

# **Engineering Base**

## **Execution Management**

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## **1** The Execution Management Assistant

## **1.1 General Information**

By means of the **Execution Management** assistant, objects (equipment, functions, locations, drawings, sheets etc) may be marked for an execution outside of the source project. These objects are allocated to an execution task and may be exported into a new project or a transport container.

After editing, these execution tasks can be transferred back into the source project and merged with the existing data. During this process, information on which objects were deleted in the execution project (deletion list) will also be taken over into the source project, and the respective deletions will also be done there.

In the project properties, you can define the **settings for the management of execu-tion tasks**.

### Prerequisite

Using the assistant requires one of the following licenses:

- Execution Management (1157)
- EB Process Engineering(1104)
- EB Detail Engineering (1105)
- EB Plant Engineering (1106)
- EB Plant Engineering (Campus) (1107)
- EB Plant Operation (1108).

The Execution Management assistant consists of four modules

- Assign to Execution Task
- Manage Execution Tasks
- Export/Transfer of Execution Tasks
- Delete Execution Task.

Moreover, the assistant **Execution Management Merge** is available to transfer execution tasks that have been carried out externally back into the source project (As-built project).

Using the **Execution Management Compare** assistant, you can <u>compare object data</u> in an As-built project and an execution project. The <u>comparison of sheet contents</u> can be started from a sheet.

The worksheet **Execution Tasks** can be started on the **Tasks** folder or any of its subfolders to obtain an overview on the defined execution tasks and their status information.

## **1.2 Management of Execution Tasks**

On managing execution tasks, you can pass on status information to an execution task.

### To make the settings for the management of execution tasks

1. In the **Properties** dialog of the project, select the option Manage **Execution Tasks** below **Project Management**.

Properties [Demo Instrumentat	ion Standard]	×
General  Gestings Designation Standards Dictionary Access Control Catalogs Routing Project Management Kecution Management Attribute Status History Advanced Data Tracking Revision Revision Revision View View View	Execution Management          Status Information         Designation         A         Delete         B         Export         C         Modify         D         no comment         No Col	
	Ok Ca	ncel

This opens the **Properties** dialog.

2. Define the status information of your choice. Click **Add** to create a new row for the definition of a status. Define your favored status.

The defined statuses may be assigned to an execution task by means of the **Modify** dialog.

- 3. Define whether deleted objects are to be written to a deletion list in the execution project so that they can also be deleted in the source project (As-built project).
- 4. Define the assigned As-built project (source project). The selection is done via a file selection dialog.
- 5. Click **OK** to save the configuration.

### Definition of the status information

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The status is used to highlight objects assigned to an execution task in color on the sheets.

Designation	Enter the designation of the status.		
	Up to 20 different statuses may be defined.		
	If a designation has been defined multiple times, an error message will be displayed after clicking <b>OK</b> .		
Comment	Enter a comment on the status.		
Color	Click the button $\Box$ to open the color selection dialog and choose your favored color.		
	If a status is assigned to an execution task, all associated objects in the sheets will be highlighted in the defined color. If an object is assigned to several execution tasks, the ob- ject will receive a frame in the allocated color for each exe- cution task.		
	If <b>No Color</b> is selected, the marked object will not be high- lighted in any color, or no frame will be displayed for the execution task.		
	The colored markings of the objects assigned to an execu- tion task are allocated to the layer Execution Tasks in Visio. Per default, this layer will not be taken into account for PDF and print outputs. This setting can be changed in Visio in the layer properties.		

### Meaning of the buttons

Add	This button creates a new row for the definition of a status.		
Delete	The marked status will be deleted.		
Up/ Down	The marked status row will be moved up or down in the displayed list.		

### **Properties of the execution project**

A project created via **Export/Transfer of Execution Tasks** is called the **Execution Project**.

The project in which the execution task is defined is called the **Source Project**.

If the current project is an execution project, it can be specified whether deletions carried out shall also be effected in the source project.

Write deleted objects into a list	If deletions are carried out in an execution project, they will be written into a deletion list so that the same deletions may also be effected in the source project.		
	If a new project is created by means of <b>Export/Transfer</b> of Execution Tasks, this option will be checked automati- cally.		
	If there already is a deletion list, two confirmation prompts will be displayed on removing the check mark. If these are answered with <b>Yes</b> , all objects in the list will be deleted.		
Associated As-built project	Via a file selection catalog, the project from which the transfer or the export of the execution task was started may be selected.		
	If a new project is created by means of <b>Export/Transfer</b> of <b>Execution Tasks</b> , the source project will be entered au- tomatically.		

