What's New V8.0

Contents

Preliminary note

This document contains a description of new features that will be available with version 8.0 of the APIS IQ-Software. Some new features are self-explanatory and are not explicitly listed. Here are a few examples of self-explanatory innovations.

Example 1: Previously, the options "Copy notes" and "User defined attributes" were used at drag-and-drop with the right mouse button. This is now unified with "Copy notes" and "Copy user-defined attributes".

Example 2: Previously, only the name of a form sheet was displayed in the object inspector. Now the identical information is shown as in the administration dialog for forms sheets.

Users with a tracking number may find related information in the readme file. Please contact us if the implementation is not in accordance with your requirements.

Conversion and data exchange

After installing the new version of the APIS IQ software, older documents need to be converted before they can be edited. The APIS IQ software executes this step automatically. When opening an IQ document with write access, the IQ software checks with which version the document was created and converts automatically if necessary. But it is also possible, to convert all documents of a directory automatically in one step.

Previous versions of the APIS IQ software cannot work with documents, which were already converted into the current format.

If it is necessary to provide other users, who do not have the current program version, with the document, we recommend to keep old documents for a certain period of time. The installation of the new version of the APIS IQ software requires a different program directory than the previous one.

Important: The documents created with the APIS IQ software may in no case be edited by any other program. This destroys the data and leads to software errors.

Use the existing interfaces for data exchange with other systems.

APIS CDM-Server
This document does not contain any information related to the available APIS CDM server. The CDM server will be available shortly
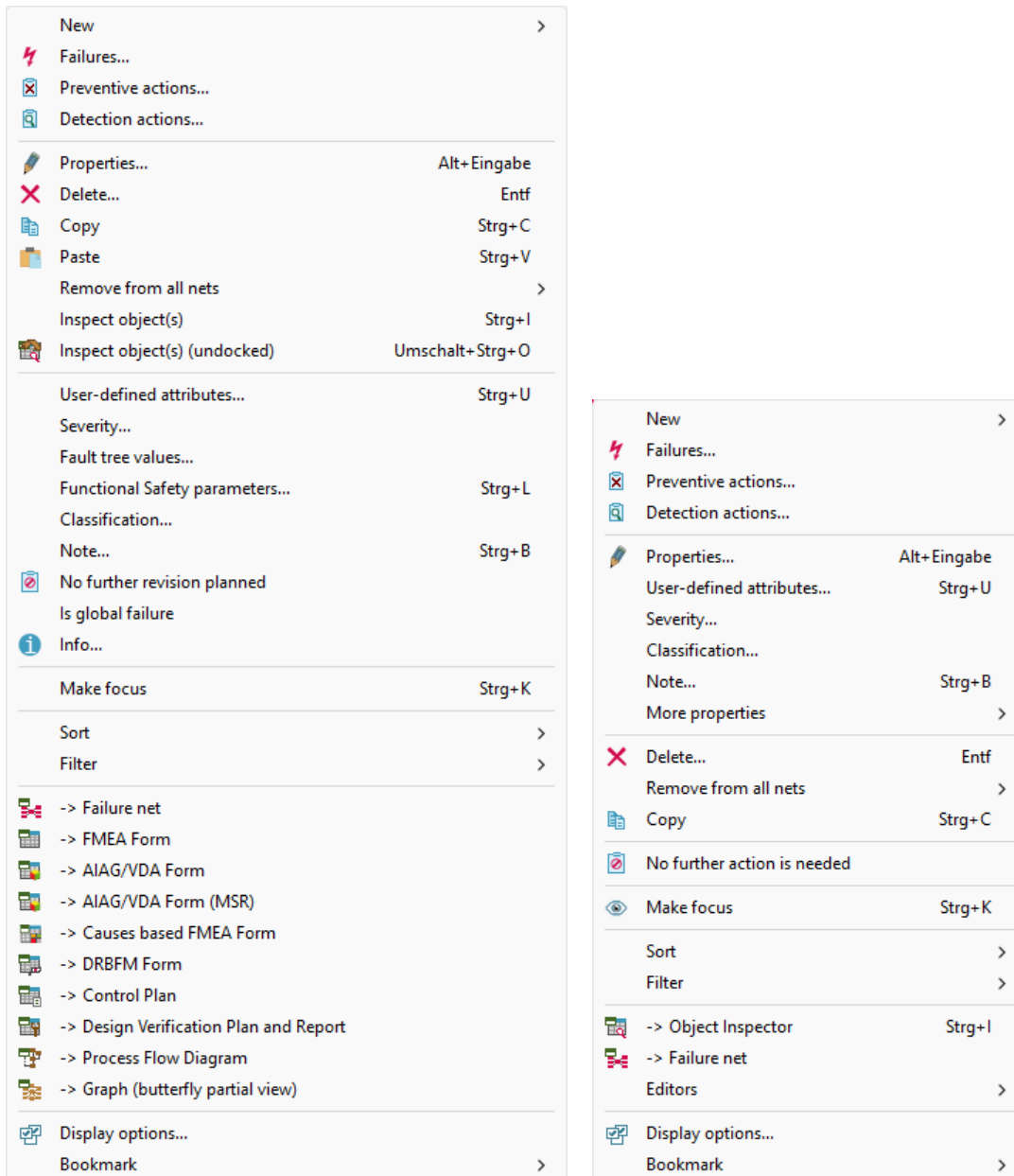
#V8-763
 CDM-Administration: Information on this can be found in a separate document.

General

#V8-36, #V8-1681

The context menus have been reorganized and streamlined

Context menu of a failure compared to V7.0 to V8.0

Relocated options are now located in the sub-dialogs, e.g. "More properties" and "Editors >".

#V8-807

Obsolete file formats have been removed from the import dialogs

The following file formats are no longer supported:

- PROMIS Files (.fea)
- GKN Files (.dbf)
- FMEAPlus Files (.f2f)

#V8-54

History concept has been removed

The previously available option to work with jump labels has been removed.

Note: Since some program versions, additional personal desktops can optionally provide a view for repeated access. This option has meant that jump labels have become less important.

#V8-887

The dialog for renewing a time-limited license has been relocated and is now accessible via the menu item Help | Expiration date.

#V8-108

The previously usable "Naming pattern for system elements" has been supplemented by a "Naming pattern for failures" based on the AIAG/VDA 2019 manual.

If the "Documentation required" option is set, a deletion is saved in a note. The entry is made in the comment category "Failures requiring documentation".
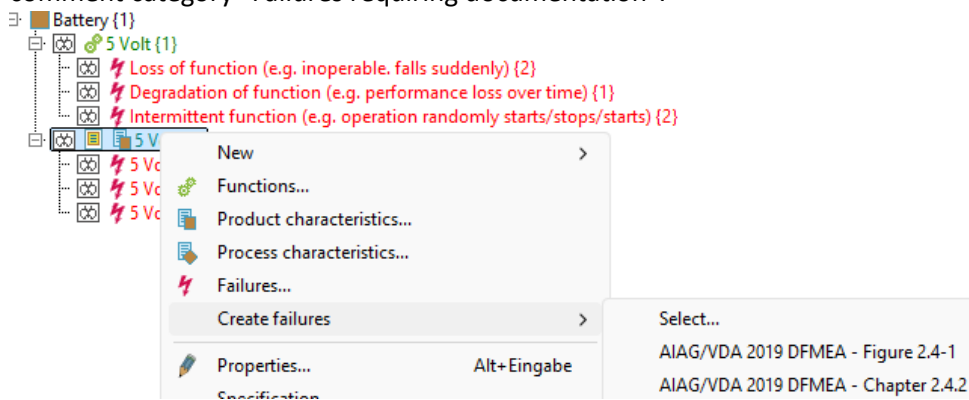
The entry for deletions in the case of failures with documentation obligation.
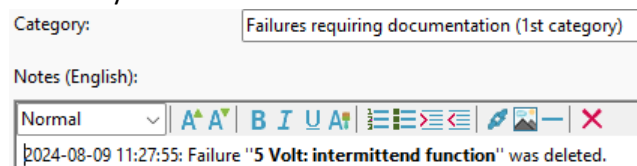
#V8-1334

A zoom factor can be used to change the visibility of project data in editors. The possible levels have been refined and there is now a global zoom factor that can be set as the default via the workstation settings.

#V8-868

The default display option has been changed so that the headline workspace is occupied by the third toolbar in the delivery status and this area is displayed below the header.
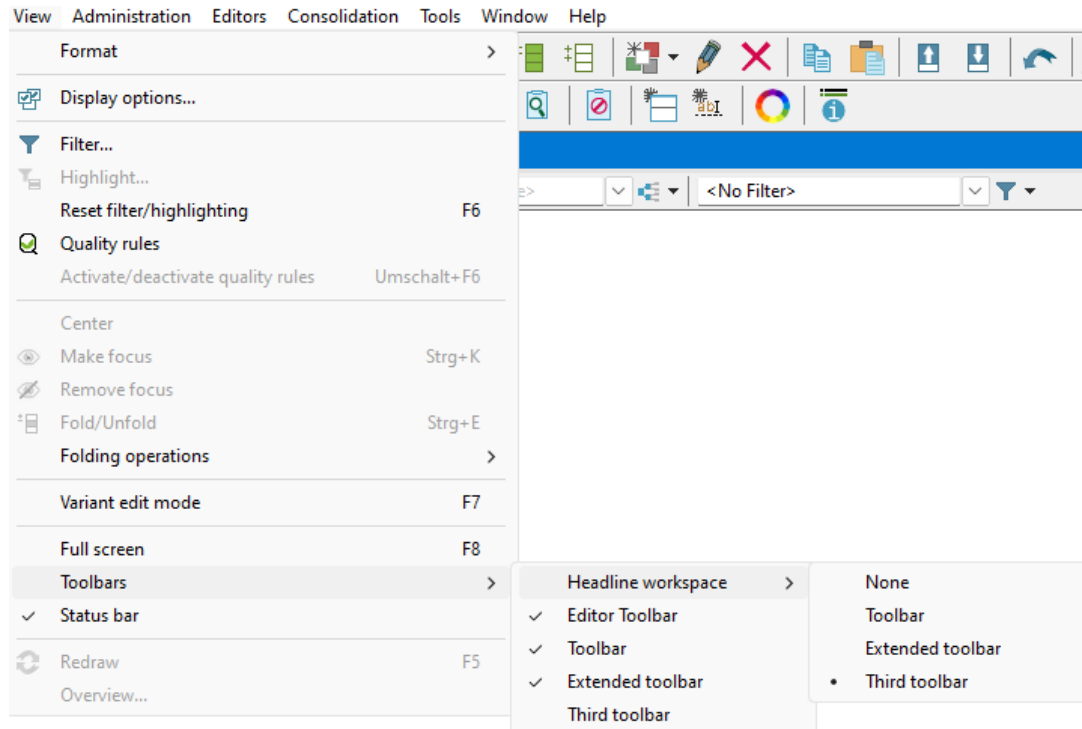
#V8-901

With extended folding options in the workplace settings, it is now possible to activate folding when opening other table editors such as PFD and CP in addition to FMEA. There is also the option to fold in historical measure statuses for FMEA.

Note: For presentation printing, it is possible to activate unfolding independently of the folding status shown.
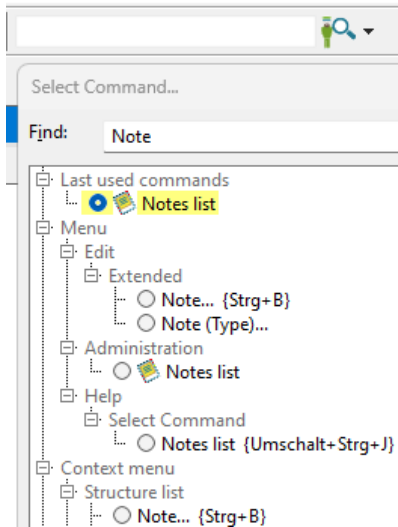
#V8-163, #V8-491, #V8-496, #V8-7178

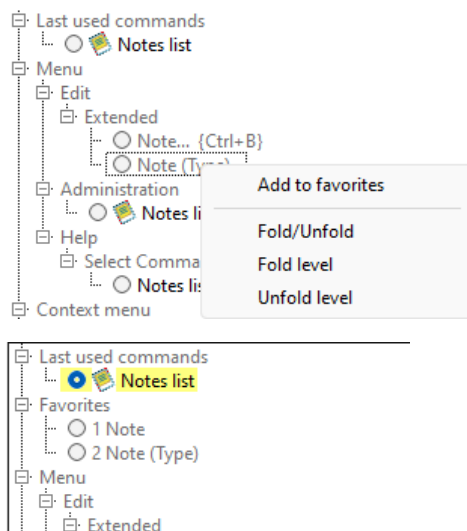A search field "<Find command/option>" has been added to the toolbar to access the Command Finder.

