



ARIS RISK & COMPLIANCE MANAGER

ARCM - MODELING CONVENTIONS

VERSION 10.0 - SERVICE RELEASE 11

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This document applies to ARIS Risk & Compliance Manager Version 10.0 and to all subsequent releases.

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1 Text conventions

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

- Menu items, keyboard shortcuts, dialogs, file names, entries, etc. are shown in **bold**.
- Content input that you specify is shown in 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 the following font:
This paragraph contains a file extract.
- Warnings have a colored background:

Warning

This paragraph contains a warning.

2 Introduction

ARIS Risk & Compliance Manager (ARCM) generates workflows based on master data, for example, a risk assessment workflow based on a risk. For some ARIS Risk & Compliance Manager components, specific objects are used to generate a workflow, such as a survey task to generate survey.

Master data can be maintained in ARIS Risk & Compliance Manager or in an ARIS modeling environment, such as ARIS Architect or ARIS Connect. If the master data is not maintained in ARIS Risk & Compliance Manager, the data must be transferred to ARIS Risk & Compliance Manager. The documentation of master data (models and objects) in an ARIS modeling environment brings a variety of advantages, such as consistency, reduction of complexity, reusability, potential for evaluation, integrity, etc. This is however only possible if the methodological and functional rules and conventions for modeling are adhered to. It is recommended observing the conventions of this manual, to properly maintain the relevant objects in an ARIS modeling environment. Only then all modeled data can be synchronized with ARIS Risk & Compliance Manager and reused there.

CONTENT OF DOCUMENT

This document explains the standards relating to the usage of descriptive views, model types, object types, relationship and connection types, and attributes. Each section contains:

- An overview of the relevant models, objects, relations, and attributes used for the ARIS Risk & Compliance Manager component as well as the relevant requirements.
- The respective modeling conventions, including the mapping of objects and attributes between the ARIS modeling environment and ARIS Risk & Compliance Manager.

OBJECTIVES AND SCOPE

Objective: Specification of modeling guidelines

Not included in this manual: User documentation

3 General conventions

3.1 Users and user groups

3.1.1 Models, objects, and relationships

Users and user groups are modeled in an **Organizational chart** diagram in an ARIS modeling environment using the **Person** (OT_PERS) and **Role** (OT_PERS_TYPE) objects.



Figure 1: Example: Structure of users/user groups

The superior role (**Risk owner_3**) in this example determines the role held by the subordinate roles in ARIS Risk & Compliance Manager. Both roles are connected to one another with the **is generalization of** connection. **Risk owner group IT** is thus a generalization of **Risk owner_3**. The name of the superior role defines the role and level of the group to be created (<role>_<level>), in this example, **Risk owner_3** (role = risk owner, level = 3). No user group is created in ARIS Risk & Compliance Manager for the superior role, in this example **Risk owner_3**.

The following applies to the various role levels:

- Role level 1: cross-environment
The privileges assigned to the user group based on its role apply to all environments assigned to the user group.
- Role level 2: environment-specific
The privileges assigned to the user group based on its role apply to the environment in which the user group was created.
- Role level 3: object-specific
The privileges assigned to the user group based on its role apply to the relevant objects of the current environment in which the user group was created.

For the above example, the **Risk reviewer group 3.01** user group is generated in ARIS Risk & Compliance Manager with the **Risk reviewer** role and level 3 privileges (object-specific). In addition, a user with the user ID **RR_01** is generated.

ATTRIBUTE MAPPINGS: ROLE NAME (ARCM) TO ROLE (ARIS)

Role name (ARCM)	Role (ARIS)	Role level
roles.auditauditor	Audit auditor	Levels 1, 2, and 3
roles.auditmanager	Audit manager	Levels 1 and 2
roles.auditowner	Audit owner	Level 3 only
roles.auditreviewer	Audit reviewer	Level 3 only
roles.auditstepowner	Audit step owner	Level 3 only
roles.deficiencyauditor.l1	Deficiency auditor (L1)	Level 1 and 2
roles.deficiencyauditor.l2	Deficiency auditor (L2)	Level 1 and 2
roles.deficiencyauditor.l3	Deficiency auditor (L3)	Level 1 and 2
roles.deficiencymanager.l1	Deficiency manager (L1)	Level 1, 2, and 3
roles.deficiencymanager.l2	Deficiency manager (L2)	Level 1, 2, and 3
roles.deficiencymanager.l3	Deficiency manager (L3)	Level 1, 2, and 3
roles.groupusermanager	User/User group administrator	Level 1 and 2
roles.hierarchymanager	Hierarchy manager	Level 1 and 2
roles.hierarchyauditor	Hierarchy auditor	Level 1 and 2
roles.hierarchyowner	Hierarchy owner	Level 3 only
roles.policyauditor	Policy auditor	Levels 1, 2, and 3
roles.policymanager	Policy manager	Levels 1 and 2
roles.policyowner	Policy owner	Level 3 only
roles.policyapprover	Policy approver	Level 3 only
roles.policyaddressee	Policy addressee	Level 3 only
roles.riskauditor	Risk auditor	Level 1 and 2
roles.riskmanager	Risk manager	Level 1, 2, and 3
roles.riskowner	Risk owner	Level 3 only
roles.riskreviewer	Risk reviewer	Level 3 only
roles.controlauditor	Control auditor	1, 2 and 3
roles.controlexecutionowner	Control execution owner	3 only
roles.controlmanager	Control manager	Level 1, 2, and 3
roles.signoffowner	Sign-off owner	Level 3 only
roles.signoffmanager	Sign-off manager	Level 2 and 3

Role name (ARCM)	Role (ARIS)	Role level
roles.signoffreviewer	Sign-off reviewer	Level 3 only
roles.surveyauditor	Survey auditor	Level 1 and 2
roles.surveymanager	Survey manager	Level 1, 2, and 3
roles.surveyreviewer	Survey reviewer	Level 3 only
roles.questionnaireowner	Interviewee	Level 3 only
roles.testauditor	Test auditor	Level 1, 2, and 3
roles.testauditorexternal	Test auditor external	Level 1 and 2
roles.testster	Tester	Level 3 only
roles.testmanager	Test manager	Level 1, 2, and 3
roles.testreviewer	Test reviewer	Level 3 only
roles.issueauditor	Issue auditor	Level 1 and 2
roles.issuemanager	Issue manager	Level 1 and 2
roles.incidentauditor	Incident auditor	Level 1 and 2
roles.incidentmanager	Incident manager	Level 1 and 2
roles.incidentowner	Incident owner	Level 3 only
roles.incidentreviewer	Incident reviewer	Level 3 only
roles.lossauditor	Loss auditor	Level 1 and 2
roles.lossmanager	Loss manager	Level 1 and 2
roles.lossowner	Loss owner	Level 3 only
roles.lossreviewer	Loss reviewer	Level 3 only
roles.lossowner	Loss owner	Level 3 only

3.1.2 Role

ATTRIBUTE MAPPINGS: ROLE (ARIS) TO USER GROUP (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description/ Definition	AT_DESC	description	-	
Role	-	role	X	The values for role and role level are determined as described above.
Role level	-	rolelevel	X	
Users	-	groupmembers	-	Users are determined by the performs connection between the person and the role.

*The **M** column specifies whether the attribute is a mandatory field.

3.1.3 Person

ATTRIBUTE MAPPINGS: PERSON (ARIS) TO USER (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Login	AT_LOGIN	Userid	X	Limited to 250 characters.
First name	AT_FIRST_NAME	firstname	X	
Last name	AT_LAST_NAME	lastname	X	
		name	-	Combination of last and first name.
Description/ Definition	AT_DESC	description	-	
E-mail address	AT_EMAIL_ADDR	email	X	
Telephone number	AT_PHONE_NUM	phone	-	
		clients	-	The Environments field is identified by the environment into which data is imported.
		substitutes	-	The Substitutes field is only maintained manually.

*The **M** column specifies whether the attribute is a mandatory field.

3.2 Company assets (hierarchies)

Corporate assets, like organization, process, and risk, are available as hierarchy elements in ARIS Risk & Compliance Manager. Only a tree structure is allowed for all hierarchies to be transferred to ARIS Risk & Compliance Manager. This means that each element in the hierarchy can have only one superior item. If hierarchy elements are used by any object related to an ARIS Risk & Compliance Manager workflow, for example, a survey task, the hierarchy elements are transferred including their superior hierarchy tree to ARIS Risk & Compliance Manager. To transfer all hierarchy elements of a model to ARIS Risk & Compliance Manager, set the **Synchronize ARCM** model attribute (AT_AAM_EXPORT_RELEVANT) to **true**. A corresponding hierarchy element is created in ARIS Risk & Compliance Manager for each relevant hierarchy element in an ARIS modeling environment, unless the top hierarchy element already exists in ARIS Risk & Compliance Manager.

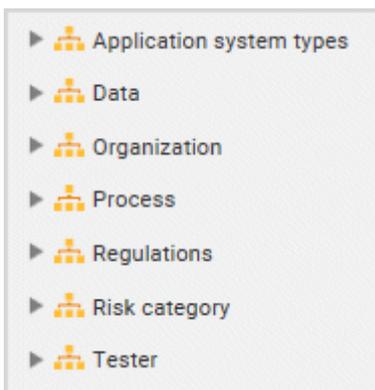


Figure 2: Top hierarchy structure in ARIS Risk & Compliance Manager

The conventions for the hierarchies of ARIS Risk & Compliance Manager are described in the following. For detailed information on conventions for data hierarchy, refer to **GDPR Conventions for ARIS Accelerators** manual, only delivered with the ARIS Accelerators for GDPR package.

The figure below shows the process modeling levels and the suggested process model types to be used within them.

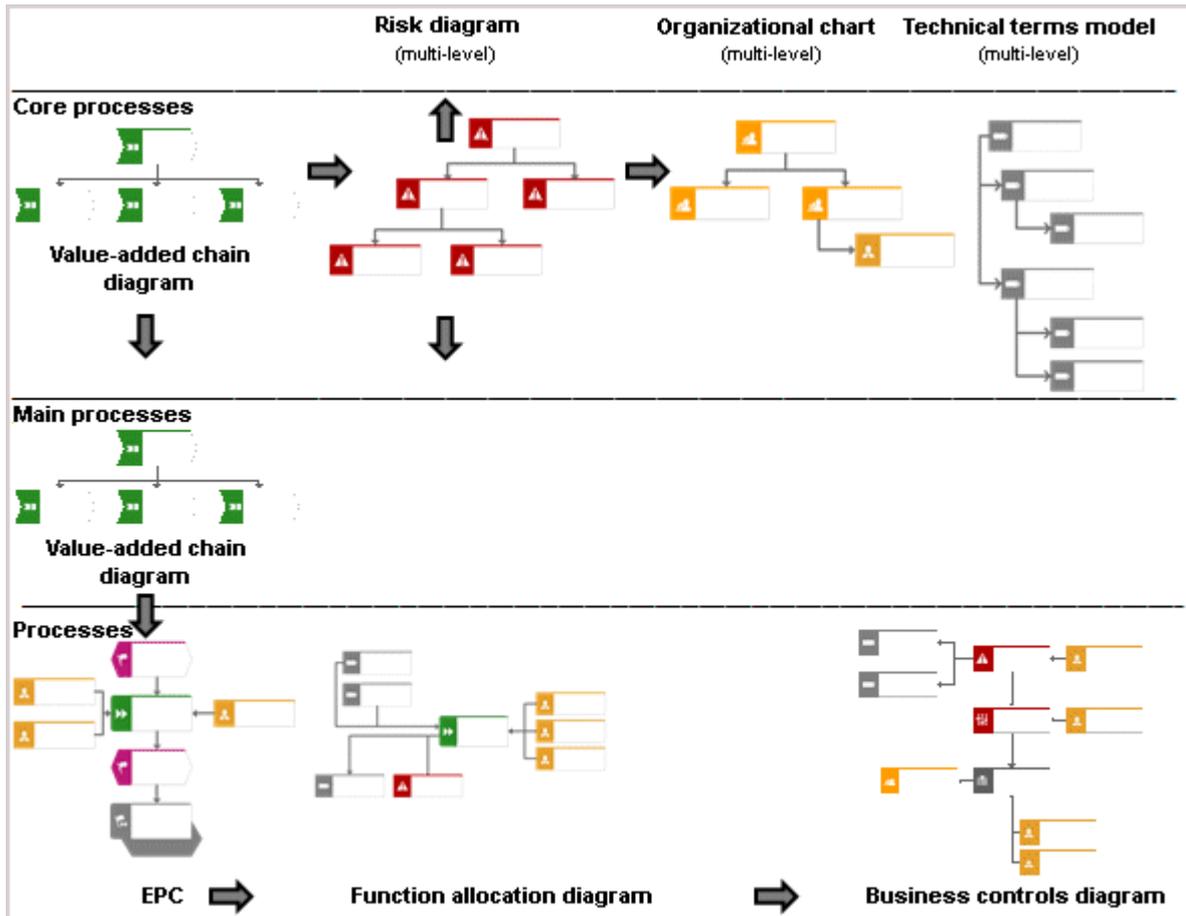


Figure 3: Modeling levels and their model types

3.2.1 Application system type hierarchy

The application system type hierarchy is modeled in the **Application system type diagram** model (MT_APPL_SYS_TYPE_DGM) in an ARIS modeling environment using the **Application system type** object (OT_APPL_SYS_TYPE). The hierarchy between the objects is represented by the **encompasses** connection.

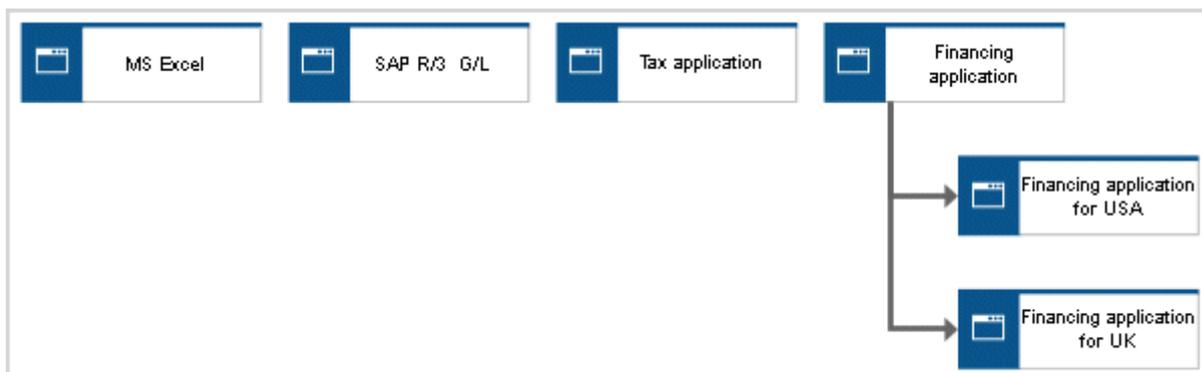


Figure 4: Structure of application system type hierarchy

ATTRIBUTE MAPPINGS: APPLICATION SYSTEM TYPE (ARIS) TO APPLICATION SYSTEM TYPE HIERARCHY (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		isroot		True only for the top hierarchy element.
		type		Application system type hierarchy (value = 6)
Description/ Definition	AT_DESC	description		
		status	X	Status is true (if active)
Model link	AT_AAM_MOD_LINK	modellink		
		modelguid		GUID of the model containing an occurrence of the application system type. The first available application system type diagram is selected.
		model_name		Name of the model (see above)
Object link	AT_AAM_OBJ_LINK	objectlink		
GUID of object		objectguid		
		children		Subordinate hierarchy elements

*The **M** column specifies whether the attribute is a mandatory field.

3.2.2 Organizational hierarchy

The organizational hierarchy is modeled in the **Organizational chart** model in an ARIS modeling environment using the **Organizational unit** object (OT_ORG_UNIT). The hierarchy between the objects is represented by the **is superior** connection.

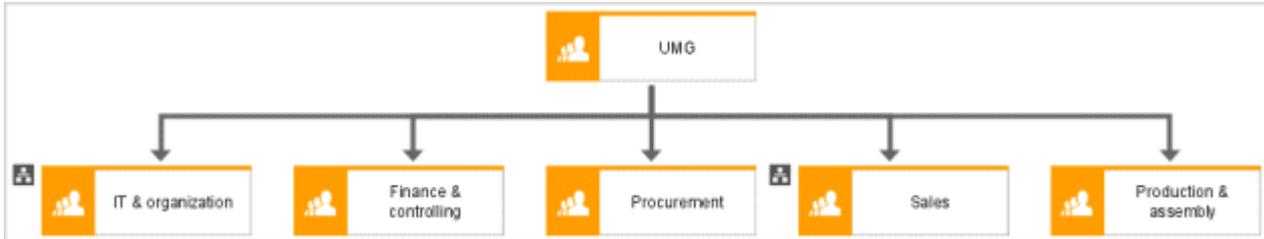


Figure 5: Organizational hierarchy structure

ATTRIBUTE MAPPINGS: ORGANIZATIONAL UNIT (ARIS) TO ORGANIZATIONAL HIERARCHY ELEMENT (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		isroot		True only for the top hierarchy element.
		type		Organizational hierarchy (value = 3)
Description/ Definition	AT_DESC	description		
		status	X	Status is true (if active)
Sign-off-relevant	AT_AAM_SIGN_OFF_RELEVANT	signoff		Only relevant for Sign-off Management.
Model link	AT_AAM_MOD_LINK	modellink		
		modelguid		GUID of the model containing an occurrence of the organizational unit. The first available organizational chart is selected.
		model_name		Name of the model: see above
Object link	AT_AAM_OBJ_LINK	objectlink		
GUID of object		objectguid		
		children		Subordinate hierarchy elements

*The **M** column specifies whether the attribute is a mandatory field.

3.2.3 Process hierarchy

The following process models can be used for setting up the process landscape/process hierarchy.

Model name	Model type number
Value-added chain diagram	12
EPC	13
Function allocation diagram	14
PCD	18
EPC (material flow)	50
PCD (material flow)	51
EPC (column display)	134
EPC (row display)	140
EPC (table display)	154
EPC (horizontal table display)	173
Enterprise BPMN collaboration diagram	272
Enterprise BPMN process diagram	273

The following chapters include a modeling example of the process landscape.

PROCESS MODELING AT LEVEL 1 - VALUE-ADDED CHAIN DIAGRAM (VACD)

The overview process model is the central model at level 1. This is modeled using the **value-added chain diagram** model type. This core process overview is used as the entry model.