## **1.3** Creation of Execution Tasks

To be able to start the assistant, the project must be prepared accordingly.

### To create an execution task

1. In the project, mark the **Tasks** folder and click first **New**, then Execution Task on the shortcut menu.

This opens the **New [Execution Task]** dialog.

- 2. On the **System Attributes** tab, enter the data of your choice.
- 3. If required, assign a Status Comment and a Status Color to the execution task.

Via the selection button, a predefined status can be selected under **Status Designa-tion**. The **Status Comment** and the **Status Color** are initialized with values taken from the **Status Information** as defined in the project properties. Both attributes can be changed individually.

If a status is deleted in the project properties, the status information at the execution task will be preserved.

4. Click **OK** to create the new execution task.

The new execution task will be created below the **Tasks** folder and may then be associated with the objects to be marked.

## **1.4** Assign to Execution Task

By means of the **Assign to Execution Task** assistant, objects (equipment, functions, drawings, sheets etc) may be marked in a project (source project) and assigned to an execution task.

The assistant may either be started on selected objects in the Engineering Base Explorer or on selected objects on a sheet. In this context, the sheet will not automatically be marked and transferred during the export or transfer. Via the options in **Export/Transfer of Execution Tasks**, these sheets can also be output.

One object may be assigned to several execution tasks.

The following objects may be assigned to an execution task:

### • Functions

- All aggregated objects of the function will be assigned.
- All associated sheets will also be assigned if the respective option for the assignment or export/transfer has been checked.
- If the structure of an object is locked, this setting will also be taken over.
- Other functions assigned to the displayed devices on sheets will also be assigned to the execution task.
- Potentials on connections (of equipment and functions) will also be taken into account, even if they are not displayed.
- Associated locations will also be assigned.

### • Locations

- All aggregated objects of the location will be assigned to the execution task.
- All associated sheets will also be assigned if the respective option for the assignment or export/transfer has been checked.
- If the structure of an object is locked, this setting will also be taken over.
- Other locations assigned to the displayed devices on sheets will also be assigned.
- Potentials on connections (of equipment and functions) will also be taken into account, even if they are not displayed.
- Associated functions will be assigned to the execution task.

### • Equipment

- All aggregated objects of the equipment or the unit will be assigned to the execution task.
- All associated sheets will also be assigned if the respective option for the assignment or export/transfer has been checked.
- If the structure of an object is locked, this setting will also be taken over.
- Functions or locations associated with the object will be taken over with their structure.
- Potentials on connections (of equipment and functions) will also be taken into account, even if they are not displayed.
- If devices in the execution task are wired alphanumerically among each other, these wires will be taken into account.
- External destinations of cables or rather core and wire connections associated with an object of the execution task will be copied if the respective option has been selected for the export/transfer.

### • Sheets or Drawings

- All objects displayed on the sheet will be assigned to the execution task with their structure (upwards).
- Potentials on connections (of equipment and functions) will also be taken into account, even if they are not displayed.

### To run the Assign to Execution Task assistant

- 1. In the **Engineering Base Explorer**, select the object that you want to assign to an execution task. A multiple selection is possible. You may also select your favored objects on a Visio sheet by means of the Visio standard functions.
- 2. On the shortcut menu, click **Assign to Execution Task**.

This opens the **Assign to Execution Task** dialog. The available execution tasks and the selected start objects will be displayed.

Assign to Execution Task 2.2.	1.0					_		×
Options Include associated docume Create PDF for documer	nts nts ass	ociated to	fund	ctions				
🔺 👔 Tasks		Selected		Designation	Comment			
Execution Task A		✓	$\bigcirc$	01-P-1	Gear Pump			
Execution Task B		✓	$\bigcirc$	01-P-2	Pump carrier with integrated oleo-pneuma	1		
Execution lask C	0	✓	B)	1	Hydraulic diagram			
0	Lis	t configura	tion			Ok	Can	cel

- 3. Select the desired options.
- 4. Under **Tasks**, mark the execution task to which you want to assign the start object(s).
- 5. Click **OK** to save the settings or **Cancel** to close the dialog without saving the changes.

All selected start objects will be assigned to the execution task and graphically marked in the Engineering Base Explorer.

