TEAMCENTER

PLM for Component Manufacturers — Usage

Teamcenter 2412

SIEMENS

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1. Introduction to PLM for Component Manufacturers

What is PLM for Component Manufacturers?

PLM for Component Manufacturers is a solution that helps you as component manufacturers manage the component design process and related program data. Using this solution, you can start the design process and track the work using a preconfigured program.

> Note:
>
> Some features might not be available depending on your license. You can contact customer support to learn more about your current license or to upgrade to a license with additional features.

Where do I go from here?

How do I manage my component designs?	You can manage the lifecycle of your designs by **exploring existing designs**, investigate designs using **3D visualization tools**, **review specifications**, **duplicate designs**, and **release designs**.
How do I manage programs?	A **program template** is available for this. You can **add additional events** to the program, **assign users**, and **create and attach deliverables**.
How do I address problems in my component design?	Using **problem reports**, you can address the design problems with your components, and assign users to resolve the problem.
How can I learn more about using this solution?	PLM for Component Manufacturers uses various Teamcenter features. You can start exploring the following documentation: • *Active Workspace Fundamentals* • *Product Data Visualization on Active Workspace* • *Structure Management on Active Workspace — Usage* • *Program Planning*

	• *Document Management on Active Workspace — Usage*

User roles in PLM for Component Manufacturers

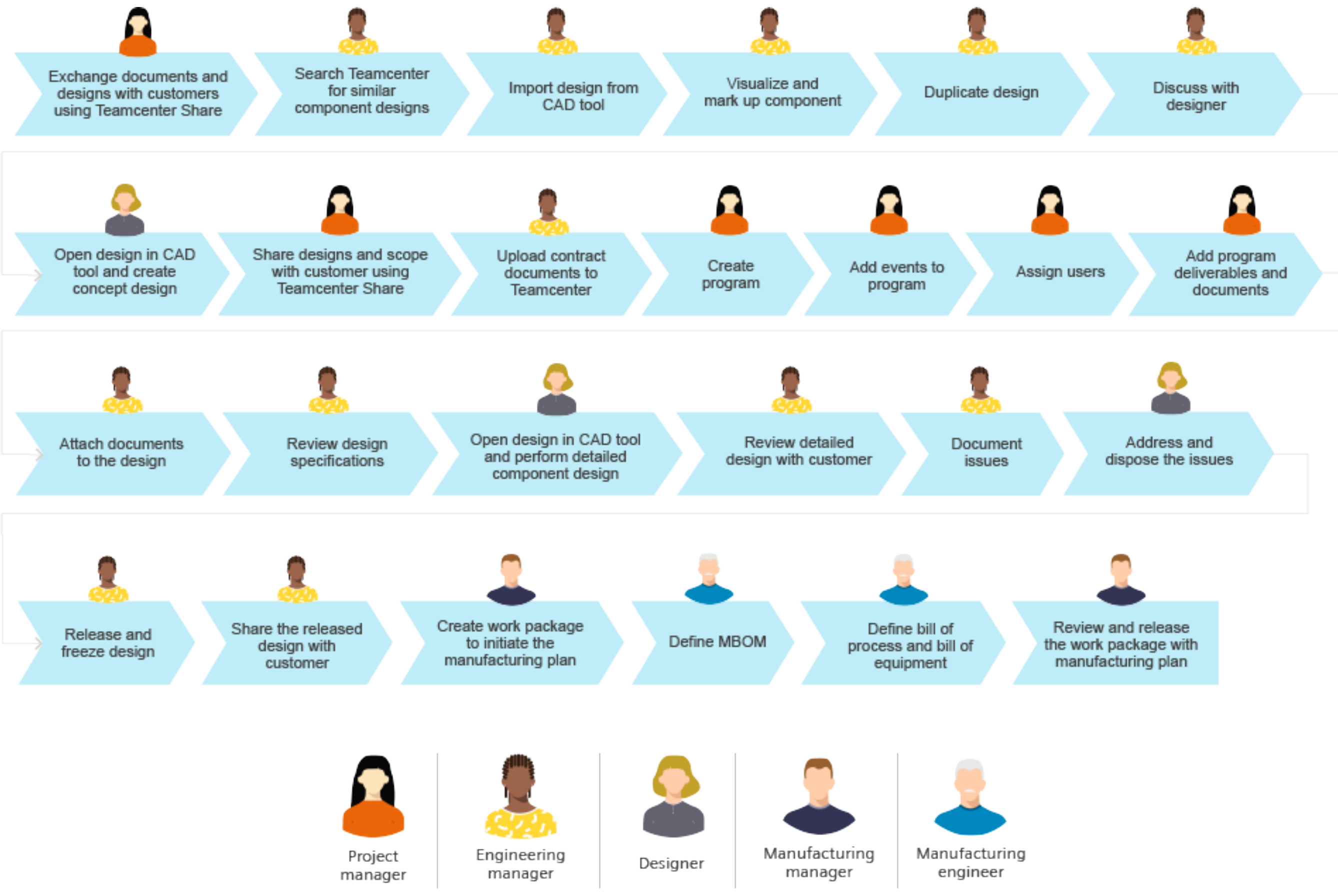
PLM for Component Manufacturers contains preconfigured groups and multiple user roles. Each group is a collection of multiple roles. For example, a group called *Engineering* can be created to manage all engineering-related roles, including engineering manager and design engineer. Each of these roles carries out a defined set of tasks through the different phases of the business process. Considering the business requirement at your site, each user role might be assigned to a separate person or a single person might be assigned to multiple user roles.

An example of a group with roles and the assigned tasks is as follows.

Group	Role	Description of tasks
Engineering	Project manager	• Creates and manages the contractual agreements for component manufacturing. • Initiates and manages the program and then establishes the schedule. • Monitors and controls the program throughout its lifecyle, including managing the project status, reviews, and various phases of the process. • Releases the component and closes the program when it is completed.
	Engineering manager	• Monitors the component work throughout its lifecyle to ensure that the work is on track. • Visualizes and provides inputs and suggestions on the component designs and ensures that the design of the component meets the customer requirements. • Creates and manages the entries for problems.
	Design engineer	• Designs the component and seeks and incorporates suggestions received for the component design. • Works on the problems reported for the component design and resolves them.

2. A sample workflow

The following is a sample process that shows you how you can use PLM for Component Manufacturers to design and manage your components.



3. Collaborate with other users

When working on the design of a component or creating a contract document for a customer order, to collaborate and communicate with other users in your organization, you can use Discussions. This eliminates the need for a public system on an external network, outside of this solution, for exchanging information and ideas.

You can use **Discussions** to start a dialog with others on specific objects such as items, components, parts, and documents.

> Example:
>
> You receive a customer order for manufacturing a gearmotor and you search for a design of the gearmotor. You create a snapshot of the existing gearmotor and then start a discussion around the snapshot to receive feedback from other users.

4. Exchanging files with stakeholders using Teamcenter Share

Overview of exchanging files with stakeholders using Teamcenter Share

Teamcenter Share is a collaborative cloud application that allows you to share project files with your partners, team members, and manufacturers, regardless of location or time.

You can use Teamcenter Share to collaborate on and communicate about component designs and contract documents with stakeholders that are outside your organization. This functionality eliminates the need for a public system on an external network, outside of this solution, for exchanging information and ideas.

With browser-based collaboration, you can work on new products and designs and share your projects with customers for review and approval. File sharing with Teamcenter Share is secured by your ability to control access to files and view their sharing history, as well as the record of file exchanges and locations.

> Example:
>
> Instead of exchanging a contract document through email attachments with a customer, a project manager can use Teamcenter Share to transmit files more securely.

By leveraging the Active Workspace integration with Teamcenter Share, you can share:

- CAD part files (NX and Solid Edge)
- Documents (Microsoft Office, PDF)
- Image files (JPG, PNG, TIFF, and so on)
- Visualization files (JT)

Share data from Active Workspace to Teamcenter Share

You can share CAD files such as NX and Solid Edge part files and non-CAD files such as Microsoft Office documents and PDFs from Active Workspace to Teamcenter Share. Subsequently, you can log on to Teamcenter Share and invite suppliers to collaborate with you to work on those files. Suppliers receive an email notification with a link to log on to Teamcenter Share. You can grant suppliers full-access, markup-and-download, or markup-only permissions for the shared files.

To share files:

1. In Active Workspace, locate the object that contains the data you want to share with your suppliers or partners.

2. Click the **Attachments** tab.

3. In the **Files** section, select the dataset to share.

   You can only share individual datasets.

4. Click **Teamcenter Share** → **Send to Teamcenter Share**.

5. The system launches a new browser tab where you must sign in to Teamcenter Share using your Webkey email and password.

6. On the **Send to Teamcenter Share** panel, specify the **Project** you want to send the data to by doing the one of the following:

   - Select an existing project from the **Project** list.

   OR

   - Create a new project.

     a. Click **Create Project** (located above the **Project** drop-down list).

     b. Assign a name and enter a description.

     c. Click **Create**.

7. Click **Send**.

   When the export is complete, you receive an alert with the file and the project name.

View all Teamcenter Share projects where a file was shared

You can also view all Teamcenter Share projects where a file was shared.

In the **Table** view, you can view the **Projects** column that displays all projects as links that will open the file in a new browser tab.

Alternatively, you can right-click the file in the **List** view and choose **Open in Teamcenter Share**. The system redirects you to the most recent project where the file was shared by opening it in a new browser tab.