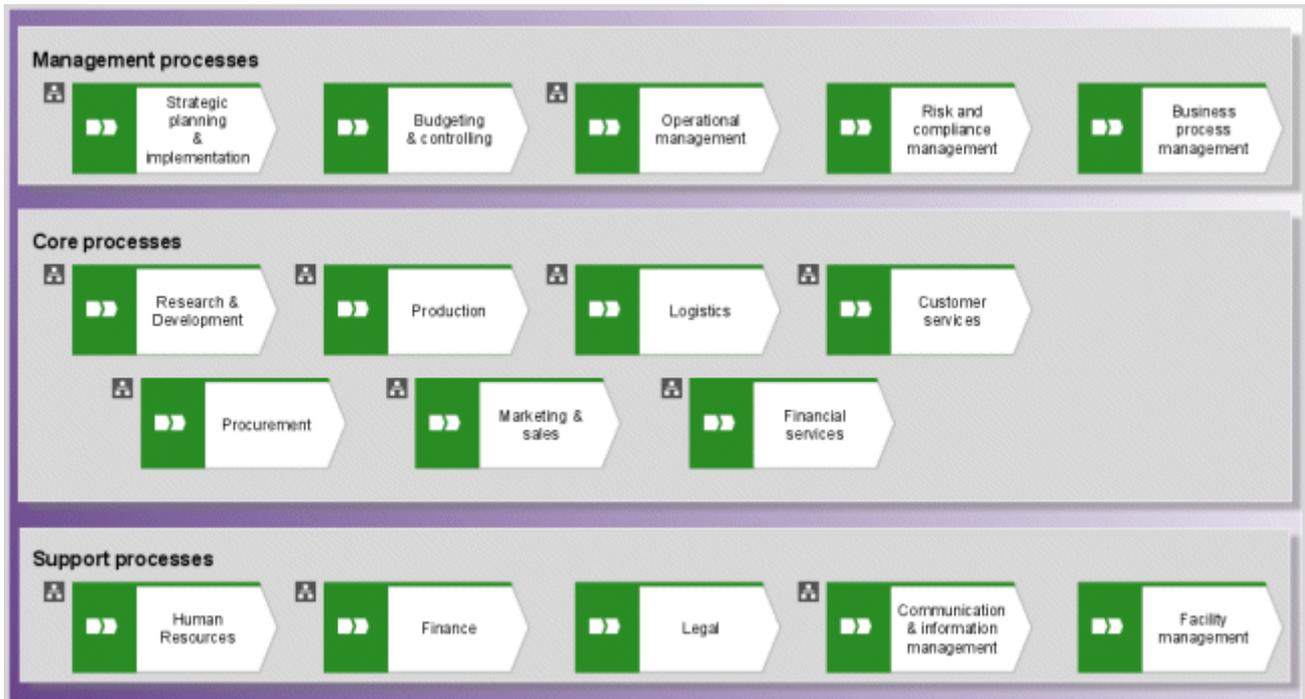


Figure 6: Level 1 – Value-added chain diagram

The object type used is **Function** (OT_FUNC). The hierarchy between the objects is represented by the **is process-oriented superior** or **is process-oriented subordinate** connection. In ARIS Risk & Compliance Manager, only a tree structure for hierarchies is allowed. Therefore, each function can only have one superior function. The following model types can be assigned to an object type in a VACD:

Object type	Assigned model type
Function [Value-added chain]	VACD
Function [Value-added chain]	Function allocation diagram

Thus, a hierarchy element is created in ARIS Risk & Compliance Manager for each relevant function. Exception: The top hierarchy element already exists in ARIS Risk & Compliance Manager.

PROCESS MODELING AT LEVEL 2 - VALUE-ADDED CHAIN DIAGRAM (VACD)

The value-added chain diagram is used as the model at level 2. Level 2 is used to represent the main processes and to map the context of the sub-processes located at level 3.

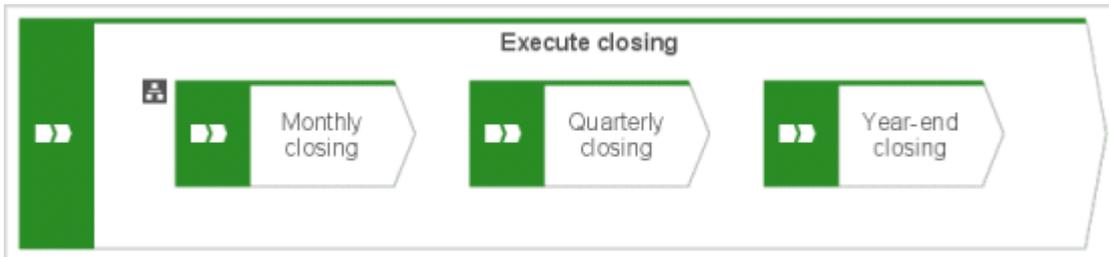


Figure 7: Level 2 – Value-added chain diagram

The same conventions apply as for the core processes modeled as a value-added chain.

The following model types can be assigned to an object type in the VACD:

Object type	Assigned model type
Function	EPC
Function	Function allocation diagram

PROCESS MODELING AT LEVEL 3 - EVENT-DRIVEN PROCESS CHAIN (EPC)

You can describe a company's processes using an EPC. It is based on the logical and chronological sequence of the activities to be carried out. In addition, a sequence of functions and resulting events is used. These lean processes can be supplemented by additional objects

(organizational units, positions, roles, application systems, etc.) containing extended information.

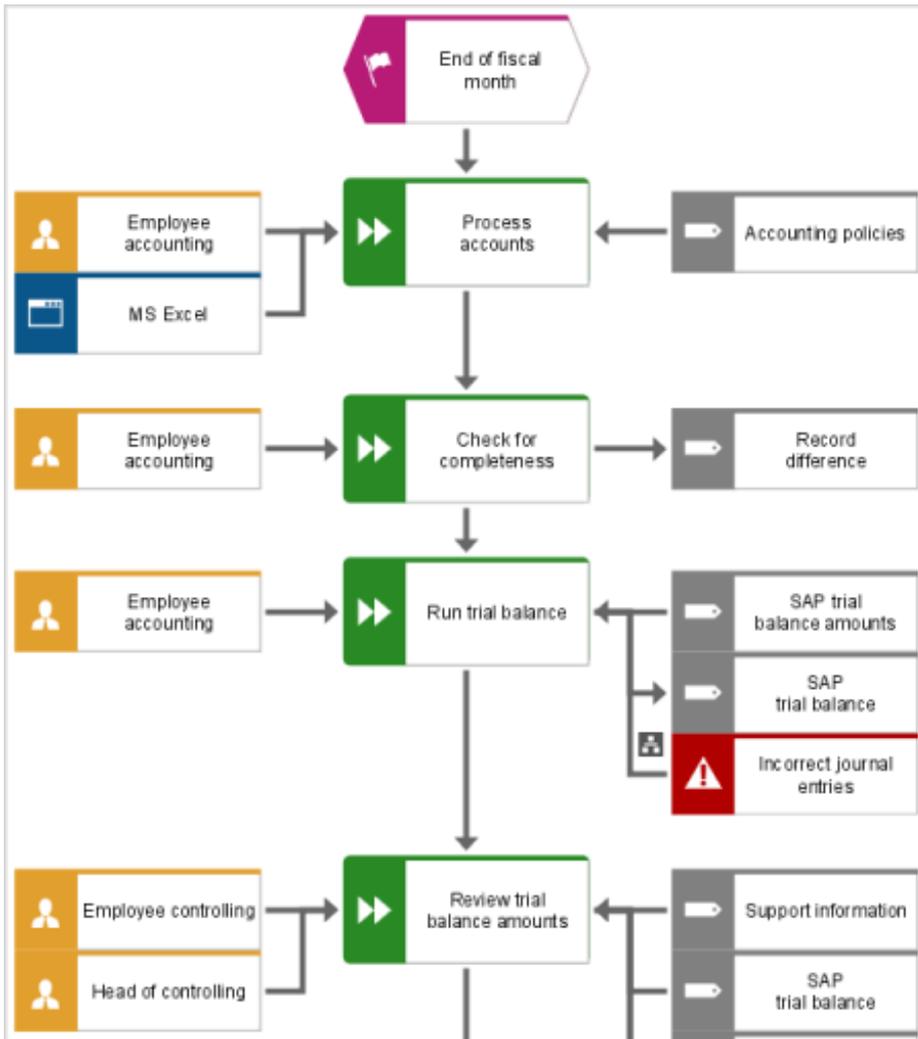


Figure 8: Level 3 – Event-driven process chain

The following model types can be assigned to an object type in an EPC:

Object type	Assigned model type
Function	EPC
Function	Function allocation diagram

ATTRIBUTE MAPPINGS: FUNCTION (ARIS) TO PROCESS HIERARCHY ELEMENT (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		isroot		True only for the top hierarchy element.
		type		Process hierarchy (value 4)

ARIS attribute	API name	ARCM attribute	M*	Notes
Description/ Definition	AT_DESC	description		
		status	X	Status is true (if active)
Sign-off- relevant	AT_AAM_SIGN_OFF _RELEVANT	signoff		Only relevant for Sign-off Management.
Model link	AT_AAM_MOD_LINK	modellink		
		modelguid		GUID of the model containing an occurrence of the function. The first available process model (EPC, VACD, etc.) is selected.
		model_name		Name of the model (see above)
Object link	AT_AAM_OBJ_LINK	objectlink		
GUID of object		objectguid		
		children		Subordinate hierarchy element

*The **M** column specifies whether the attribute is a mandatory field.

3.2.4 Regulation hierarchy

The regulation & standards hierarchy is modeled in the **Technical terms** model (MT_TECH_TRM_MDL) in an ARIS modeling environment using the **Technical term** object (OT_TECH_TRM). The **Regulations** attribute (API name: AT_AAM_ANNUAL_ACCOUNTS_ITEM) can be used to uniquely identify regulations. This attribute can be used at individual **Technical term** objects as well as at the **Technical terms** model. If used at the model, all **Technical**

term objects on the model will be considered as regulation. The hierarchy between the objects is represented by the **has** connection.

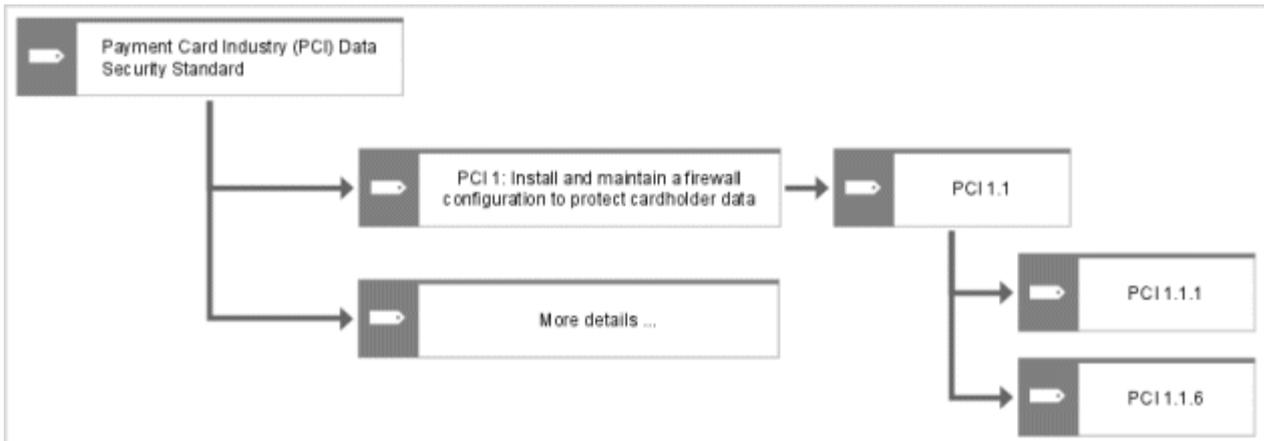


Figure 9: Regulation hierarchy structure

ATTRIBUTE MAPPINGS: TECHNICAL TERM (ARIS) TO HIERARCHY (ARCM)

ARIS attribute	API name	M*	ARCM attribute	Notes
Name	AT_NAME	X	name	
			isroot	True only for the top hierarchy element.
Short description	AT_SHORT_DESC		hnumber	
			type	Regulation hierarchy (Value = 2)
Description/ Definition	AT_DESC		description	
		X	status	Status is true (if active)
Sign-off-relevant	AT_AAM_SIGN_OFF_RELEVANT		signoff	Only relevant for Sign-off Management.
Model link	AT_AAM_MOD_LINK		modellink	
			modelguid	GUID of the model containing an occurrence of the technical term. The first available technical term model is selected.
			model_name	Name of the model (see above)
Object link	AT_AAM_OBJ_LINK		objectlink	

ARIS attribute	API name	M*	ARCM attribute	Notes
GUID of object			objectguid	
			children	Subordinate hierarchy elements

*The **M** column specifies whether the attribute is a mandatory field.

3.2.5 Risk category hierarchy

In an ARIS modeling environment, the risk category hierarchy is modeled in the **Risk diagram** model (MT_RISK_DGM) with the **Risk** object (OT_RISK) and the **Risk category** object (OT_RISK_CATEGORY). The categorization of risks can be carried out here. Risks can be made subordinate to categories and the categories can in turn be made subordinate to other categories using the **encompasses** or **contains** relationship. It is not possible to make risks subordinate to risks.

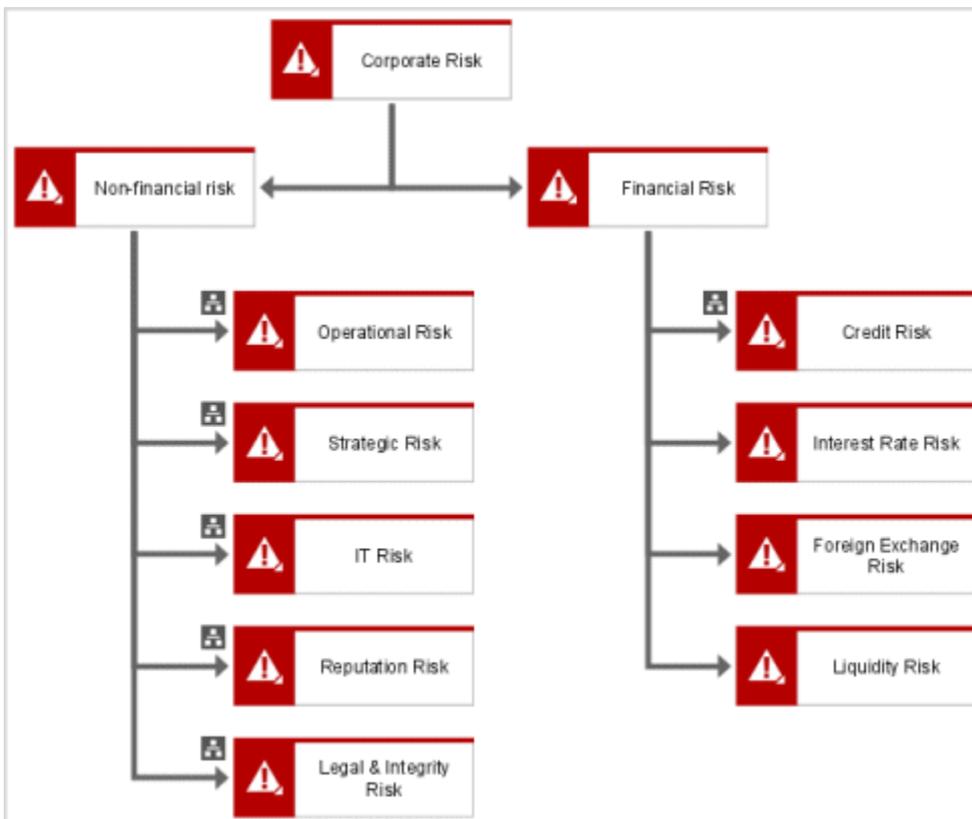


Figure 10: Risk hierarchy structure

ATTRIBUTE MAPPINGS: RISK CATEGORY (ARIS) TO RISK HIERARCHY (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		isroot		True only for the top hierarchy element.

ARIS attribute	API name	ARCM attribute	M*	Notes
		type		Risk hierarchy (value = 5)
Description/ Definition	AT_DESC	description		
		status	X	Status is true (if active)
Model link	AT_AAM_MOD_LINK	modellink		
		modelguid		GUID of the model containing an occurrence of the risk category. The first available risk diagram is selected.
		model_name		Name of the model (see above)
Object link	AT_AAM_OBJ_LINK	objectlink		
GUID of object		objectguid		
		children		Subordinate hierarchy elements

*The **M** column specifies whether the attribute is a mandatory field.

3.2.6 Tester hierarchy

The tester hierarchy is modeled in the organizational chart in an ARIS modeling environment using the **Organizational unit** object (OT_ORG_UNIT). The hierarchy between the objects is represented by the **is superior** connection.



Figure 11: Tester hierarchy structure

A tester hierarchy element is therefore created in ARIS Risk & Compliance Manager for each organizational unit (exception: the top hierarchy element already exists in ARIS Risk & Compliance Manager). At present, each hierarchy element can only be assigned to one user group.

Thus, for the above example, the tester hierarchy elements **Tester groups headquarter**, **Tester group "Sales"**, and **Tester group "Finance"** are created in ARIS Risk & Compliance Manager. **Tester groups headquarter** is superior to the other hierarchy elements.

ATTRIBUTE MAPPINGS: ORGANIZATIONAL UNIT (ARIS) TO TESTER HIERARCHY ELEMENT (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		isroot		True only for the top hierarchy element.
		hnumber		Not relevant for the tester hierarchy.
		type		Tester hierarchy (value = 1)
Description/ Definition	AT_DESC	description		
		status	X	Status is true (if active)
Sign-off-relevant	AT_AAM_SIGN_OFF_RELEVANT	signoff		
Model link	AT_AAM_MOD_LINK	modellink		
		modelguid		GUID of the model containing an occurrence of the organizational unit. The first available organizational chart is selected.
		model_name		Name of the model (see above)
Object link	AT_AAM_OBJ_LINK	objectlink		
GUID of object		objectguid		
		children		Subordinate hierarchy unit
		so_owner		Associated sign-off owner group
		tester		Associated tester groups

*The **M** column specifies whether the attribute is a mandatory field.

4 Policy Management conventions

4.1 Business controls diagram

You can model policy definitions in an ARIS modeling environment to simplify master data maintenance. The model **Business controls diagram** (MT_BUSY_CONTR_DGM) is intended for this.

OBJECTS AND RELATIONSHIPS THAT CAN BE USED IN BUSINESS CONTROLS DIAGRAM

Object type name	Symbol type name	API name	Symbol	ARCM name
Policy	Business policy	OT_POLICY	 Business policy	Policy definition
Role	Role	OT_PERS_TYPE	 Role	Policy owner, Policy approver, Policy addressee, Policy auditor (depending on the role selected)
Risk	Risk	OT_RISK	 Risk	Risk
Application system type	Application system type	OT_APPL_SYS_TYPE	 Application system type	Application system type
Organizational unit	Organizational unit	OT_ORG_UNIT	 Organizational unit	Organization

Object type name	Symbol type name	API name	Symbol	ARCM name
Technical term	Technical term	OT_TECH_TRM		Regulations

CONNECTIONS

Object	Connection	Object	Remark
Role	is technically responsible for	Policy	Assigns the user group to the policy definition.
Risk	is reduced by	Policy	Creates the connection between the policy definition and the risk.
Policy	affects	Organizational unit	Creates the connection between the policy definition and the affected organizational hierarchy element.
Policy	affects	Technical term	Creates the connection between the policy definition and the affected regulation hierarchy element.
Policy	affects	Application system type	Creates the connection between the policy definition and the affected application system type hierarchy element.

