



DIGITAL INDUSTRIES SOFTWARE

What's new in Teamcenter Quality 6.2

Applying FMEA best practices to detect possible failures early in development stages

Benefits

- Apply FMEA best practices to detect possible failures early in the development stages
- Keep all your relevant information in standardized FMEA projects
- Optimize quality planning with process-driven inspection planning
- Strengthen alignment between quality and manufacturing process data
- Manage the root cause analysis tools by using the problem-solving process
- Manage a single source for all your quality data

Summary

You can use Teamcenter® Quality software to support a closed-loop quality approach from design to manufacturing. Built on top of the Teamcenter software product lifecycle management (PLM) backbone, Teamcenter Quality helps you leverage product and process information, as well as share cross-departmental workflows so you can streamline the core quality management processes.

Teamcenter Quality works in the Active Workspace client for Teamcenter. Active Workspace is an innovative web-based client platform that simplifies PLM for all users involved in product lifecycle, accelerating user adoption and shortening time-to-value by providing an intuitive experience anytime, anywhere, on any device.

Teamcenter Quality, which is a part of the Siemens Xcelerator portfolio, the comprehensive and integrated portfolio of software, hardware and services, helps you support all of the quality-relevant processes required in the overall product lifecycle.

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Features

- Create boundary diagrams within design FMEA to reuse engineering data for quality analysis
- Improve usability for searching and standardized form sheets in the FMEA module
- Optimize alignment between FMEA and control plan to collect all relevant information
- Transfer of the BOP operation from the FMEA to the control plan
- Leverage easy-to-use drag and drop function for root cause analysis tools
- Use enhanced quality master data for quality checklists and quality actions

Teamcenter Quality version 6.2 includes enhancements for all the available modules (Failure Mode and Effects Analysis [FMEA], Control and Inspection Planning, Quality Project Management, Problem Solving, Quality Issue Management and Quality Action Management). The new update allows you to perform new functionalities that improve the closed-loop quality approach and leverage many optimizations that improve the overall usability. In addition to these enhancements that run through all Teamcenter Quality modules, the main focus of the extended functions is to improve the quality planning modules.

Recognize possible failures early in development stages with FMEA

FMEA is a methodology that allows companies to assess risks associated with possible product failure. The Teamcenter Quality FMEA module helps you support preventive defect avoidance by allowing you to evaluate the effects caused by potential problems early in the planning phase. The FMEA module supports several standards and guidelines.

The quality planning with Teamcenter Quality is further improved with the FMEA release 6.2.

The new important element is the FMEA boundary diagram, or block diagram, a visual representation of the system that displays what is included or not in the FMEA to clearly describe the target of the FMEA breakdown. The FMEA boundary diagram should be used as an analysis tool for the preparation of system or design FMEA.

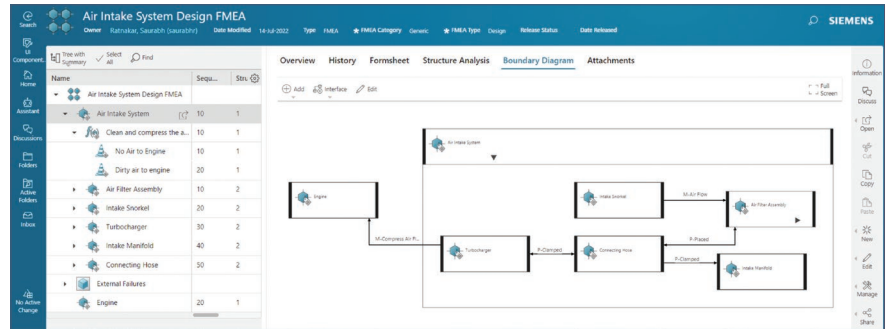


Figure 1. Teamcenter Quality FMEA visual representation of boundary diagram or block diagram.

Once a FMEA has been created in Teamcenter Quality, the boundary diagram can be displayed and edited. A user can also create all system elements via the boundary. They are also displayed in parallel in the tree.

In addition, the interfaces between the system elements can be defined in detail. The following interface types are supported: data exchange, energy transfer, information transfer, material exchange and physical connection. It can be defined if the connection is direct or indirect and if it is a one- or two-way connection.