Replace data in Active Workspace with data imported from Teamcenter Share

After suppliers upload updated versions of their files back to Teamcenter Share, you can replace the existing files with the updated ones in Active Workspace.

1. Navigate to the object that contains the data that you want to update.
2. Click the **Attachments** tab.
3. In the **Files** section, select the dataset to replace.
4. Click **Edit** > **Replace File** to display the **Replace** panel.
5. In the **Replace** panel, click **Choose File** and then **Browse Teamcenter Share** to view all projects in Teamcenter Share.
6. In the new browser tab, sign in to Teamcenter Share using your Webkey email and password.
7. Choose the project that contains the updated data.

   Tip:

   You can also search for an Teamcenter Share project using the **Filter** box.

8. Choose the updated file.
9. Click **Replace**.

   For CAD files, such as NX and Solid Edge, the files are imported in the background. You receive an alert once the process is complete.

Add new files to Active Workspace by importing them from Teamcenter Share

You can import additional files from Teamcenter Share to Active Workspace.

1. In Active Workspace, navigate to the object where you want to add any additional files from Teamcenter Share provided by your supplier or partner.
2. Click the **Attachments** tab.
3. Click **Add to** to display the **Add** panel in the **Files** section.

4. In the **Add** panel, click **Choose File** and then **Browse Teamcenter Share** to view the projects in Teamcenter Share.

5. Choose the Teamcenter Share project that contains the file you want to add.

   > Tip:
   >
   > You can also search for an Teamcenter Share project using the **Filter** box.

6. Select the file.

7. Click **Add**.

   For CAD files, such as NX and Solid Edge, the files are imported in the background. You receive an alert once the process is complete.

5. Follow an object of interest

When an object of interest is changed in the system, you can set Subscriptions so that you are notified of the change. You do this using the **Follow** command. An **Alerts** button on the global navigation bar notifies you when the subscription notifications are received.

Example:

The design engineer follows the gearmotor object and receives a notification in the following scenarios:

- The object itself is checked in, checked out, or canceled.
- The design of the gear motor item is modified or deleted.
- New *followers* are added to the design of the gearmotor.

6. View and manage assigned tasks

After a user responsible for a task (including the document owner and engineer) sends a document and the design of the component for review, a task is created and automatically assigned to the reviewer. As a reviewer, you can check your Inbox to view the task that is assigned to you and perform the following actions. You can:

- Approve, reject, or release a document or design.

- Provide suggestions and comments on the document or design.

7. Review documents and designs and provide suggestions

As a reviewer, you might receive customer requirements and other documents and designs related to the component manufacturing order for review and signoff. You can use markups to review and add comments to the documents.

Files can be marked up in various ways. You can highlight text, add freehand drawings, and use the predefined shapes.

8. Managing designs

Overview of managing component designs

The design lifecycle may begin with a customer need based on which you explore the existing designs and investigate how the existing design differs from the customer need. Subsequently, you update and review specifications, create or import component parts, and update the design, review it, and release the design.

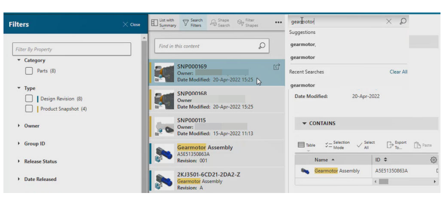
A sample process to help you manage component designs

1. **Explore existing designs based on customer needs using search and 3D viewer**

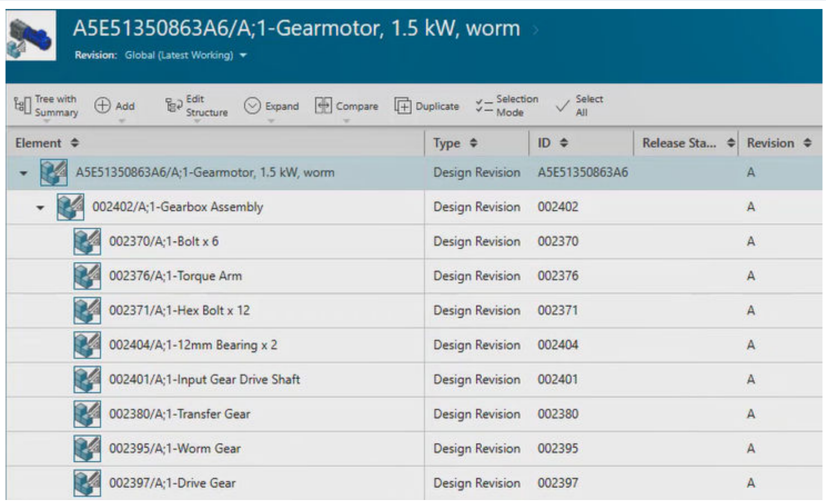
   In Teamcenter, component designs are organized using hierarchical structures also called bill of materials (BOM). If you do not have such a structure, you can import one from your **CAD tool** or **excel**.

   > Example:
   >
   > The customer needs a gearmotor with a worm gear and 1.5 kW of power. You search Teamcenter for gearmotors and select a gearmotor that matches the requirement.

Search



Bill-of-materials

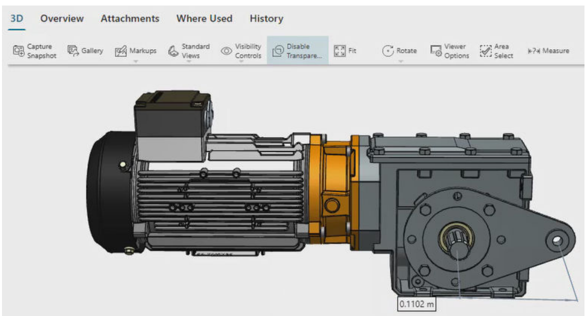


2. **Investigate how your current component design requirement differs from existing component designs**

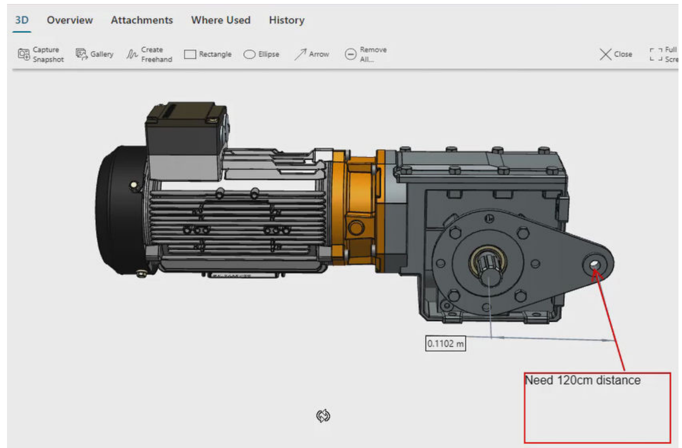
   Use the 3D visualization tools in Teamcenter to **view, mark up, measure, and send a snapshot of the component** for further analysis.

> Example:
>
> The customer specifications indicate that a distance of 120 cm must be maintained from the output shaft to the mounting hole in the torque arm. You perform this measurement in the 3D viewer.

Measure the design



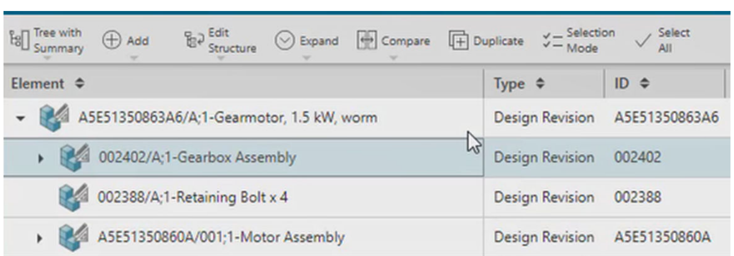
Mark up the design



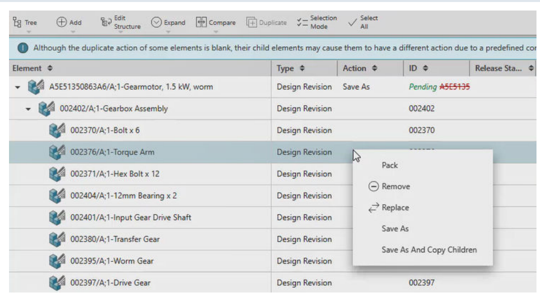
3. **Create a new component design**

   To start working on an updated design, you **duplicate the old component design** and add new parts to the component. You then open the component in a **CAD program** and create the new parts and update the design.