The entire user interface is searched with the Command Finder and a selected location can be used.
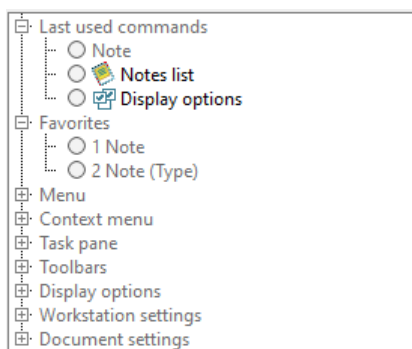
Example: Entering "Note"

It is possible to define up to 9 favorites via the context menu. Their quick selection is then possible using CTRL+ALT+<No>.
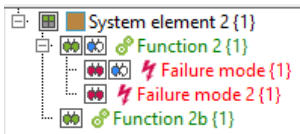

The "Last used commands" and "Favorites" options associated with the Command Finder can be accessed via the CTRL+J shortcut.
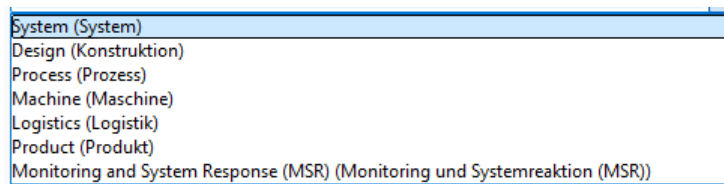
#V8-1028

In addition to the familiar hot-click icons for function and failure nets, there is now an additional hot-click icon "Structure spanning nets" that can be activated via the display options.
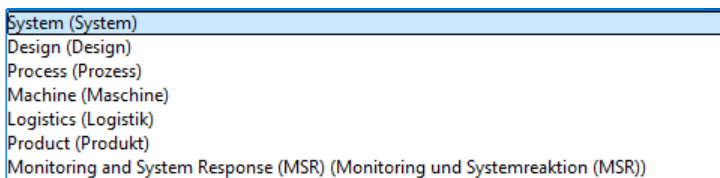

#V8-120

The designation of the structure type Construction has been replaced by Design; in accordance with AIAG/VDA2019.
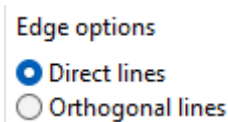
Version 7.0 – Englisch (German)

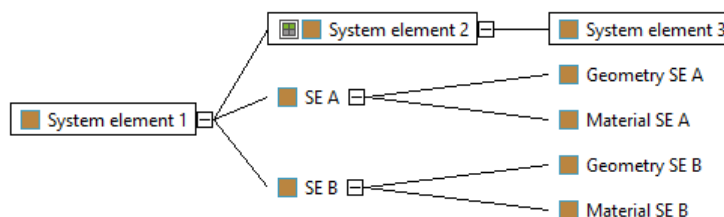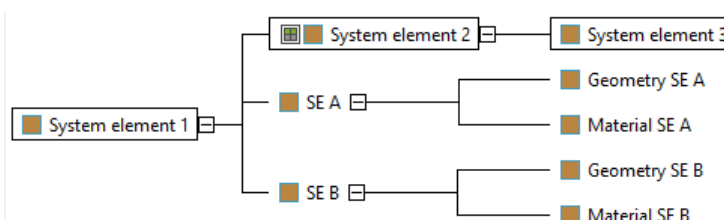Version 8.0 – Englisch (German)

#V8-231

In the Structure Editor, you can now switch between the classic "Direct lines" and "Orthogonal lines" in the display options.
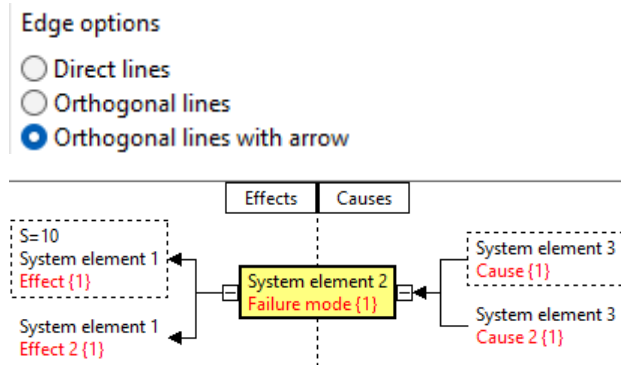

Classic view with direct lines:

View with activated orthogonal lines

This option is also available for the function and failure net and additionally with the "Orthogonal lines with arrow" option.

#V8-325

Notes can be shown - in an abbreviated form - in the list views.

Display option:
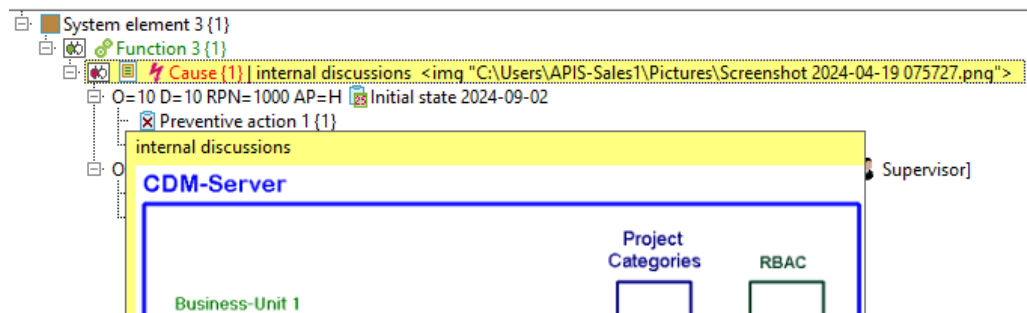
#V8-830

Object attributes that are specific to an object type can be changed via the context menu of the type icon. The prerequisite is that the option has been activated in the workplace settings.

The following context menu is available for the type icon for failures:

#V8-931

Some form columns now show a shortened label and as a tool tip on mouse-over the previous long form, which is saved as a note in the label.Representation V7.0:
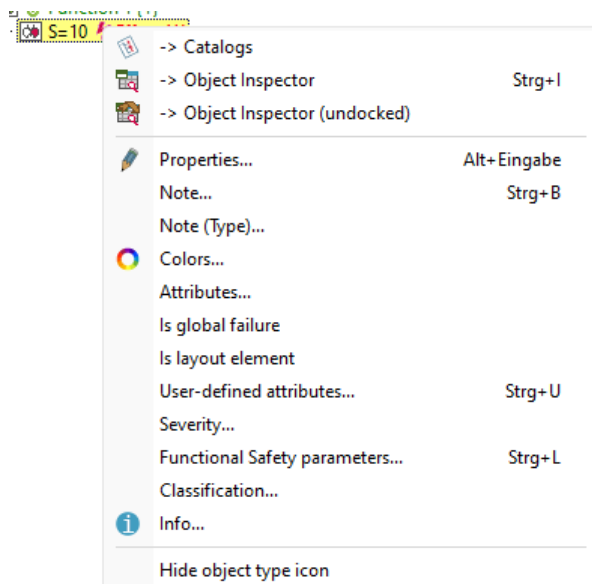

Representation V8.0:

#V8-521, V8-1485

There is now the additional AP catalog "GM 2024 Risk Priority Level (RPL)". This contains the additional priority class S (safety-relevant). There is also the priority class T (Top).

Effect	S	Prediction of Failure Cause Occurring	O	Ability to Detect	D	AP
GM 2024 Risk Priority Level (RPL) (6 items)						
Product or Plant Effect Very high	9 - 10	Low - Very high	3 - 10	Moderate - Very low	4 - 10	S
				Very high - High	1 - 3	M
		Low	2 - 2	Moderate - Very low	6 - 10	S
				Very high - High	1 - 5	M
		Very low	1 - 1	Moderate - Very low	6 - 10	M
				Very high - High	1 - 5	L

#V8-100

In the document settings for automatic classification calculation, the default has been changed so that information from several action groups is no longer mixed. This means that the option "Calculation based on maximum O/D valuations (can originate from different action groups)" is not active.

General settings for classification

☐ Calculate the classification of an FMEA form automatically
    ☐ Calculation based on maximum of O/D valuation (can originate from different actions groups)
☐ Calculate the classification of characteristics/functions automatically
    ☐ Calculation based on maximum of S/O/D valuation (can originate from different failures)
    ☐ Allow user overwrite over calculated classifications

☐ Classification inheritance (assignment to dependent objects)

Classification (C column) at the

☑ Cause
☑ Failure mode
☑ Effect

#V8-1243

The user information area has been revised and focuses on the changed entries saved there.

#V8-1155

With "Extract branch into new structure", attribute values are set in the newly created placeholder object in the source structure in the same way as in the relocated object.

#V8-94

Objects from the structure that are used in the 8D report via drag & drop now also have a "8D report" hot-click icon at the source. The bidirectional allocation exists as long as the bookmark is present in the 8D report.

#V8-803

With the newly created option "Counter for effects and causes - Show only for multiple connections", it is now easy to recognize whether there are multiple connections for hot-click icons for function and failure nets.

☑ Counter of effects and causes
   ☑ Show only for multiple connections

Missing or existing links are shown directly via the hot-click icon. By activating the option, you can now focus on multiple links.
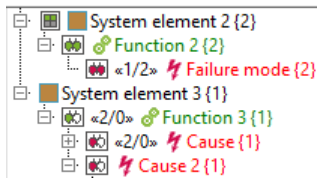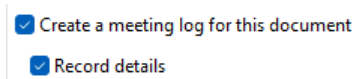

#V8-179

The previous document setting "Always create a detailed meeting log for this document" has been split into "Create a meeting log for this document" and the subordinate option "Record details".

If the "Record details" option is not active, only the header data area is created with the comment field available there.

#V8-195

Quality rules can now be managed via QR jobs named by the user (menu: View | Quality rules). The marking is removed or reset using Shift+F6.
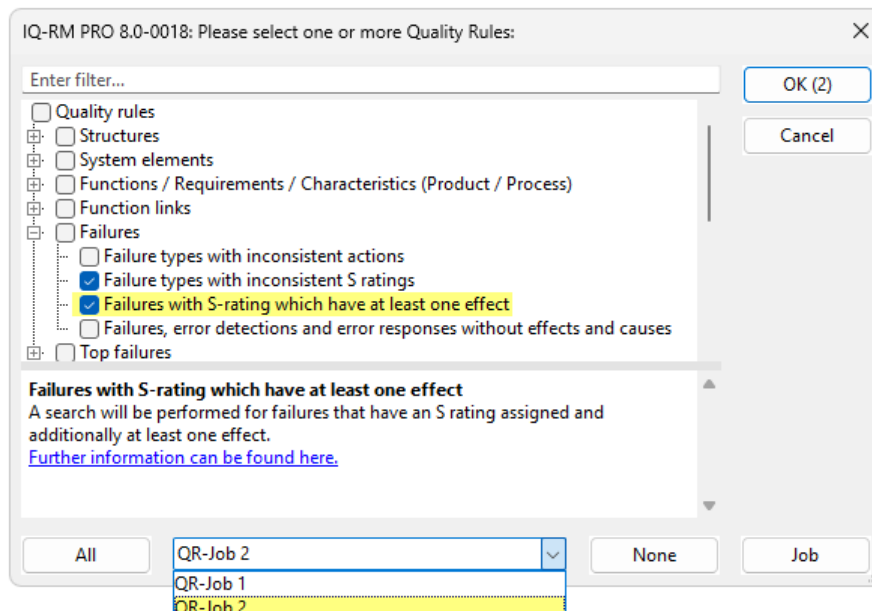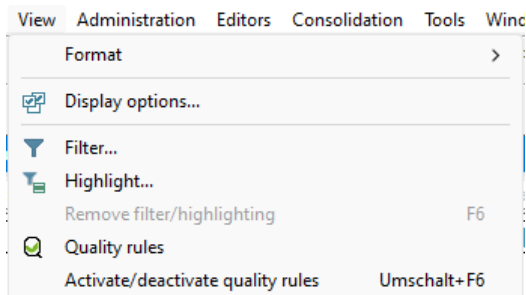
#V8-71

The previously available display option for FMEA forms "Calculate S and RPN from visible effects only" has been removed.

#V8-184

If Mechatronics FMEA is activated, it is possible to work with the object types "Error detection" and "Error response". In the context of error detection, it is poss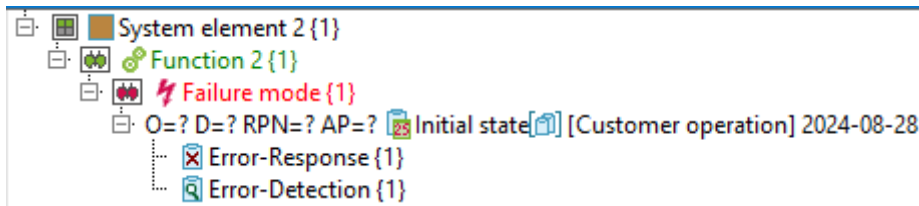ible to derive actions that are directly assigned to an action group (status) with the attribute "Actions for customer operation".

The "Monitoring and System Response (MSR)" structure type now has the option "Derive actions for customer operation: only for error detections" in the workstation settings area.

#V8-194

In the "Monitoring and System Response (MSR)" structure type, the status information is shown for actions in accordance with the MSR specifications.

Example: DFMEA vs. MSR

#V8-85

The FMT template file contains new default values. These are also filled with the corresponding new default values when converting an FMT file from version 7.0.

#V8-616

There are additional icons in the toolbar: "Make focus" and "Remove focus". If an existing focus has been removed, the functionality of the second icon changes to "Restore focus".

Note: In the structure editor, focusing on the root element displays the complete structure. In the structure editor, it is possible to focus on several system elements. In the network editors, there is only one icon for focusing. The keyboard shortcut Ctrl + K can also be used to focus.

V8-954

The search in lists should always use "SmartCase Matching". There should be a standardized dialog on the topic of document langugages.

Such-Text	findet NEU	findet bisher
foo	foo, FOO, Foo	foo, FOO, Foo
Foo	Foo	foo, FOO, Foo
FO	FOO	foo, FOO, Foo

Note: This functionality has not yet been implemented across the board. The changed strategy is introduced when program components are revised.