4.2 Policy object

ATTRIBUTE MAPPINGS: POLICY OBJECT (ARIS) TO POLICY DEFINITION (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description	AT_DESC	description		
Policy type	AT_POLICY_TYPE	policy_type	X	Two selection options: <ul style="list-style-type: none"> ▪ Confirmation required (the confirmation process is started after the policy is published) ▪ Publish only (the process ends after the policy is published)
Confirmation text	AT_CONFIRMATION_TEXT	confirmation_text		
Confirmation duration in days	AT_CONFIRMATION_DURATION	duration	(X)	Outputs the time span in which the users in the policy addressee group can read and confirm the policy. The confirmation duration is relevant only for policies of the type Confirmation required .
Start date of publishing preparation period	AT_START_DATE_APPROVAL_PERIOD_OWNER	startdate	X	Start of the approval period for the policy owner.
End date of publishing preparation period	AT_END_DATE_APPROVAL_PERIOD_OWNER	enddate	X	End of the approval period for the policy owner.

ARIS attribute	API name	ARCM attribute	M*	Notes
Start date of approval period	AT_START_DATE_APPROVAL_PERIOD_APPROVER	approverstartdate	X	Start of the approval period for the policy approver. The approvals are generated for the approver.
End date of approval period	AT_END_DATE_APPROVAL_PERIOD_APPROVER	approverenddate	X	End of the approval period for the policy approver.
Start date of publishing period	AT_START_DATE_PUBLISHING_PERIOD	publishingstartdate		Start of the publishing period. If no start date is set the publishing period starts directly after approval by the policy owner.
End date of publishing period	AT_END_DATE_PUBLISHING_PERIOD	publishingenddate	X	End of the publishing period.
Synchronize ARCM	AT_AAM_EXPORT_RELEVANT	-		This attribute specifies whether a policy definition should be synchronized with ARIS Risk & Compliance Manager.
Title 1 Title 2 Title 3 Title 4	AT_TITL1 AT_TITL2 AT_TITL3 AT_TITL4	document: ▪ name ▪ title		Indicates the linked documents.
Link 1 Link 2 Link 3 Link 4	AT_EXT_1 AT_EXT_2 AT_EXT_3 AT_LINK	document: ▪ link		Indicates the linked documents.

ARIS attribute	API name	ARCM attribute	M*	Notes
ARIS document storage Title 1	AT_ADS_TITL1	document: <ul style="list-style-type: none"> ▪ name ▪ title 		Indicates the linked documents.
ARIS document storage Title 2	AT_ADS_TITL2			
ARIS document storage Title 3	AT_ADS_TITL3			
ARIS document storage Title 4	AT_ADS_TITL4			
ARIS document storage link 1	AT_ADS_LINK_1	document: <ul style="list-style-type: none"> ▪ link 		Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2			
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			
		owner_group	X	Is identified via the connection to the role. A corresponding link to the policy owner in ARIS Risk & Compliance Manager is saved.

*The **M** column specifies whether the attribute is a mandatory field.

ADDITIONAL ATTRIBUTES (REVIEW ATTRIBUTE GROUP) FOR THE POLICY OBJECT FROM ARIS 9.5

ARIS attribute	API name	ARCM attribute	M*	Notes
Review-relevant	AT_REVIEW_RELEVANT	reviewRelevant		Marks the policy as review-relevant.
Review activities	AT_REVIEW_ACTIVITY	activities		Describes the activities to be executed during the review.
Review frequency	AT_REVIEW_FREQUENCY	frequency	(X)	Outputs the interval at which the policy review is to be carried out. If the policy was marked as review-relevant, this field becomes mandatory.
Event-driven review allowed	AT_EVENT_DRIVEN_REVIEW_ALLOWED	event_driven_allowed		Indicates whether manually created reviews are allowed for policies. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Review frequency attribute is set to Event-driven .
Time limit for the execution of the review in days	AT_REVIEW_EXECUTION_TIME_LIMIT	duration	(X)	Outputs the number of days that are available to the policy owner to process the review. The review duration is specified by the end date at which the review must be completed. If the policy was marked as review-relevant, this field becomes mandatory. This attribute is not mandatory if the Review frequency attribute has the value Event-driven .

ARIS attribute	API name	ARCM attribute	M*	Notes
Start date of policy review	AT_START_DATE_OF_POLICY_REVIEWS	startdate	(X)	Outputs the date from which the first policy review is to be generated. If the policy was marked as review-relevant, this field becomes mandatory. This attribute is not mandatory if the Review frequency attribute has the value Event-driven .
End date of policy review	AT_END_DATE_OF_POLICY_REVIEWS	enddate		Outputs the date up to which policy reviews are to be generated.
Length of control period	AT_AAM_TESTDEF_CTRL_PERIOD	control_period		Outputs the period to which the policy review relates. If the policy was marked as review-relevant, it is recommended maintaining this field, but it is not mandatory.

*The **M** column specifies whether the attribute is a mandatory field.

4.3 Process models for policies

To create a connection to the process hierarchy, policies can be modeled in the following process models.

Model type number	Model name
12	Value-added chain diagram
13	EPC
14	Function allocation diagram
18	PCD
50	EPC (material flow)
51	PCD (material flow)
134	EPC (column display)
140	EPC (row display)
154	EPC (table display)
173	EPC (horizontal table display)

OBJECTS, RELATIONSHIPS, AND ATTRIBUTES

Object type name	Symbol type name	API name	Symbols	ARCM name
Function	(Depending on the process model)	OT_FUNC		Process
Policy	Business policy	OT_POLICY		Policy definition

CONNECTIONS

Object	Connection	Object	Remark
Policy	affects	Function	Creates the connection between the policy and the affected process hierarchy element.

4.4 Business rule architecture diagram

To model a hierarchy between policies, you can use the following connection in the **Business rule architecture diagram** model.

Object	Connection	Object	Remark
Policy	encompasses	Policy	Represents a hierarchy between policies

5 Regulatory Change Management conventions

5.1 Technical terms model

The regulation hierarchy is modeled in the **Technical terms model** (MT_TECH_TRM_MDL) in an ARIS modeling environment using the **Technical term** object (OT_TECH_TRM).

5.2 Technical term object

ATTRIBUTE MAPPINGS: TECHNICAL TERM OBJECT (ARIS) TO HIERARCHY (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		isroot		True only for the top hierarchy element.
Short description	AT_SHORT_DESC	hnumber		
		type		Regulation hierarchy (Value = 2)
Description/ Definition	AT_DESC	description		
		status	X	Status is true (if active)
Sign-off-relevant	AT_AAM_SIGN_OFF_RELEVANT	signoff		Irrelevant for Regulatory Change Management.
Model link	AT_AAM_MOD_LINK	modellink		

ARIS attribute	API name	ARCM attribute	M*	Notes
		modelguid		GUID of the model containing an occurrence of the technical term. The first available technical term model is selected.
		model_name		Name of the model (see above)
Object link	AT_AAM_OBJ_LINK	objectlink		
GUID of object		objectguid		
		children		Subordinate hierarchy elements
		so_owner		Associated sign-off owner group
		owner_group		Associated hierarchy owner group
		tester		Not relevant for this hierarchy type.

*The **M** column specifies whether the attribute is a mandatory field.

FURTHER ATTRIBUTES TO SPECIFY REGULATORY CHANGE MANAGEMENT DATA

ARIS attribute	API name	ARCM attribute	M*	Notes
Review-relevant	AT_REVIEW_RELEVANT	reviewRelevant		Marks regulations as review-relevant. Accordingly, the attributes specified here and the assignment of precisely one group with the Hierarchy owner role become mandatory.
Review activities	AT_REVIEW_ACTIVITY	activities		Describes the activities to be executed during the review.

ARIS attribute	API name	ARCM attribute	M*	Notes
Review frequency	AT_REVIEW_FREQUENCY	frequency	(X)	Indicates the interval at which the review is to be carried out. If regulations were marked as review-relevant, this field becomes mandatory.
Event-driven review allowed	AT_EVENT_DRIVEN_REVIEW_ALLOWED	event_driven_allowed		Indicates whether manually created reviews are allowed for regulations. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Review frequency attribute is set to Event-driven .
Time limit for the execution of the review in days	AT_REVIEW_EXECUTION_TIME_LIMIT	duration	(X)	Indicates the number of days available to the hierarchy owner to process the review. If regulations were marked as review-relevant, this field becomes mandatory.
Start date of review	AT_REVIEW_START_DATE	startdate	(X)	Indicates the date from which the first review is to be generated. If regulations were marked as review-relevant, this field becomes mandatory.
End date of review	AT_REVIEW_END_DATE	enddate		Indicates the date up to which reviews are to be generated.

*The **M** column specifies whether the attribute is a mandatory field.

5.3 Relation between Role and Technical term

To map the responsibilities between the hierarchy owner group (OT_PERS_TYPE) and the regulations (OT_Tech_TRM), the **Function allocation diagram** (MT_FUNC_ALLOC_DGM) is used with the following connection.

Object	Connection	Object	Remark
Role	is owner of	Technical term	Allocates the user group (with the Hierarchy owner role) to the regulations.

6 Survey Management conventions

6.1 Survey management model

To simplify master data maintenance questionnaire templates can be modeled in an ARIS modeling environment. For this, the **Survey Management** model (MT_SURVEY_MGMT) is used. The following objects can be used in the model.

OBJECTS AND SYMBOLS

To simplify master data maintenance questionnaire templates can be modeled in an ARIS modeling environment. For this, the **Survey Management** model (MT_SURVEY_MGMT) is used. The following objects can be used in the model.

Object type	API name	Symbol
Questionnaire template	OT_SURVEY_QUEST_TMPL	 Questionnaire template
Section	OT_SURVEY_SECTION	 Section
Question	OT_SURVEY_QUESTION	 Question
Option set	OT_SURVEY_OPTION_SET	 Option set
Answer option	OT_SURVEY_OPTION	 Answer option

Example: Relationships between the objects in a questionnaire template

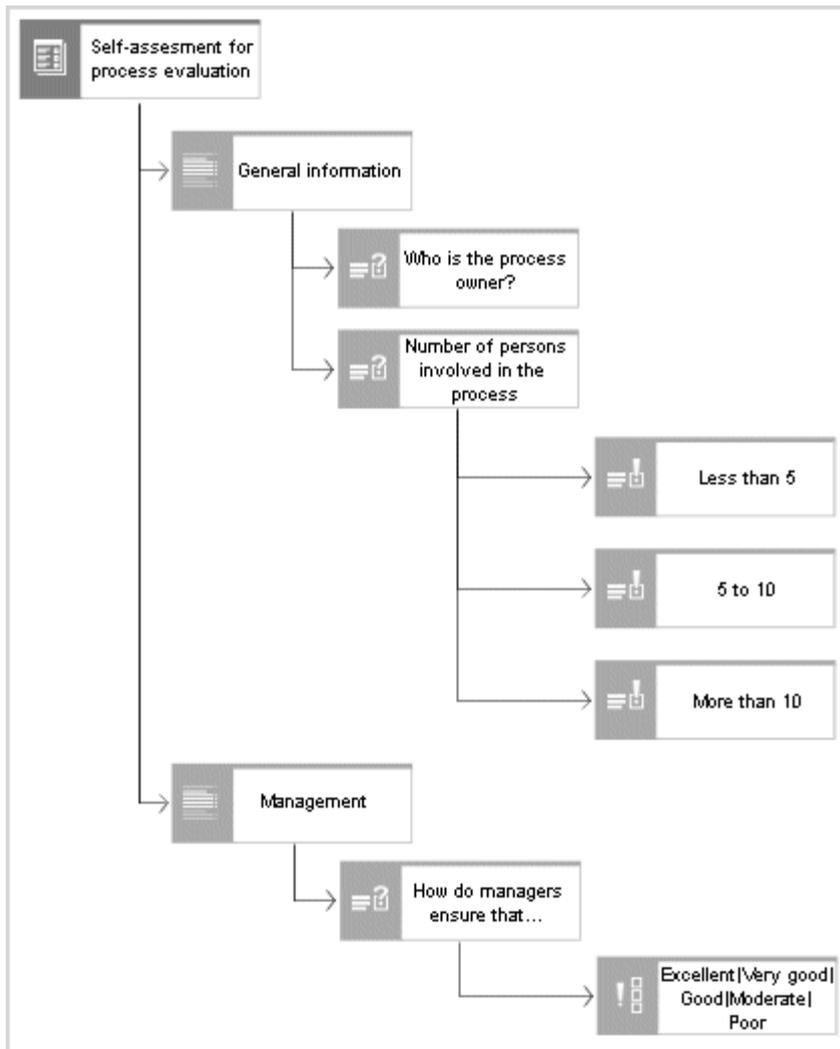


Figure 12: Example of a questionnaire template (Survey management models)

The highest element is the questionnaire template (**Self-assessment for process evaluation**). Any number of sections can be assigned to a questionnaire template. The sections can in turn have any number of subsections. In the example above the questionnaire template has the two sections **General information** and **Management**. Questions cannot be directly assigned to a questionnaire template. They can only be attached to sections. Note that a question can only occur once in a section. In the figure above the questions **Who is the process owner?** and **Number of persons involved in the process** are assigned to the section **General information**. The question **Who is the process owner?** is an open-end question of the **text** type. This means that a text box is available for answering the question. The question **Number of persons involved in the process** is a **single choice** question type. As you can see in the figure above three possible answers are assigned to this question. The user can select one of the three answers to answer the question.

If a combination of possible answers should be used more often, you can combine these in an option set. In the above example the option set **Excellent/Very good/Good/Moderate/Poor** is assigned to the question **How do managers ensure that processes are continuously**

improved and adjusted? The option set can be modeled in the same model of type **Survey Management** or in a separate model that combines all of the option sets.

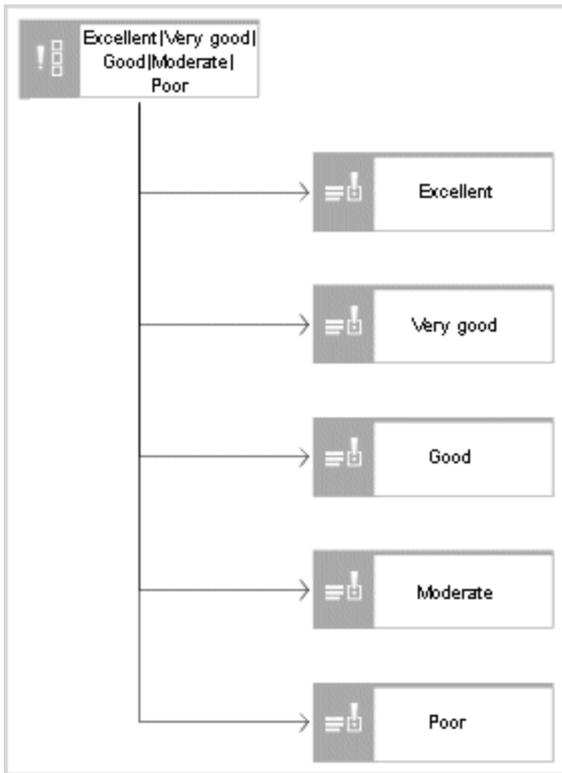


Figure 13: Option set (Survey Management model)

CONNECTIONS AND RELATIONSHIPS THAT CAN BE USED IN A QUESTIONNAIRE TEMPLATE

Object	Connection	Object	Notes
Questionnaire template	contains	Section	A questionnaire template can have several sections. A section can only occur in one questionnaire template. It is not possible to reuse sections in different questionnaire templates.
Section	contains	Section	A section can contain several subsections. A subsection can only have one superior section.
Section	contains	Question	A section can contain several questions. A question can only occur once in a section. It is, however, possible to use a question in different sections. A question can also be used in different questionnaire templates.
Question	contains	Option set	Only one option set can be assigned to a question. Different questions can, however, be assigned to an option set.

Object	Connection	Object	Notes
Question	has	Answer option	Several answers can be assigned to a question. An answer option can be assigned to several different questions.
Option set	has	Answer option	An option set can contain several answer options. An answer option can be assigned to several different option sets.

6.2 Questionnaire template object

The questionnaire template is modeled in an ARIS modeling environment using the **Questionnaire template** object (OT_SURVEY_QUEST_TMPL). A questionnaire template is created in ARIS Risk & Compliance Manager for each questionnaire template for which the **Synchronize ARCM** attribute is set.

ATTRIBUTE MAPPINGS: QUESTIONNAIRE TEMPLATE (ARIS) TO QUESTIONNAIRE TEMPLATE (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description/ Definition	AT_DESC	description	-	
Section	-	sections	-	Is determined using the connection between the questionnaire template and the assigned sections. A corresponding link to the section is saved in ARIS Risk & Compliance Manager.
Title 1	AT_TITL1	document:	-	Indicates the linked documents.
Title 2	AT_TITL2	▪ name		
Title 3	AT_TITL3	▪ title		
Title 4	AT_TITL4			
Link 1	AT_EXT_1	document:	-	Indicates the linked documents.
Link 2	AT_EXT_2	▪ link		
Link 3	AT_EXT_3			
Link 4	AT_LINK			

ARIS attribute	API name	ARCM attribute	M*	Notes
ARIS document storage Title 1	AT_ADS_TITL1	document: <ul style="list-style-type: none"> name title 	-	Indicates the linked documents.
ARIS document storage Title 2	AT_ADS_TITL2			
ARIS document storage Title 3	AT_ADS_TITL3			
ARIS document storage Title 4	AT_ADS_TITL4			
ARIS document storage link 1	AT_ADS_LINK_1	document: <ul style="list-style-type: none"> link 	-	Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2			
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			
Score (target)	AT_SCORE_TARGET	targetScore	-	The score (target) specifies how many points should be achieved for a specific questionnaire.
Synchronize ARCM	AT_AAM_EXPORT_RELEVANT	-	-	This attribute specifies whether a questionnaire template should be synchronized with ARIS Risk & Compliance Manager.

ARIS attribute	API name	ARCM attribute	M*	Notes
Automatic numbering	AT_AUTOMATIC_NUMBERING	autoNumbering	-	Activates (Yes) or deactivates (No) the automatic numbering for all sections and questions of the questionnaire in ARIS Risk & Compliance Manager.

*The **M** column specifies whether the attribute is a mandatory field.

