT ELEMENT

Model or object that is used as the top element in a hierarchy in the portal. This element is displayed when you open the hierarchy in the portal.

S

SAML

Security Assertion Markup Language (SAML).

XML framework for exchanging authentication and authorization information. SAML provides functions to describe and transfer security-related information.

SATELLITE

A satellite is an object that can be inserted in a model or diagram but is not a structurally relevant object (page 1154) in the model or diagram.

For example, an object of the **Organizational unit** type is a satellite in an event-driven process chain (EPC). In a model of the **Organizational chart** type, on the other hand, an object of the **Organizational unit** type is a structurally relevant object.

SCIM

The **System for Cross-Domain Identity Management** is designed to facilitate the management of user identities in cloud-based applications and services.

ARIS supports SCIM 2.0.

SEMANTIC CHECK

A semantic check is a script that contains modeling conventions. It can be applied to models (page 1148) and indicates whether modeling conventions have been followed. If rules are not adhered to, detailed error descriptions, warnings, and/or notes are displayed.

SINGLE LOG-OUT (SLO)

The advantage of using SLO is that users need log out only once from the network.

SINGLE SIGN-ON (SSO)

With **SSO** or **single sign-on** the user only needs to authenticate himself once with his user name and password to access all services, programs and computers without logging in again.

If services, programs, and computers request a new authentication when accessed by the user the authentication is carried out by the underlying SSO mechanism.

SSL

Secure Socket Layer (SSL).

Security software for encrypting data that is exchanged between programs.

STRUCTURALLY RELEVANT OBJECTS

Basic model objects.

These are objects that indicate the distinctive feature of a model. For a model of the **Organizational chart** type, the objects **Organizational unit**, **Role**, and **Person** are structurally relevant objects, for example. Using these items, you can build the typical hierarchy of an organizational chart.

The **Event** and **Function** objects are typical for the **EPC** model type and are thus structurally relevant to a business process. You can use these to establish the typical control flow. The **Organizational unit**, **Role**, and **Person** objects can also be inserted into an **EPC**. However, these objects do not constitute the distinctive feature of a business process. As structurally irrelevant objects, they act as satellites, and add more detailed information to the process model. For example, you can insert **organizational units** and link them to functions to illustrate who carries out those functions.

An object that can be inserted in a model or diagram but is not a structurally relevant object is known as a satellite (page 1153).

SUPERUSER

The user **superuser** is created automatically. By default, this user is assigned the **User management**, **License management**, and **Configuration administrator** function privileges. This user can also enable this function privilege for other users. Users of the **superuser** type do not use up a license. They manage the system administration, but cannot use ARIS products due to license restrictions. The default password is **superuser**. You should change the default password to prevent unauthorized access. The password of the superuser is very important, as it is the only user who cannot be deleted. You can change all user data except for the user name.

SYSTEM DATABASE

This database manages the content of a tenant located in the **Configuration** and **Evaluations** folders, which is displayed on the **Administration** tab in ARIS Architect. This content includes filters, templates, fonts and font formats, but also ARIS Method and all common files, report scripts, scheduled reports, semantic checks and macros.

The system database is created automatically while the first user is logging in to ARIS. The content is available to all databases of this tenant. The ARIS Service Administrator commands **backupsystemdb**, **restoresystemdb**, and **updatesystemdb** can be used to save and restore this data centrally.

SYSTEM USERS

System users are users who have all function and access privileges in a database and who have the required privileges in the ARIS Administration. System users can be created by the system administrator (user **system**) or by another system user.

The system user **system** is created automatically. This user has full access to all databases of a tenant. The name **system** cannot be changed. A system user should immediately change the password **manager** in ARIS Administration to prevent unauthorized access. The function and access privileges of system users cannot be changed at database level. To withdraw privileges from a system user, another system user must disable the **System user** check box on the user's **Function privileges** properties page in ARIS Architect. As a result, the user's privileges can be changed. After this, the user has no access privileges.

The system user **system** assumes the administrator role of the system administrator and has all function and access privileges in all databases of a tenant. Authorized persons can use this emergency user to log in to any database, even if you are using an external system, such as LDAP (page 1147), for authentication.