Example: Search in the filter dialog with "action" vs. „Action"
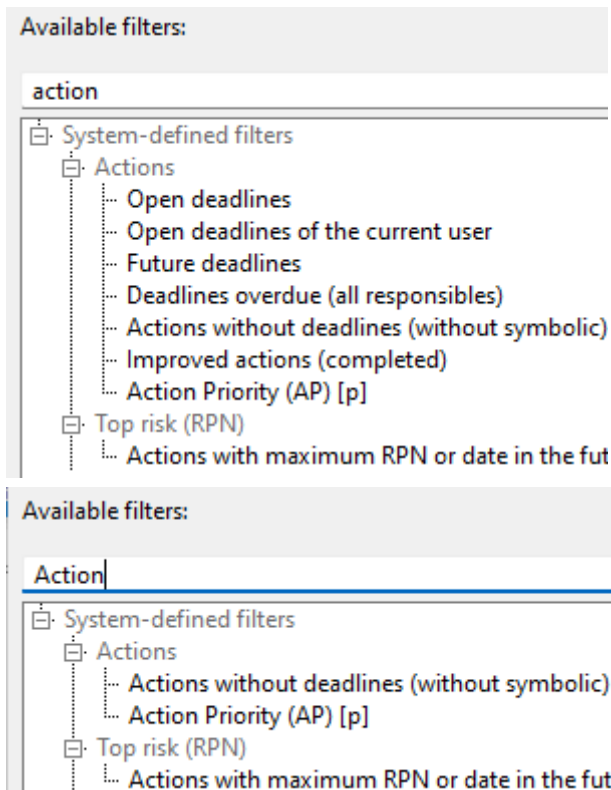
V8-591

If there are to be function nets that are identical to failure nets, there is now a query option when automatically creating function nets, in which function nets are deleted beforehand.

The options are available for an active failure net:

Create function nets [failure net]
Create function nets [database]
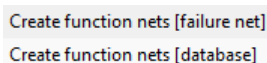
The option to delete function nets is offered under "Create function nets (database)".

#V8-538

For bookmarks, there is now an individually colored hot-click icon depending on the type of bookmark.
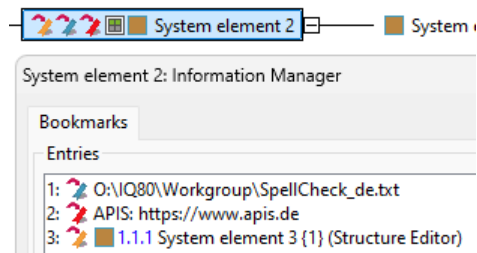
#V8-317

There is now a separate number column in the "Deadline Customer Requirements" editor. This can be used for sorting, for example, and is also exported accordingly when exporting the table.
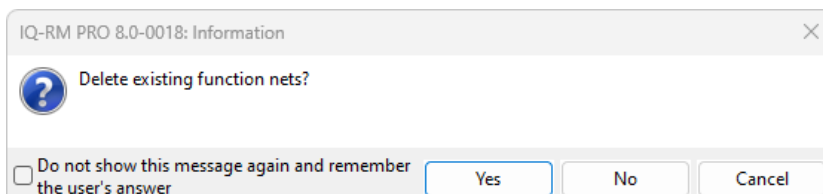
No.	Customer requirement
1	CR1
2	CR2

#V8-160

Working with quality rules has been optimized, e.g. more detailed information is provided on locations.

In V7.0:
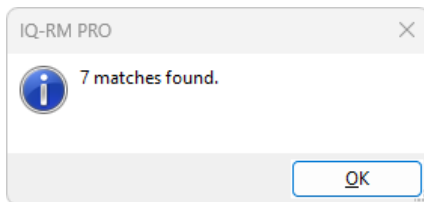
In V8.0:

If too many quality rules are violated, summary information is still provided

It also provides more detailed information when checking failure links, for example.

IQ-RM PRO 8.0-0018: Quality rules   ✕

ℹ 2 objects violate the quality rule: Linked failures with inversely connected function links

                                                                   OK
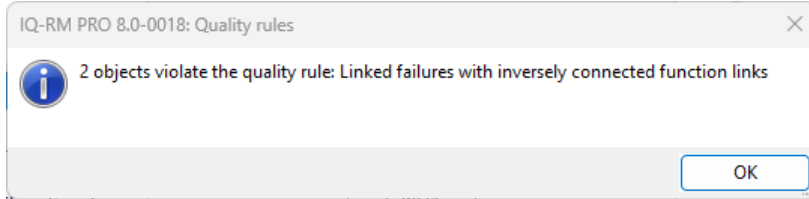
Input collector

#V8-1148

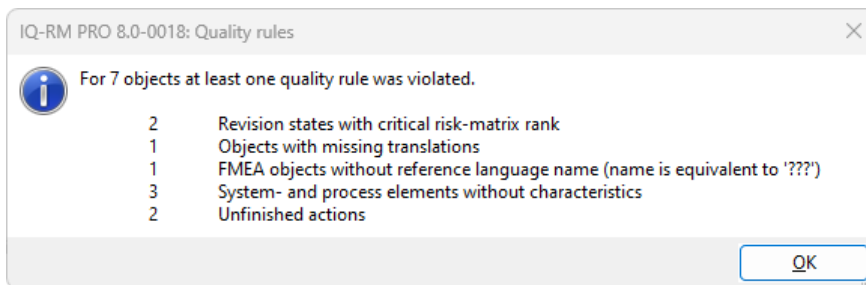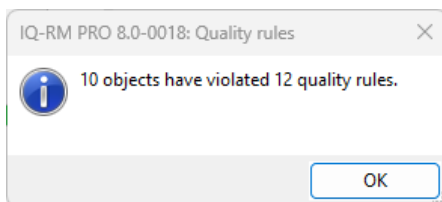As a supporting step towards AI integration, the option to create an AI prompt in which the context is summarized has been created in the collective input. The response from an AI tool can be pasted from the clipboard for use.

—— Copy AI prompt to the clipboard ·—— Paste AI answer from the clipboard ·
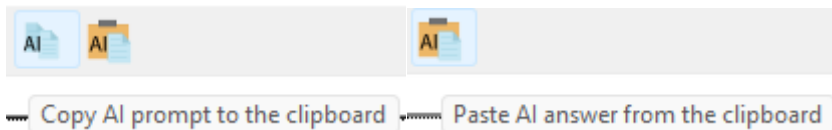
Prompt for system elements and functions

Context:
☑ Project
☑ Structure
☑ System element

Prompt for failures

Context:
☑ Project
☑ Structure
☑ System element
☑ Function

Prompt for actions

Context:
☑ Project
☑ Structure
☑ System element
☑ Function
☑ Failure
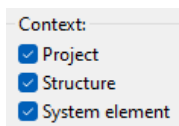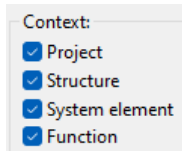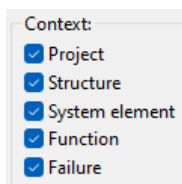
Workstation settings

#V8-447, #V8-448, #V8-449

The program components that can be activated and deactivated have been revised; the screenshot shows the newly selectable program components.

#V8-670

When opening forms, there are now workplace settings that support intelligent folding. There are two additional options that can be activated:

- Fold System elements when opening a table editor
- Fold historical Revision states when opening a FMEA form

Both options mean that even large tables or FMEA forms can be opened more efficiently.

The workstation setting regarding folding also affects the following tables:

- FMEA form
- Control plan
- DRBFM worksheet
- Cause-centered form
- FMEDA form

V8-347

The option to create a meeting log was previously available in the workplace settings (= "Create meeting log") and the document settings (= "Always create a detailed meeting log for this document"). Both options are now available in the document settings. The entry in the workplace settings has been removed.

☑ Create a meeting log for this document
  ☑ Record details

#V8-306

There is now an option to deactivate the CARM server via the workstation settings. This eliminates any options that are not required, e.g. in the menu and in the context menu.

Some IQ-Software functions can be activated or deactivated here.

If a function is deactivated, no data is lost in the fme files. Instead, only the corresponding editors etc. can no longer be opened.

☑ CDM Server
☐ CARM Server
  ☑ CARM Server Administration
☐ Action-Tracking (CARM-NG-Server)

Structure editor

V8-1251

There is an additional hot-click symbol for system elements in the Graphics window of the Structure Editor which shows whether there is a variant exclusion for dependent objects.

Display options „Contains variant exclusions".
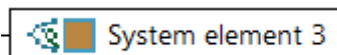
Object inspector

#V8-68, #V8-1202

The interface in the object inspector has been optimized, especially in the context of variants.

Example V7.0:
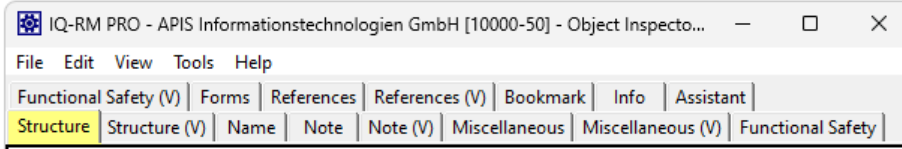
Example V8.0:
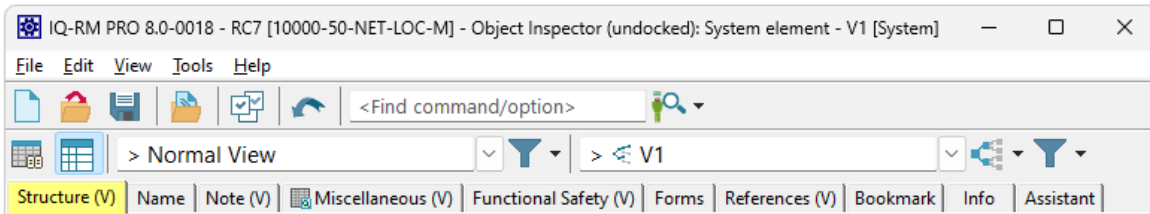
Examples of the status in V8.0:

There are now toolbars and the usual combo boxes.

#V8-1198

The display of variant-specific attribute cells has been optimized.

Example V7.0:

Example V8.0:

#V8-544

It is now also possible to inspect forms, e.g. to view their content.
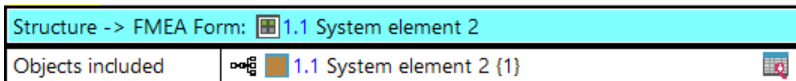
#V8-165, #V8-167

It is now possible to create named layouts for the reduced view in the object inspector and access them via the selection box.
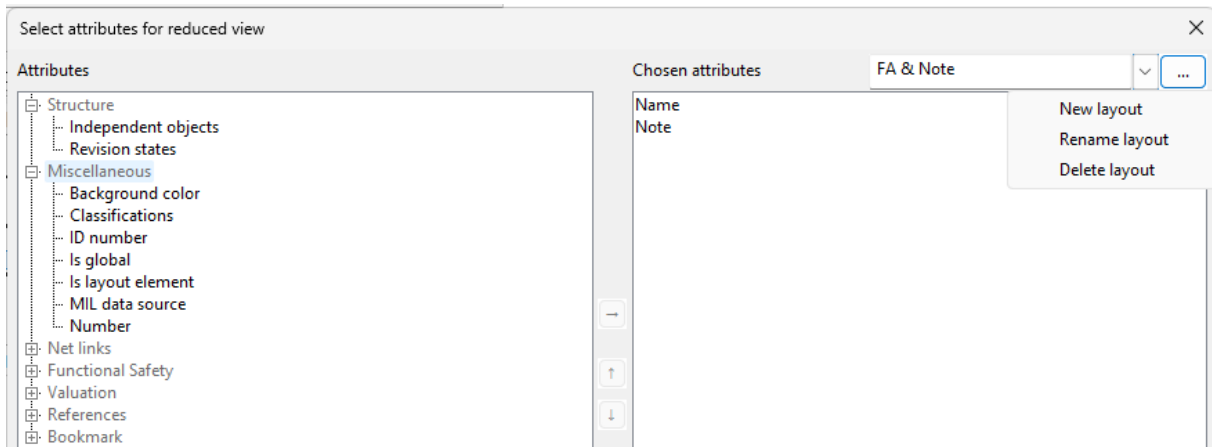
The selection is made via the selection box (screenshot of the undocked object inspector)
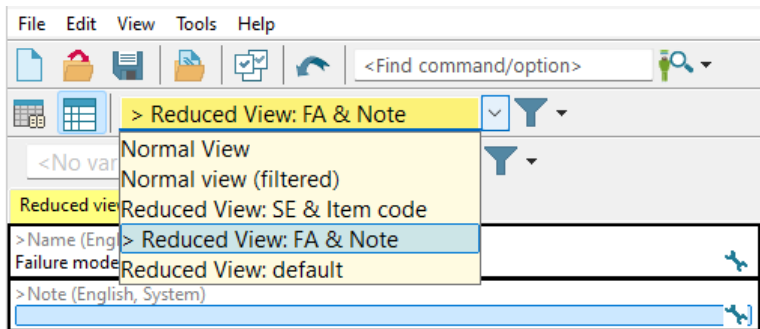
Working with modified reduced views is also possible in the normal object inspector.

Scope Analysis

#V8-269

The criteria are shown in the table with a short description, if available. This makes it possible to make the table in which you are working clearer.