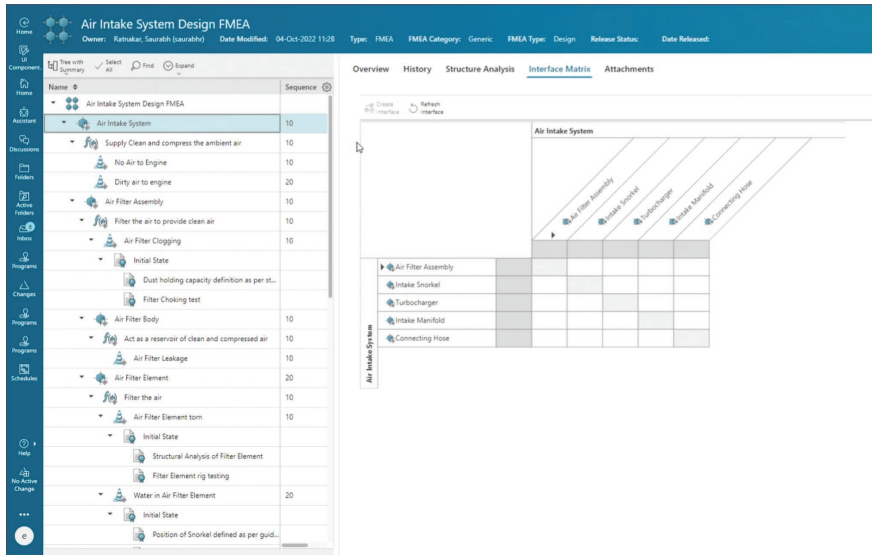


Figure 2. The new interface matrix and visual table with all detailed system information.

You can further identify the interfaces specified with the assistance of an interface matrix. The matrix and table visualize the existing interfaces. Users can benefit from this approach to define the interfaces in the matrix using the results in boundary.

Keep all your relevant information in standardized FMEA projects

The latest version contains many improvements mainly improving the usability, for example, now it's possible to expand the tree completely or up to a certain level, which can be helpful for large FMEAs.

There is also a new search option available in the tree as well as in the form. You can use a special filter to search via the system elements, functions, failures or quality actions.

A search function is also integrated in the form to make the possibilities more comprehensive. It is possible to search for a specific object, for example, a failure, but it is also possible to link several searches with each other. The filter symbol in the form then indicates what columns are currently being searched. It is also possible to include threshold values.

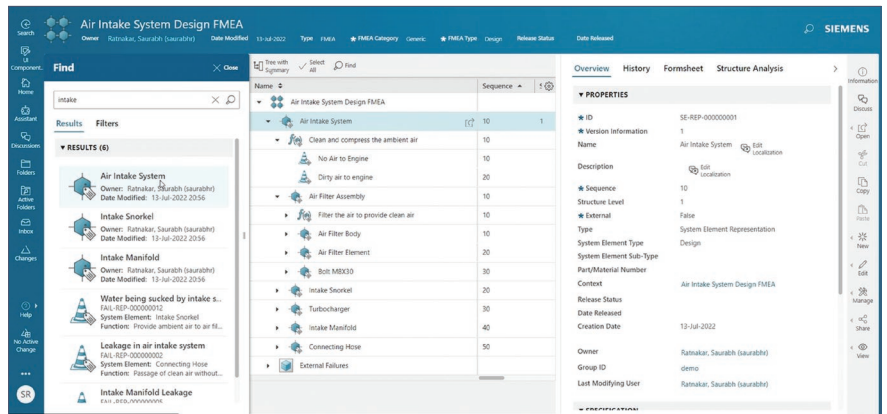


Figure 3. New FMEA searching options.