Duplicate the component design

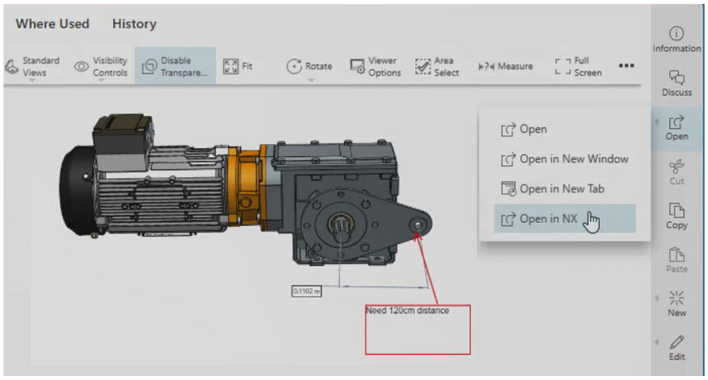
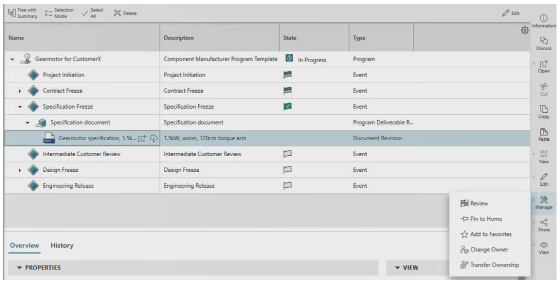


Add new parts



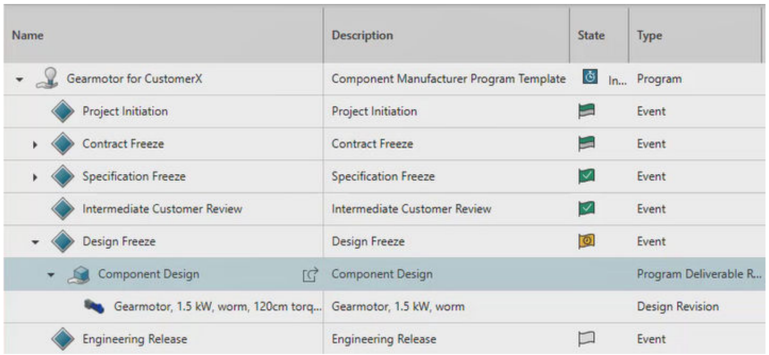
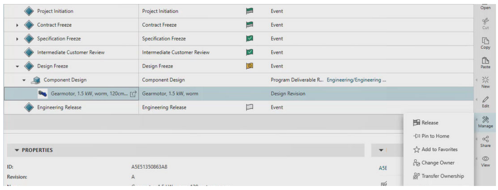
4. **Update and review specifications**

   You **open the data snapshot in a CAD tool** and try out the new design. Subsequently, you can update the component design specification document and **send it for review**.

Open the design in the CAD tool	Review the specification document
	

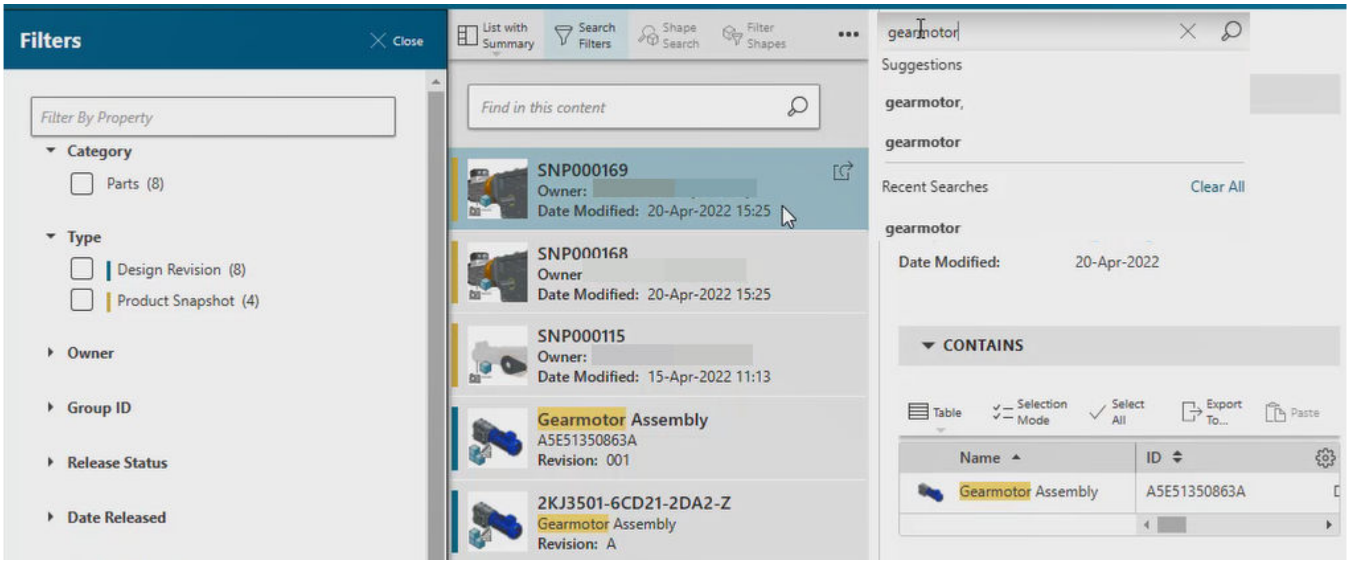
5. **Review the design**

   After the component design is updated, you add it to the relevant event in the program and **send it for review**. After the design is approved, it is released. With this, the previous version is locked, and a new version of the design is created.

Add design to program	Release design
	

Search for component designs

For more information about searching for component designs, see *Active Workspace Fundamentals* help.



Import a design structure from the CAD tool

Refer to the relevant CAD documentation about how you can import a design structure from your CAD tool to Teamcenter.

Import a design structure from Excel

You can import a structure by using an Excel file. The structure can include all reference properties with an LOV, such as unit of measure, owner, and group. You can import structures with the global revision rule and structures using different ID types that use a Multi-Field Key (MFK). You can import vendor-part data, multiple parts and assemblies, and multiple types of secondary objects.

To import a structure from Excel, you must prepare the Excel file in a specific way. See *Prepare the Excel file for importing a structure*.

Procedure

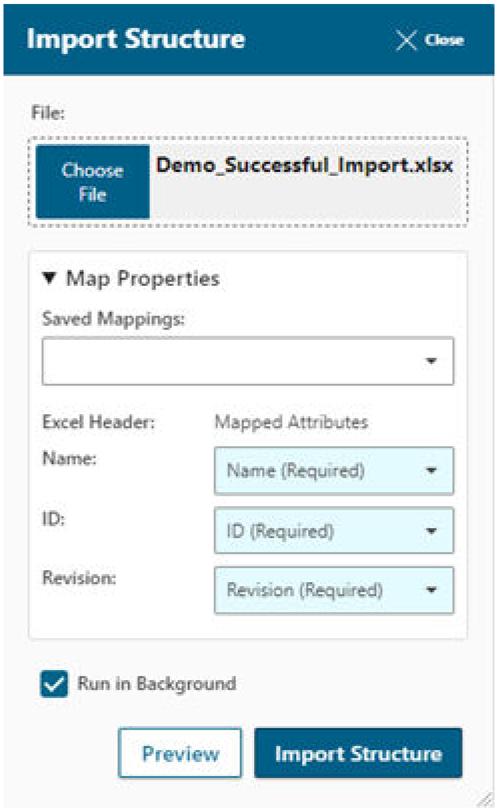
1. Navigate to the folder where you want to import the structure, and choose **More Commands** ••• > **Import/Export** > **Import Structure**.

2. In the **Import Structure** panel, select the Microsoft Excel file from which you want to import the structure by clicking **Choose File**.

3. Map the structure properties between Teamcenter and Excel.

   - Select the required mapping from the **Saved Mappings** list. The list shows the mappings created and saved by the administrator or previous users.

- Alternatively, create a new mapping by entering a name in the **Saved Mappings** field and selecting the **Mapped Attributes** for the **Excel Headers**. Even if an error occurs while importing a structure, the created mapping is saved. You need not select the mapped attributes again for the Excel headers.



- If a mapped attribute is not available for an Excel header:

  a. In the **Mapped Attributes** list for the corresponding Excel header, click **Add New** to create a new attribute.

  b. In **Add Properties**, select appropriate **Subtypes**, if you want to change the default one.

     The reference properties **Unit of Measure**, **Owner**, and **Group**, along with other properties, are listed in the **Add Properties** section.

  c. Filter and select the attribute that you want to map.

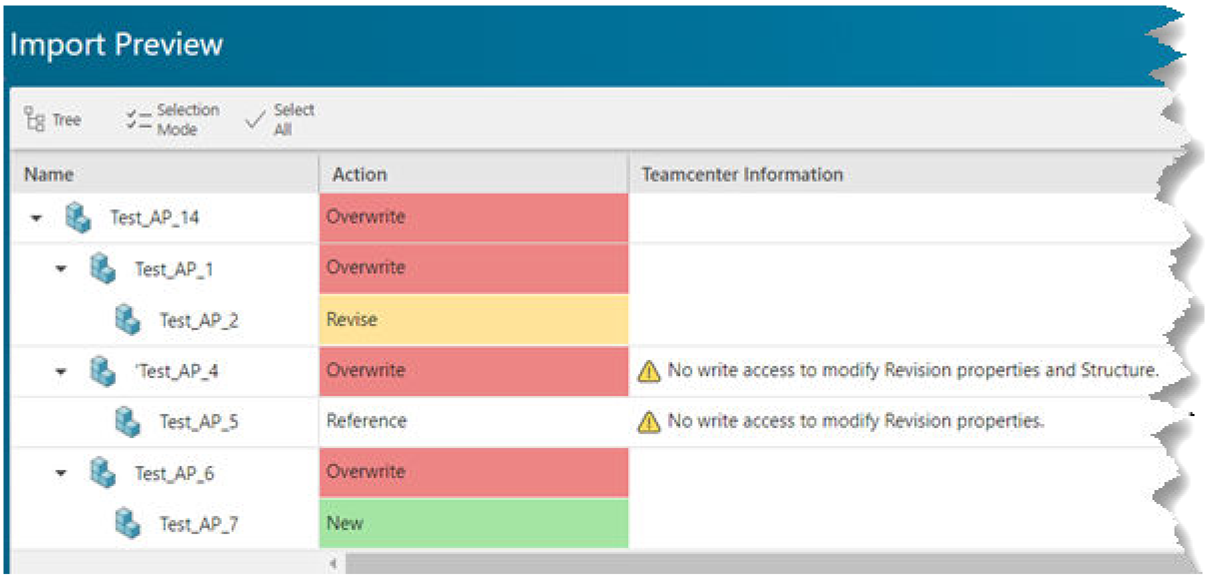
  d. Click **Add**.

  e. In the **Import Structure** panel, choose the newly added attribute.