6.3 Section object

The section is modeled in an ARIS modeling environment with the **Section** object (OT_SURVEY_SECTION).

ATTRIBUTE MAPPINGS: SECTION (ARIS) TO SECTION (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description/ Definition	AT_DESC	description	-	
Subsections	-	subSections	-	Is determined using the connection between the section and the subsections. A corresponding link to the subsection is saved in ARIS Risk & Compliance Manager.
Questions	-	questions	-	Is determined using the connection between the section and the assigned questions. A corresponding link to the question is saved in ARIS Risk & Compliance Manager.
Score (target)	AT_SCORE_TARGET	targetScore	-	The score (target) specifies how many points should be achieved for a specific section.

*The **M** column specifies whether the attribute is a mandatory field.

6.4 Question object

The question is modeled in an ARIS modeling environment using the **Question** object (OT_SURVEY_QUESTION). An option set and answer options cannot be assigned to a question at the same time.

ATTRIBUTE MAPPINGS: QUESTION (ARIS) TO QUESTION (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Description/ Definition	AT_DESC	question_text	X	The Description/Definition ARIS attribute contains the question text.
Remark/ Example	AT_REM	remark	-	The Remark/Example ARIS attribute can contain remarks and explanations pertaining to the question text.
Option set	-	optionSet	(X)	Is determined using the connection between the question and the assigned option set. A corresponding link to the option set is saved in ARIS Risk & Compliance Manager. If the question type is Single choice or Multiple choice , then either an option set or at least one answer options must be assigned (mandatory fields).
Answer options	-	options	(X)	Is determined using the connection between the question and the answer options. A corresponding link to the answer option is saved in ARIS Risk & Compliance Manager. If the question type is Single choice or Multiple choice , then either an option set or at least one answer options must be assigned (mandatory fields).
Notes allowed	AT_ANNOTATIONS_ALLOWED	Notes allowed	-	Specifies whether an interviewee can add a note pertaining to a question (default setting: False = No).

ARIS attribute	API name	ARCM attribute	M*	Notes
Document upload allowed	AT_DOCUMENT_UPLOAD_ALLO WED	Document upload allowed	-	Specifies whether an interviewee can upload documents and attach them to a question (default setting: False = No).
Question type	AT_QUESTION_TYPE	type	X	The question type specifies the type of question (for example: single choice, text).
Evaluation by reviewer	AT_REVIEWER_RATES_ANSWER	reviewerRates Answer	-	Specifies whether the survey reviewer can evaluate the interviewee's answers and thus assign a score (default setting: False = No).
Optional question	AT_OPTIONAL_QUESTION	optional Question	-	Specifies whether questions are optional (default setting: False = No).
Title 1 Title 2 Title 3 Title 4	AT_TITL1 AT_TITL2 AT_TITL3 AT_TITL4	document: <ul style="list-style-type: none"> ▪ name ▪ title 	-	Indicates the linked documents.
Link 1 Link 2 Link 3 Link 4	AT_EXT_1 AT_EXT_2 AT_EXT_3 AT_LINK	document: <ul style="list-style-type: none"> ▪ link 	-	Indicates the linked documents.

ARIS attribute	API name	ARCM attribute	M*	Notes
ARIS document storage Title 1	AT_ADS_TITL1	document: <ul style="list-style-type: none"> ▪ name ▪ title 	-	Indicates the linked documents.
ARIS document storage Title 2	AT_ADS_TITL2			
ARIS document storage Title 3	AT_ADS_TITL3			
ARIS document storage Title 4	AT_ADS_TITL4			
ARIS document storage link 1	AT_ADS_LINK_1	document: <ul style="list-style-type: none"> ▪ link 	-	Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2			
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			

*The **M** column specifies whether the attribute is a mandatory field.

6.4.1 Question types attribute

A fundamental property of a question is the question type. The question type specifies how a question can or must be answered. In addition, the question type has an effect on whether a question can be assigned to an option set or to answer options.

The following question types are available:

- **Single choice**
The single choice question type specifies that the interviewee can select only one of the available answer options. As soon as this question type was selected the question must be assigned to either an option set or answer options.
- **Multiple choice**
The multiple choice question type specifies that the interviewee can select any number of available answer options. As soon as this question type was selected the question must be assigned to either an option set or answer options.
- **Text**
The text question type specifies that an interviewee can enter any text as an answer to the question.
- **Numerical (integer)**
The numerical (integer) question type specifies that an interviewee must enter an integer as an answer to the question.
- **Numerical (floating point number)**
The numerical (floating point number) question type specifies that an interviewee must enter a floating point number as an answer to the question.
- **Date**
The date question type specifies that an interviewee must enter a date as an answer to the question.
- **Date range**
The date range question type specifies that an interviewee must enter a date range (from ...to ...) as an answer to the question.

The question types mentioned are mutually exclusive. Thus, a question can only have one question type.

6.4.2 Evaluation by reviewer attribute

If the **Evaluation by reviewer** attribute is set the survey reviewer can evaluate the interviewee's answer. This is however only possible for questions that do not belong to the **Single choice** or **Multiple choice** question type. As soon as this attribute was set the question must be assigned to either an option set or answer options. As soon as the interviewee has answered the question the survey reviewer can select a fitting answer from the answer options. In doing so, however he isn't answering the question but rather evaluating the interviewee's answer. This evaluation determines the score for the corresponding question.

6.5 Option set object

The option set is modeled in an ARIS modeling environment using the **Option set** object (OT_SURVEY_OPTION_SET).

ATTRIBUTE MAPPINGS: OPTION SET (ARIS) TO OPTION SET (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description/ Definition	AT_DESC	description	-	
Answer options	-	options	X	Is determined using the connection between the option set and the answer options. A corresponding link to the answer option is saved in ARIS Risk & Compliance Manager.

*The **M** column specifies whether the attribute is a mandatory field.

6.6 Answer option object

The answer option is modeled in an ARIS modeling environment using the **Answer option** object (OT_SURVEY_OPTION).

ATTRIBUTE MAPPINGS: ANSWER OPTION (ARIS) TO ANSWER OPTION (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Answer value	AT_OPTION_VALUE	optionValue	-	The answer value is used to calculate the score (if the corresponding answer was selected).
Description/ Definition	AT_DESC	description	-	

*The **M** column specifies whether the attribute is a mandatory field.

6.6.1 Dependent questions/sections

You can create dependencies between an answer option and additional questions/sections. In this case, interviewees must answer additional questions or edit additional sections depending on the/their given answers. You can only create additional questions for **Single choice** and **Multiple choice** question types. An answer option can simultaneously activate additional questions and sections. The dependencies are modeled in a **Survey Management** model. Make sure not to model cycles in dependencies.

Example

Question: **How do you assess the performance of managers to ensure that processes are continuously improved and adjusted?**

Answer option 1: **Good** (there are no additional questions to be answered)

Answer option 2: **Moderate** (there are no additional questions to be answered)

Answer option 3: **Poor** (activates the additional question: **What could be improved?**)

OBJECT RELATIONSHIPS IN A SURVEY MANAGEMENT MODEL

Object	Connection	Object	Notes
Answer option	activates	Question	An answer option can activate one or more questions.
Answer option	activates	Section	An answer option can activate one or more sections.

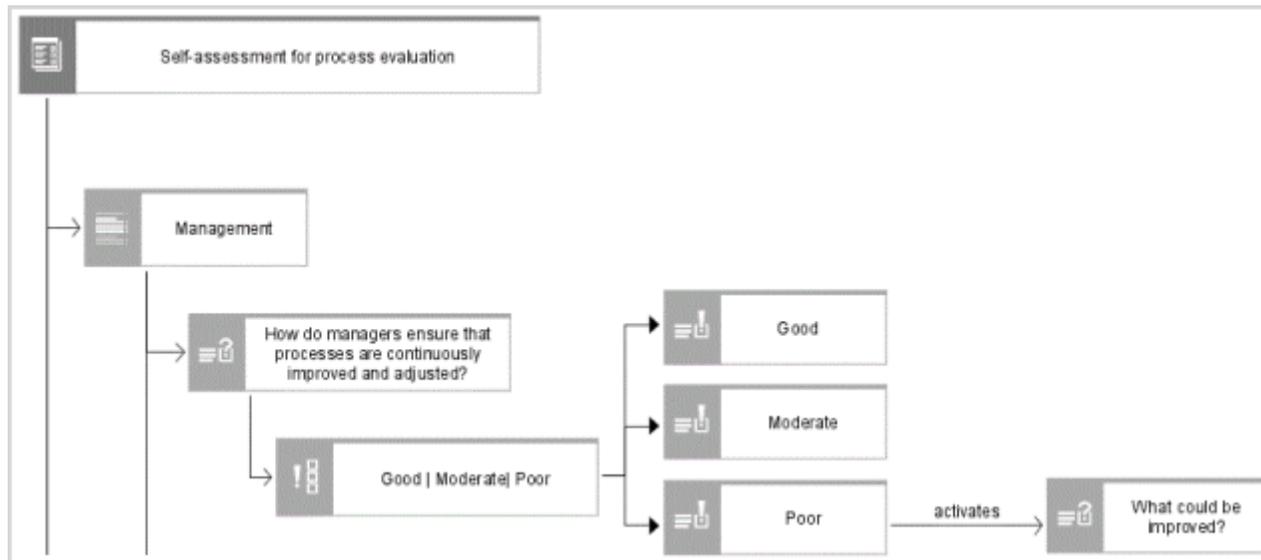


Figure 14: Dependency between an answer option and a question

ACTIVATION OF DEPENDENT QUESTIONS/SECTIONS

ANSWER OPTION ALWAYS ACTIVATES THE SAME QUESTIONS/SECTIONS

An answer option is often used multiple times in a questionnaire template, especially if it belongs to an option set. If an answer, for example, **Poor**, must always activate the same question, for example, **What could be improved?**, the question must be connected to the option. The same applies to sections.

Example

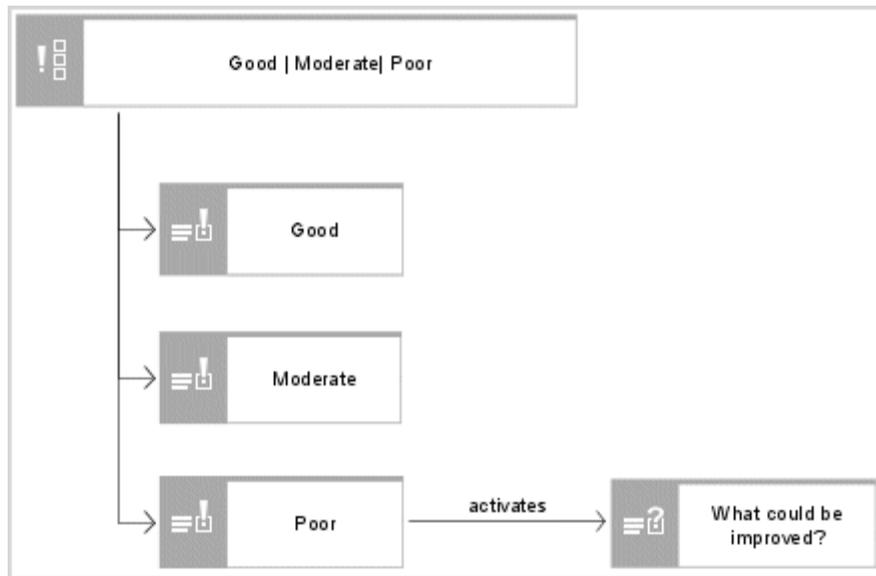


Figure 15: Answer option always activates the same question

ANSWER OPTION ACTIVATES DIFFERENT QUESTIONS/SECTIONS IN THE CONTEXT OF A SPECIFIC QUESTION

An answer option, for example, **Poor**, can activate different questions depending on the context. To do so, the connection **is valid in context of** must be used to define in which context which dependent question must be activated. The same applies to sections.

Object	Connection	Object	Notes
Question	is valid in context of	Question	A question is only activated by an answer option in the context of a particular question.
Section	is valid in context of	Question	A section is only activated by an answer option in the context of a particular question.

Example

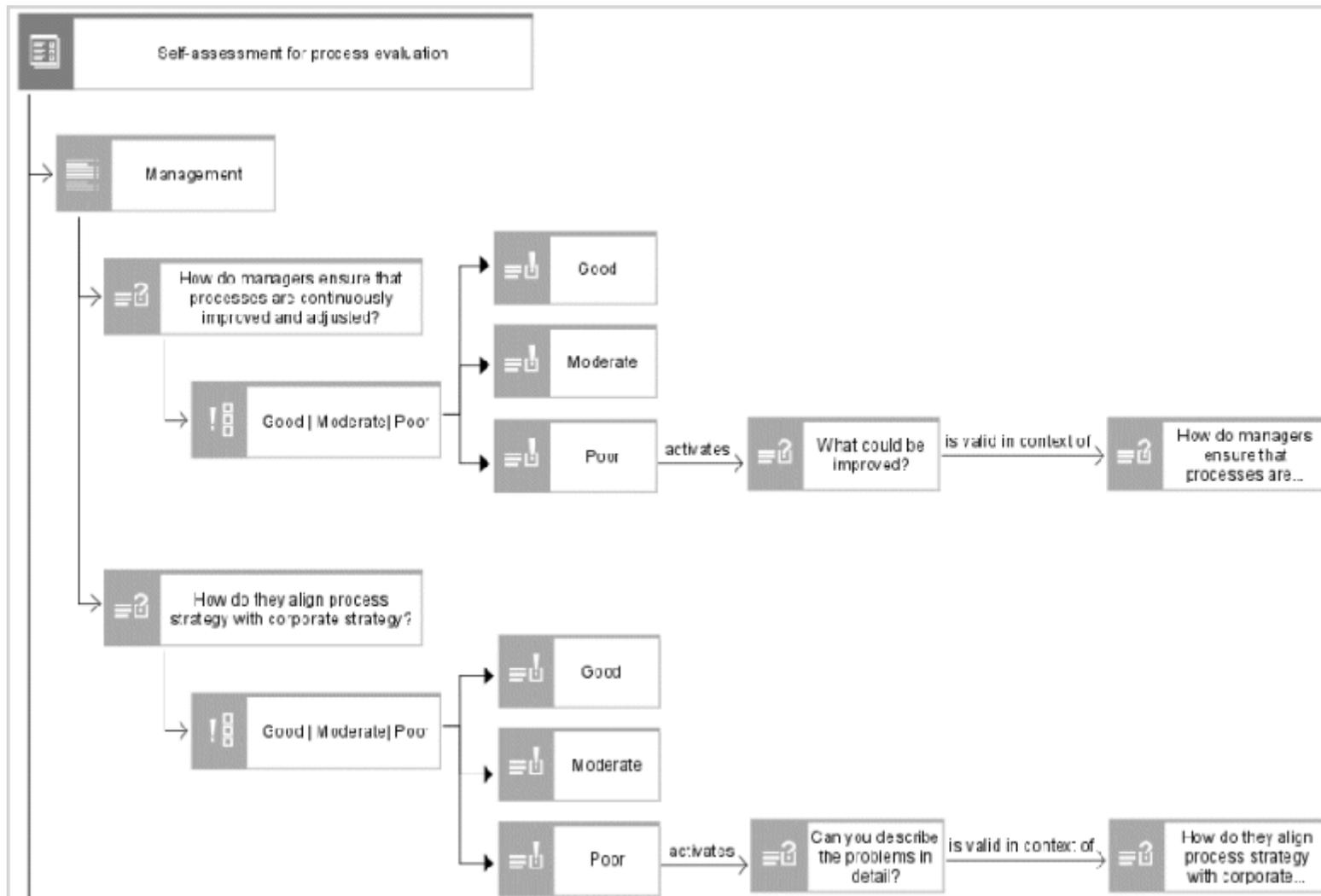


Figure 16: Answer option activates different questions in different contexts

POSITION OF DEPENDENT QUESTIONS/SECTIONS IN ARIS RISK & COMPLIANCE MANAGER

Once the questionnaire template is modeled in an ARIS modeling environment, you can transfer it to ARIS Risk & Compliance Manager (**Synchronize ARCM**). There are two possibilities to define the position of the dependent question/section in the questionnaire template of ARIS Risk & Compliance Manager.

DEPENDENT QUESTION/SECTION DIRECTLY BENEATH THE ACTIVATING QUESTION

If the dependent question/section can be displayed below the activating question in the questionnaire template structure of ARIS Risk & Compliance Manager, use the **activates** connection to connect the question/section to the answer option in an ARIS modeling environment.

STANDARD CASE

If the triggering answer option is connected to multiple questions in an ARIS modeling environment, the synchronization of ARIS Risk & Compliance Manager generates the corresponding number of copies of the activated question/section. In the questionnaire template structure of ARIS Risk & Compliance Manager, each copy of the activated question/section is displayed directly beneath the activating question. An answer option always triggers only the depending question/section that is displayed beneath the activating question.

SPECIAL CASES

Multiple answer options trigger the same depending question

If multiple answer options of one question trigger the same depending question, the depending question is displayed only once beneath the question.

Multiple questions activate the same depending section

- If multiple questions within a section activate the same depending section, the depending section is displayed only once beneath the section.
- If multiple questions of multiple sections that belong to the same superior section activate the same depending section, the depending section is displayed only once beneath the superior section.

Multiple questions activate the same depending question

If multiple questions of one section activate the same depending question, the depending question is displayed only once within the section.

DEPENDENT QUESTION/SECTION AT A DEFINED POSITION

If you want to specify the position of the dependent question/section in the questionnaire template structure of ARIS Risk & Compliance Manager, you must model this explicitly in an ARIS modeling environment. To do so, use the **activates** connection to connect the question/section to the answer option. Additionally, use the **contains** connection to specify the position of the question/section in the section/the questionnaire template.