An additional tab **Execution Task** will be created in the **Modify** dialog for all objects directly assigned to the execution task. The information on the execution task will be transferred into this tab.

### The Assign to Execution Task dialog

Include associated documents	<ul> <li>All documents associated with the start object will be taken in account and displayed in the dialog.</li> <li>The associated documents are graphically marked and displayed as associations below the selected execution task.</li> <li>The objects associated with the selected documents are also copied into the target project during the export. The objects are not marked in the target project and they are not associated with the execution task either.</li> </ul>			
Create PDF for doc- uments associated to functions	If the start object is a function, all associated documents are created as PDF and stored under the name of the <b>Execution</b> <b>Task</b> in a folder below <b>Documents/Execution Task</b> . The cre- ated PDF files are transferred to the target project during the export. The PDF will not be graphically marked, nor will it be associated with the execution task.			
Execution task	All execution tasks defined in the project will be displayed.			

Table of start ob- jects	<ul> <li>In the table, the following objects are displayed:</li> <li>All start objects</li> <li>All associated documents if the option Include associated documents has been marked.</li> </ul>
	All objects will be marked in the column <b>Selected</b> . will be displayed if either no execution task has been se- lected or if the object has already been assigned to the marked execution task in the respective row.
List Configuration	Via this option, you may select the attributes to be displayed additionally in the table of start objects. You may select attributes or change the sequence of the dis- played attributes via the arrow keys.

## **1.5 Manage Execution Tasks**

The **Manage Execution Tasks** assistant serves to delete the association of objects with an **Execution Task**.

### To start the Manage Execution Tasks assistant

- 1. In the **Engineering Base Explorer**, click the **Tasks** folder or an execution task.
- 2. On the shortcut menu, click **Manage Execution Tasks**.

The **Manage Execution Tasks** dialog is opened for the selected execution task; it displays all associated objects.

Manage Execution Tasks 2.2.16.0				
Delete associated documents				
Tasks     Tasks     Execution Task A     Execution Task B     Execution Task C	Designatio	Comment       Image: Comment of the second of		
	10	Motor frequency transverter Bill of Material		
	List configuration		Delete Association C	k Cancel

- 3. Mark **Delete associated documents** if you wish the associated documents to be deleted together with the object.
- 4. Mark the object(s) for which you want to delete the association with the execution task.
- 5. Click **OK** to delete the marked objects and to close the dialog or **Cancel** to undo all previous deletions and to close the dialog.

Delete associated documents	On deleting an object that has been assigned to an execu- tion task, its associated documents will also be deleted by means of this option.				
Execution task	All execution tasks defined in the project will be displayed.				
Table of associated ob- jects	<ul> <li>In the table, the following objects will be displayed for the marked execution task:</li> <li>All start objects</li> <li>All associated documents, if the option <b>Include associated documents</b> has been selected on assigning the start objects.</li> </ul>				
List Configuration	With this option, you may select the attributes to be dis- played additionally in the table of associated objects. You may select attributes or change the sequence of the played attributes via the arrow keys.				
Delete Association	For the marked objects in the table of associated objects, the association with the execution task will be deleted. The dialog <b>Manage Execution Tasks</b> remains opened.				

### The Manage Execution Tasks dialog

## **1.6 Export/Transfer of Execution Tasks**

Execution tasks may either be exported into a newly created project or into a transport container.

Edited execution tasks may be transferred back from the execution project into the original source project (As-built project). Per default, the **Execution Management Merge** assistant is available to merge the data.

During the export or transfer of an execution task, the start object and its subordinated objects will be copied.

Depending on the options selected in the dialog **Assign to Execution Task**, further objects will be transferred. If the option **Include associated documents** has been selected, all documents associated with the start object, including PDF, will be taken into account. The objects associated with these documents will also be copied during the export or transfer.

### To run the Export/Transfer of Execution Tasks assistant

- 1. In the Engineering Base Explorer, select the desired execution task in the **Tasks** folder.
- 2. In the context menu, select **Export/Transfer of Execution Tasks**.

This opens the **Export/Transfer of Execution Tasks** dialog for the selected execution task. After that, the **Export Execution Task** dialog will be displayed.