4. (Optional) If you do not want to run the import process in the background, clear the **Run in Background** check box. The system notifies you about the result of the import process in the **Alerts** panel.

5. (Optional) Click **Preview** to check the structure before import.

   a. The preview shows the structure to be imported along with the **Action** that is performed by default. **Teamcenter Information** shows additional information related to an action.



Action	Description
New	A new item or occurrence is created.
Revise	A new revision of the item or occurrence is created.
Overwrite	The existing revision is overwritten with the updated information.
Reference	The existing revision is used as is. For example, if the revision is released, and some changes are made to the revision in the Excel file without revising the item, the action is set as **Reference**. This indicates that the changes will not be applied.

   b. You can change the action for **Revise** and **Overwrite**. To do so, right click an action and select:

   - **Revise**

     To create a new revision of the occurrence.

   - **Reference**

To reuse the existing revision in Teamcenter as is. The existing revision will not be updated with the latest information in the Excel file.

- **Overwrite**

  To update the existing revision in Teamcenter with the latest information from the source Excel file.

6. Click **Import Structure** to import the structure in Teamcenter.

   If there were no errors while importing the structure:

   The structure is imported in Teamcenter. When you import multiple elements or assemblies simultaneously, all the top-level elements and assemblies are added to the folder you specified previously. You receive a notification in the **Alerts** panel when the import is complete. Click **Alerts** to open the **Alerts** panel.

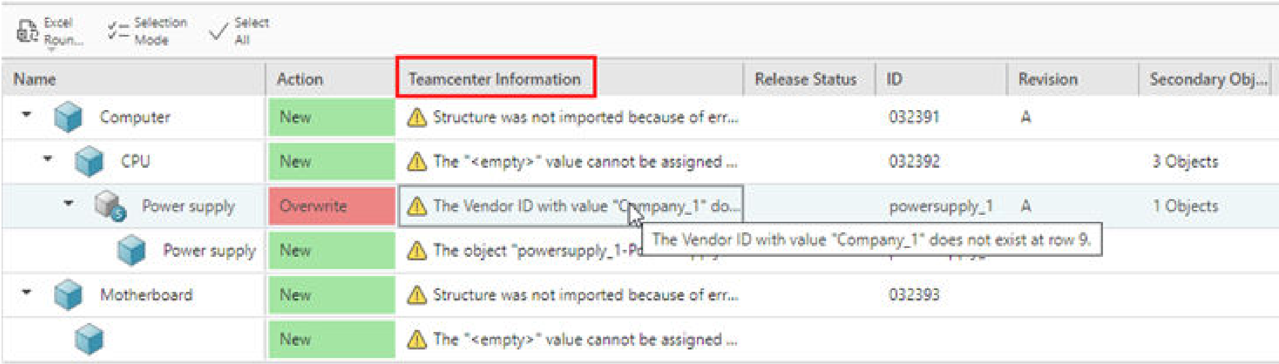
   The structure is imported using the global revision rule. The same revision rule is used while opening the structure after import.

   You can also import a structure with different ID types that use a multi-field key, that is, when you have two different items with the same ID. You can see the items on the **Import Preview** screen and import them successfully. The import structure functionality searches for and creates items based on the multi-field key.

   If there were errors while importing the structure:

   You receive an error message stating that the import failed because there were errors while importing the structure. You also receive a notification in the **Alerts** panel, where you can view the error details. Click **Alerts** to open the **Alerts** panel.

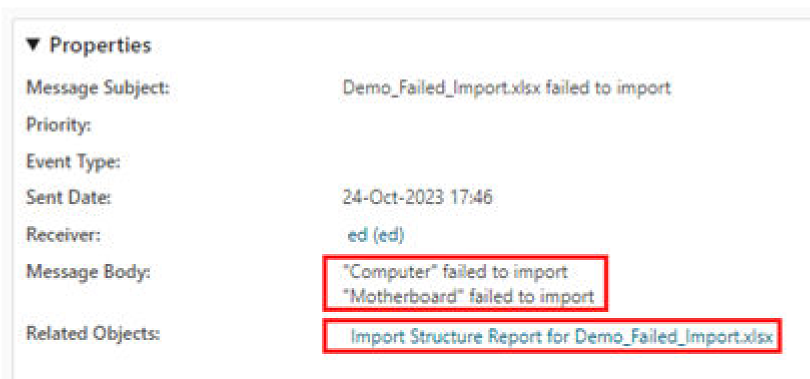
   In the **Teamcenter Information** section, you can view a list of all potential errors simultaneously. When you hover over an error, you can view detailed information about that error.



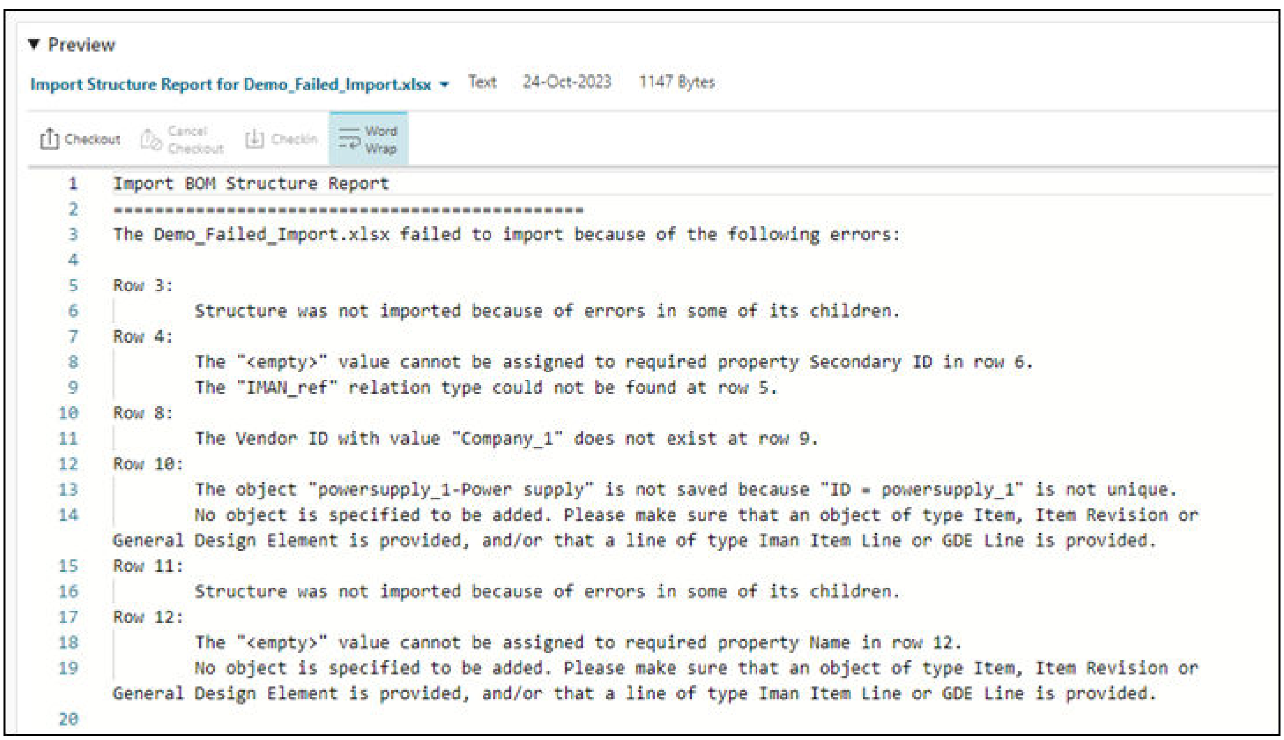
Tip:

At this stage, you need not restart the import process from the beginning. You can make the required corrections in the Excel file and then reupload it by clicking **Choose File** in the **Import Structure** panel. Once this is done, the saved mappings from the previous import are automatically selected and shown in the **Saved Mappings** list. Then, you can click **Import Structure** to proceed with the import.

When you click the link in the **Alerts** panel, you can view the information about the structures that could not be imported and the related objects.



When you click the **Related Objects** link, you receive a detailed report of the errors.




```
Import BOM Structure Report
================================================
The Demo_Failed_Import.xlsx failed to import because of the following errors:

Row 3:
        Structure was not imported because of errors in some of its children.
Row 4:
        The "<empty>" value cannot be assigned to required property Secondary ID in row 6.
        The "IMAN_ref" relation type could not be found at row 5.
Row 8:
        The Vendor ID with value "Company_1" does not exist at row 9.
Row 10:
        The object "powersupply_1-Power supply" is not saved because "ID = powersupply_1" is not unique.
        No object is specified to be added. Please make sure that an object of type Item, Item Revision or
General Design Element is provided, and/or that a line of type Iman Item Line or GDE Line is provided.
Row 11:
        Structure was not imported because of errors in some of its children.
Row 12:
        The "<empty>" value cannot be assigned to required property Name in row 12.
        No object is specified to be added. Please make sure that an object of type Item, Item Revision or
General Design Element is provided, and/or that a line of type Iman Item Line or GDE Line is provided.
```

Visualize structures and 3D product data

Using Teamcenter, you can explore 3D data (JT) associated with component parts and assemblies. You can manipulate views, query and measure parts and features, view part-level and assembly-level product and manufacturing information (PMI), and create 3D sections using your data.