L	Name	Short label	Structure type
🔒	New development of products & processes	New development	Process
🔒	Process failures that may result in hazards	Hazards	Process
🔒	Complexity of Design	Complexity	Design

System element	Reference product or process	Informa-tion source	New development	Hazards
PS 100 {1}				
PS 200 {1}				
PS 300 {1}				

Note: The long name is shown as a tool tip on mouse-over.

For criteria that should not be automatically assigned via the structure type, it is now possible to select the structure type "<< Not assigned >>". This is indicated in the administration with "-".

🔒	Complexity of Design	Complexity	System
	Legal Compliance US	LC-US	-
	Legal Compliance JP	LC-JP	-

Table editors in general

#V8-115, #V8-860

Column labels and labels in header data can now have additional notes and colors.

In V7.0:
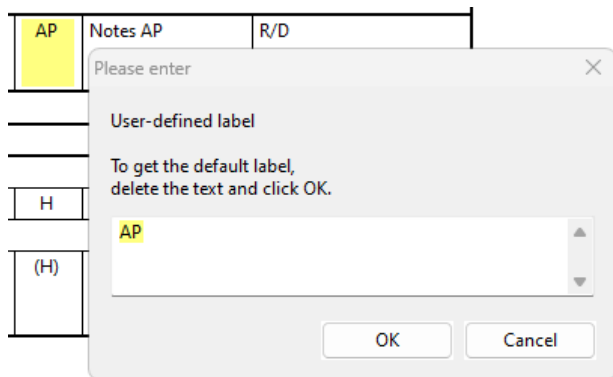
In V8.0:
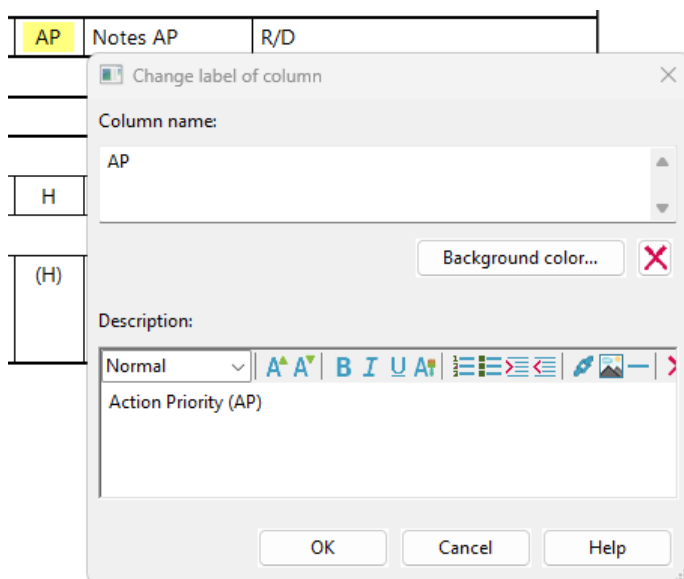
Information contained in the note is shown when the mouse pointer is over the label. Based on this possibility, the usual short form has been inserted as a label in some places and the previous long form has been moved to the note.

Example: The previous column label "Spec. Characteristic" now has the column label 'C' with the note 'Special Characteristic'.

#V8-1248

Cells of a table can show content from different structures if, for example, there is a cross-structure function or failure net. If the authorization to edit the object does not exist in all structures, this was previously displayed in the status bar during selection and is now also displayed in color for selected cells.

Example with failures "Effect 2" and "Effect 4" in a structure with read-only authorization.

Effect	S
System element: System element 2	
Function: Function 2	
[System element 1] Effect1	10
[System element - Read-Only] Effect 2	9
[System element 1] Effect 3	8
[System element - Read-Only] Effect 4	7

Cover sheet

#V8-171

With the cover sheets, e.g. the FMEA cover sheet, you can work with continuation pages to document more extensive information. It is now possible to insert additional continuation pages and change the order if necessary.
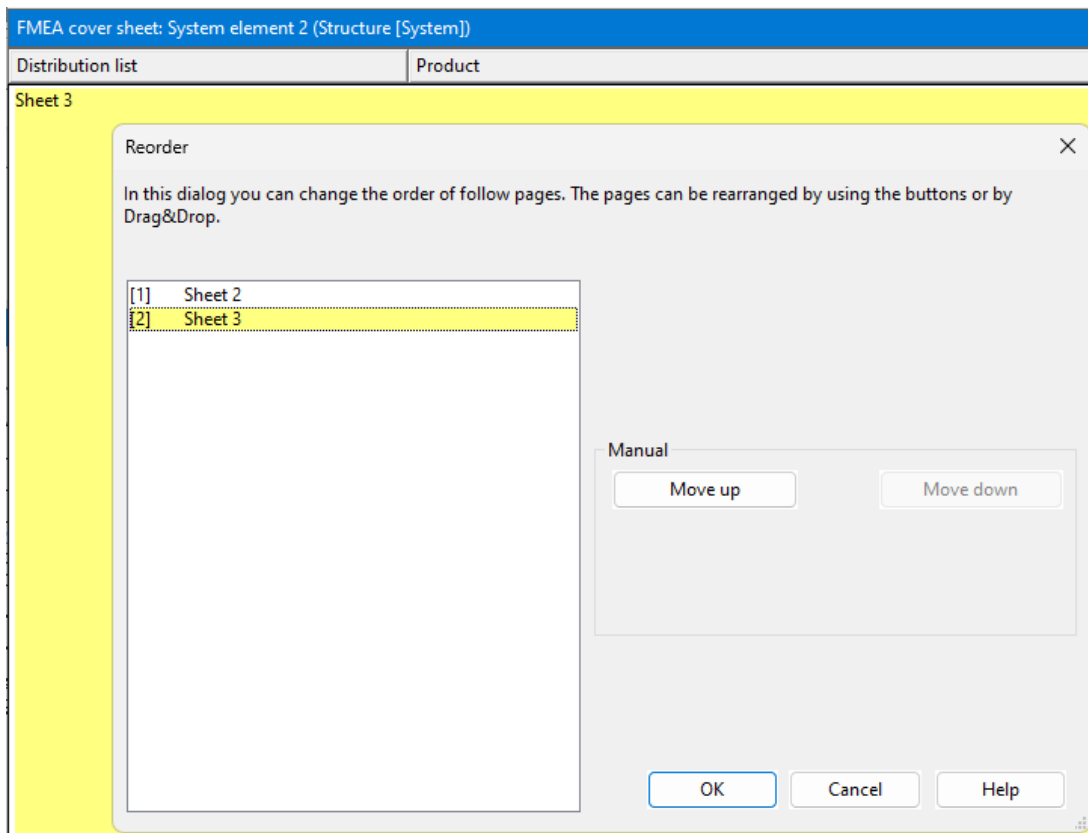
#V8-111

It is now also possible to create a cover sheet for structures.

FMEA forms editor

#V8-332

With "Split cause" it is possible to create a new cause with identical actions. Note: It is helpful to see the counter for effects/causes.

Previously, an identically named cause was created, which could then be renamed appropriately. Now the renaming can be done directly in the properties dialog.

#V8-1000

Readme: Previously, it was incorrectly possible to assign a date description in the form with an active display option ("Deadline description") and deactivated document setting ("initial state must have a deadline") even for initial actions. This has now been fixed.

#V8-808

The "GKN" layout is no longer supported for the FMEA form.

#V8-1409

The object attribute "No further actions needed" can be assigned for the revision state. In the FMEA form, the display has been brought into line with the AIAG/VDA2019 document.

EN: "No further revision planned" changed to "No further action is needed"

#V8-333

There is a "Filter code" comment category for action groups. The content is now not only displayed in the AIAG/VDA form, but also optionally in the proven FMEA form, e.g. in the VDA 2019 layout (AIAG/VDA). The display is activated via a display option in the Table area.

AIAG/VDA form

Changes in the AIAG/VDA form

#V8-78

Versioned forms can now also be displayed in the AIAG/VDA Form editor.

#V8-206

When selecting cells that belong to method steps, the relevant cells of the other method steps are highlighted in color.

STRUCTURE ANALYSIS (STEP 2)			FUNCTION ANALYSIS (STEP 3)			FAILURE ANALYSIS (STEP 4)					
1. Next Higher Level	2. Focus element	3. Next Lower Level or Characteristic Type	1. Next higher level Function and requirement	2. Focus element Function and requirement	3. Next lower level Function and requirement or characteristic	1. Failure Effects (FE) to the Next Higher Level Element and/or End User	S	SC	2. Failure Mode (FM) of the Focus Element	SC	3. Failure Cause (FC) of the Next Lower Element or Characteristic
System element 1 {1}	System element 2 {1}	System element 3 {1}	[System element 1] Function 1 {1}	[System element 2] Function 2 {1}	[System element 3] Function 3 {1}	[System element 1] <Function 1> Effect {1}	10	Classifications	[System element 2] <Function 2> Failure mode {1}	Classifications	[System element 3] <Function 3> Cause {1}

FFA editor

#V8-405

Faded in actions are always in the context of a failure. If there are several identical faded in actions with different contexts for a action group, it is now possible to display them only once using "Combine faded in actions".
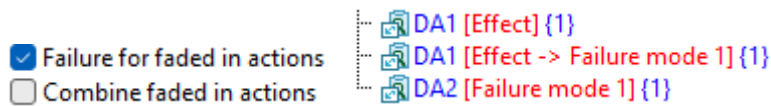
Information on the number of contexts is then displayed.

Deadline editor & Statistics

#V8-696

When printing directly from the deadline editor, it is now possible to activate the "Print per person" option.

#V8-535

For exported actions to XLSX, the data format has been changed so that only the date is visible in MS Excel and the time is no longer shown.

Note: The previous time: 23:59:59 has been changed to 00:00:00.

#V8-174

The frequency analysis AP now takes into account whether the "No further action needed" attribute is set. For bars with the classification High and Medium, the bar is divided into two sections with different colors.
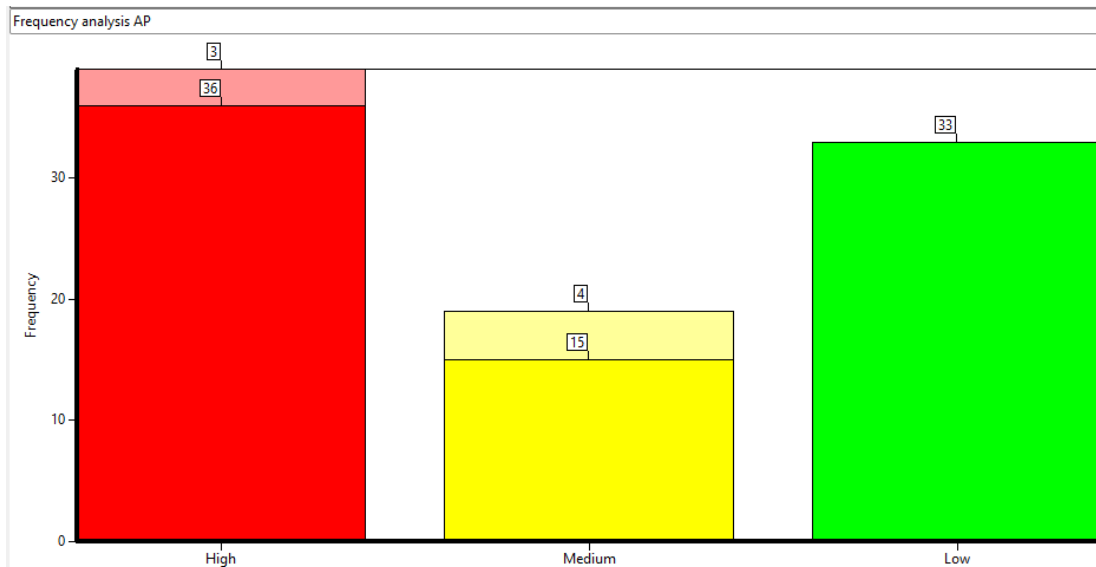
In addition to the number, the results list also shows the number for the respective sub-area.