If the answer option (which activates the dependent question/section) is connected to multiple questions in an ARIS modeling environment, the synchronization with ARIS Risk & Compliance Manager only generates one question/section. In the questionnaire template structure of ARIS Risk & Compliance Manager, the dependent section/question is displayed at the same position as in the an ARIS modeling environment model. Each answer option activates the same depending question/section. Example:

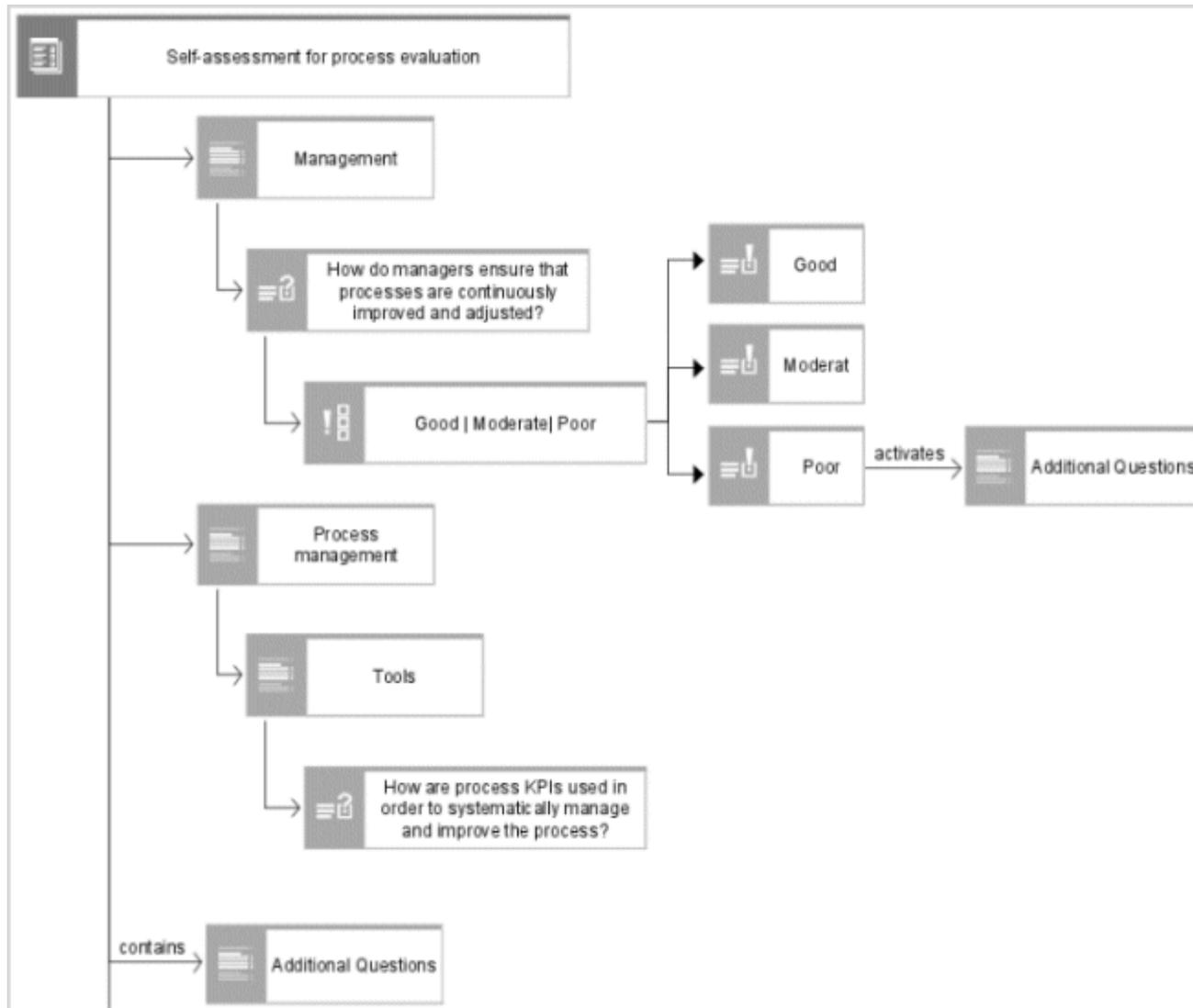


Figure 17: Section at a defined position in the structure

6.7 Questionnaire template assignment model

A model of the **Survey Management** type can be assigned a model of the **Questionnaire template assignments** type. This model represents information on the areas, objects, and hierarchies involved in the survey. You can also model objects of the **Survey task** type with the elements involved in the survey. A survey task assigned to a questionnaire template, for which the attribute **Synchronize ARCM** is set, is synchronized with ARIS Risk & Compliance Manager together with its associated information. The information modeled at the questionnaire template is ignored by the import.

OBJECTS AND RELATIONSHIPS

The following objects can be assigned with the **concerns** connection to an object of the **Questionnaire template** type in the **Questionnaire template assignments** model:

Object type name	Symbol type name	API name	Symbol	ARCM name
Task	Project/Task	OT_FUNC_INST	 Project  Task	Audit template/ audit step
Risk category	Risk category	OT_RISK_CATEGORY	 Risk category	Risk category
Application system type	Application system type	OT_APPL_SYS_TYPE	 Application system type	Application system type
Function	Function/ control	OT_FUNC	 Function  Control	Process/control
Organizational unit	Organizational unit	OT_ORG_UNIT	 Organizational unit	Organization
Technical term	Technical term	OT_TECH_TRM	 Technical term	Regulations

Object type name	Symbol type name	API name	Symbol	ARCM name
Policy	Business policy	OT_POLICY	 Business policy	Policy definition
Risk	Risk	OT_RISK	 Risk	Risk
Test definition	Test definition	OT_TEST_DEFINITION	 Test definition	Test definition

The following objects can be assigned with the **is initiated by** connection to an object of the **Questionnaire template** type in the **Questionnaire template assignments** model:

Object type name	Symbol type name	API name	Symbol	ARCM name
Survey task	Survey task	OT_SURVEYTASK	 Survey task 1.1	Survey task

The survey manager group in charge of the survey is assigned to the questionnaire template using the **is assigned to** connection.

Object type name	Symbol type name	API name	Symbol	ARCM name
Role	Role	OT_PERS_TYPE	 Role	Survey manager group

QUESTIONNAIRE TEMPLATE OBJECT CONNECTIONS

Object	Connection	Object	Notes
Questionnaire template	affects	Audit template/ audit step	Multiple audit templates and/or audit steps can be assigned to a questionnaire template.*
Questionnaire template	affects	Policy	Multiple policy definitions can be assigned to a questionnaire template.*
Questionnaire template	affects	Risk category	Multiple risk categories can be assigned to a questionnaire template.*
Questionnaire template	affects	Technical term/ regulations	Multiple regulations can be assigned to a questionnaire template.*
Questionnaire template	affects	Function/ process	Multiple processes can be assigned to a questionnaire template.*

Object	Connection	Object	Notes
Questionnaire template	affects	Application system type	Multiple application system types can be assigned to a questionnaire template.*
Questionnaire template	affects	Organizational unit	Multiple organizational units can be assigned to a questionnaire template.*
Questionnaire template	affects	Risk	Multiple risks can be assigned to a questionnaire template.*
Questionnaire template	affects	Control	Multiple controls can be assigned to a questionnaire template.*
Questionnaire template	affects	Test definition	Multiple test definitions can be assigned to a questionnaire template.
Questionnaire template	is initiated by	Survey task	Multiple survey tasks can be assigned to a questionnaire template.*
Questionnaire template	is assigned to	Role	Multiple survey manager groups can be assigned to a questionnaire template.*

* This relationship is not used in ARIS Risk & Compliance Manager.

6.8 Survey task

Objects of the **Survey task** type can be connected with an object of the type **Questionnaire template** using the **is initiated by** connection. Objects of the **Survey task** type that are modeled on a questionnaire template, and for which the **Synchronize ARCM** attribute is set, are synchronized with ARIS Risk & Compliance Manager including all objects modeled on the survey task.

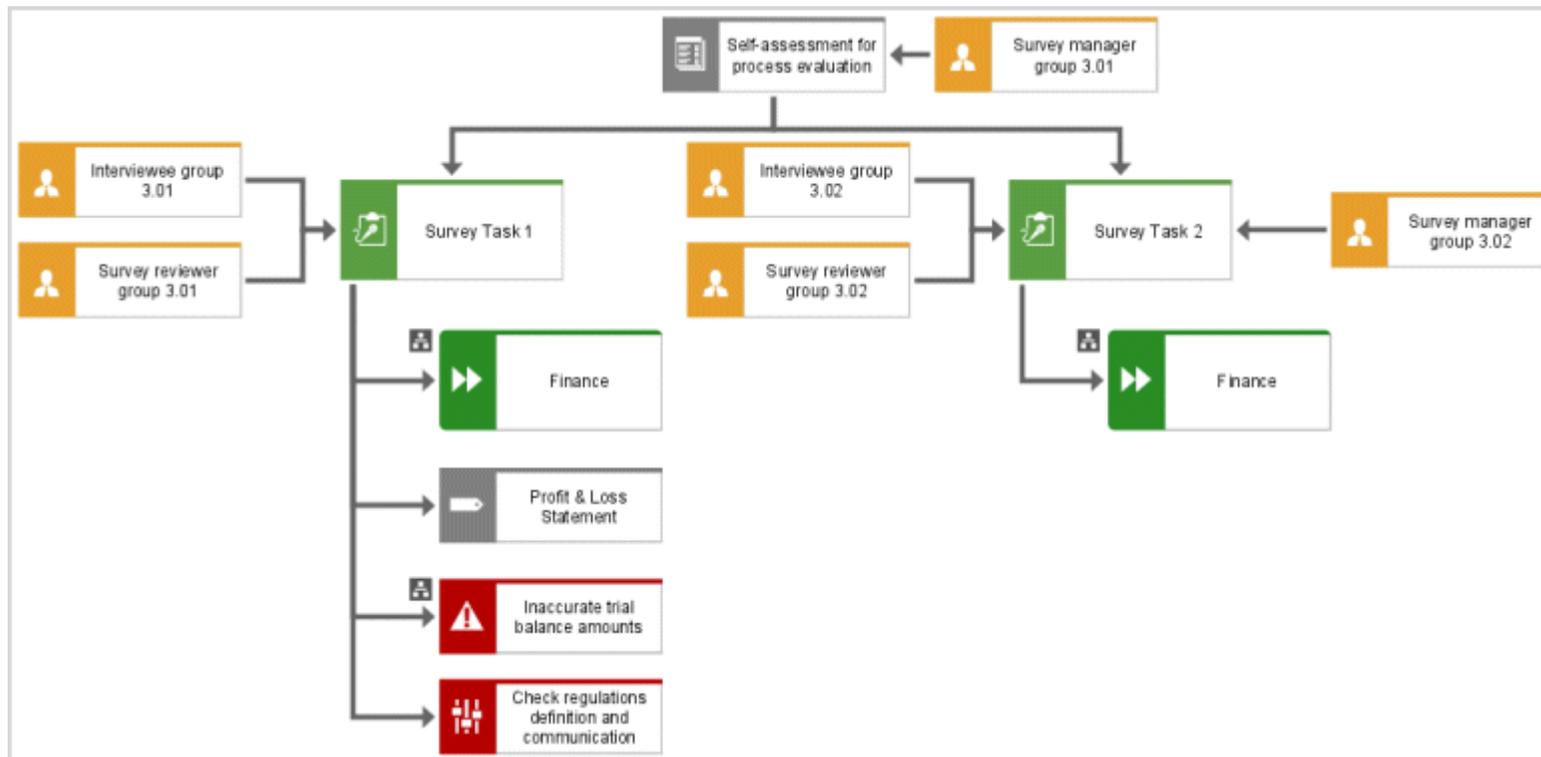


Figure 18: Example of a questionnaire template allocations model

The following objects can be assigned in the **Questionnaire template assignments** model to an object of the **Survey task** type using the **affects** connection:

Object type name	Symbol type name	API name	Symbol	ARCM name
Risk category	Risk category	OT_RISK_CATEGORY	 Risk category	Risk category
Application system type	Application system type	OT_APPL_SYS_TYPE	 Application system type	Application system type
Function	Function/control	OT_FUNC	 Function  Control	Process/control
Organizational unit	Organizational unit	OT_ORG_UNIT	 Organizational unit	Organization
Technical term	Technical term	OT_TECH_TRM	 Technical term	Regulations
Risk	Risk	OT_RISK	 Risk	Risk
Test definition	Test definition	OT_TEST_DEFINITION	 Test definition	Test definition

The groups in charge of the survey are assigned to the survey task using the connection **is assigned to**.

Object type name	Symbol type name	API name	Symbol	ARCM name
Role	Role	OT_PERS_TYPE		Interviewee group, survey reviewer group, survey manager group

SURVEY TASK CONNECTIONS

Object	Connection	Object	Notes
Survey task	concerns	Risk category	Multiple risk categories can be assigned to a survey task.*
Survey task	concerns	Technical term/regulations	Multiple regulations can be assigned to a survey task.*
Survey task	concerns	Function/process	Multiple processes can be assigned to a survey task.*
Survey task	concerns	Application system type	Multiple application system types can be assigned to a survey task.*
Survey task	concerns	Organizational unit	Multiple organizational units can be assigned to a survey task.*
Survey task	concerns	Risk	Multiple risks can be assigned to a survey task.*
Survey task	concerns	Control	Multiple controls can be assigned to a survey task.*
Survey task	concerns	Test definition	Multiple test definitions can be assigned to a survey task.*
Survey task	is assigned to	Role	Multiple interviewee groups, exactly one reviewer group, and one survey manager group can be assigned to a survey task.*

* This relationship is used in ARIS Risk & Compliance Manager.

The survey task is modeled in an ARIS modeling environment with the **Survey task** object (OT_SURVEY_TASK). The following mappings are applicable for the **Survey task** object in ARIS to the **Survey task** object in ARIS Risk & Compliance Manager.

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	The name of a survey task.
Frequency	AT_SURVEYTASK_FREQUENCY	frequency	X	Defines how often a survey is generated.
Start date	AT_SURVEYTASK_START_DATE	startDate	(X)	Outputs the date on which the generation of the survey should begin. This attribute is not mandatory if the Frequency attribute has the value Event-driven .
End date	AT_SURVEYTASK_END_DATE	endDate		Outputs the date on which the generation of the survey should end.
Offset in days	AT_SURVEYTASK_OFFSET	control period offset		Outputs the number days by which a survey task precedes the control period.
Time limit for execution in days	AT_SURVEYTASK_DURATION	Duration	(X)	Outputs the number of days that are available to the interviewee for the completion of the survey. The duration defines the completion date by which the survey must be completed. This attribute is not mandatory if the Frequency attribute has the value Event-driven .
Length of control period	AT_SURVEYTASK_CTRL_PERIOD	control_period		Specifies the time unit for the control.

ARIS attribute	API name	ARCM attribute	M*	Notes
Event-driven surveys allowed	AT_EVENT_DRIVEN_SURVEYS_ALLOWED	event_driven_allowed		Indicates whether manually created surveys are allowed for survey tasks. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Frequency attribute is set to Event-driven .
		owner_group	X	Interviewee groups in charge. This role can be assigned to multiple groups. Is determined using the connection between the survey task and the role. A corresponding link to the survey task is saved in ARIS Risk & Compliance Manager.
		reviewer_group	X	Survey reviewer group in charge. The role can only be assigned to exactly one group. Is determined using the connection between the survey task and the role.
		manager_group		Survey manager group in charge. The role can only be assigned to exactly one group. Is determined using the connection between the survey task and the role.
		relatedAppSystems		List of the assigned application system types. Is determined using the connection between the survey task and the application system type.

ARIS attribute	API name	ARCM attribute	M*	Notes
		relatedOrgunits		List of the assigned organizational units. Is determined using the connection between the survey task and the organizational unit.
		relatedProcesses		List of the assigned functions/processes. Is determined using the connection between the survey task and the function.
		relatedRegulations		List of the assigned regulations. Is determined using the connection between the survey task and the regulations.
		relatedCategories		List of the assigned risk categories. Is determined using the connection between the survey task and risk category.
		risks		List of the assigned risks. Is determined using the connection between the survey task and the risk.
		controls		List of the assigned controls. Is determined using the connection between the survey task and the control.
		test_definitions		List of the assigned test definitions. Is determined using the connection between the survey task and the test definition.

*The M column specifies whether the attribute is a mandatory field.

7 Operational Risk Management conventions

7.1 Level 3 process models

You can describe a company's processes using an EPC. It is based on the logical and chronological sequence of the activities to be carried out. In addition, a sequence of functions and resulting events is used. These lean processes can be supplemented by additional objects (organizational units, positions, roles, application systems, etc.) containing extended information. The following model types can be assigned to an object type in an EPC:

Object type	Assigned model type
Function	EPC
Function	Function allocation diagram
Risk	EPC
Risk	Business controls diagram
Risk	KPI allocation diagram

7.2 KPI allocation diagram

For the risks identified in the processes, the responsibilities and objects relevant for the assessment can be defined in the KPI allocation diagram. This means that effects on the company's hierarchies can be documented, e. g. which risk affects which organizational unit.

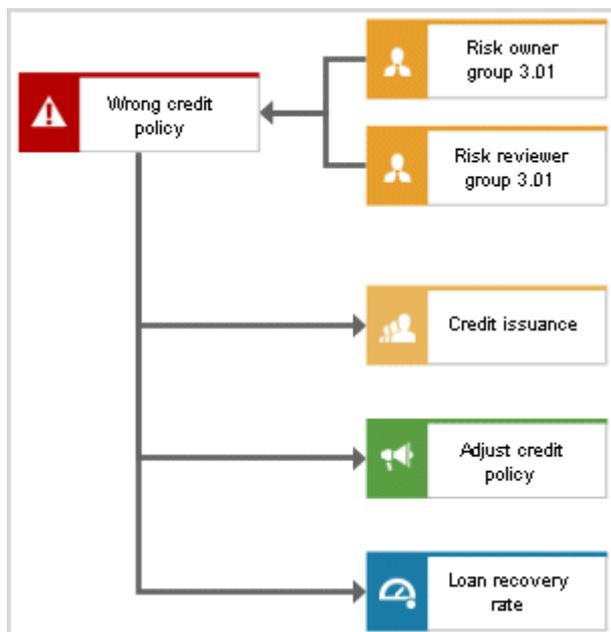


Figure 19: KPI allocation diagram structure

All allocations except the allocation of risk owner and risk reviewer are optional.

RELATIONSHIPS OF THE RISK OBJECT

The following connections are relevant between the objects in the KPI allocation diagram:

Object	Connection	Object	Notes
Risk	is technically responsible for	Role	This connection creates the relationship to the risk owner, risk manager, and risk reviewer.
Risk	affects	Organizational unit	This connection creates the relationship to the organizational hierarchy.
Risk	affects	Technical term	This connection creates the relationship to the regulation hierarchy. It becomes a mandatory relationship if Financial reporting has also been selected for the Risk type risk attribute.
Risk	affects	Application system type	This connection creates the relationship to the application system type hierarchy.
Risk	is measured by	KPI instance	This connection creates the relationship to the KPI. It is not transferred to ARIS Risk & Compliance Manager so far.
Risk	is influenced by	Task	This connection creates the relationship to the measure. It is not transferred to ARIS Risk & Compliance Manager so far.

7.3 Risk object

The risk is modeled in an ARIS modeling environment with the **Risk** object (OT_RISK). A risk is created in ARIS Risk & Compliance Manager for each risk for which the **Synchronize ARCM** attribute is set.