You can also capture and mark up 2D images of your 3D data to support collaborative workflows such as change requests.

> Note:
>
> Some features might not be available depending on your license. You can contact customer support to learn more about your current license or to upgrade to a different license.

In PLM for Component Manufacturers, you can perform various tasks when visualizing your structures with Teamcenter. You can:

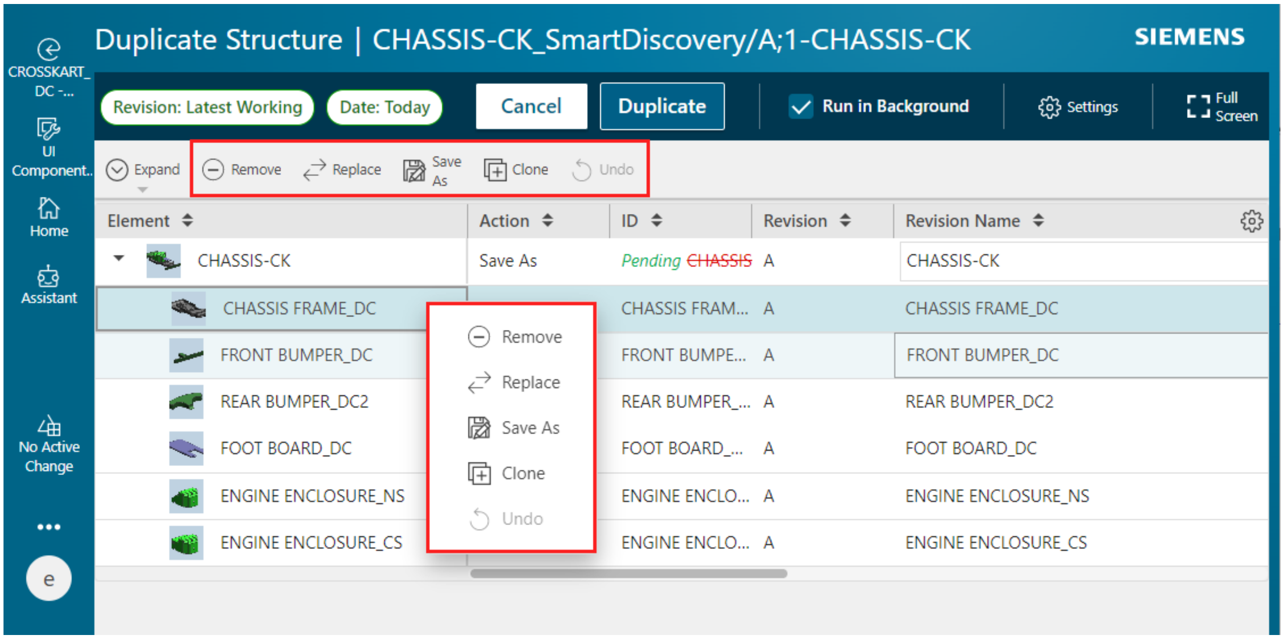
- Open a 3D model to explore the 3D data associated with the component part and design.
- Add markups to 3D data for communicating ideas and suggestions. You can either create freehand markups or add markups using predefined shapes.
- Select components and adjust the visibility of the components to explore its different parts.
- Measure the distance between parts of a component in the 3D tab to understand the dimensions.
- Get the geometric part data in 3D models.
- Capture a snapshot of the current 3D view.

Duplicate a structure

You can create a new structure by duplicating an existing structure. You can also duplicate structures that you do not own. When you duplicate a structure that you do not own, you become the owner of the new structure.

To duplicate a structure:

1. Select the top line or an assembly in the structure that you want to duplicate.
2. Click **Duplicate**.
3. Right-click each element and select one of the following actions. You can also select these actions from the work area toolbar.



Action	Description
Remove	The element is not included in the new structure.
Replace	The element is replaced with the replacement element that you specified in the **Replace** panel.
Save As	A copy of the element is added to the new structure. You own this new element. If the element is a structure, all its child elements are only referenced in the new structure. These are still owned by the user who created the source structure. You can edit the **Revision Name** and **Description** of the element.
Clone	A copy of the element is added to the new structure. You own this new element. If the element is a structure, copies of its child elements are used in the new structure. You can edit the **Revision Name** and **Description** of each element.

Note:

If any child element is a structure, all its children are also marked with the same action. However, if you change the action of one of its child elements later, the action of the parent element changes accordingly.

If you do not select an action, and the **Action** column is blank, the element is only referenced in the new structure. The element continues to be owned by the user who created the source structure.

4. To undo an action set on an element, select the element, and click **Undo**.

5. (Optional) To define a specific naming pattern for the duplicated elements:

   a. Click **Settings**.

   b. In the **Settings** panel, click **ID Naming Rule** and enter the following details:

ID naming rule	Description
Prefix	The text is prefixed at the start of the existing IDs.
Suffix	The text is appended at the end of the existing IDs.
Replace/With	The text specified in **Replace** is replaced with the text specified in **With**. The text specified in **Replace** must be text that is part of the existing ID, and it is case-sensitive.

   c. Click **Close**.

6. To run the duplicate process in the background or foreground, select or clear the **Run in Background** check box. If you choose to run the duplicate process in the background, you receive a notification in **Alerts** once the structure is duplicated.

7. To create the new structure, click **Duplicate**.

Attach a document to a design

You can attach a document such as a specification document to a design so that all design related information are in one place.

Procedure

1. Open the design and click the **Attachments** tab.

2. In the **Documents** section, click **Add to** to display the **Add** task pane.

3. In the **Add** pane, choose the objects you want to add by doing one of the following.

   - Click **Search**.

     The search only returns results that you can relate to the displayed item. You can also filter search results in the task panel.

   - Click **Palette** to select from the **Favorites**, **Recent**, or **Clipboard** sections.

The **Clipboard** section displays objects previously copied to the paste buffer using **Copy**. These are preselected at this point. Otherwise, select the desired objects.

- Click **New** to create a new object:

  a. Select the type of object you want to create either from the list of recently used object types or from the full list of available object types. You can also refine the results using **Filter**.

  b. Enter the properties for the new object.

4. Click **Add**.

Send a document for review

In Teamcenter, you can send a document for review and approval through a workflow. To do this, you must assign a workflow and a reviewer for the document. After the reviewer reviews and approves the document, it is released and its current revision is no longer editable.

Procedure

1. Click the **Programs** tile and then click **My Programs**.

2. Select a program and click **Open**.

   The program opens in a table and all its events are displayed.

3. Expand a program deliverable that contains a document and then select the document that you want to send for review.

4. Click **More Commands** ••• > **Manage** > **Submit for Review**.

5. Click **Submit** when the confirmation message is displayed

   The review workflow is assigned to the document.

6. If you are the owner of the document, perform the following steps to assign a reviewer.

   a. In the global navigation, click **Inbox** and then click **Assign Reviewers** task.

   b. In the **REVIEWERS** section of the **Overview** tab, click **Add**.

   c. In the **Add** panel, select a user and click **Add**.

d. Specify the participation of the reviewer in the **MINIMUM PARTICIPATION** section of the **Overview** tab and click **Complete**.

   The document appears in the inbox of the reviewer.

Open a component in a CAD tool

You can open a component design in a CAD tool such as NX from Teamcenter.

Prerequisites

Ensure that you have the required licenses for the CAD tool and the CAD tool integration with Teamcenter.

Procedure

1. Select the component and choose **Open** and then select your CAD tool.

   Example:

   To open a component in NX, choose **Open** > **Open in NX**.

Release the design of the component

After the design of the component is finalized considering the specifications and the customer order, you must release the design in Teamcenter so that it is available for others to use.

Procedure

1. Click the **Programs** tile and then click **My Programs**.

2. Select a program and click **Open**.

   The program opens in a table and all its events are displayed.

3. Expand a program deliverable that contains the design and then select the design revision that you want to release.

   Example:

   Expand **Design Freeze** that contains component design.

4. Click **More Commands** > **Manage** > **Submit for Release**.

5. When the confirmation message is displayed, click **Submit**.

6. If you are the owner of the design, perform the following steps to release a design.

    a. In the global navigation, click **Inbox** and then click the **Assign Reviewers** task.

    b. In the **REVIEWERS** section of the **Overview** tab, click **Add** ⊕.

    c. In the **Add** panel, select a user and click **Add**.

    d. Specify the participation of the reviewer in the **MINIMUM PARTICIPATION** section of the **Overview** tab, and click **Complete**.

    The design appears in the inbox of the reviewer and is sent for review and approval through a workflow. After the design is approved, the current revision of the design is released.

Export a design structure

You can export a design structure in the following ways:

- PLM XML
- Briefcase files
- NX
- Excel

Export and modify a design structure to Excel

You can export designs to Excel, make changes to the design structure, and then import it back to Teamcenter.

Procedure

1. Select the design structure to be exported and click **Excel Round-trip** > **Export to Excel**.

2. (Optional) In the **Settings** section, select any of the following check boxes:

    - **Allow Structure Changes in Excel**: Selecting this option, allows external users to modify the structure in Excel.