Category	Number
M	15(19)
	4(19)

Note: Tables with summary information can be generated using the management report. In a sub-table, for example, each cell can show the information based on a filter. Example:

	AP-L		AP-M		AP-H	
B	i.O.	n.i.O.	i.O.	n.i.O.	i.O.	n.i.O.
				2		**3**
10						
9	2	2				
8					4	1
7						
6	2		3	1		
5			2	1		
4			2		2	
3					1	1
2					2	1
1						

Entry in a cell based on a filter:


```
Failure by...
   AND
      has Revision state with...
         AND
            - Is last rated revision state  equals  true
            - No further action is needed  equals  true
            has Action group with...
               - Action Priority (AP)  equals  H
      - S max  equals  10
```

Management-Report

#V8-1292

The concept for formatting table cells in the management report has been optimized. Previous formatting based on the previous concept is applied. The "Remove text formatting" option can be used to return the formatting to its basic state.
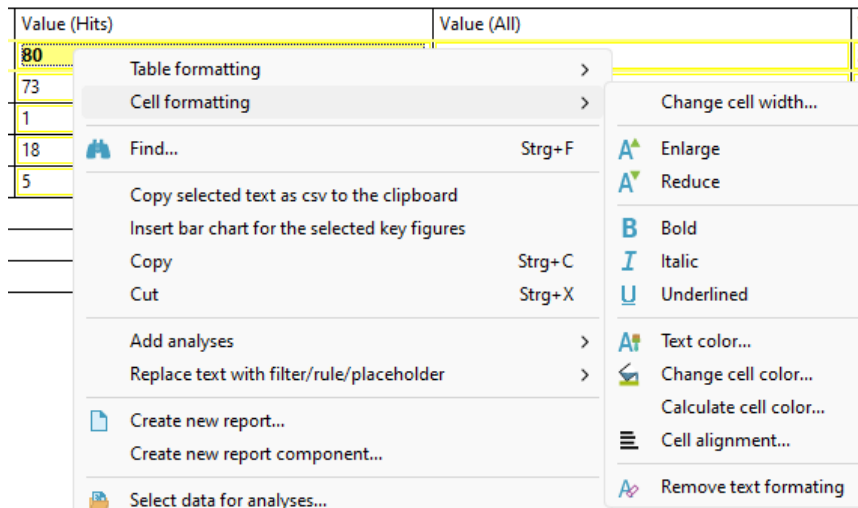

#V8-275

In the management report, it is now possible to insert the trend over time as a trend bar chart for the same key figures. The basis is either a report with associated versioned reports or several selected reports.
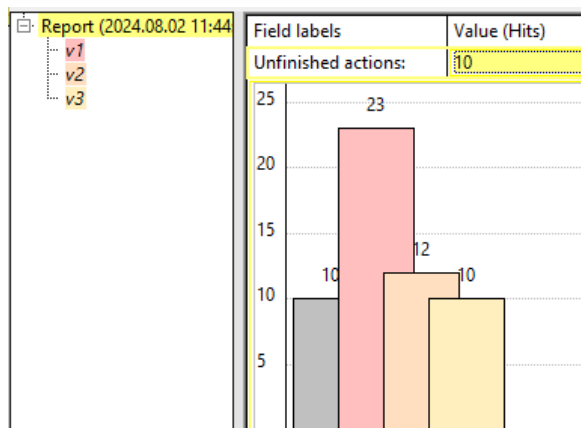
A bar chart can be inserted via the context menu for a selected key figure "Insert bar chart for the selected key figures…". The colors of the columns correspond to the colors of the reports or versions. On mouse-over, an info bubble with the selected data basis is displayed.

#V8-606

The evaluation can now also take into account the affiliation of persons to teams. A corresponding filter is required, e.g. a structure filter.
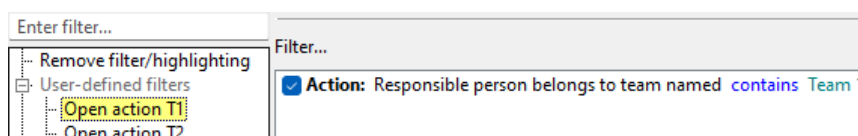
#V8-580

Cells with figures in the management report can be drag&dropped onto an empty cell using the right mouse button. This leads to calculation options such as "Total".

Field labels	Value
Open action: under consiseration	0
Open action: untouched	5
Open action: in progress	75
Open action: completed	232
Open action: rejected	0
Total	**312**

#V8-529

If there is no management report yet, a default report is created when the "Management Report" editor is opened. The date-time information in the name corresponds to the creation date of the report. Renaming is possible.

The content is updated via "Recalculate values" and there should be date-time information with the update time.

Report to present results

To calculate the values please execute the menu command *Edit | Recalculate values*

Basis of data: Document2

Date: 2024-08-12 Time: 13:24:30

Field labels	Value (Hits)	Value (All)	Value (%)
Unfinished actions	-	-	-
Actions with overdue deadlines	-	-	-
Actions without a responsible and deadline	-	-	-
Action groups with unrated measures	-	-	-
Top failures with missing S rating:	-	-	-

Frequency analysis AP

To show the analysis results please execute the menu command *Edit | Recalculate values*

Risk matrix

To show the analysis results please execute the menu command *Edit | Recalculate values*

The following information is available after updating:

Report to present results

To calculate the values please execute the menu command *Edit | Recalculate values*
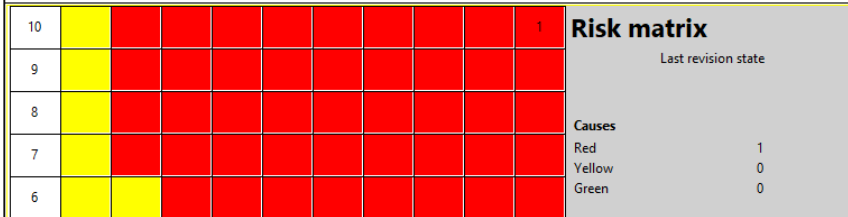
Basis of data: Document1

Date: 2024-08-12 **Time:** 13:22:37

| Field labels	Value (Hits)	Value (All)	Value (%)
Unfinished actions:	2	4	50.00
Actions with overdue deadlines:	0	4	-
Actions without a responsible and deadline:	0	4	-
Action groups with unrated measures:	0	2	-
Top failures with missing S rating:	0	1	-

Frequency analysis AP
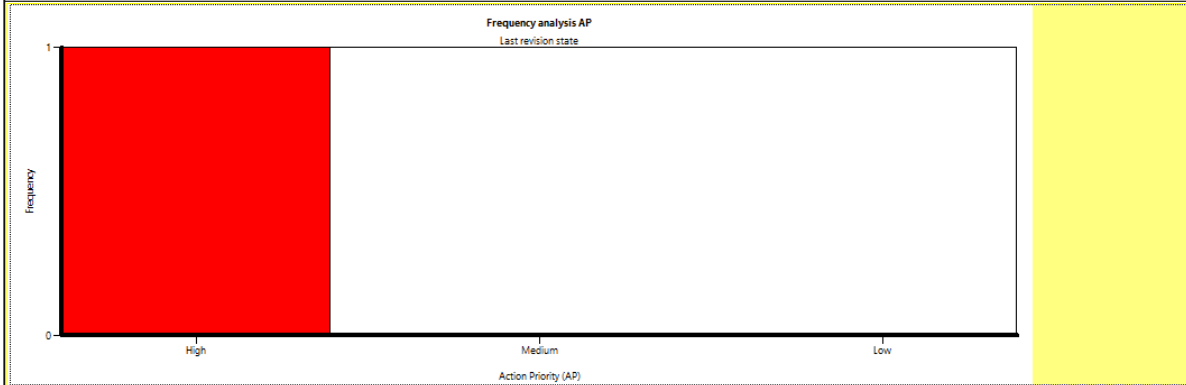
Risk matrix

#V8-479

Any selection of projects, structures, variants and FMEA forms can now be selected as the data basis for the management report.
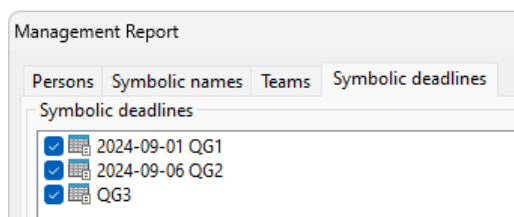
Selection dialog V7.0
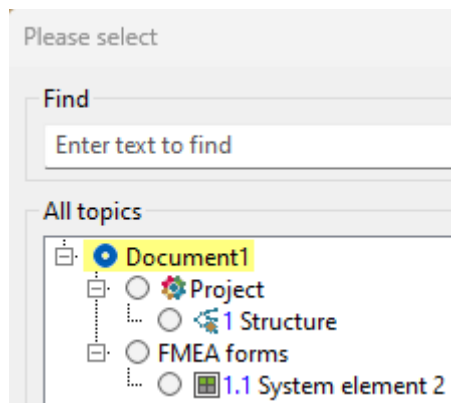
Selection dialog V8.0
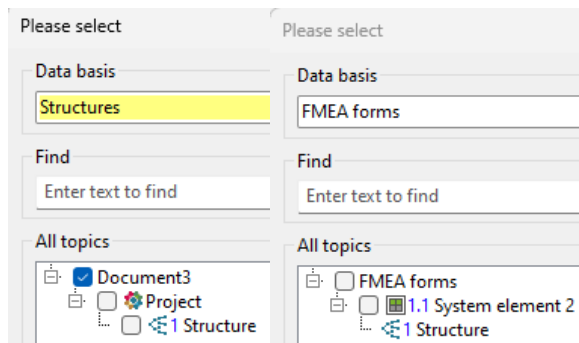
#V8-582

It is now possible to make a selection from the Administrative Data area in the Management Report to create a legend. Example "Symbolic deadlines":

Symbolic deadline	Value
QG1	2024-09-01
QG2	2024-09-06
QG3	

#V8-599

In the management report, there are additional functionalities in the table area in the area of sub-tables via "Table formatting".

Control Plan

#V8-105

There are now "error proofing" objects in connection with inspections. These are catalogue-based, i.e. typed objects, and can be added during inspections.

It is possible to display a corresponding column in all control plan layouts ("Show column Error Proofing").

#V8-525

It is now possible to include the process characteristics from all structure levels in the control plan (menu: Document settings | Control plan).

Note: Previously, this was only possible if function nets were created.

Note: When versioning a control plan, the currently set option is used. Subsequently changing the option has no effect on control plan versions.

#V8-1308

The following additions have been integrated:

- There is an additional option to select "Safe launch" in the header data area.
- For the reaction plan, there is the option to enter and show the responsible person.

    (Menu: Display options | Additional details)

Note: There is also an option to show the responsible person for the control method.

#V8-44

In IATF 16949, there are several inspections for different purposes in the control plan for characteristics, e.g. first part approval, approval after planned/unplanned system stop, series release.

Corresponding inspection categories are now available and further inspection categories can be created in the "Attributes and categories" administration dialog.

L	Name
🔒	📋 First part approval
🔒	📋 Series release
🔒	📋 Approval after planned/unplanned system stop

The display in the control plan is provided by additional lines above Inspection equipment.

Inspection equipment	Error proofing
Inspection <First part approval>	
check by shift supervisor	
Inspection <First part approval, Series release>	
📄 test appliance: pull-off strength	

#V8-900

If the control method and reaction plan are managed as separate objects, a drag & drop to prevention and detection actions is now supported and vice versa.

Example after drag&drop from FMEA to CP:

Initial state: 2024-08-22							
Preventive action 1		10	Detection action 1	10	H		
Revision state: 2024-08-22							
Preventive action 2		(10)	Detection action 2	(10)	(H)		Supervisor 2024-10-03 untouched

				Methods			
	Inspection equipment	Error proofing	Responsible	Samples		Control method	Reaction plan
				Size	Frequency		
	Inspection						
			Responsible?			🔧 Preventive action 2	🔧 Detection action 2 R: Supervisor

Example after drag&drop from CP to FMEA:

Initial state: 2024-08-22						
Preventive action 1	10	Detection action 1	10	H		
Revision state: 2024-08-22						
🥢 Control method		🥢 Reaction plan				Supervisor
Responsible?		Supervisor				Deadline? in progress

				Methods			
	Inspection equipment	Error proofing	Responsible	Samples		Control method	Reaction plan
				Size	Frequen-cy		
	Inspection						
			Responsible?			Control method	Reaction plan R: Supervisor

Functional Safety

The functionalities associated with functional safety are included in the APIS IQ-FMEA PRO and APIS IQ-RM PRO expansion stages.

#V8-462

The calculation strategies for calculating the FIT value are now saved in the "safetyNorms.ice" file.

Example when the SN29500 calculation strategies are available.

Functional Safety - Calculation strategies:

Standard

SN29500 Edition 2008-02

Calculation strategy

SN29500-02: Expected values for integrated circuits (Edition 2004-
SN29500-03: Expected values for discrete semiconductors (Edition
SN29500-04: Expected values for passive components (Edition 20
SN29500-05: Expected values for electrical connections, electrical

Component

- Passive Components
  - Inductor
  - Capacitor
  - Other passive components
  - Resistor
    - Wire-wound
    - Carbon film
      - <= 100 kOhm
      - > 100 kOhm
    - Metal-oxide
    - Metal film

Calculation formula

Calculation formula

$$lamdaRef*((A*exp(Ea1*11605*(1/TUref-1/T2))+(1-A)*exp(Ea2*11605*(1/TUref-1/T2)))/(A*exp(Ea1*11605*(1/TUref-1/T1))+(1-A)*exp(Ea2*11605*(1/TUref-1/T1))))$$

Partial formula

Parameter	Condition	Partial formula

Material constant definition

Constant	Definition list	Description
A	0.873	Constant
Ea1	0.16	Activation energy in eV
Ea2	0.44	Activation energy in eV
TUref	313.0	Reference ambient temperature in K

Variable definition

Variable	Unit	Description
T2	K	Average actual surface temperature

Definition of selection variable

Note: The safetyNorms.ice does not contain any calculation strategies in the delivery status.

#V8-151, #V8-153, #V8-693, #V8-1661

It is now possible to assign functional safety parameters on a variant-specific basis.