Export/Transfer of Execution Tasks 2.1.35.0	$\times$
Export Execution Task Transfer to As-built Project	
Template Project	
Vroject Templates\ As-built Project	~
Define associations to execution task	
Associated documents	
Create PDF for associated documents	
Definition of additional data of the execution task	
✓ Documents with representations of associated devices	
✓ Documents with representations of associated functions	
Documents with representations of associated locations	
✓ Hook Up's with relations to associated objects	
Specifications with relations to associated objects	
External targets of cable or rather core and wire connections	
✓ Create transport container file	
G:\Transportcontainer Export\Projekt 1.exp	
0k	Cancel

- 3. Select whether you want to export the execution tasks or whether you want to transfer them into another project.
- 4. Specify the necessary settings.

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- 5. Select the documents to be copied additionally.
- 6. Select the additional data to be copied with the execution task.
- 7. Click **OK** to start the export or the transfer.

## After that, the **Export/Transfer of Execution Tasks** dialog will be displayed for the **Transfer into the As-built project**.

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The project from which the execution task was exported for editing is called the As-built project. Via this dialog, you may specify which data shall be transferred back from the execution project into the As-built project.

Export/Transfer of Execution Tasks 2.1.35.0	×
Export Execution Task Transfer to As-built Project	
Project	
As-built Project	
Define associations to execution task	
Associated documents	
Definition of additional data of the execution task	
Documents with representations of associated devices	
Documents with representations of associated functions	
Documents with representations of associated locations	
✓ Hook Up's with relations to associated objects	
✓ Specifications with relations to associated objects	
External targets of cable or rather core and wire connections	
Automatically execute merge with the tool below	
🔀 Execution Management Merge	
	Ok Cancel

### Settings in the Export/Transfer of Execution Tasks dialog

Template Project	Select a template project whose settings in the project con- text match the settings of the source project.
	If no transport container is to be created, a new project with the name <b>Name of source project_Name of execution</b> <b>task_Export</b> (e.g. Project1_Execution task A_Export) is cre- ated into which the data of the execution task is stored.
Create transport contai- ner	Select the storage location and the name of the transport container via the file selection dialog. The data of the execu- tion task will be saved with the settings of the template pro- ject.

Project	Select the project into which you want to transfer the execu- tion task.
	The copied objects are copied into the copy bin of the related system folder in the target project. Per export, a folder with the name <b>Name of execution project – EB User_used PC - YYYY-MM-DD HH:MM:SS</b> (e.g. Target project – CCl_ccl-nb – 2/23/2018 14:23:55) will be created below the copy bin (for example Execution project – CCl_ccl-nb – 2018-02-23 14:23:55).
	<b>Project</b> will be preset with the project entered as As-built project in the Project Properties/General/Execution Management.
Automatically execute merge with the tool be- low	To merge transferred and existing data in the As-built project (original source project), the <b>Execution Management</b> <b>Merge</b> assistant is available. To merge the data, the options defined in the assistant <b>Merge Execution Task</b> will be used.

### Selection of the documents to be assigned to the execution task

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Associated documents	Sheets that are associated with an object after the object it- self was associated with an execution task will automatically be assigned to the execution task during the export or trans- fer and copied into the new project, the transport container or the copy bin of an existing project during the export. All sheets associated with an object that is assigned to an execution task will automatically be assigned to the execu- tion task and copied during the export, even if the option <b>In- clude associated documents</b> was not marked during the association to the execution task.
Create PDF for associ- ated documents	This option is only available if the option <b>Associated Docu- ments</b> is marked. PDFs will be created of all associated documents. They will be stored in the source project in a folder named after the execution task below <b>Documents/Execution Task</b> . At the related object, an association with the PDF will be displayed. In the context of exports and transfers, these PDFs will be copied.

### Definition of additional data of the execution task

Documents with repre- sentations of associated devices	Documents with representations of associated devices of the objects of the execution task will also be transferred during the export or transfer.
Documents with repre- sentations of associated functions	Documents with representations of associated functions of the objects of the execution task will also be transferred dur- ing the export or transfer.
Documents with repre- sentations of associated locations	Documents with representations of associated locations of the objects of the execution task will also be transferred during the export or transfer.
HookUps with relations to associated objects	All HookUps associated with an object of the execution task or an associated object will be copied.

Specifications with rela- tions to associated ob- jects	All specifications associated with an object of the execution task or an associated object will be copied.
External targets of cable or rather core and wire connections	External targets of cable or rather core and wire connections associated with an object of the execution task will be copied. Automatic wires will not be considered.

The settings in the project context of the target project (either an existing project or the template project used) must match the settings in the source project.