    - **Include ID as Hyperlink**: The **Object ID** column, and the link, to the object are exported to Excel. You can click the link and open the object in Teamcenter.

    - **Include Outline Numbers**: The numbers denoting the hierarchy are exported to Excel.

3. From the **Template** list in the **Properties** section, select a template or select **Custom**.

   - If you select **Template**, you can export the design structure into a specified template format. You must select a template from the list.

     If a template is not available, contact your administrator.

   - If you select **Custom**, you can select the properties that are exported to the Excel spreadsheet.

     To add properties, click ⊕ and select the properties you want to add to the export.

     To remove a property, highlight the property and click **Delete**.

     You can also choose to move a property up or down the list.

4. (Optional) Select the **Run in Background** check box. If you select this option, you receive an alert when the export process is complete.

5. Click **Export**.

   The export process begins, and a progress bar indicates that the process is still running.

6. Open the exported spreadsheet and make any edits to the properties listed, and save the spreadsheet.

   Note:

   If no objects match the criteria in the Excel template, a blank Excel sheet appears.

   Caution:

   Do not alter these columns in the Excel sheet: **TC_ObjectType**, **TC_ObjectID**, and **ID**. One exception to altering **TC_ObjectType** is creating a new object in the structure.

7. (Optional) To create a new object in the structure:

   a. Open the spreadsheet and insert a new row using the Excel insert feature.

   b. Indicate the object type to be created in the **TC_ObjectType** column, ensuring that the **TC_ObjectID** column is left blank.

   c. (Optional) To adjust the parent or outline level, use the Excel grouping feature.

   d. Save the changes to the Excel file.

9. Creating and managing programs

Overview of programs

You use a program to coordinate and track the work activities of multiple functional teams in a PLM environment. A program helps you gain enterprise-wide visibility and insights into the top-level projects and their major events. A program helps all stakeholders (including project managers, engineering managers, and designers) plan and coordinate work.

> Note:
>
> Some features of Program Management might not be available depending on your license agreement. You can contact customer support to learn more about your current license or to upgrade to a license that contains more features.

The elements of a program in Teamcenter

Many elements make up a program in the PLM for Component Manufacturers solution. Depending on the order and the requirements for the new components, some programs may include all of these elements, while others may only contain a few elements.

The program elements in Teamcenter are as follows.

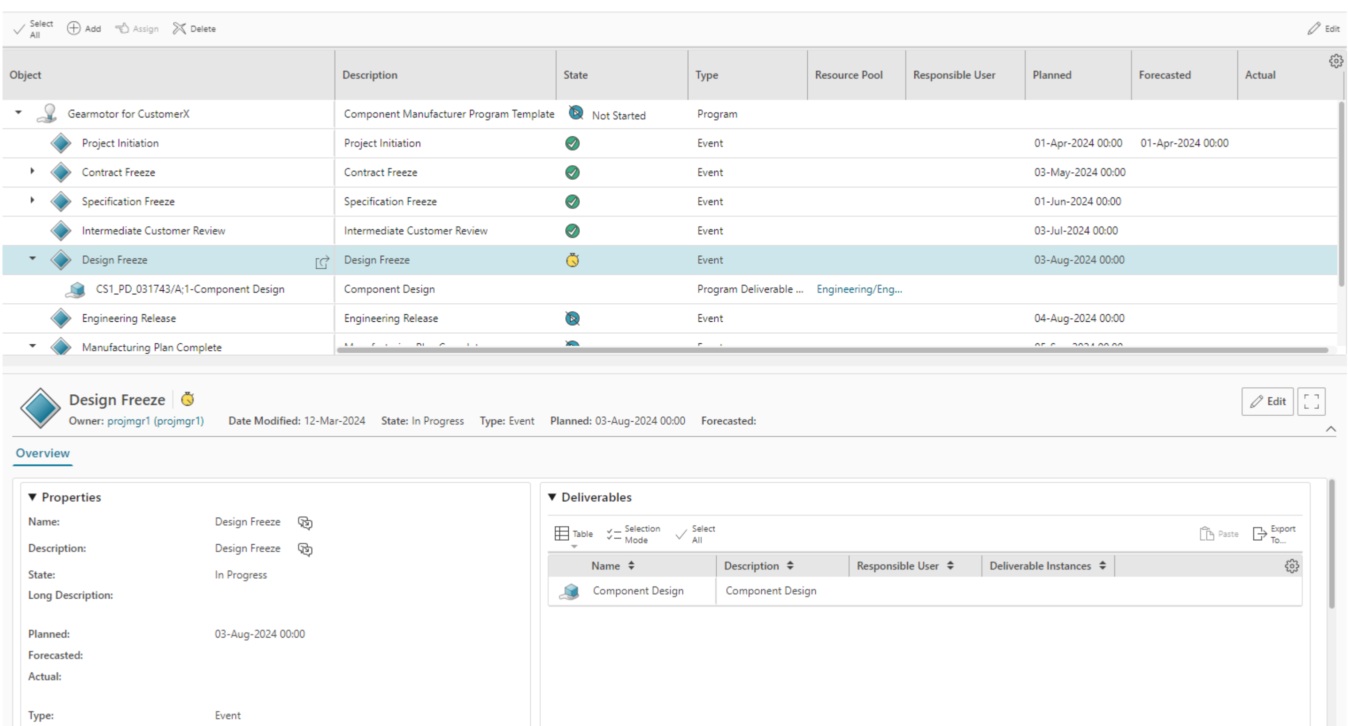
Program element	Definition
Event	This is a significant milestone for the program. Project initiation, contract freeze, specification freeze, design freeze, engineering release, manufacturing plan complete, or manufacturing release are examples of events in a program.
Program deliverable	This refers to work that must be completed for an event. For example, **Contract document** is a program deliverable for the **Contract Freeze** event. You can assign the program deliverable to a user so that the user can work on it. In Teamcenter, a program deliverable acts like a container and holds a document or design inside it.
Program deliverable instance	This is the actual product, such as a design or document, that needs to be completed for the event. For example, the specification document of the gearmotor is a program deliverable instance for the **Specification Freeze** event.
Responsible user	This is the user who is assigned to work on the program deliverable.
State	As work on the program and its events progresses, the project manager can update their states for tracking purposes. Programs and events use the same default values for their states. They are as follows:

Program element	Definition
	• **Not Started**. The program or event is created but work has not yet started and it is not in progress. • **In Progress**. The program or event is in progress and is actively being worked on by the team. • **Complete**. The program or event is complete and is no longer being worked on, but it has yet to be released to the customer. • **Closed**. All work on the program or event is complete, and the project is released (to the customer).

After a program is created, a project manager continuously monitors it, updates the event details, and modifies the program properties. After a program is created, you can view its details including its events, attachments, deliverables, and problem reports.

The Component Manufacturers program template

The PLM for Component Manufacturers solution has a preconfigured program template that you can use to create a program for the new component manufacturing order. This template includes a program with some sample events that are common in the component manufacturing industry. You can use this template as it is or modify it to create and manage a program for a customer order.



Create a program

As a project manager, you can create a new program for a component manufacturing order. You can create a program either from scratch or by using the provided template.

Procedure

1. Click the **Programs** tile and then click **My Programs**.
2. Click **More Commands** ••• > **New** > **Add Program** .
3. In the **Add Program** panel, the **Component Manufacturer Program Template** option in the **Template** list is selected by default. If you want to create a program from scratch, keep the **Template** list blank.
4. Enter a name and description for the program.
5. (Optional) In the **Prime Event Date** field, select a date for the program.

   When you set the prime event date for the new program, all the event dates are automatically adjusted.
6. (Optional) Click the **Open on Create** check box to open the program when it is created in the system.
7. Click **Add**.

Add an event to the program

You can add an event to every program that you create. Events represent milestones in the life cycle of the program. An event can be added for design or manufacturing or for any custom activity such as seeking executive approval, performing contract signoff, or starting regular production.

Procedure

1. Click the **Programs** tile and then click **My Programs**.
2. Select a program and click **Open** .

   The program opens in a table and displays all its events.
3. Select the topmost row, and click **Add** .
4. In the **Add Event** panel, select an event type.

> Example:
>
> Select **Design Event** for adding an event to create the design of a component.

5. Enter the details for the event in the required fields, including **Event ID**, **Name**, **State**, and **Planned**.

6. Click **Add**.

   The event is added to the program.

Edit the event information

As a project manager, you might need to update the event properties to reflect the current event state.

Procedure

1. Open the program that contains the event that needs editing and then select the event.

2. Click **More Commands** ••• > **Edit** > **Summary** .

3. Edit the event properties.

4. On the primary toolbar, click **Edit** > **Save Edits** .

> Tip:
>
> You can also edit an event directly from the program timeline by first selecting the event. Next, from the primary toolbar, click **Information** to open the **Information** panel for the event. From this panel, you can click **Edit** to edit the event properties.
>
> Alternatively, select an event and then from the work area toolbar, and click **Edit** . The rows of the program become available for editing. After you finish editing, click **Save Edits** .

Delete an event

Delete an event that is not required anymore.

Procedure

1. Click the **Programs** tile and then click **My Programs**.

2. Select a program and click **Open** .

The program opens in a table and displays all its events.

3. Select the event that you want to delete, and click **Delete**.

   A confirmation message appears.

4. If the status of the event is anything other than **Not Started**, click **Yes** to delete the event. If the status of the event is **Not Started**, click **Delete** to delete the event.