Functional Safety (V) -> System element: ⊶⚏ 1.1.1 System element 3 {1}	
Failure rate (FR) in FIT	
Failure rate (FR) in FIT (V1)	**10**
Failure rate (FR) in FIT (V2)	
Self-heating of system element	
Self-heating of system element (V1)	**100**
Self-heating of system element (V2)	
>Source for % value of failure (English)	
>Source for % value of failure (English) (V1)	**V1-Source %**
>Source for % value of failure (English) (V2)	
>Source FIT (English)	
>Source FIT (English) (V1)	**V1-Source FIT**
>Source FIT (English) (V2)	

Variant-specific attributes for the safety goal:

- ASIL/SIL   SafetyIntegrityLevel
- SPFM in %   requiredSafeFailureFraction
- LFM in %   requiredSafeFailureFractionLatent
- PMHF in FIT   requiredPartsFailurePerHour
- FTTI (SPF) in ms   faultTolerantTimeIntervalSpf
- FTTI (MPF) in ms   faultTolerantTimeIntervalMpf

Variant-specific attributes for failure detections and reactions

- DC-(SPF)   DiagnosticCoverage
- DC (LF)   DiagnosticCoverageLatent
- FDTI in ms   DetectionTime
- FRTI in ms   FaultReactionTime

#V8-196

There is the functional safety parameter "Common cause fault". This is present if a failure leads to several safety goals being violated. It can be displayed in the failure net and graph editor.

Functional Safety

- ☑ Functional Safety parameters
  - ☑ SIL/ASIL (Automotive / Safety Integrity Level)
  - ☐ SIL/ASIL (maximum)
  - ☑ Failure rates (actual value, required value, detected fraction, undetected fraction)
  - ☐ Total of FIT values
  - ☐ Processing times (actual value, required value)
  - ☐ Fault Tolerance Time Interval (minimum)
  - ☑ Common cause fault
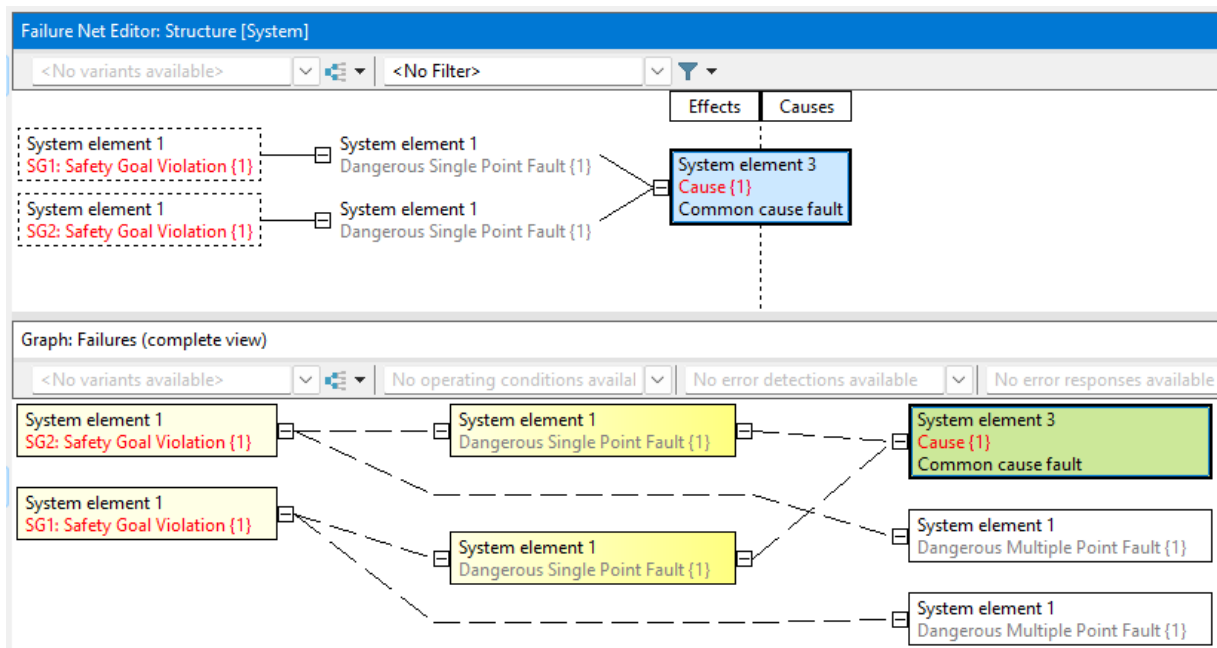
#V8-1170

Calculation strategies previously available on the APIS CARM-NG server with CSS Functional Safety will in future be saved in a "safetyNorms.ice" file.

A description of the migration of calculation strategies is available separately.

#V8-503

When the FMEDA form is activated, there are now options for importing and updating parameters that are available in the FMEDA form.

The following objects and object attributes can be imported and updated:

- System element
- FIT System element
- Source FIT
- Self heating of system element
- Source for % value of failure
- Function
- Failure mode
- % value of failure
- Base fault [FIT]

DVP&R

Design Verification Plan & Report

#V8-880

The "Test method" and "Test report" grouping labels provide support when working in the DVP&R form. These show the associated table areas and therefore make it easier to understand data modeling and the consequences, e.g. when adding or deleting. Both objects can also now have notes.

#V8-186

Notes for test method and test report now have the usual display options.

System element	Test name		Test num-ber	Test method	Acceptance criteria
1.1 Systemelement {1}	📄 Test name {1} Note Test name		Test-Nr.	📄 Test method Note Test method	Acceptance criteria

Languages

Improvements in the management of content languages

#V8-432

When copying/pasting, the existing document languages are no longer added automatically.

#V8-903

In the dialog for reorganizing, languages that are not visible can be removed.

#V8-431

There is an optimized dialog for managing document languages (menu: Tools | Change document languages).
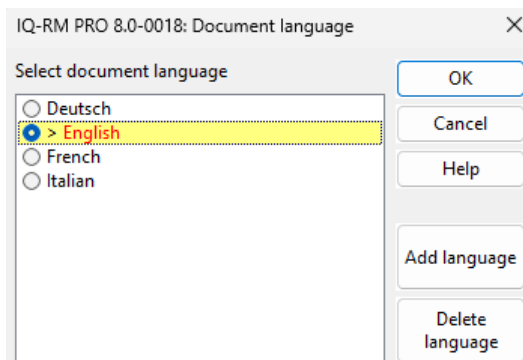
#V8-296

In File | Extended, there is the option "Translate document automatically". This translates the entire document automatically.

#V8-955

For machine translation, there are now additional options such as "British English" or "Brazilian Portuguese".

#V8-326

After machine translation, object names have the additional attribute "Machine translated". This can be used for highlighting, filtering, searching, etc., e.g. in terminology control, and can also be changed if necessary.

#V8-536

In "Terminology and translation", the texts of the reference language are no longer displayed for objects that have not yet been translated.

Note 1: In the editors, the text of the reference language is displayed if there is no translation yet.

Note 2: Cover sheets and the management report are not offered for translation in the terminology check. Translation in this area is possible directly in the cover sheets and in the management report.

#V8-579

Filter names are now translatable.

#V8-1471

It is possible to select "Thai" as the document language.

#V8-205

In the table label area, there is now the option "Automatic translate column/entry label" in the context menu.

#V8-91

It is now possible to call up the object inspector directly from various editors in the Data Manager (e.g. Terminology and Translation). In addition to the assignment of variant-specific values, it is also possible to translate automatically.

#V8-578

The fields in the Management Report can be translated either manually or automatically. To do this, "Translate contents..." can be called up in the context menu and machine-based translation can be carried out in the "Translate contents" dialog using "Translate".
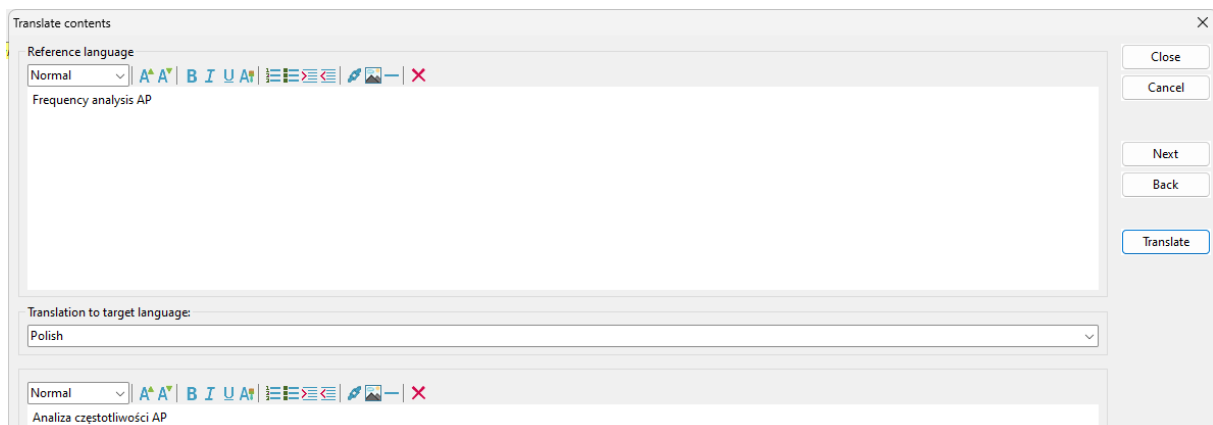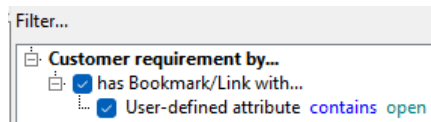
Filter

#V8-898

The "Site" for persons is now available as a filter criterion. This makes it possible to filter for actions with the criterion "Has responsible person named at the location ...". If it is a symbolic person responsible, then their specific person responsible is used for the comparison.
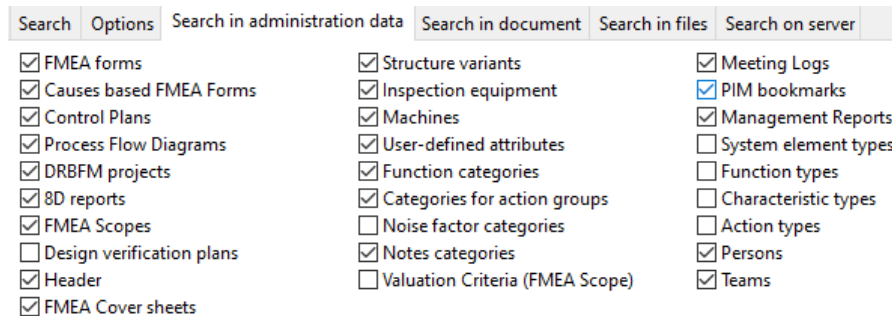
#V8-308

In the editors for managing customer requirements, there are now filter options that extend into the area of linked objects.

IQ-Explorer

#V8-80

A differentiated search in the administrative data is now possible.

#V8-1184

The system filter "Variant-specific assigned object attributes" has been extended. For example, safety targets, their violations, reaction plans, control methods and test methods are now also taken into account.

#V8-1084

The system filter "Variant-specific assigned object attributes" has been extended. Variant exclusions (nets) are now also taken into account, for example.

Data Manager

#V8-567

In the assistant rules, the possibility of the classification "priority" has been created with a corresponding effect on the symbols. The possible classes are: Must, Should, Can with colors red, yellow and grey.

#V8-511

Actions in the catalog can be provided with additional information, e.g. "Responsible" and "Deadline". These are used to initialize new instance and are also relevant if it is a global action.

When exporting from the catalog to TXT or XLSX, "Responsible" and "Deadline" are also exported. Note: Additional information is ignored during import.
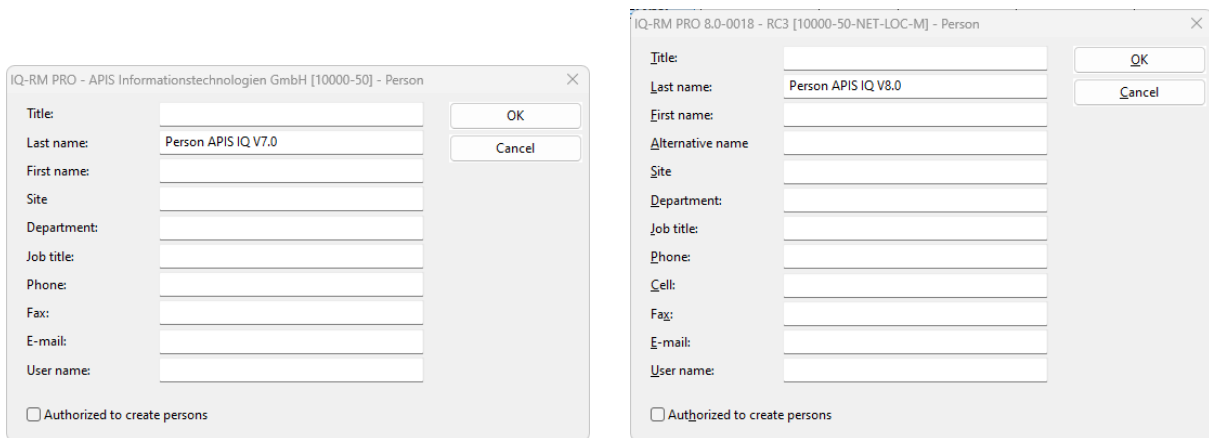
#V8-1098

Symbolic responsibilities can now be restructured in the usual way, e.g. Ctrl + Up Arrow Key
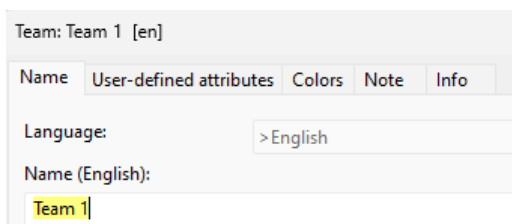
Note: Normal sorting is still possible.

#V8-597

For persons, the value for "site" contained in the associated table can now be imported.
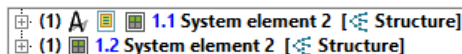
Comparison V7.0 to V8.0:

#V8-655

It is now possible to add the attribute values "Custom attribute, color, note" to a team.