The name **system** cannot be changed. The **System user** check box for this user (**Function privileges** properties page in ARIS Architect) cannot be disabled either. You should immediately change the password **manager** to prevent unauthorized access.

To avoid problems, you should create additional system users. Having more than one system user can avoid problems, for example, if one system user has forgotten his password. If you forgot the passwords of all your system users, the full range of functions is no longer available and full data access is no longer possible.

T

TAG

Keyword or term assigned to an information, such as an Internet bookmark, a digital image, a database record, or a computer file. This kind of metadata helps describe an item and allows it to be found again by browsing or searching

TENANT

A tenant is a container providing its own ARIS Administration (page 1137) and ARIS data set, such as configuration, ARIS method, databases, scripts, etc.

Each tenant provides users with a particular set of functionalities and specific data depending on their licenses and privileges.

TILE SERVERS

A tile server is the service that generates rendered images (tiles) from a database. The tile server hosts **Open Street Map** (OSM) data.

TLS

Transport **L**ayer **S**ecurity (**TLS**).

TLS is known under the name of its predecessor **S**ecure **S**ockets **L**ayer (**SSL**) and is an encryption protocol for the secure transfer of data on the Internet.

U

UML (UNIFIED MODELING LANGUAGE)

UML is a graphical modeling language for specifying, constructing, and documenting software, parts of software, and other systems. This "unified" modeling language specifies the notations of the modeling terms and their relationships. It also defines the graphical notation, the static structures, and the dynamic processes.

URI

Uniform **R**esource **I**dentifier. String that is used to uniquely identify an abstract or physical resource.

URIs are used to describe resources (such as Web sites, other files, calls for Web services) on the Internet.

URIs can be incorporated as a string (encoded with a character set) into digital documents, particularly those in HTML format, or written by hand. A link from one Web site to another is called a hyperlink.

URL

Uniform **R**esource **L**ocator, a particular type of URI (page 1156) (**U**niform **R**esource **I**dentifier).

URLs identify a resource via the network protocol used (for example, http or ftp) and the **location** of the resource (for example, of a service) in a network.

The term URL is often used synonymously with URI because URLs were the first and are still the most frequently used type of URI.

USER NAME

Name of a user (for example, **system**) for access to a database. The user name does not necessarily have to correspond to a person's real name.

Access to a database is possible if a user logs in to it with the combination of user name and password that has previously been stored for the database. This is the case when the system administrator or a user with the **User management** function privilege creates the new user.

USER 'SYSTEM'

The system user **system** assumes the administrator role of the system administrator and has all function and access privileges in all databases of a tenant. Authorized persons can use this emergency user to log in to any database, even if you are using an external system, such as LDAP (page 1147), for authentication.

The name **system** cannot be changed. The **System user** check box for this user (**Function privileges** properties page in ARIS Architect) cannot be disabled either. You should immediately change the password **manager** to prevent unauthorized access.

To avoid problems, you should create additional system users. Having more than one system user can avoid problems, for example, if one system user has forgotten his password. If you forgot the passwords of all your system users, the full range of functions is no longer available and full data access is no longer possible.

V

VARIANT

Model/Object "derived" from another model/object, known as the master (page 1148).

The derived model/object has a reference to the GUID (page 1146) of its master, known as the variant relationship (page 1157).

VARIANT RELATIONSHIP

Reference in a variant to the GUID of its master (page 1148).

When you create variants of objects or models, they receive a reference to the GUID (page 1146) of their master. The model or object created as a variant can be changed as required, irrespective of the master item. However, the master model/object and the model/object variant "know" each other. With variant relationships, scripts can be used, for example, to evaluate differences between items.

VERSION

A version is an image of a model that represents the unique state of the model at the time it was versioned in a change list (page 1139).

A version represents a modification of a model and, for example, in Release Cycle Management, you can determine which version is valid from which point in time. Therefore, versions cannot be modified.