## **1.7 Delete Execution Task**

The **Delete Execution Task** assistant serves to delete a selected **Execution Task**.

### To run the Delete Execution Task assistant

- 1. In the **Engineering Base Explorer**, mark the execution task you want to delete.
- 2. On the shortcut menu, click **Delete Execution Task**.

A respective confirmation prompt will be shown.

3. Click **Yes** to delete the execution task together with all its associations.



If a deletion list is saved at the execution task in the As-built project or in the execution project, an additional confirmation prompt is displayed.

## 1.8 Comparison of Sheets and Objects in the As-built Project and the Execution Project

On editing execution projects, it is often necessary to compare the object data or the sheet content with the object data or sheet content of the As-built project. From a planning perspective, it is also necessary to check the work status in the execution project.

Using the **Execution Management Compare** assistant, you can compare the object data of objects in the As-built project with the object data of the execution project.

### 1.8.1 Comparison of Objects

The comparison of objects can either be started in the As-built project or in the execution project.

### To compare objects of the As-built project with objects of the execution project

- 1. Select the object in the As-built project or in the execution project.
- 2. On the shortcut menu, click **Compare Objects**.

In the **Execution Management Compare** dialog, the attributes of the selected object in the As-built project and in the execution project are displayed side by side.

Execution Management Compare V	V1.0.6.0		- 0	
Designation of As-built project: Der	no Instrumentation Standard			
		tion Task 1 Funerat		
Designation of working project: Der	mo instrumentation Standard_Exect	Ition Task I_Export		
▲ () MT1 (P01.MT)	N	Working Project	As-built Project	
Prozess / Fluid	System Attributes			
Prozess / Fluid	Part of	+F1 MT1	+F1 MT1	
Prozess / Fluid	Designation	LT 003	LT 003	
Prozess / Fluid	Designation Tag Element	LT	LT	
Prozess / Fluid	Туре	Sensor, Transducer general	Sensor, Transducer general	
	Associated Function	P01 .MT L003	P01 .MT L003	
	Associated Specification		Sensors L - Level E&H_FMB70	
	Associated HookUp		Level Measurement	
	Lock Structure	False	False	
	Protected	False	False	
▷ 🕂 1N18 (P01 .MT)	Frozen by P&ID	False	False	
▷ 🕂 1N19 (P01 .MT)	Specifications			
▷ 🕇 1N20 (P01 .MT)	intrinsically safe (Ex i)	False	False	
▷	Accessory available	False	False	
▷ 🕂 TT 003 (P01 .MT T003) 🤍	Operating Data			
Show only changed attributes	Interface Relevant	False	False	
Show only filled attributes	$\widehat{}$		>	
0			Close	

If the assistant was started in the As-built project, an execution project can be selected in **Designation of working project**.

If the object contains a substructure, you can use the arrow key to expand it in the tree on the left side of the dialog.

Changed objects and attributes are displayed in red.

The number of displayed attributes can be limited via two options:

Show only changed attributes	Only displays those attributes which do not have the same attribute value in the table.
Show only filled attributes	Only displays those attributes with contents in the table.

3. Click **Close** to end the object comparison.

### 1.8.2 Comparison of Sheets

Only sheets with the following smart diagram types can be compared in As-built and execution projects:

- P&I Diagram
- Process Flow Diagram
- Single-Line Diagram.
- On the comparison sheet, differences on the sheets are highlighted in color.



If a sheet is opened, it canned be used for any comparisons. In the **Execution Management Compare** dialog, the sheet is highlighted in grey and a message is displayed.

### To compare sheets of the As-built project with sheets of the execution project

- 1. Select the sheet in the As-built project or in the execution project.
- On the opened sheet, click Show Changes on the EB Tools/Execution Management tab.

This opens the **Execution Management Compare** dialog.

Execution Management Compare V1.0.6.0	_		$\times$
Compare the current sheet with one of the following execut	tion proj	ects	
O Demo Instrumentation StandardExecution Task 2_Expo	ort		
O Demo Instrumentation StandardExecution Task 3_Expo	ort		
Demo Instrumentation StandardExecution Task 1_Expo	ort		
Com	pare	Clos	se

3. Select an execution project that is to be used for the comparison of the current sheet.

If the sheet comparison is started on a sheet in an execution project, only the associated As-built project is displayed in the selection field.

4. Click **Compare**.

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On the comparison sheet, the established differences are highlighted in color.