ATTRIBUTE MAPPINGS: RISK ARIS TO RISK (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Risk ID	AT_AAM_RISK_ID	risk_id		
Risk types	AT_AAM_RISK_TYPE_FINANCIAL_REPORT AT_AAM_RISK_TYPE_COMPLIANCE AT_AAM_RISK_TYPE_OPERATIONS AT_AAM_RISK_TYPE_STRATEGIC	risktype		The enumeration is set in ARIS Risk & Compliance Manager when the values are true .
Description/ Definition	AT_DESC	description		
		risk_function		Is identified via the connection to the function. A corresponding link to the process hierarchy element in ARIS Risk & Compliance Manager is saved.
		financial_statement		Is identified via the connection to the technical term. A corresponding link to the regulation hierarchy element in ARIS Risk & Compliance Manager is saved.
Impact	AT_AAM_IMPACT	impact		

ARIS attribute	API name	ARCM attribute	M*	Notes
Probability	AT_AAM_PROBABILITY	probability		
Risk catalog 1	AT_AAM_RISK_CATALOG_1	risk_catalog1		
Risk catalog 2	AT_AAM_RISK_CATALOG_2	risk_catalog2		
Title 1 Title 2 Title 3 Title 4	AT_TITL1 AT_TITL2 AT_TITL3 AT_TITL4	document: ▪ name ▪ title		Indicates the linked documents.
Link 1 Link 2 Link 3 Link 4	AT_EXT_1 AT_EXT_2 AT_EXT_3 AT_LINK	document: ▪ link		Indicates the linked documents.
ARIS document storage Title 1 ARIS document storage Title 2 ARIS document storage Title 3 ARIS document storage Title 4	AT_ADS_TITL1 AT_ADS_TITL2 AT_ADS_TITL3 AT_ADS_TITL4	document: ▪ name ▪ title		Indicates the linked documents.

ARIS attribute	API name	ARCM attribute	M*	Notes
ARIS document storage link 1	AT_ADS_LINK_1	document: ▪ link		Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2			
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			
		manager_group		Is identified via the connection to the role. A corresponding link to the risk manager in ARIS Risk & Compliance Manager is saved.
Assertions	AT_AAM_ASSERTIONS_EXIST_OCCURRENCE AT_AAM_ASSERTIONS_COMPLETENESS AT_AAM_ASSERTIONS_RIGHTS_OBLIGATIONS AT_AAM_ASSERTIONS_VALUATION_ALLOCATION AT_AAM_ASSERTIONS_PRESENTATION_DISCLOSURE AT_AAM_ASSERTIONS_NA	assertions		The enumeration is set in ARIS Risk & Compliance Manager depending on the values that are set. A dependency of values exists. The first 5 values cannot occur in combination with the last entry.

*The **M** column specifies whether the attribute is a mandatory field.

MAPPINGS TRANSFERRED TO ARIS RISK & COMPLIANCE MANAGER ONLY IF THE RISK IS MARKED AS RISK MANAGEMENT-RELEVANT

ARIS attribute	API name	ARCM attribute	M*	Notes
Risk management-relevant	AT_GRC_RISK_MANAGEMENT_RELEVANT	risk_management_relevant		
Assessment activities	AT_GRC_ASSESSMENT_ACTIVITIES	assessment_activities		Describes the assessment steps.
Assessment frequency	AT_GRC_ASSESSMENT_FREQUENCY	assessment_frequency	X	Defines the frequency at which risk assessments are automatically generated.
Event-driven assessment allowed	AT_GRC_EVENT_DRIVEN_ASSESSMENTS_ALLOWED	event_driven_allowed		Indicates whether manually created assessments are allowed for risks. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Assessment frequency attribute is set to Event-driven .
Time limit for execution in days	AT_GRC_RISK_ASSESSMENT_DURATION	assessment-duration	(X)	Specifies the duration for executing a risk assessment. This attribute is not mandatory if the Assessment frequency attribute has the value Event-driven .

ARIS attribute	API name	ARCM attribute	M*	Notes
Start date of risk assessment	AT_GRC_START_DATE_OF_RISK_ASSESSMENTS	assessments_startdate	(X)	Specifies the date as of which risk assessments are generated. This attribute is not mandatory if the Assessment frequency attribute has the value Event-driven .
End date of risk assessment	AT_GRC_END_DATE_OF_RISK_ASSESSMENTS	assessments_enddate		Specifies the date as of which risk assessments are no longer generated.

*The **M** column specifies whether the attribute is a mandatory field.

FURTHER RISK (ARIS) TO RISK (ARCM) ATTRIBUTES

ARIS attribute	API name	ARCM attribute	M*	Notes
-	-	risk_assessment_owner_group	X	Is identified via the connection to the role. A corresponding link to the risk owner in ARIS Risk & Compliance Manager is saved.
-	-	risk_reviewer_group	X	Is identified via the connection to the role. A corresponding link to the risk reviewer in ARIS Risk & Compliance Manager is saved.
-	-	risk_category		Is identified via the connection to the risk category. A corresponding link to the risk hierarchy element in ARIS Risk & Compliance Manager is saved.
-	-	organizational_unit		Is identified via the connection to the organizational unit. A corresponding link to the organization hierarchy element in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
-	-	application_system_type		Is identified via the connection to the application system type. A corresponding link to the application system type hierarchy element in ARIS Risk & Compliance Manager is saved.

*The **M** column specifies whether the attribute is a mandatory field.

8 Control Management conventions

8.1 Business controls diagram

The objects and relationships for Control Management can be modeled in an ARIS modeling environment to make master data maintenance easier. The model **Business controls diagram** (MT_BUSY_CONTR_DGM) is intended for this. The following objects and relationships between those objects are used:

Object	Connection	Object	Remark
Control	is initiated by	Control execution task	A control execution task is used to describe the documentation of control executions. For example, it specifies documentation activities, frequencies, and result formats.
Control execution task	affects	Organizational unit	Assigns the organizational unit affected by the documentation.
Role	is assigned to	Control execution task	Assigns the user group (with the Control execution owner role) to the control execution task as the responsible group.

8.2 Control execution task object

ATTRIBUTE MAPPINGS: CONTROL EXECUTION TASK (OT_CTRL_EXECUTION_TASK) (ARIS) TO CONTROL EXECUTION TASK (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
GUID of object		guid	X	
Control documentation activities	AT_CTRL_EXECUTION_TASK_DOC	activities		Describes the activities necessary for documentation of the control execution.
Selection	AT_CTRL_EXECUTION_TASK_SELECTIVITY	selectivity		Indicates the scope of the documentation to be performed: Complete documentation, sample, sample %, number of samples.
Result format	AT_CTRL_EXECUTION_TASK_RESULT_FORMAT	result_format		Indicates the format for result calculation.
Control documentation frequency	AT_CTRL_EXECUTION_TASK_FREQUENCY	frequency	X	Indicates the interval at which control execution is to be documented.
Event-driven control documentation allowed	AT_EVENT_DRIVEN_CTRL_EXECUTION_ALLOWED	event_driven_allowed		Indicates whether manually created documentation are allowed for control execution tasks. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Control documentation frequency attribute is set to Event-driven .

ARIS attribute	API name	ARCM attribute	M*	Notes
Time limit for documentation of control execution in days	AT_CTRL_EXECUTION_TASK_DURATION	duration	(X)	Indicates the number of days available to the control execution owner for documentation of the control execution. This period determines the date by which documentation of control execution must be completed. This attribute is not mandatory if the Control documentation frequency attribute has the value Event-driven .
Start date	AT_CTRL_EXECUTION_TASK_START_DATE	startdate	(X)	Indicates the date from which control execution is to be documented. This attribute is not mandatory if the Control documentation frequency attribute has the value Event-driven .
End date	AT_CTRL_EXECUTION_TASK_END_DATE	enddate		Indicates the date up to which control execution is to be documented.
Length of documented period	AT_CTRL_EXECUTION_TASK_CTRL_PERIOD	control_period		Specifies the period for which control executions are to be documented.
Offset in days	AT_CTRL_EXECUTION_TASK_OFFSET	Control-period offset		Indicates the number of days by which the documented period precedes the documentation period.
Title 1 Title 2 Title 3 Title 4	AT_TITL1 AT_TITL2 AT_TITL3 AT_TITL4	document: <ul style="list-style-type: none"> ▪ name ▪ title 		Indicates the linked documents.

ARIS attribute	API name	ARCM attribute	M*	Notes
Link 1	AT_EXT_1	document:		Indicates the linked documents.
Link 2	AT_EXT_2	▪ link		
Link 3	AT_EXT_3			
Link 4	AT_LINK			
ARIS document storage Title 1	AT_ADS_TITL1	document:		Indicates the linked documents.
ARIS document storage Title 2	AT_ADS_TITL2	▪ name		
ARIS document storage Title 3	AT_ADS_TITL3	▪ title		
ARIS document storage Title 4	AT_ADS_TITL4			
ARIS document storage link 1	AT_ADS_LINK_1	document:		Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2	▪ link		
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			
		affected_organunit	X	Is identified via the connection to the organizational unit. A corresponding link to the relevant organizational unit in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
		owner_group	X	Is identified via the connection to the role. Specifies the assigned control execution owner group.

*The **M** column specifies whether the attribute is a mandatory field.

9 Risk-based Test Management conventions

9.1 Level 3 process models

You can describe a company's processes using an EPC. It is based on the logical and chronological sequence of the activities to be carried out. In addition, a sequence of functions and resulting events is used. These lean processes can be supplemented by additional objects (organizational units, positions, roles, application systems, etc.) containing extended information. Thus for example, a risk with the **occurs at** connection can be linked directly with a function in an EPC. The following model types can be assigned to an object type in an EPC:

Object type	Assigned model type
Function	EPC
Function	Function allocation diagram
Risk	EPC
Risk	Business controls diagram

FUNCTION ALLOCATION DIAGRAM (FAD)

EPCs can also be modeled as lean EPCs, that is, without organizational units, positions and application systems. The relationships between these additional objects and a function are then modeled in a function allocation diagram, which is assigned to the function. The object and symbol types in the function allocation diagram are those that change a lean EPC into an extended EPC. These are:

- Function
- Position
- Organizational unit
- Organizational unit type
- Group
- Role
- Internal person
- Application system
- Application system type
- Information carrier (file, document)
- Risk

9.2 Analysis of risks, and derivation of controls and tests

For the risks identified in the processes, controls, and test definitions including responsibilities can be defined in the business controls diagram. In addition, effects on the company's hierarchies can be documented, for example, which risk affects which balance sheet item.

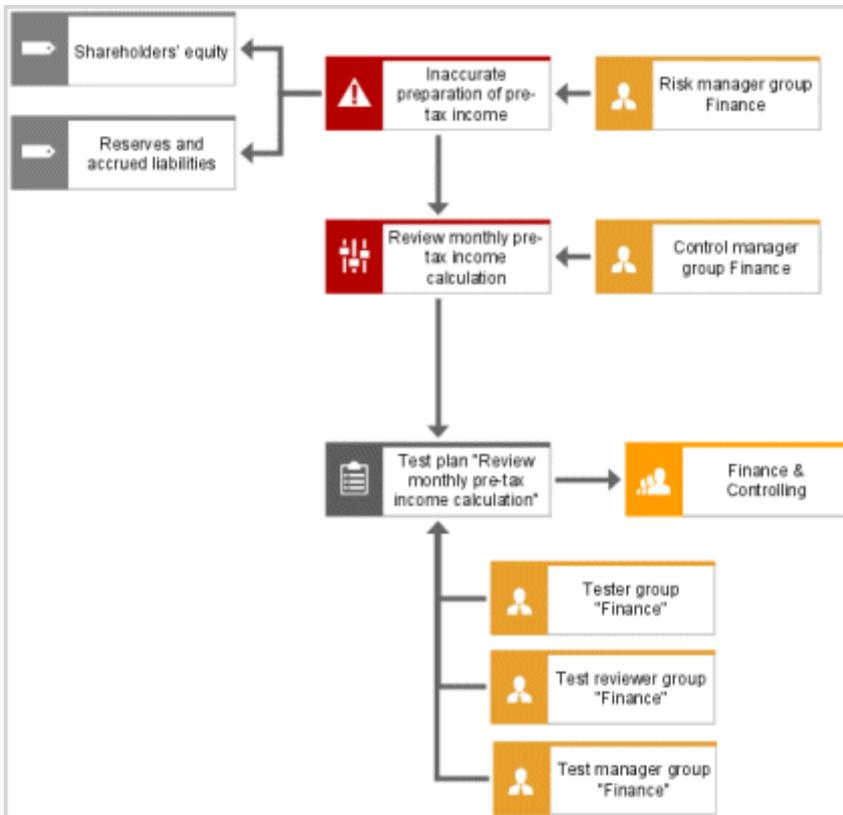


Figure 20: Business controls diagram structure

Assignment of a risk manager group, test manager group, and control manager group is optional.

RELATIONSHIPS BETWEEN RISK OBJECT AND ASSOCIATED OBJECTS

The following connections are relevant between the objects in the business controls diagram:

Object	Connection	Object	Notes
Risk	affects	Technical term	This connection creates the relationship to the regulations.
Risk	is technically responsible for	Role	This connection creates the relationship to the risk manager.
Risk	is reduced by	Control	This connection creates the relationship to the control.

Object	Connection	Object	Notes
Control	is monitored by	Test definition	This connection creates the relationship to the test definition.
Control	is technically responsible for	Role	This connection creates the relationship to the control manager.
Test definition	affects	Organizational unit	This connection creates the relationship to the organizational unit concerned.
Test definition	is assigned to	Role	This connection creates the relationship to the tester, test reviewer, and to the test manager.

9.3 Risk object

The risk is modeled in an ARIS modeling environment with the **Risk** object (OT_RISK). A risk is created in ARIS Risk & Compliance Manager for each risk for which the **Synchronize ARCM** attribute is set.

ATTRIBUTE MAPPINGS: RISK (ARIS) TO RISK (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Risk ID	AT_AAM_RISK_ID	risk_id		
Risk types	AT_AAM_RISK_TYPE_FINANCIAL_REPORT AT_AAM_RISK_TYPE_COMPLIANCE AT_AAM_RISK_TYPE_OPERATIONS AT_AAM_RISK_TYPE_STRATEGIC	risktype		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Description/ Definition	AT_DESC	description		
		risk_function		Is identified via the connection to the function. A corresponding link to the process hierarchy element in ARIS Risk & Compliance Manager is saved.
		financial_statement		Is identified via the connection to the technical term. A corresponding link to the regulation hierarchy element in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
Impact	AT_AAM_IMPACT	impact		
Probability	AT_AAM_PROBABILITY	probability		
Risk catalog 1	AT_AAM_RISK_CATALOG_1	risk_catalog1		
Risk catalog 2	AT_AAM_RISK_CATALOG_2	risk_catalog2		
Title 1	AT_TITL1	document:		Indicates the linked documents.
Title 2	AT_TITL2	▪ name		
Title 3	AT_TITL3	▪ title		
Title 4	AT_TITL4			
Link 1	AT_EXT_1	document:		Indicates the linked documents.
Link 2	AT_EXT_2	▪ link		
Link 3	AT_EXT_3			
Link 4	AT_LINK			
ARIS document storage Title 1	AT_ADS_TITL1	document:		Indicates the linked documents.
ARIS document storage Title 2	AT_ADS_TITL2	▪ name		
ARIS document storage Title 3	AT_ADS_TITL3	▪ title		
ARIS document storage Title 4	AT_ADS_TITL4			

ARIS attribute	API name	ARCM attribute	M*	Notes
ARIS document storage link 1	AT_ADS_LINK_1	document: ▪ link		Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2			
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			
		controls		Is identified via the connection to the control. A corresponding link to the control in ARIS Risk & Compliance Manager is saved.
		manager_group		Is identified via the connection to the role. A corresponding link to the risk manager in ARIS Risk & Compliance Manager is saved.
Assertions	AT_AAM_ASSERTIONS_EXIST_OCCURRENCE AT_AAM_ASSERTIONS_COMPLETENESS AT_AAM_ASSERTIONS_RIGHTS_OBLIGATIONS AT_AAM_ASSERTIONS_VALUATION_ALLOCATION AT_AAM_ASSERTIONS_PRESENTATION_DISCLOSURE AT_AAM_ASSERTIONS_NA	assertions		The enumeration is set in ARIS Risk & Compliance Manager when the values are true. A dependency of values exists. The first 5 values cannot occur in combination with the last entry.

*The **M** column specifies whether the attribute is a mandatory field.

9.4 Control object

The control is modeled in an ARIS modeling environment using the **Function** object (OT_FUNC) and the default symbol **Control** (ST_CONTR). Only those controls that are modeled at a risk that is **Synchronize ARCM** are relevant for export to ARIS Risk & Compliance Manager.

ATTRIBUTE MAPPINGS: FUNCTION (CONTROL) (ARIS) TO CONTROL (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Control ID	AT_AAM_CTRL_ID	control_id		
		manager_group		Is identified via the connection to the role. A corresponding link to the control manager in ARIS Risk & Compliance Manager is saved.
Control frequency	AT_AAM_CTRL_FREQUENCY	control_frequency		
Control execution	AT_AAM_CTRL_EXECUTION_MANUAL AT_AAM_CTRL_EXECUTION_IT	control_execution		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Effect of control	AT_AAM_CTRL_EFFECT	control_effect		
COSO component	AT_AAM_COSO_COMPONENT_CTRL_ENVIRONMENT AT_AAM_COSO_COMPONENT_RISK_ASSESSMENT AT_AAM_COSO_COMPONENT_CTRL_ACTIVITIES AT_AAM_COSO_COMPONENT_INFO_COMMUNICATION AT_AAM_COSO_COMPONENT_MONITORING	control_type		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Control activity	AT_AAM_CTRL_ACTIVITY	controls		

ARIS attribute	API name	ARCM attribute	M*	Notes
		testdefinitions		Is identified via the connection to the test definition. A corresponding link to the test definition in ARIS Risk & Compliance Manager is saved.
Control objective	AT_AAM_CTRL_OBJECTIVE	control_objective		
Key control	AT_AAM_KEY_CTRL	key_control		

*The **M** column specifies whether the attribute is a mandatory field.

9.5 Test definition object

The test definition is modeled in an ARIS modeling environment using the **Test definition** object (OT_TEST_DEFINITION). Only those test definitions are relevant for synchronization with ARIS Risk & Compliance Manager that are modeled at a control for which the **Synchronize ARCM** attribute is set.