#V8-89

In the administration dialog for SE containers (= PFD, FMEA, CP, ...), icons for user-defined attributes and notes are now displayed there.

#V8-114

The remarks list now also shows the columns "Link" and "Reference".

Column widths

Name	Width in cm:
Type	1.00
Name	6.00
Note	15.00
Link	5.00
Reference	3.00

There you can see whether the information used has been changed or is no longer available.

Link	Reference
O:\test\test2.txt	File 'O:\test\test2.txt' not found! -> GlobalRefPath: O:\IQ80\Environment\ -> LocalRefPath: -> Path Database: O:\IQ80\Environment; Time stamp upon creation/update: 2024-09-01 12:12:21, Size: 0.00 KB
O:\test\test.txt	O:\test\test.txt; The embedded/linked document has been changed since creation/update; Time stamp upon creation/update: 2024-09-01 12:09:11, Size: 0.00 KB
O:\test\test.txt	O:\test\test.txt

In the context menu, there are options for deleting and updating.

Delete unused documents/graphics
Embed referenced documents/graphics
Extract referenced documents/graphics
Update embedded documents/graphic

Data model

#V8-375

Actions that are shown are displayed in forms in the causes in the context of the failure mode. If actions are displayed outside the form, e.g. in the structure editor, there may be a different context.

The new "Tools | Change faded-in actions..." command can be used in the FMEA form. In the simplest case, selecting "All" ensures that all faded-in actions are also visible in the FMEA form.

Note: An action in the structure list that is not visible in the form can also be shown in the form by drag & drop with the right mouse button.

#V8-241

If there are only displayed actions in an action group, their status is taken into account in statistical evaluations, filters, etc. at the location of the display in the same way as an existing action there.

#V8-178

The meeting log now take into account changes to the Revision state and action groups.

#V8-142

The "FMEA scope of analysis" is now possible on a variant-specific basis.

#V8-614

If revision state has the status "rejected", it is ignored with regard to the evaluation figures for new revision states. The evaluation figures from the previous revision states are used for initialization.

#V8-572, #V8-649

It is now possible to assign the object attribute "Is layout element" in the catalog. This makes it possible to define layout elements.

The object type icon and the display of some attribute values, such as the number, are no longer displayed for catalog entries with an attribute. The counter for the number of occurrences is also no longer visible. Layout elements can be found according to the attribute value when filtering, etc.
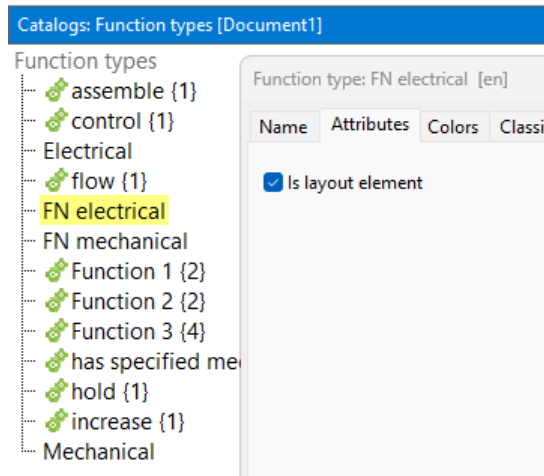
When filtering, it is possible to search for functions with the criterion "Is layout element false", for example, and thus remove the layout objects from the results list.
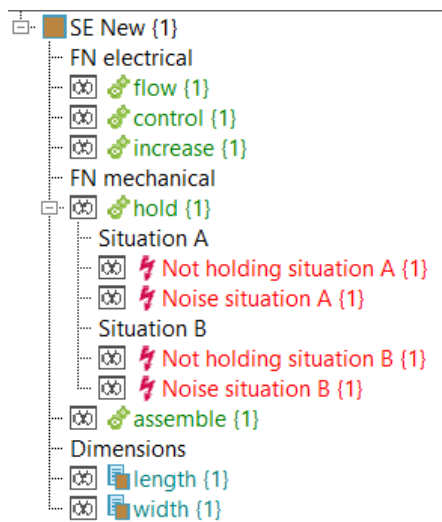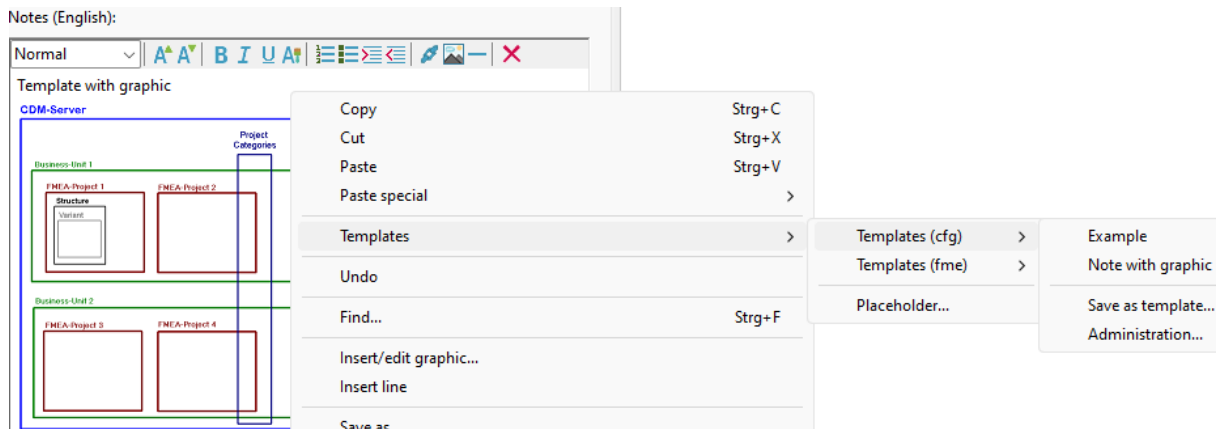

#V8-568

If O=1 is set for the Prevention action for a measure status and there is no Detection action yet, then "none" is entered as the Detection action.

Initial state: 2024-09-02			
PA 1	5	DA 1	5
Revision state: 2024-09-02			
PA 2	(1)	none	5

#V8-608

Note templates can now also contain graphics.

#V8-790

The Java area has been converted to OpenJDK. The interaction with setting options in the Windows operating system, e.g. in the area of date-time formats, can lead to changes (improvements) in the display, e.g. for XLSX export formats.

#V8-472

The user-defined attributes can be provided with categories and notes.

There is an option to filter in the selection dialog for the object. The content contained in the note is now also taken into account when filtering.
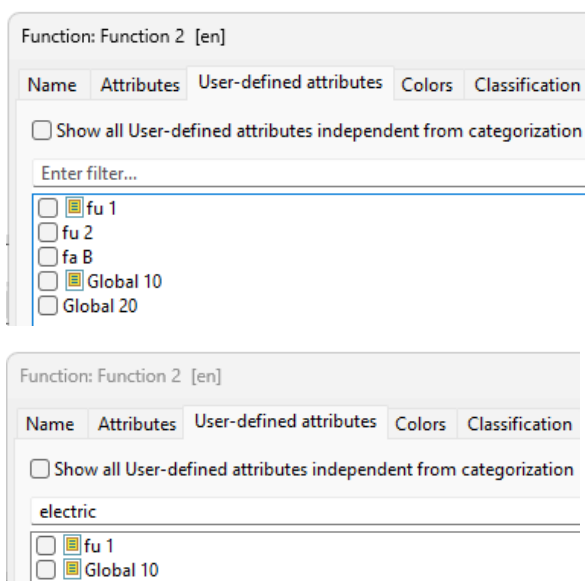
Variants

#V8-566

The restrictions on authorizations previously available for structures are now also possible for variants. This prevents unintentional changes to variant-specific attribute values in variants. The user is only supported in adding something in the variants in which he has the authorization to do so.

The authorization for the structure is higher-level and determines whether changes relevant to other variants are also possible, such as deletions, moves and changes to non-variant-specific attribute values such as the name.

#V8-192

The background color of objects can now be assigned on a variant-specific basis.

#V8-441

In the variants matrix editor, there are now additional hot-click icons with toggle functionality in the status bar, e.g. to change display options.

#V8-164

An additional option in the workplace settings in the "Copy" area can be used to control whether variant-specific attribute values should be copied. This has an effect on the different possible copy actions, copying using drag & drop, special drag & drop and "normal" copy & paste.

Example with two variants in which a failure with variant-specific severity has been copied.

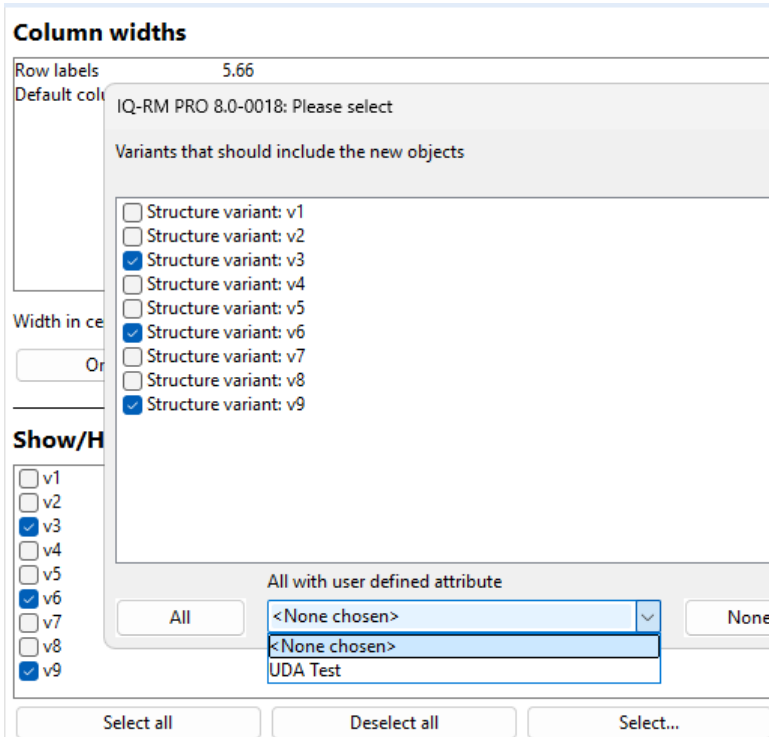| Valuation (V)	Failure: S=10 1.a.1 Effect M {3}	Failure: S=10 1.a.2 Effect M {3}
Severity	10	10
Severity (v1)	9	9
Severity (v2)	8	8

#V8-226

In the variant matrix, it is now possible to select the variants to be displayed there, e.g. by making the selection via a user-defined attribute.

Example with a structure with 9 variants:

Variants Matrix: Structure [System]									
> Structure	<No variant selected>		<No Filter>						
	v1	v2	v3	v4	v5	v6	v7	v8	v9
1 System element 1 {1}	✔	✔	✔	✔	✔	✔	✔	✔	✔
1.1 System element 2 {1}	✔	✔	✔	✔	✔	✔	✔	✔	✔
1.1.1 System element 3 {1}	✔	✔	✔	✔	✔	✔	✔	✔	✔

When selecting in the Columns display options area and "Select" there

there is the following view:
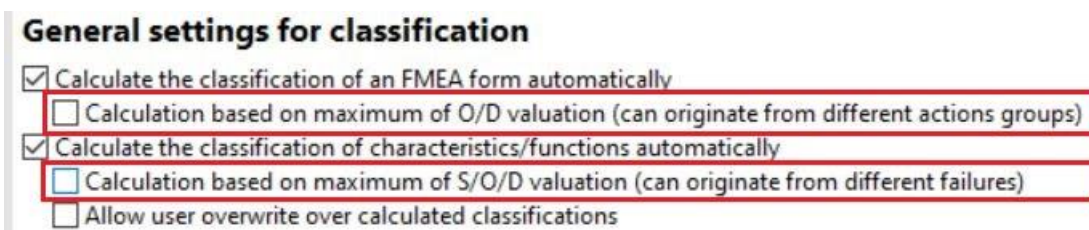

Classification

Menu: Classification | Document settings

#V8-2, #V8-370
Single classification has been abolished in favor of multiple classification. The corresponding option in the document settings has been removed.

#V8-593
In the automatic classification calculation for functions/characteristics based on S/O/D, there is now the additional option "Calculation based on maximum S/O/D valuation (can originate from different failures)" in the document settings. This option is available for compatibility reasons with earlier versions of the APIS IQ-Software and is not recommended.

#V8-137

For some object types, e.g. product characteristics, it is now possible to specify a classification in the catalog. If a new occurrence is created, this attribute value is used for initialization.

Personal Information Manager (PIM)

#V8-427

If information is to be added to versioned data at a later date, this is not possible as versioned data cannot be changed. The option has now been created to work with an associated PIM entry, e.g. to save approval information.

A PIM entry can be created either directly during versioning or for data that has already been versioned. The versioned data must be opened and then the root element of a versioned structure, for example, can be drag&dropped into the PIM.