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The sheet (comparison sheet) is read-only.

Change	Color marking
New Object	Newly added objects are displayed on the sheet in green. This also applies to the related connections.
Changed Object	The changed contents of an attribute are superimposed onto the text in the same format. Additionally, the text or the object is highlighted with a blue frame.
Deleted Object	Deleted objects are displayed in a red frame with the name of the used master shape and the version number.



The type of the change is displayed as a tooltip at the object highlighted in colors.

5. On tab **EB Tools/Execution Management**, click **Delete marks** to end the sheet comparison.

The opened sheet is editable again.

## 1.9 An Execution Task Associated With an Object Affects Other Assistants

**Execution Management** serves to mark equipment, functions, drawings and sheets and to export these objects into a target project of the desired type. Once objects have been marked via **Execution Management**, changing these objects may lead to conflicts if the planning project is reimported back into the project edited via **Execution Management**. Because of this fact, users will be alerted if they start an assistant on an object that has been associated with an execution task and if that assistant might change said object. The assistants alerting the user in this context are the **Wiring Manager**, the **Terminal Block Assistant**, and the **Merge Device Assistant**.

### How to activate the alert

- 1. In the **Engineering Base Explorer**, click the object that is assigned to an execution task.
- 2. On the shortcut menu, click the **Wiring Manager**, the **Terminal Block Assistant** or the **Merge Device Assistant**.

This will trigger the warning for the reserved object.



### 3. Click **OK**.

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This opens the dialog of the respective assistant. All row sections containing objects that have been associated with an execution task will be displayed with a yellow background.



If you start the assistant on an unassociated object which contains associated sub objects, no alert will be given, but all row sections containing associated objects will be displayed with a yellow background.

If you add, in the dialog, an additional object that has been associated with an execution task, a warning will be displayed.

## 2 **Execution Management Merge**

Edited execution tasks created from the As-built project (source project) may be transferred back into the As-built project and merged with the data of the As-built project by means of this assistant. During this process, information on which objects were deleted in the execution project (deletion list) will also be taken over into the source project, and the respective deletions will also be done there.

The assistant may either be started automatically during the transfer of the execution tasks into the As-built project or after the transfer on an execution task saved in the copy bin below the Execution Task folder in the As-built project.



Merging data cannot be undone!

### Prerequisite

A previously exported and edited execution task in the execution project must have been transferred into the As-built project (current project) by means of the **Export/Transfer of Execution Tasks** assistant.

### To merge execution tasks with the data of the As-built project

- 1. Mark the execution task in the copy bin below the **Tasks** folder.
- 2. On the context menu, click **Execution Management Merge**.

This opens the **Execution Management Merge** dialog for the selected execution task.

le Execut	ion Management Mer	ge V1.4.0.0		_		×
Merge	Name	Туре	Comment			
~	++HYD 01-P-1	Pump (Process / Fluid)	Gear Pump			
~	++HYD 01-P-2	Pump (Process / Fluid)	Pump carrier with integrated oleo-pneuma			
~	Hydraulic diagram 1	Unspecified Sheet	Hydraulic diagram			
	Options			Start	Car	ncel

The objects directly assigned to the execution task will be displayed. All objects are marked in the column **Merge**. This marking cannot be removed.

- 3. Under **Options**, select the options that are to be taken into account for the merge process.
- 4. Click **Start** to start the data merging process or **Cancel** to close the dialog without saving the changes.

After the data merging, a worksheet containing all messages created during merging will be displayed.

5. Check the **Info**, **Warning** and **Error** messages that are listed in the worksheet.

All folders in the copy bin of the system folder of the As-built project which were created during the transfer of the execution task will be deleted.

### Options

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The following options are available to control data merging.

#### **General Options**

Options	—		$\times$
General Options Documents with represented associated objects			
Replace associated diagrams			
Merge Hook Ups			
<ul> <li>Use Hook Ups out of the As-built project (Sheets and Objects)</li> </ul>			
<ul> <li>Use Hook Ups out of the Execution project (Sheets and Objects)</li> </ul>			
Merge Specifications O Use Specification out of the As - built project (Sheets and Objects)			
<ul> <li>Use Specification out of the Execution project (Sheets and Objects)</li> </ul>			
Merge external destinations of cables, cores and wires (infrastructural data)			
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### **General Options**

Replace associated dia- grams	This option is always marked. All associated diagrams in the As-built project will be re- placed by the diagrams of the transferred execution task.
Merge HookUps	Define whether you want to use the HookUps of the As- built project or the HookUps of the execution project.
Merge specifications	Define whether you want to use the specifications of the As-built project or the specifications of the execution project.
Merge external destina- tions of cables, cores and wires	Mark this option if you have specified during the transfer that external destinations of cables, cores and wires are to be taken into account for the transfer.