Modify the program properties

As work proceeds on a program, the project manager often manually updates the program properties of the program to reflect the current state.

Procedure

1. Search for and open the program.

2. Click **More Commands** > **Edit** > **Summary**.

3. Edit the program's properties.

4. On the primary toolbar, click **Edit** > **Save Edits**.

> Tip:
>
> You can also edit some program properties directly from the program timeline by first selecting the program. Next, from the primary toolbar, click **Information** to open the **Information** panel for the program. From this panel, you can click **Edit** to edit some program properties.

Assign work to a user

After a program is created and a deliverable is associated with it, you must assign a user to complete work on the deliverable.

Procedure

1. Click **Programs** tile and then click **My Programs**.

2. Select a program and click **Open** > **Open**.

   The program opens in a table and all its events are displayed.

3. Expand an event and then select the deliverable.

4. Click **Assign**.

5. In the **Assign Resource** panel, select a user.

   The panel defaults to the group and role defined in the **Resource Pool** property for the program deliverable.

6. Click **Assign**.

   The work is assigned to the user for completion.

Add a design or document to the program deliverable

In a program, an event contains a program deliverable. The program deliverable is a container to which you add the actual design or document. The document can be a contract document or a specification document for the component. For example, you attach a document that contains all the requirements for the gearmotor to the **Specification document** program deliverable.

Procedure

1. Search for and open your program.

2. Select or expand an event where you want to attach the document.

3. In the **DELIVERABLES** section, click **Add to**.

4. In the **Add** panel that opens, in the **OTHER** section, select **Program Deliverable**.

5. Enter the program deliverable properties and then click **Add**.

   The program deliverable is added to the event.

6. Select the program deliverable and then click **Open** > **Open**.

7. In the **Deliverables** section, click **Add**.

8. In the **Add** panel, perform one of the following tasks:

   - If the document already exists, click the **Search** tab, enter the name of the document, and then select it from the list.

   - If the document already exists, click **Palette** and then select the required document from **Clipboard**, **Favorites**, or **Recent** items.

   - To attach the document, select the type of the document from the **OTHER** section of the panel. Enter the properties. Required fields are marked with an asterisk.

- To attach the document that is available in the Teamcenter Share, click **Select from Xcelerator Share** and then choose a file.

- To attach the document that is present on your system, click **Choose File from System** and then choose a file.

> Note:
>
> If you want to add a component design, in the **TYPE** list of the **Add** panel, select **Design**. If you want to add a document, in the **TYPE** list of the **Add** panel, select **Document**.

9. Click **Add**.

   After a document or design is attached to the event, you can perform the following tasks:

   - **Send the document for review**.

   - **Release the design of the component**.

Send a document for review

In Teamcenter, you can send a document for review and approval through a workflow. To do this, you must assign a workflow and a reviewer for the document. After the reviewer reviews and approves the document, it is released and its current revision is no longer editable.

Procedure

1. Click the **Programs** tile and then click **My Programs**.

2. Select a program and click **Open**.

   The program opens in a table and all its events are displayed.

3. Expand a program deliverable that contains a document and then select the document that you want to send for review.

4. Click **More Commands** ••• > **Manage** > **Submit for Review**.

5. Click **Submit** when the confirmation message is displayed

   The review workflow is assigned to the document.

6. If you are the owner of the document, perform the following steps to assign a reviewer.

   a. In the global navigation, click **Inbox** and then click **Assign Reviewers** task.

b. In the **REVIEWERS** section of the **Overview** tab, click **Add** ⊕.

c. In the **Add** panel, select a user and click **Add**.

d. Specify the participation of the reviewer in the **MINIMUM PARTICIPATION** section of the **Overview** tab and click **Complete**.

   The document appears in the inbox of the reviewer.

Review documents and designs and provide suggestions

As a reviewer, you might receive customer requirements and other documents and designs related to the component manufacturing order for review and signoff. You can use markups to review and add comments to the documents.

Files can be marked up in various ways. You can highlight text, add freehand drawings, and use the predefined shapes.

Release the design of the component

After the design of the component is finalized considering the specifications and the customer order, you must release the design in Teamcenter so that it is available for others to use.

Procedure

1. Click the **Programs** tile and then click **My Programs**.

2. Select a program and click **Open**.

   The program opens in a table and all its events are displayed.

3. Expand a program deliverable that contains the design and then select the design revision that you want to release.

   Example:

   Expand **Design Freeze** that contains component design.

4. Click **More Commands** ••• > **Manage** > **Submit for Release**.

5. When the confirmation message is displayed, click **Submit**.

6. If you are the owner of the design, perform the following steps to release a design.

   a. In the global navigation, click **Inbox** and then click the **Assign Reviewers** task.

b. In the **REVIEWERS** section of the **Overview** tab, click **Add** ⊕.

c. In the **Add** panel, select a user and click **Add**.

d. Specify the participation of the reviewer in the **MINIMUM PARTICIPATION** section of the **Overview** tab, and click **Complete**.

   The design appears in the inbox of the reviewer and is sent for review and approval through a workflow. After the design is approved, the current revision of the design is released.

Create a task

You can create and assign the tasks specified for your business process in Teamcenter. For example, as a program manager, you might want a designer to collaborate with the manufacturing engineer and understand the challenges in manufacturing a component. In such a case, you can create and assign the task to the designer. After the task is created, it appears in the **Inbox** of the assignee.

Procedure

1. Click the **Programs** tile.

   The **My Dashboard** tab appears.

2. Click **Create Task**.

3. In the **Create Task** panel, enter the following information:

   - Topic and description for the task.
   - Priority level such as low, medium, high, and urgent.
   - The name of the person whom you want to assign the task to.

4. Click **Create**.

   The task is created and appears in the **Inbox** of the assignee.

Use projects to organize your data and control access

You can use a project to organize your data and control access to a collection of related data, which may be accessible to multiple organizations. These organizations can include project teams, development teams, suppliers, and customers. You can use the **PROJECTS** tile on your home page to access your programs and projects. If you are a privileged team member, you can manage your programs and projects by assigning or removing objects from them. If you are a project administrator, you can create and modify projects and programs and manage your team members.

10. Create and manage manufacturing tasks using Work Packages and Teamcenter Easy Plan

As a manufacturing planner, you can plan and create work instructions for the shop floor for the component manufacturing order. You can also plan the manufacturing process considering the MBOM structure, and then create and manage the work instructions accordingly.

> Note:
>
> Work packages, a feature of Easy Plan, might not be available depending on your license agreement. You can contact customer support to learn more about your current license or to upgrade to a license that contains more features.

In PLM for Component Manufacturers, you can:

- Create a work package.
- Search for and open an existing work package.
- Add an existing structure of the component to the work package.

To understand more about Teamcenter Easy Plan, see *Teamcenter Easy Plan Overview*.

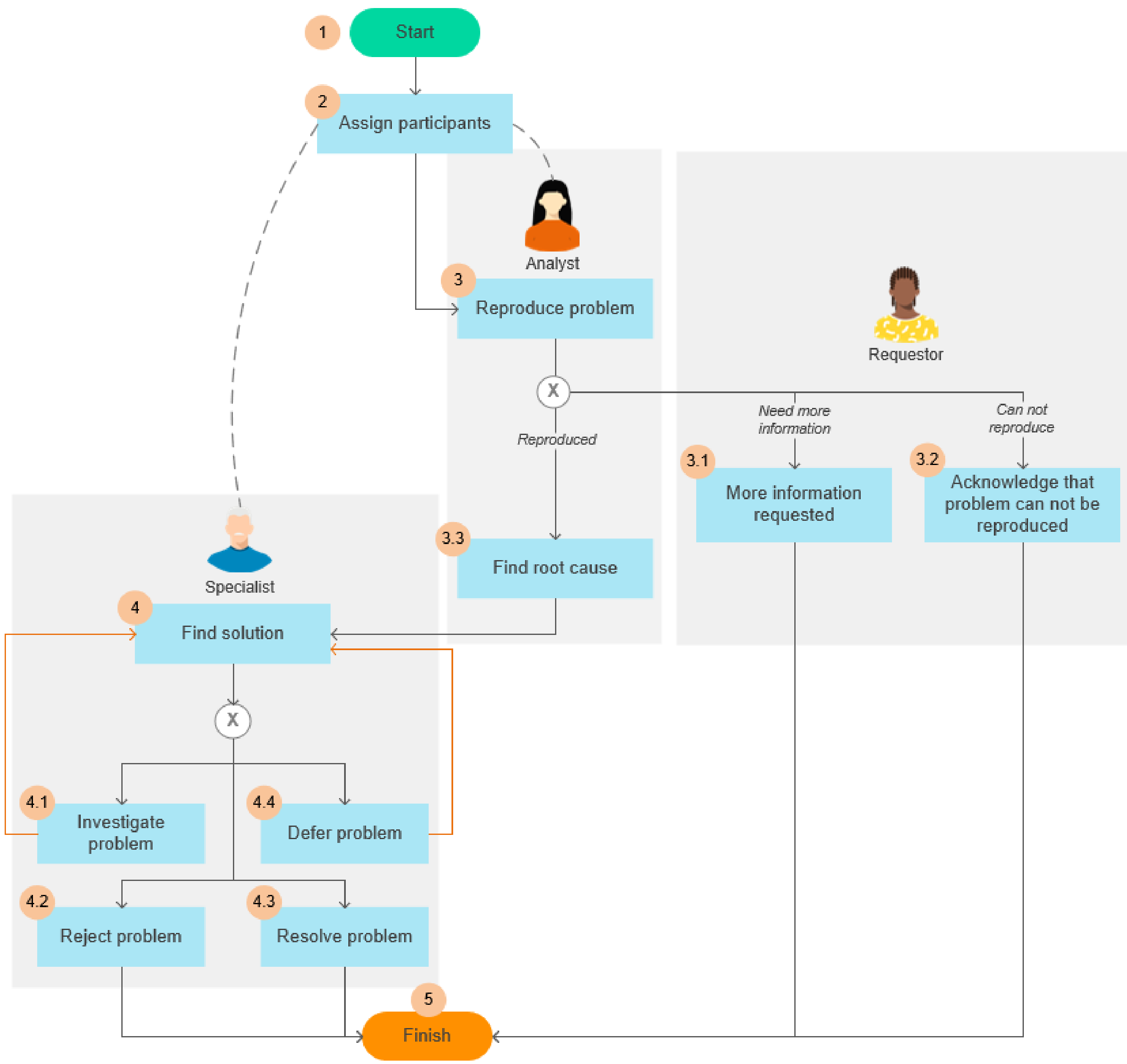
11. Managing issues in your component designs

How to address issues in your components

If you encounter an issue with your component, you can address the issue in Teamcenter by creating a problem report.