#V8-540

In the administration dialog of forms (FMEA forms, Process Flow, Control Plan, ...) it is possible to create PIM bookmarks via the context menu. This enables management with additional information.
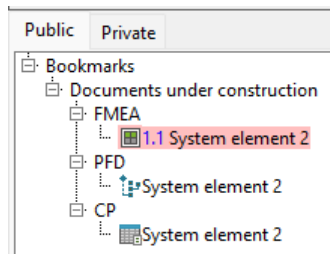
CARM-Server

#V8-561

For the installation of CARM server modules, there is now the option of manual replacement ("Replace with module (manually)") in addition to the previous automatic replacement. The previous "Replace with module" has been renamed "Replace with module (automatic)".
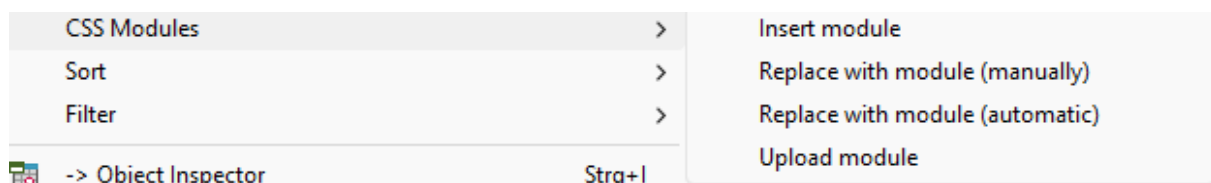
#V8-139

In the module, helpful additional information can be documented in the note. The content of the note is now easier to access. When creating a successor module, the note of the predecessor is adopted and can be adjusted as usual in the properties dialog before transferring it to the server.

Note: The notes for modules are always in the system category. There are no other categories. The notes are adopted in all languages. When modules are uploaded, the note is taken from the last module.

When module variants are uploaded, the note of any existing generation is adopted. If no such generation exists, the note from the last module variant is adopted.

With the " Upload structure with variants as a module" command, the notes of the module are transferred (and are visible in the properties dialog that opens), but the notes of the module variants are not! Reminder: The note is applied to the object for which the properties dialog is displayed!

#V8-1

The authorization categories for module certificates have been expanded. There are now the following categories:

- Read module
- Download module
- Upload module
- Delete module
- Change module
- Certificate administrator

Previously, there was the combined authorization level "Delete module / Certificate administrator".

#V8-267

The backup can now be started not only at the defined time interval, but also immediately when the dialog in which the settings are configured on the CARM server is closed.
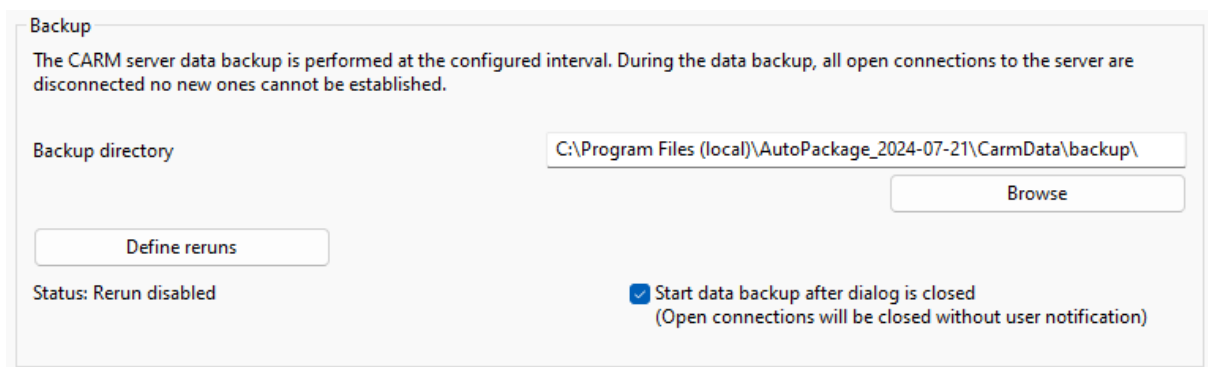
Template

The data manager associated with a project is saved in an FMT file, e.g. NORMAL.FMT.

#V8-246

Previously, all existing print jobs were combined in a group called "Presentation print".
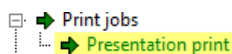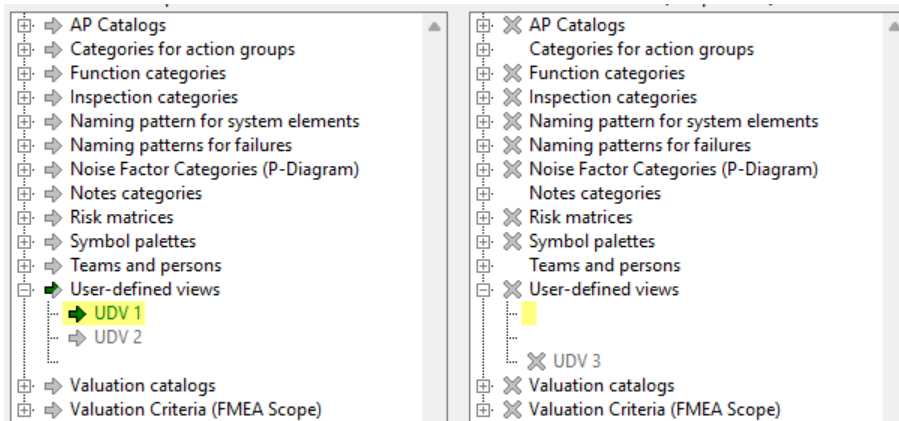

It is now possible to write individual print jobs to or read them from the template file.
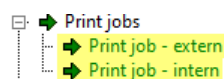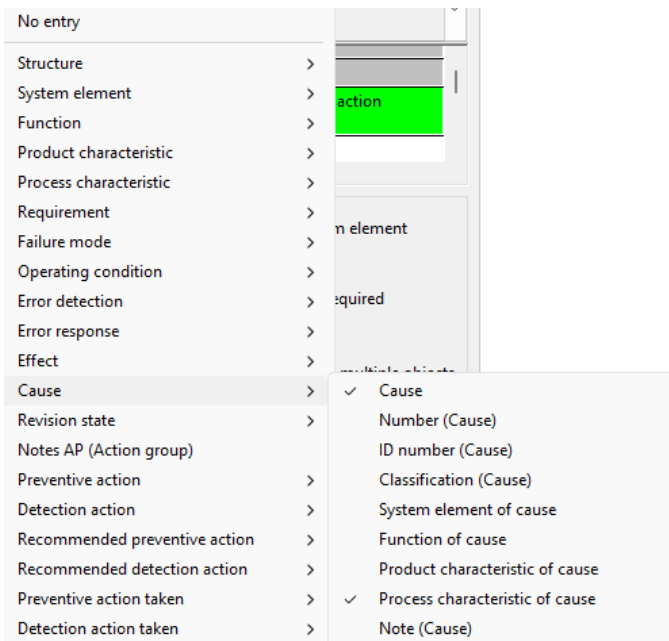
#V8-758

Previously, all existing user-defined views were exchanged with the template without a detailed breakdown. It is now possible to exchange specific user-defined views with the template.

Import

#V8-1162

When importing XLSX, it is now also possible to assign process characteristics.

#V8-613

In the XLSX import strategies, additional settings are now saved that are related to a specially created import strategy ("FMEA", "Control Plan", etc.).

Extract from the import dialog V7.0
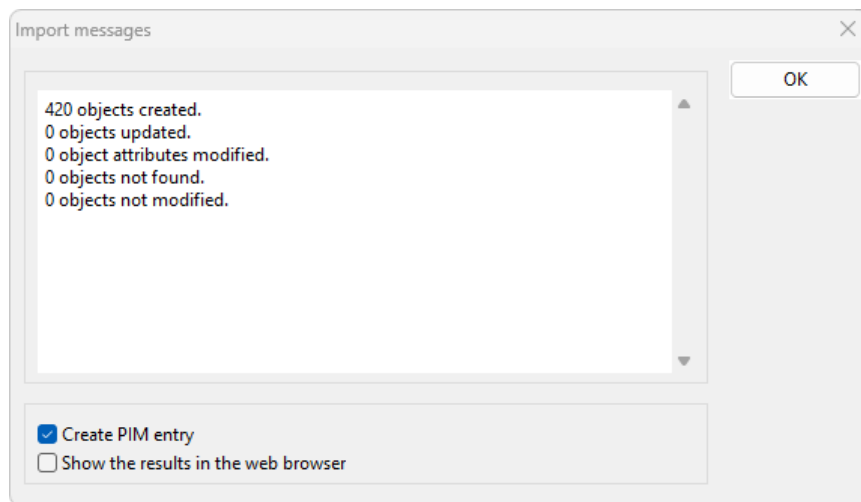

Extract from the import dialog V8.0

#V8-458

With the XLSX import, it is now possible to import recommended actions either as detection or preventive actions.
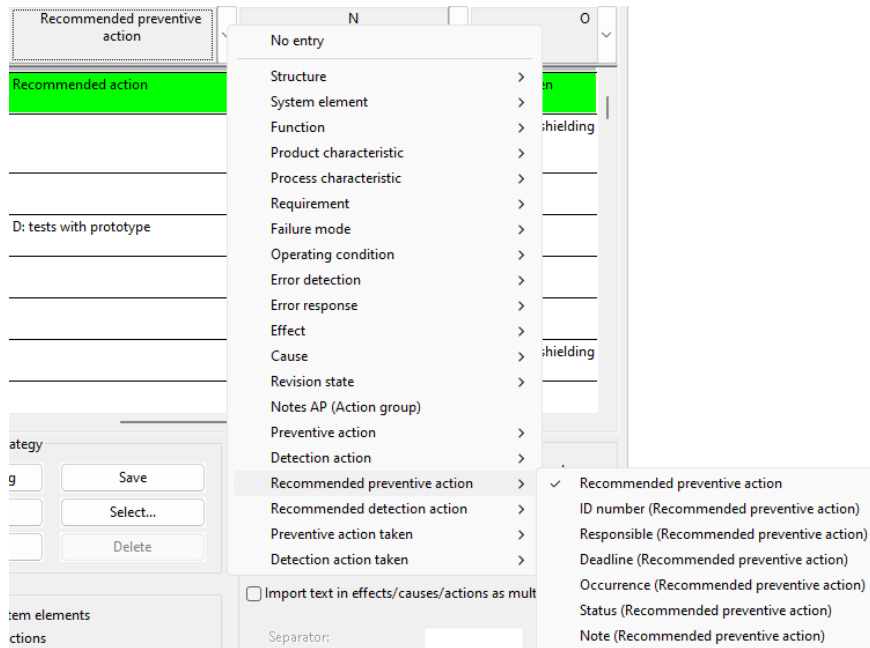
#V8-328

There are now import messages when importing data from XLSX and XML files with information on the import result and any errors.


#V8-476

Formulas in XLSX files are no longer ignored.

Note: Previously, the import result may have been incomplete if formulas were present. In these cases, it was previously necessary to clean up beforehand by removing the formulas.
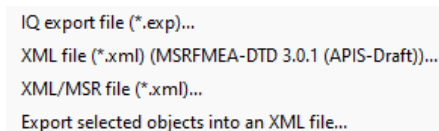
#V8-131

Based on XLSX files (= MS Excel), product characteristics and their associated specifications can be imported and updated. This option is now also available for requirements.
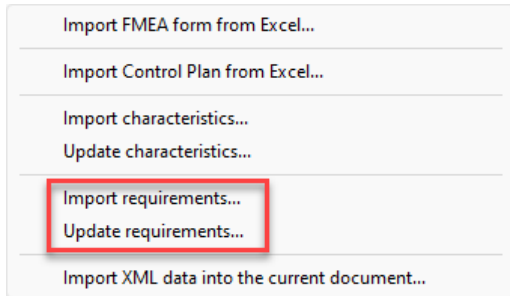
Export-Import

#V8-410

The XML interface now supports the DTD with version 3.0.1.

#V8-423

The storage of variant-specific attribute values in an XML file has been optimized. This leads to performance improvements during export and import.

#V8-1618

When sending HTML e-mails, e.g. "Notify reponsible persons (HTML)", unnecessary attachments are avoided by integrating them into HTML.

#V8-743

The XML interface was revised with a view to the additional variant-specific properties in the area of functional safety.

#V8-581

Custom filters are displayed in groups after a user-defined attribute (UDA) has been assigned; the UDA is the grouping criterion. The UDA is retained when exporting and importing filters.

This supports users who want to manage a large number of their own filters.
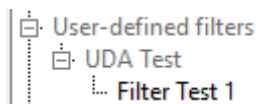
Readme

The basis for the compilation of the new features are the issues marked with Readme or Readme relevant. Information with the associated tracking number is published in the readme file. Some of these are not included in detail in this document.

The readme for the release version (Version 8.0, Service Pack 0020) is divided into the following sections:

- General:
- Editors:
- CARM server:
- Control Plan:
- Data Manager:
- DVP&R:
- Excel export/import:
- FMEA form editor:
- AIAG-VDA Form Editor:
- Functional safety:
- Functional and Failure Analysis (FFA):
- IQ-Explorer:
- Quality rules:
- Management Report:
- Object Inspector:
- Structure Editor:
- Tools and dialogs:

Here is an excerpt from the readme:

to features that are not described in detail in the document:

#V8-258 On the start page of the display options, it is now possible to reset the display options for an editor using a button.

#V8-487 *Some default settings have been revised in the workstation and document settings as well as in the display options of all editors.*

#V8-624 Filters: these can now also have background color, user-defined attributes and ID numbers.

#V8-988 When importing FMEA data from Excel that only contains 3 levels of system elements and 3 levels of functions (e.g. effect, failure mode and cause levels), the structure and functions are now imported correctly, even if there are no failures in the Excel file.