Per default, the use of the HookUps and specifications of the execution project is preset.

### Documents with represented associated objects

Via these settings, you may define how you want to handle documents copied via their assigned object representations.

Options			—		$\times$
General Options	Documents with represented associated objects				
Keep documents with shape type :					
✓ Preferred Shape Type "Process Flow Diagram"					
O Copy the sheet parallel to the As-built sheet					
• Leave sheet in the Copy Bin					
Preferred Shape Type "D&ID Diagram"					
Copy the sheet parallel to the As-built sheet					
Leave sheet in the Copy Bin					
✓ Preferred Shape Type "Single Line Diagram"					
O Copy the sheet parallel to the As-built sheet					
Leave sheet in the Copy Bin					
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You may define the settings of the following preferred shape types:

- Process Flow Diagram
- P&I Diagram

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• Single-Line Diagram

Copy the sheet parallel to the As-built sheet	The sheet of the execution task containing one of the aforementioned shape types will be copied parallel into the As-built project. There will be no specific marking. This option is preset for all 3 shape types.		
Leave sheet in the Copy Bin	The sheet of the execution task containing one of the aforementioned shape types will be left in the copy bin of the Documents folder.		



If no settings have been made for sheets with shapes of the types Process Flow Diagram, P&I Diagram and Single Line Diagram, the sheets will be deleted on merging.

### Rules for data merging

- All changes in the As-built project will be documented. Messages of the type **Info**, **Warning** or **Error** will be created respectively.
- The data of the project will be overwritten by the data of the execution task.
- The objects directly assigned to the execution task will be merged.
- For functions (without sheets) assigned to the execution task, all associated devices will be merged.
- For sheets assigned to the execution task, the sheet and all objects displayed thereon will be merged.
- For sheets assigned to the execution task, a check will be carried out to verify whether the respective sheet has the attribute **Frozen by P&I** set in the As-built project.

If this is the case, a message of the type **Warning** will be created.

- For all objects displayed on a sheet that has been assigned to the execution task, a check will be carried out to verify whether the respective object has the attribute
   Frozen by P&I set in the As-built project.
   If this is the case, a message of the type Warning will be created.
- A changed **Associated Function** at devices and cables will be taken over.
  - For devices, this could be an error.
    - A message of the type **Error** will be created.
  - For cables, a message of the type **Warning** will be created.
- A changed **Associated Location** at devices and cables will be taken over. A message of the type **Warning** will be created.
- A changed value at **Part Of** at devices, cables, functions, locations, and sheets will be taken over.

A message of the type **Warning** will be created.

### Addition of new objects into the As-built project

New objects will be copied into the As-built project. If there is a superordinate structure with the attribute **Lock Structure** set, the entire structure will be inserted into the As-built project.

### Deletion of objects in the As-built project

Objects deleted in the execution task will be deleted during merging under the following conditions:

• Sheets will be deleted.

A message of the type **Info** will be created.

• Drawings will be deleted if all sheets or folders of the drawing have been deleted. If this is not the case, a message of the type **Warning** will be created.

If the drawing can be deleted, a message of the type **Info** will be created.

 Functions will be deleted, the associations with the associated devices will be deleted.

A message of the type **Info** will be created.

- Equipment will not be deleted,
  - if there are further representations of the object or its children on other diagrams.
  - if the attribute **Lock Structure** has been set at superordinate structures.

- if not all subordinate objects (sub devices) are to be deleted.
- A message of the type **Warning** will be created.
- Equipment will be deleted if none of the aforementioned conditions inhibit the deletion. The deletion will also be carried out if the attribute **Protected** is set at the object.

A message of the type **Info** will be created.

- Locations will not be deleted,
  - if there are further representations of the location or its subordinate locations on other diagrams.
  - if not all subordinate locations are to be deleted.

A message of the type **Warning** will be created.

• Locations will be deleted if none of the aforementioned conditions inhibit the deletion. The deletion will also be carried out if the attribute **Protected** is set at the location.

A message of the type **Info** will be created.