The editable state of a model is workspace (page 1158), the last version created is the current version (page 1142), and the other versions are associated with the Change list numbers (page 1139) (Versioning state (page 1158)).

VERSION NUMBER

Number assigned to a model during versioning.

The number relates to the model whose versions are numbered in ascending order.

VERSIONING STATE

Image of database content recorded at a certain point in time. Individual models, several models, or all models of a database that are available at the time of versioning can be versioned. The versioned content of a database is summarized in a change list (page 1139). A versioning state can include models of different versions with different or identical version numbers (page 1158) that represent a specific state.

Workspace (page 1158) represents the state of models and/or objects that is editable and has not yet been versioned.

Current version (page 1142) or last version contains the changes that were last versioned. It contains the revisions associated with the last change list number (page 1139).

W

WIDGET

In ARIS Connect, a widget is an interactive graphical dashboard component, such as a bar chart, grid, or vector map, that visualizes data from various data sources, such as ARIS table or CSV files.

WORKSPACE (VERSIONING)

Indicates the database content that has not yet been versioned. It can be edited. (Versioning state (page 1158))

5 Legal information

5.1 Documentation scope

The information provided describes the settings and features as they were at the time of publishing. Since documentation and software are subject to different production cycles, the description of settings and features may differ from actual settings and features. Information about discrepancies is provided in the Release Notes that accompany the product. Please read the Release Notes and take the information into account when installing, setting up, and using the product.

If you want to install technical and/or business system functions without using the consulting services provided by Software AG, you require extensive knowledge of the system to be installed, its intended purpose, the target systems, and their various dependencies. Due to the number of platforms and interdependent hardware and software configurations, we can describe only specific installations. It is not possible to document all settings and dependencies.

When you combine various technologies, please observe the manufacturers' instructions, particularly announcements concerning releases on their Internet pages. We cannot guarantee proper functioning and installation of approved third-party systems and do not support them. Always follow the instructions provided in the installation manuals of the relevant manufacturers. If you experience difficulties, please contact the relevant manufacturer.

If you need help installing third-party systems, contact your local Software AG sales organization. Please note that this type of manufacturer-specific or customer-specific customization is not covered by the standard Software AG software maintenance agreement and can be performed only on special request and agreement.

If a description refers to a specific ARIS product, the product is named. If this is not the case, names for ARIS products are used as follows:

Name	Includes
ARIS products	Refers to all products to which the license regulations of Software AG standard software apply.
ARIS Client	Refers to all programs that access shared databases by using ARIS Server.
ARIS Download Client	Refers to an ARIS Client that can be accessed using a browser.

5.2 Data protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR).

Where applicable, appropriate steps are documented in the respective administration documentation.

5.3 Restrictions

ARIS products are intended and developed for use by persons. Automated processes, such as the generation of content and the import of objects/artifacts via interfaces, can lead to an outsized amount of data, and their execution may exceed processing capacities and physical limits. For example, processing capacities are exceeded if models and diagrams transcend the size of the modeling area or an extremely high number of processing operations is started simultaneously. Physical limits may be exceeded if the memory available is not sufficient for the execution of operations or the storage of data.

Proper operation of ARIS products requires the availability of a reliable and fast network connection. Networks with insufficient response time will reduce system performance and may cause timeouts.

If your product contains ARIS document storage, the following applies:

ARIS document storage was tested with 40.000 document items. This includes documents, document versions or folders. We recommend monitoring the number and overall size of stored document items and archiving some document items if needed.

If ARIS products are used in a virtual environment, sufficient resources must be available there in order to avoid the risk of overbooking.

The system was tested using scenarios that included 100,000 groups (folders), 100,000 users, and 1,000,000 modeling artifacts. It supports a modeling area of 25 square meters.

If projects or repositories are larger than the maximum size allowed, a powerful functionality is available to break them down into smaller, more manageable parts.

Some restrictions may apply regarding the use of process administration, ARIS Administration, ARIS document storage, and ARIS Process Board, and the generation of executable processes. Process Governance has been tested and approved for 1000 parallel process instances. However, the number may vary depending on process complexity, for example, if custom reports are integrated.

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