ATTRIBUTE MAPPINGS: TEST DEFINITION (ARIS) TO TEST DEFINITION (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Test activity	AT_AAM_TEST_ACTIVITY	testingsteps		
Nature of test	AT_AAM_TEST_NATURE_INQUIRY AT_AAM_TEST_NATURE_OBSERVATION AT_AAM_TEST_NATURE_EXAMINATION AT_AAM_TEST_NATURE_REPERFORMANCE	test_nature		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Test type	AT_AAM_TEST_TYPE_DESIGN AT_AAM_TEST_TYPE_EFFECTIVENESS	test_type	X	The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Test size	AT_AAM_TEST_SCOPE	testextend		
		owner_group	X	Is identified via the connection to the role. A corresponding link to the tester in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
Event-driven test cases allowed	AT_EVENT_DRIVEN_TESTS_ALLOWED	event_driven_allowed		Indicates whether manually created test cases are allowed for test definitions. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Test frequency attribute is set to Event-driven .
Test frequency	AT_AAM_TEST_FREQUENCY	testfrequency	X	
Time limit for execution in days	AT_AAM_TEST_DURATION	testduration	(X)	This attribute is not mandatory if the Test frequency attribute has the value Event-driven .
Start date of test definition	AT_AAM_TESTDEF_START_DATE	testdefinition_startdate	(X)	This attribute is not mandatory if the Test frequency attribute has the value Event-driven .
End date of test definition	AT_AAM_TESTDEF_END_DATE	testdefinition_enddate		
Length of control period	AT_AAM_TESTDEF_CTRL_PERIOD	control_period	X	
Offset in days	AT_AAM_TESTDEF_OFFSET	offset		
		reviewer_group	X	Is identified via the connection to the role using the Test reviewer role. A corresponding link to the test reviewer in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
		manager_group		Is identified via the connection to the role using the Test manager role. A corresponding link to the test manager in ARIS Risk & Compliance Manager is saved.
		effected_orgunit	X	Is identified via the connection to the organizational unit, group, position, or location. A corresponding link to the relevant organizational unit in ARIS Risk & Compliance Manager is saved.
Follow-up allowed	AT_AAM_TESTDEF_FOLLOWUP	isfollowup		

*The **M** column specifies whether the attribute is a mandatory field.

9.6 General modeling conventions

Risks must be unique within the modeled business controls diagrams. A risk can have several controls, but a control can only have one risk. A risk can have an occurrence in no more than one business controls diagram and be connected with only one function.

The control must be unique within the modeled business controls diagram and can have an occurrence in no more than one business controls diagram. Controls can be connected to precisely one risk for which the **Synchronize ARCM** attribute is specified.

The test definition must be unique within the modeled business controls diagram and can have an occurrence in no more than one business controls diagram. A test definition can be connected to precisely one control that is connected with a risk for which the **Synchronize ARCM** attribute is specified.

9.7 Automated control testing

To carry out automated control tests per event enabling the **Event-driven test cases allowed** attribute must be set to **true**. Automated control testing can then be carried out ad-hoc, for example, driven by an external event. In addition, the **Event-driven** attribute value must be selected for the **Test frequency** attribute, in order to prevent the system from generating test cases during the year. This frequency is used only for processing ad-hoc tests.

10 Control-based Test Management conventions

10.1 Level 3 process models

You can describe a company's processes using an EPC. It is based on the logical and chronological sequence of the activities to be carried out. In addition, a sequence of functions and resulting events is used. These lean processes can be supplemented by additional objects (organizational units, positions, roles, application systems, etc.) containing extended information. Thus for example, a control with the **is carried out at** connection can be linked directly with a function in an EPC. The following model types can be assigned to an object type in an EPC:

Object type	Assigned model type
Function	EPC
Function	Function allocation diagram
Control (OT_FUNC, ST_CONTR)	EPC
Control (OT_FUNC, ST_CONTR)	Business controls diagram

FUNCTION ALLOCATION DIAGRAM (FAD)

EPCs can also be modeled as lean EPCs, that is, without organizational units, positions and application systems. The relationships between these additional objects and a function are then modeled in a function allocation diagram, which is assigned to the function. The object and symbol types in the function allocation diagram are those that change a lean EPC into an extended EPC. These are:

- Function
- Position
- Organizational unit
- Organizational unit type
- Group
- Role
- Internal person
- Application system
- Application system type
- Information carrier (file, document)
- Control (object type: OT_FUNC, symbol type: ST_CONTR)

10.2 Business controls diagram

For the controls identified in the processes, the associated risks and test definitions including responsibilities can be defined in the **Business controls diagram** model. In addition, effects on the company's hierarchies can be documented, for example, which control affects which balance sheet item.

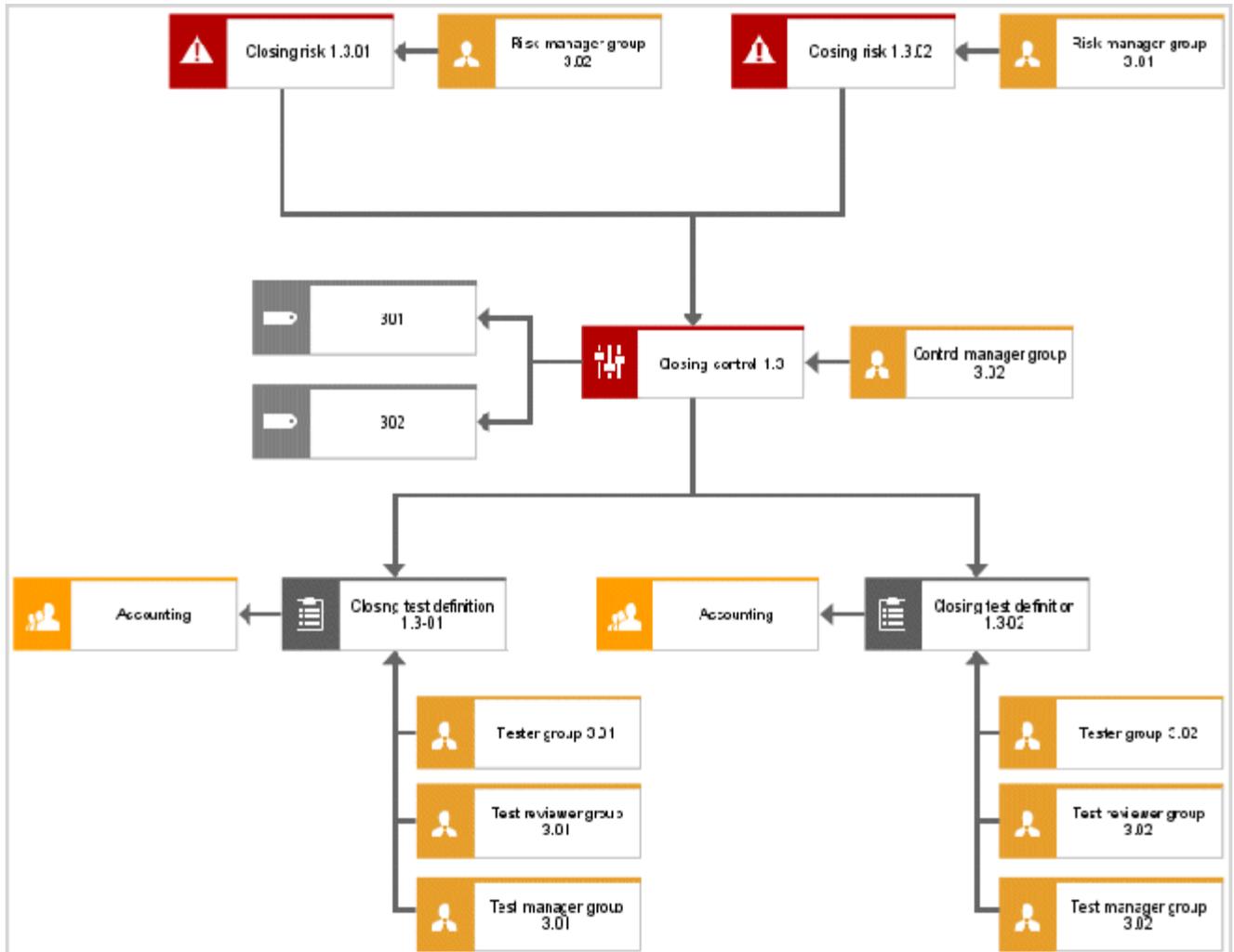


Figure 21: Business controls diagram structure

Assignment of a risk manager group, test manager group, and control manager group is optional.

RELATIONSHIPS BETWEEN RISK OBJECT AND ASSOCIATED OBJECTS

The following connections are relevant between the objects in the business controls diagram:

Object	Connection	Object	Notes
Control	affects	Technical term	This connection creates the relationship to the regulations.
Control	is monitored by	Test definition	This connection creates the relationship to the test definition.

Object	Connection	Object	Notes
Control	is technically responsible for	Role	This connection creates the relationship to the control manager.
Risk	is technically responsible for	Role	This connection creates the relationship to the risk manager.
Risk	is reduced by	Control	This connection creates the relationship to the control.
Test definition	affects	Organizational unit	This connection creates the relationship to the organizational unit concerned.
Test definition	is assigned to	Role	This connection creates the relationship to the tester, test reviewer and to the test manager.

10.3 Control object

The control is modeled in an ARIS modeling environment using the **Function** object (OT_FUNC) and the default symbol **Control** (ST_CONTR). A control is created in ARIS Risk & Compliance Manager for each control for which the **Synchronize ARCM** attribute is set. A control must be uniquely defined and cannot be reused.

ATTRIBUTE MAPPINGS: FUNCTION (CONTROL) (ARIS) TO CONTROL (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Control ID	AT_AAM_CTRL_ID	control_id		
		manager_group		Determined by the connection to the role and saves a corresponding link to the control manager in ARIS Risk & Compliance Manager.
Control frequency	AT_AAM_CTRL_FREQUENCY	control_frequency		
Control execution	AT_AAM_CTRL_EXECUTION_MANUAL AT_AAM_CTRL_EXECUTION_IT	control_execution		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Effect of control	AT_AAM_CTRL_EFFECT	control_effect		
COSO component	AT_AAM_COSO_COMPONENT_CTRL_ENVIRONMENT AT_AAM_COSO_COMPONENT_RISK_ASSESSMENT AT_AAM_COSO_COMPONENT_CTRL_ACTIVITIES AT_AAM_COSO_COMPONENT_INFO_COMMUNICATION AT_AAM_COSO_COMPONENT_MONITORING	control_type		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.

ARIS attribute	API name	ARCM attribute	M*	Notes
Control activity	AT_AAM_CTRL_ACTIVITY	controls		
Control objective	AT_AAM_CTRL_OBJECTIVE	control_objective		
Key control	AT_AAM_KEY_CTRL	key_control		
Assertions	AT_AAM_ASSERTIONS_EXIST_OCCURRENCE AT_AAM_ASSERTIONS_COMPLETENESS AT_AAM_ASSERTIONS_RIGHTS_OBLIGATIONS AT_AAM_ASSERTIONS_VALUATION_ALLOCATION AT_AAM_ASSERTIONS_PRESENTATION_DISCLOSURE AT_AAM_ASSERTIONS_NA	assertions		The enumeration is set in ARIS Risk & Compliance Manager when the values are true. A dependency of values exists. The first 5 values cannot occur in combination with the last entry.
		control_function		Is identified via the connection to the function. A corresponding link to the process hierarchy element in ARIS Risk & Compliance Manager is saved.
		testdefinitions		Is identified via the connection to the test definition. A corresponding link to the test definition in ARIS Risk & Compliance Manager is saved.
		financial_statement	X	Is identified via the connection to the technical term. A corresponding link to the regulation hierarchy element in ARIS Risk & Compliance Manager is saved.

*The **M** column specifies whether the attribute is a mandatory field.

10.4 Risk object

Risks are modeled in an ARIS modeling environment using the **Risk** object (OT_RISK). Only those risks are relevant for synchronization with ARIS Risk & Compliance Manager that are modeled at a control for which the **Synchronize ARCM** attribute is set. It is possible to reuse risks.

ATTRIBUTE MAPPINGS: RISK (ARIS) TO RISK (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Risk ID	AT_AAM_RISK_ID	risk_id		
Risk types	AT_AAM_RISK_TYPE_FINANCIAL_REPORT AT_AAM_RISK_TYPE_COMPLIANCE AT_AAM_RISK_TYPE_OPERATIONS AT_AAM_RISK_TYPE_STRATEGIC	risktype		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Description/ Definition	AT_DESC	description		
Impact	AT_AAM_IMPACT	impact		
Probability	AT_AAM_PROBABILITY	probability		
Risk catalog 1	AT_AAM_RISK_CATALOG_1	risk_catalog1		
Risk catalog 2	AT_AAM_RISK_CATALOG_2	risk_catalog2		
Title 1 Title 2 Title 3 Title 4	AT_TITL1 AT_TITL2 AT_TITL3 AT_TITL4	document: ▪ name ▪ title		Indicates the linked documents.

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Link 1	AT_EXT_1	document:		Indicates the linked documents.
Link 2	AT_EXT_2	▪ link		
Link 3	AT_EXT_3			
Link 4	AT_LINK			
ARIS document storage Title 1	AT_ADS_TITL1	document:		Indicates the linked documents.
ARIS document storage Title 2	AT_ADS_TITL2	▪ name		
ARIS document storage Title 3	AT_ADS_TITL3	▪ title		
ARIS document storage Title 4	AT_ADS_TITL4			
ARIS document storage link 1	AT_ADS_LINK_1	document:		Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2	▪ link		
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
		controls		Is identified via the connection to the control. A corresponding link to the control in ARIS Risk & Compliance Manager is saved.
		manager_group		Is identified via the connection to the role. A corresponding link to the risk manager in ARIS Risk & Compliance Manager is saved.

*The **M** column specifies whether the attribute is a mandatory field.

10.5 Test definition object

The test definition is modeled in an ARIS modeling environment using the **Test definition** object (OT_TEST_DEFINITION). Only those test definitions are relevant for synchronization with ARIS Risk & Compliance Manager that are modeled at a control for which the **Synchronize ARCM** attribute is set.

ATTRIBUTE MAPPINGS: TEST DEFINITION (ARIS) TO TEST DEFINITION (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	
Test activity	AT_AAM_TEST_ACTIVITY	testingsteps		
Nature of test	AT_AAM_TEST_NATURE_INQUIRY AT_AAM_TEST_NATURE_OBSERVATION AT_AAM_TEST_NATURE_EXAMINATION AT_AAM_TEST_NATURE_REPERFORMANCE	test_nature		The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Test type	AT_AAM_TEST_TYPE_DESIGN AT_AAM_TEST_TYPE_EFFECTIVENESS	test_type	X	The enumeration is set in ARIS Risk & Compliance Manager when the values are true.
Test size	AT_AAM_TEST_SCOPE	testextend		
		owner_group	X	Is identified via the connection to the role. A corresponding link to the tester in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
Event-driven test cases allowed	AT_EVENT_DRIVEN_TESTS_ALLOWED	event_driven_allowed		Indicates whether manually created test cases are allowed for test definitions. Is automatically set to true during import from ARIS to ARIS Risk & Compliance Manager if the Test frequency attribute is set to Event-driven .
Test frequency	AT_AAM_TEST_FREQUENCY	testfrequency	X	
Time limit for execution in days	AT_AAM_TEST_DURATION	testduration	(X)	This attribute is not mandatory if the Test frequency attribute has the value Event-driven .
Start date of test definition	AT_AAM_TESTDEF_START_DATE	testdefinition_startdate	(X)	This attribute is not mandatory if the Test frequency attribute has the value Event-driven .
End date of test definition	AT_AAM_TESTDEF_END_DATE	testdefinition_enddate		
Length of control period	AT_AAM_TESTDEF_CTRL_PERIOD	control_period	X	
Offset in days	AT_AAM_TESTDEF_OFFSET	offset		
		reviewer_group	X	Is identified via the connection to the role using the Test reviewer role. A corresponding link to the test reviewer in ARIS Risk & Compliance Manager is saved.

ARIS attribute	API name	ARCM attribute	M*	Notes
		manager_group		Is identified via the connection to the role using the Test manager role. A corresponding link to the test manager in ARIS Risk & Compliance Manager is saved.
		effected_orgunit	X	Is identified via the connection to the organizational unit, group, position, or location. A corresponding link to the relevant organizational unit in ARIS Risk & Compliance Manager is saved.
Follow-up allowed	AT_AAM_TESTDEF_FOLLOWUP	isfollowup		

*The **M** column specifies whether the attribute is a mandatory field.

10.6 General modeling conventions

Controls within the modeled business controls diagrams must be unique and can have an occurrence in not more than one business controls diagram. They can only be connected to precisely one function and at least one test definition.

A risk can have an occurrence in no more than one business controls diagram. A risk can be connected to at least one control for which the **Synchronize ARCM** attribute is specified.

A test definition must be unique within the modeled business controls diagram and can have an occurrence in no more than one of these diagrams. At the same time, a test definition can be connected to precisely one control for which the **Synchronize ARCM** attribute is specified.

10.7 Automated control testing

To carry out automated control tests per event enabling the **Event-driven test cases allowed** attribute must be set to **true**. Automated control testing can then be carried out ad-hoc, for example, driven by an external event. In addition, the **Event-driven** attribute value must be selected for the **Test frequency** attribute, in order to prevent the system from generating test cases during the year. This frequency is used only for processing ad-hoc tests.

11 Sign-off Management conventions

A sign-off process is a valuation process. A valuation process is a multi-level process used to value individual hierarchy elements across various hierarchy levels. The valuations are usually based on the results of test cases that were performed within the control period. In turn, these test cases are based on the **risk**, **control** and **test definition** base elements.

Within a sign-off process, the valuation proceeds from the lowest to the highest hierarchy level. This means that the valuation of a higher-level hierarchy element is performed only after all subordinate hierarchy elements have been valued. If no sign-off owner is assigned to subordinate sign-off hierarchy elements, the system automatically releases them for further processing.

11.1 Sign-off using process hierarchy

For sign-off, the relationship between the function and the sign-off owner group (role) is modeled in a value-added chain diagram. An example can be seen in the following figure.

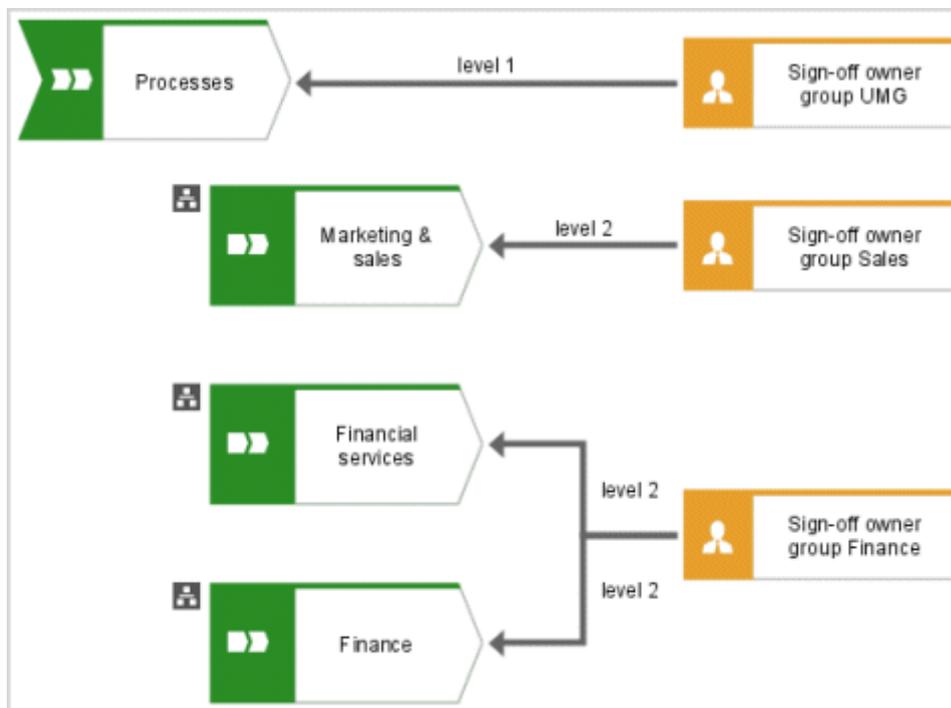


Figure 22: Allocation of function – Sign-off owner group

The **decides on** connection creates a link between a sign-off owner group (user group) and a process hierarchy element.