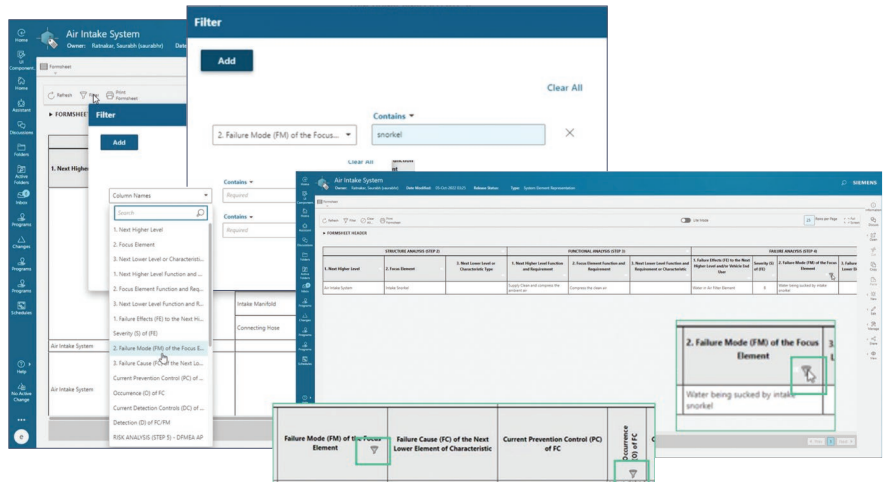


Figure 4. Example of search for a specific object.

Let's stay with the extensions in the form. To have a clear overview of the content, due to the large dimension of the Automotive Industry Action Group (AIAG) and the German Association of the Automotive (VDA) harmonized form sheet, the user can hide the columns they do not need for the current work.

For all users who prefer to work and edit directly in the form, Teamcenter Quality version 6.2 supports this option for all available functions.

All elements, regardless of whether they are system elements, functions, failures or groups of actions, as well as actions can be inserted directly in the form. This is supported by intelligent menus that only allow the relevant entries.

The function and failure links can be done directly in the form. Teamcenter Quality FMEA also supports this with various options for the user to select the best option for them, as seen in the examples.

Process-driven inspection planning for optimized quality planning

Using Teamcenter Quality enables you to fully integrate your FMEA activities with other Teamcenter Quality modules, including control and inspection planning. You can leverage the information you generate in FMEA to prevent defects in processes or products by creating a control plan.

Creating a control plan is a vital component of an effective advanced quality planning process. By sharing the same business objects as the Teamcenter Quality FMEA, you can easily use critical predefined characteristics within the control plan. The outcome is a standards-driven control plan.

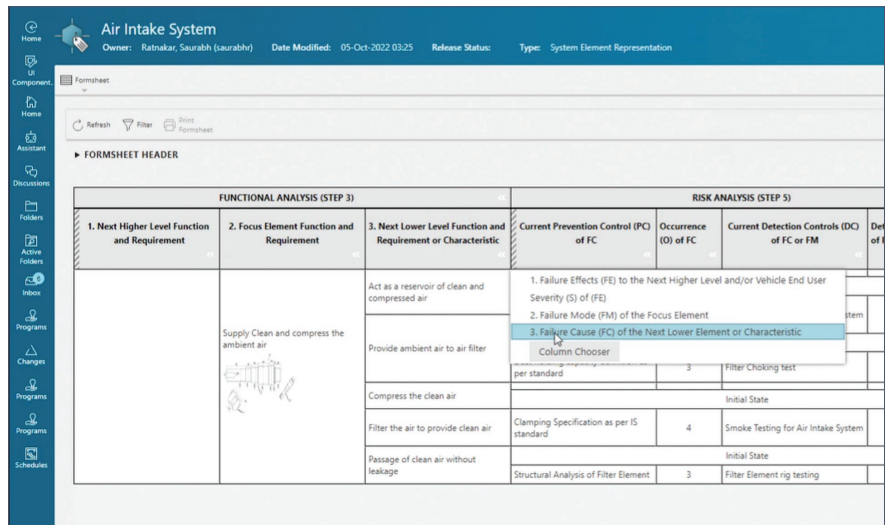


Figure 5. Possibility to hide the columns not needed to the user's analysis.

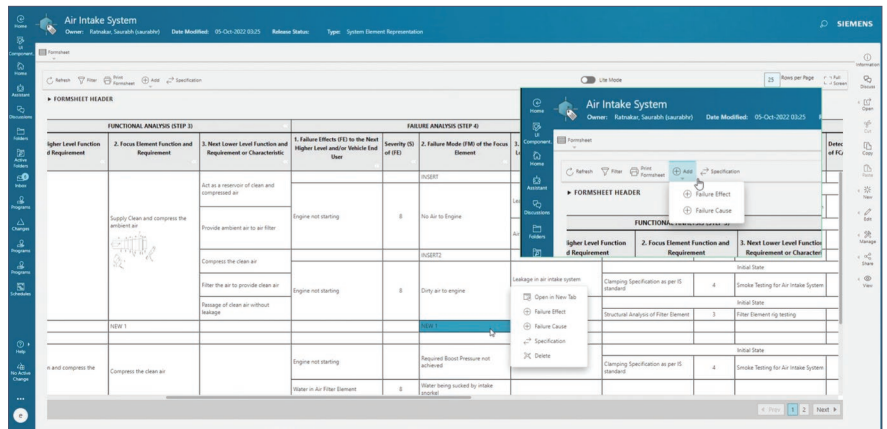


Figure 6. The user can select the best options for adjusting the form sheet view.

This feature ultimately provides more options to the user. A difference report is provided in the control plan to show changes in the FMEA as well as in the control plan. With the "align" functionality, you can synchronize the content between control plan and FMEA, for example, if an inspection definition in FMEA was changed or a new inspection definition in FMEA was created.

Strengthen alignment with manufacturing process definition

The integration capabilities with Teamcenter Manufacturing Process Planner have also been enhanced. If the process FMEA (PFMEA) was created based on the bill-of-process (BOP) and then the control plan was derived, the operation (from the BOP) referenced in the system element is transferred and displayed for inspection definition.

Managing root cause analysis tools in problem-solving processes

Teamcenter Quality Problem Solving has been enriched with useful enhancements such as the drag-and-drop functionality, a five-why method created, for example, to secure the

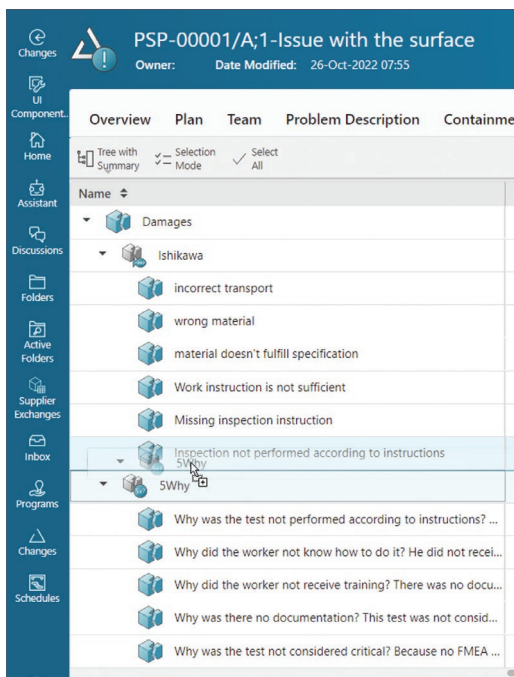


Figure 8. Drag and drop function in five-why.

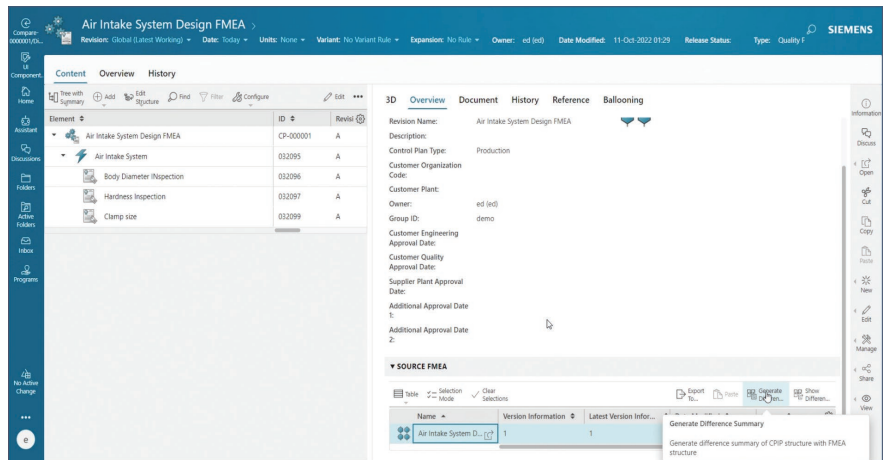


Figure 7. FMEA can be leveraged to directly create a control plan.

root cause, which can be linked to the relevant root cause in the Ishikawa diagram. The same is possible between the five-why method and a separate why element.

Manage a single source for all of your quality data

The quality checklists have already been introduced in the previous release. The function of the checklist within the quality master data has been extended in version 6.2 to include the following:

- Possibility to order elements for questions displayed in the right sequence
- Increased usability of the checklist table
- Quality actions are inserted as a template to reduce the project's efforts
- Tracking history for a better traceability
- Extended checklists used in quality project management

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