11.2 Sign-off using regulations & standards hierarchy

For sign-off using the regulations & standards hierarchy, the relationship between the regulations and the sign-off owner group is modeled in a function allocation diagram. The **is owner of** connection creates a link between the user group and a hierarchy element.

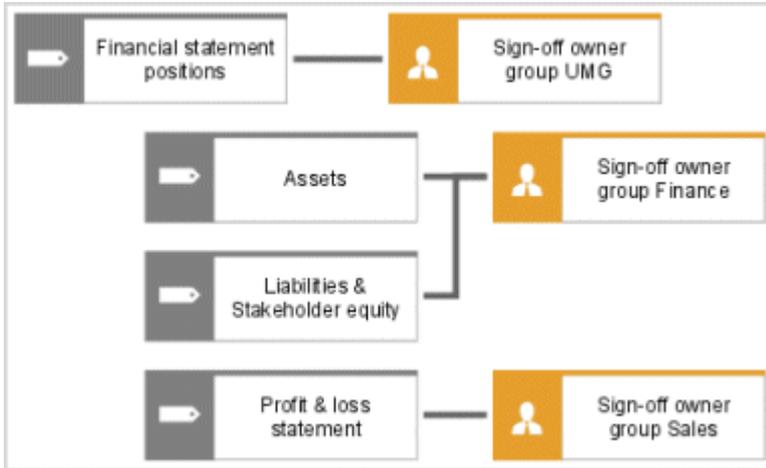


Figure 23: Allocation of regulations – Sign-off owner group

11.3 Sign-off using tester hierarchy

For sign-off using the tester hierarchy, the relationship between the organizational unit and the sign-off owner group is modeled in the organizational chart of the tester hierarchy. The **belongs to** connection creates a link between the user group and the hierarchy element.

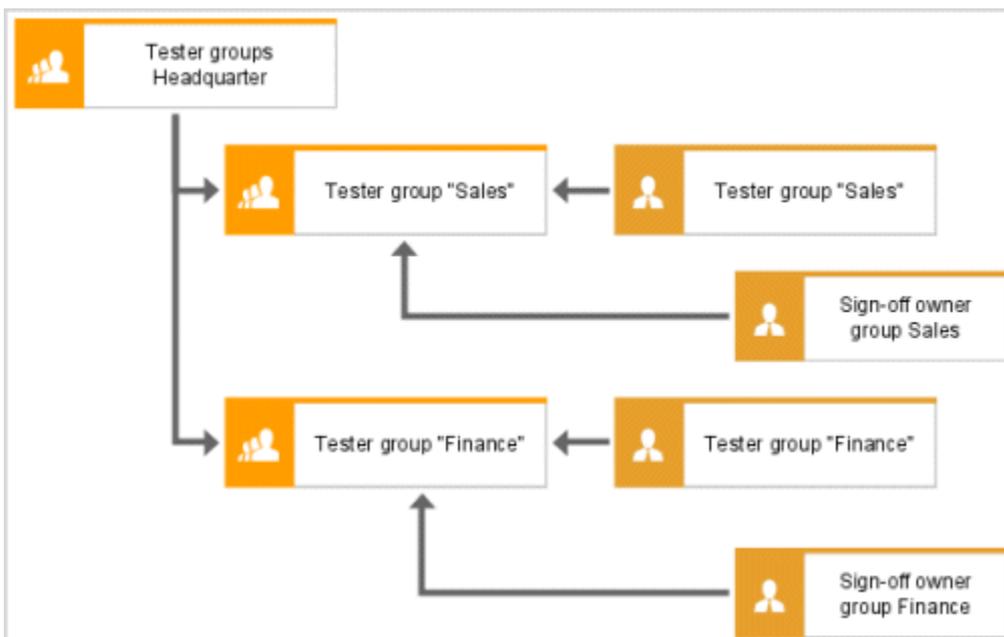


Figure 24: Allocation of organizational unit (tester) – Sign-off owner group

11.4 Sign-off using organizational hierarchy

For sign-off, the relationship between the organizational units and the sign-off owner groups is modeled in the organizational chart of the company organization. The **belongs to** connection creates a link between the user group and the hierarchy element.

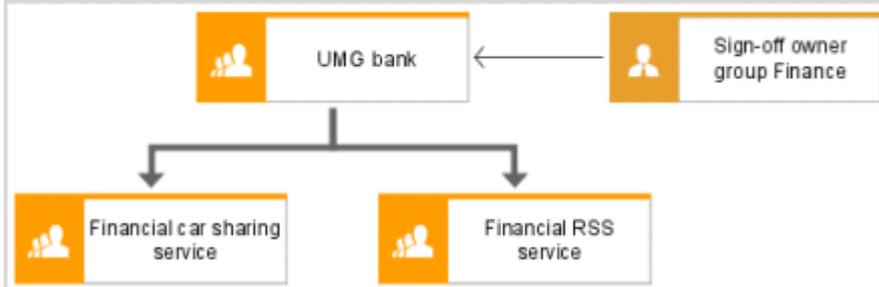


Figure 25: Allocation of organizational unit – Sign-off owner group

12 Audit Management conventions

12.1 Project schedule model (audit template)

You can model audit templates in an ARIS modeling environment to simplify master data maintenance. The **Project schedule** model (MT_PROJECT_SCHEDULE) model is intended for this. To use attribute-based modeling you must specify the row/column properties for attribute-based modeling. Right-click the column header, select **Properties > Format > Attribute-based modeling** and edit the following items:

Position attribute: **Start date** (AT_DATE_START)

Dimension attribute: **Max. total time** (AT_MAX_TL_TIME)

Attribute-dependent symbols: Both position and dimension must be allowed for the **Task** object.

OBJECTS THAT CAN BE USED IN THE PROJECT SCHEDULE MODEL

Object type name	Symbol type name	API name	Symbols	ARCM name
Task	Project	OT_FUNC_INST		Audit template
Role	Role	OT_PERS_TYPE		Audit owner, Audit reviewer, Audit auditor (depending on the role selected)

CONNECTIONS

Object	Connection	Object	Remark
Task (project)	is carried out by	Role	The implicit connection to the task is generated automatically if you model the organizational unit in the first column (organizational elements).

12.2 Task object (audit template)

ATTRIBUTE MAPPINGS: TASK (ARIS) TO AUDIT TEMPLATE (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description	AT_DESC	description		
Start date	AT_DATE_START	auditstartdate	X	Start date of the audit. Everyone involved is informed about their tasks.
	-	auditenddate		Is calculated using the start date plus the max. total time.
Maximum total time	AT_MAX_TL_TIME	-	X	
Weekend off	AT_WEEKEND_OFF	-		If the Weekend off option was selected the max. total time is extended by two days when the time period contains a weekend.
Audit client	AT_AUDIT_CLIENT	audit_client		Organization or person the audit was requested by.
Synchronize ARCM	AT_AAM_EXPORT_RELEVANT	-		This attribute specifies whether or not an audit template is to be synchronized with ARIS Risk & Compliance Manager.
Audit objective	AT_AUDIT_OBJECTIVE	objectives		Definition of the audit objective.
Start date of audit preparation	AT_START_DATE_OF_AUDIT_PREPARATION	plannedstartdate	X	Start of the preparatory phase. The audit is generated.
Start date of control period	AT_START_DATE_OF_CONTROL_PERIOD	controlstartdate	X	Start date of the control period to be audited.

ARIS attribute	API name	ARCM attribute	M*	Notes
End date of control period	AT_END_DATE_OF_CONTROL_PERIOD	controlenddate	X	End date of the control period to be audited.
Title 1 Title 2 Title 3 Title 4	AT_TITL1 AT_TITL2 AT_TITL3 AT_TITL4	document: ▪ name ▪ title		Indicates the linked documents.
Link 1 Link 2 Link 3 Link 4	AT_EXT_1 AT_EXT_2 AT_EXT_3 AT_LINK	document: ▪ link		Indicates the linked documents.
ARIS document storage Title 1 ARIS document storage Title 2 ARIS document storage Title 3 ARIS document storage Title 4	AT_ADS_TITL1 AT_ADS_TITL2 AT_ADS_TITL3 AT_ADS_TITL4	document: ▪ name ▪ title		Indicates the linked documents.

ARIS attribute	API name	ARCM attribute	M*	Notes
ARIS document storage link 1	AT_ADS_LINK_1	document: <ul style="list-style-type: none">link		Indicates the linked documents.
ARIS document storage link 2	AT_ADS_LINK_2			
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			

*The **M** column specifies whether the attribute is a mandatory field.

12.3 Project schedule model (audit step template)

You can assign a model of the **Project schedule** type (MT_PROJECT_SCHEDULE) to the audit template (Task (project)) to define the audit step templates of an audit template. To use attribute-based modeling you must specify the row/column properties for attribute-based modeling. Right-click the column header, select **Properties > Format > Attribute-based modeling** and edit the following items:

Position attribute: **Start date** (AT_DATE_START)

Dimension attribute: **Max. total time** (AT_MAX_TL_TIME)

Attribute-dependent symbols: Both position and dimension must be allowed for the **Task** object.

OBJECTS AND NAMES (AUDIT STEPS) THAT CAN BE USED IN THE PROJECT SCHEDULE MODEL

Object type name	Symbol type name	API name	Symbols	ARCM name
Task	Task	OT_FUNC_INST		Audit step template
Role	Role	OT_PERS_TYPE		Audit step owner

CONNECTIONS (AUDIT STEPS)

Object	Connection	Object	Remark
Task (task)	is carried out by	Role	The implicit connection to the task is generated automatically if you model the organizational unit in the first column (organizational elements).
Task (task)	belongs to	Task (task)	Defines which task is superior.

12.4 Task object (audit step template)

ATTRIBUTE MAPPINGS: TASK (ARIS) TO AUDIT STEP TEMPLATE (ARCM)

ARIS attribute	API name	ARCM attribute	M*	Notes
Name	AT_NAME	name	X	Limited to 250 characters.
Description	AT_DESC	description		
Start date	AT_DATE_START	plannedstartdate	X	Planned start date of the audit step.
	-	plannedenddate		Is calculated using the start date plus the max. total time.
Maximum total time	AT_MAX_TL_TIME	-	X	
Weekend off	AT_WEEKEND_OFF	-		If the Weekend off option was selected the max. total time is extended by two days when the time period contains a weekend.
Required processing time	AT_DES_PROC_TIME	processingtime	X	Duration planned for the execution of the audit step.
Audit step type	AT_AUDIT_STEP_TYPE	Audit step type		Determines the task type of an audit step: <ul style="list-style-type: none"> ▪ Logistic task ▪ Point of audit task
Title 1	AT_TITL1	document: <ul style="list-style-type: none"> ▪ name ▪ title 		
Title 2	AT_TITL2			
Title 3	AT_TITL3			
Title 4	AT_TITL4			

ARIS attribute	API name	ARCM attribute	M*	Notes
Link 1	AT_EXT_1	document:		
Link 2	AT_EXT_2	▪ link		
Link 3	AT_EXT_3			
Link 4	AT_LINK			
ARIS document storage Title 1	AT_ADS_TITL1	document:		
ARIS document storage Title 2	AT_ADS_TITL2	▪ name		
ARIS document storage Title 3	AT_ADS_TITL3	▪ title		
ARIS document storage Title 4	AT_ADS_TITL4			
ARIS document storage link 1	AT_ADS_LINK_1	document:		
ARIS document storage link 2	AT_ADS_LINK_2	▪ link		
ARIS document storage link 3	AT_ADS_LINK_3			
ARIS document storage link 4	AT_ADS_LINK_4			

*The **M** column specifies whether the attribute is a mandatory field.

12.5 Task allocation diagram

To define the scope of an audit or an audit step, you can use the **Task allocation diagram** (MT_FUNC_ALLOC_DGM_INST). Depending on the selected scope, associated elements such as test cases, risk assessments etc. (filtered according to the defined control period) are displayed for the assigned audit/audit step in ARIS Risk & Compliance Manager.

OBJECTS AND NAMES (SCOPE) THAT CAN BE USED IN A TASK ALLOCATION DIAGRAM

Object type name	Symbol type name	API name	Symbols	ARCM name
Task	Project/Task	OT_FUNC_INST	 	Audit/Audit step
Risk category	Risk category	OT_RISK_CATEGORY		Risk category
Application system type	Application system type	OT_APPL_SYS_TYPE		Application system types
Function	Function	OT_FUNC		Process

Object type name	Symbol type name	API name	Symbols	ARCM name
Organizational unit	Organizational unit	OT_ORG_UNIT		Organization
Technical term	Technical term	OT_TECH_TRM		Regulations

Connections

Object	Connection	Object
Risk category	is within the scope of	Task
Application system type	is within the scope of	Task
Function	is within the scope of	Task
Organizational unit	is within the scope of	Task
Technical term	is within the scope of	Task

No more than one connection of the **is within the scope of** type is allowed per audit/audit step.

13 Glossary

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 Cloud provide a ARIS modeling environment.

ASSERTIONS

Assertions are statements that are relevant for checks and relate, for example, to the correctness or completeness of an accounting item. To assign relevant statements to risks, you can use the **Assertions** attribute to select one or more values.

The following assertions are available:

- **Existence or occurrence**
- **Completeness**
- **Rights and obligations**
- **Valuation or allocation**
- **Presentation and disclosure**

AUDIT PREPARATION

After an audit template was imported or created the audit preparation begins. In this phase, the audit owner can edit various attributes of the audit and the audit steps, for example, detailing the audit scope. Audit steps can also be added. Preparation ends when the audit owner sets the status of the template to **Released**. The assigned audit steps then also have the status **Released**. The audit step owners are notified by e-mail that new audit steps exist.

CONTROL PERIOD

Period in which audits, test cases and surveys are checked, that is, it is the period in which the activities to be checked took place. It is normally based on a fiscal year or a fiscal year period, for example, a quarter, and usually lies before the test and survey period (page 114), for example. It can be associated with the sign-off period.

COSO COMPONENTS

COSO: **C**ommittee of **S**ponsoring **O**rganizations of the Treadway Commission.

This committee defines requirements to be fulfilled by a company in the following areas in order to prevent fraudulent financial conduct. Test specifications can be classified as COSO components accordingly:

- Control environment
- Risk assessment
- Control activities

- Information & communication
- Monitoring

CREDIT DEFAULT

Losses caused by operational risk in connection with credit risk must be identified, recorded as operational risk in a loss database, and clearly identified there (credit default in the credit risk area). Losses such as these are not used to calculate the amount relevant for inclusion in the operational risk.

DEFICIENCY

A deficiency (= control inadequacy) exists if the design or execution of the control cannot guarantee attainment of process goals or compensation for process risks.

DIRECT LOSS

Direct losses are the costs involved in resolving problems and repairing damages. Recovering the fixed assets, for example, rebuilding a factory that has burnt down, including the machinery, etc., incurs the greatest portion of the costs.

DUAL CONTROL

Dual control ensures that important decisions are not made by a single person and that critical tasks are not edited and reviewed by a single person (segregation of duties).

INCIDENT

An incident is the trigger for a loss.

INDIRECT LOSS

Indirect losses are the costs that are incurred as a result of the damaging incident, for example, production downtime costs due to fire damage and the resulting contractual penalties due to non-compliance with the contractual deadlines.

ISSUE MANAGEMENT

Overall Issue Management enables processes and objects, for example, risks, controls and policies, to be combined in an issue across different contexts, so that it can refer to different situations or assigned tasks.

Unlike deficiencies, issues are one-off problems that occur in the business environment. Issue Management allows you to document, analyze, and monitor identified issues for the purpose of crisis prevention. The goal is to make problematic issues known in time and resolve them.

LOSS

A loss is the result of an incident.

NEAR LOSS

A near loss is an incident that is recognized in time so that a loss can be avoided. Near losses are thus all incidents that can have undesirable consequences, but which have not occurred in the specific case.

RESERVES

Loss reserves are the amounts fixed by the management of an insurance company at the beginning of the year for the payment of the company's old and new claims.

SIGN-OFF

A sign-off is a multi-level release process that can relate to different hierarchies (process, organization, regulation, or tester hierarchy). Sign-off managers must submit an assessment of the effectiveness of the internal control system for the control period and the hierarchy element under analysis. The release relates to the test cases performed in the control period and associated deficiencies.

SIGN-OFF PERIOD

Period available to the sign-off owner to complete a sign-off process. A sign-off relates to a particular control period (page 112).

SURVEY PERIOD

Period available to the interviewee to answer a questionnaire. It normally comes after the control period (page 112). It can be associated with the sign-off period.

TEST OF DESIGN

Test type that is used to check whether the control is properly designed and fulfills its purpose.

TEST OF EFFECTIVENESS

Test type that is used to check whether the control is effective in practice.

TESTING PERIOD

Period available to the tester to perform the test. It is calculated from the test frequency (once, daily, weekly, monthly, quarterly, semi-annually, annually), the date when the test case was generated the first time and the test duration (time limit for execution in days).

14 Legal information

14.1 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 Clients	Refers to all programs that access shared databases via ARIS Server, such as ARIS Architect or ARIS Designer.
ARIS Download clients	Refers to ARIS clients that can be accessed using a browser.

14.2 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.

14.3 Restrictions

ARIS products are intended and developed for use by people. Automatic processes such as generation of content and import of objects/artefacts using interfaces can lead to a huge data volume, processing of which may exceed the available processing capacity and physical limits. Physical limits can be exceeded if the available memory is not sufficient for execution of the operations or storage of the data.

Effective operation of ARIS Risk & Compliance Manager requires a reliable and fast network connection. A network with an insufficient response time reduces system performance and can lead to timeouts.

If ARIS products are used in a virtual environment, sufficient resources must be available to avoid the risk of overbooking.

The system has been tested in the **Internal control system** scenario with 400 users logged in simultaneously. It contains 2,000,000 objects. To guarantee adequate performance, we recommend operating with not more than 500 users logged in simultaneously. Customer-specific adaptations, particularly in lists and filters, have a negative impact on performance.