These issues are resolved using workflows (automated processes).

For example, the following workflow shows how a problem report can be resolved. The workflow consists of start-end states and tasks such as assigning participants, analyzing the root cause, and finding a solution.



The workflow requires that you:

- Assign users to the following roles.
  - Requestor: The user who creates the problem report is automatically assigned this role.
  - Specialist: The user assigned to this role analyzes the issue and finds the root cause.
  - Analyst: The user assigned to this role finds the solution and fixes the issue.
- Perform tasks related to resolving the issue such as:

- Reproduce the issue and find the root cause.
- Find a solution to the issue.

When you send a problem report for resolution (using a workflow), the problem report goes through various states depending on where it is in the resolution process.

Report and resolve issues

You can report and resolve an issue with your components by creating a problem report.

Procedure

1. In the program or in a design, select the component that has a problem and click **More Commands** ••• > **New** > **Problem Report**.

2. Add the required information and click **Create** to only create the problem report or click **Create and Submit** to create the problem report and send it for resolution.

3. In step 2, depending on whether you have clicked the **Create** button or the **Create and Submit** button, you can do the following:

   - In step 2, if you have clicked the **Create** button, only the problem report is created.

     To send it for resolution, open the problem report and click **Manage** > **Review**.

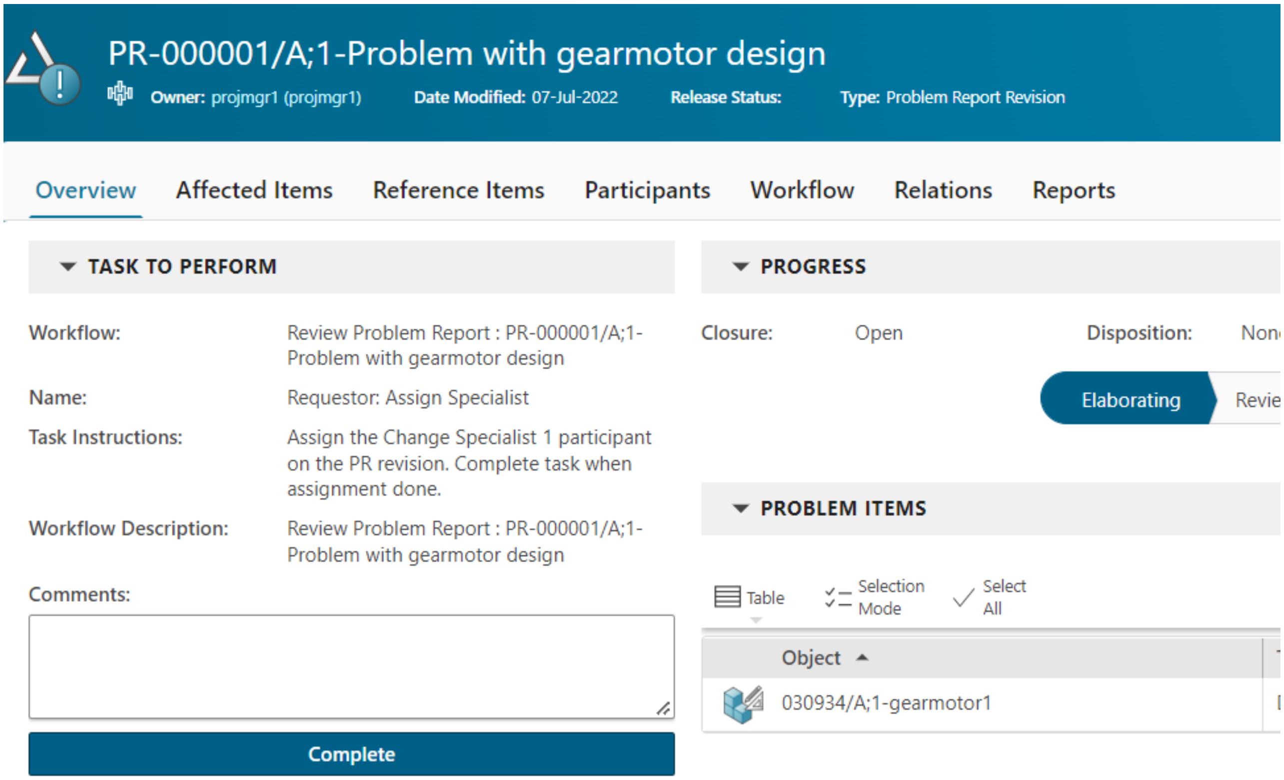
   - In step 2, if you have clicked the **Create and Submit** button, the problem report is sent for resolution using a workflow.

     See the next steps for more information about how to resolve the problem using the workflow.

4. Open the problem report.

   If the problem report is not open, you can open it from the dashboard.

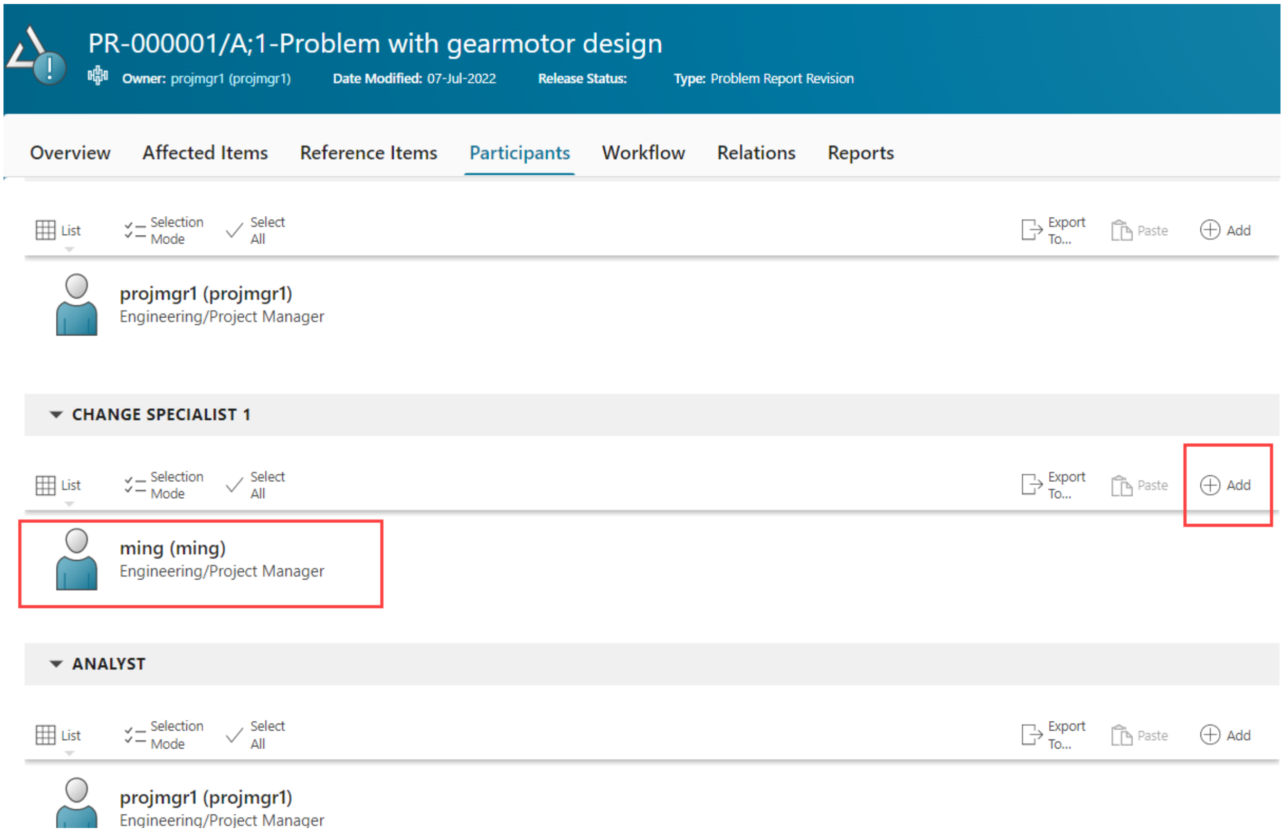
   Once you open the problem report, the **Overview** tab shows the tasks that you must perform.



In the default workflow, you must perform the following tasks:

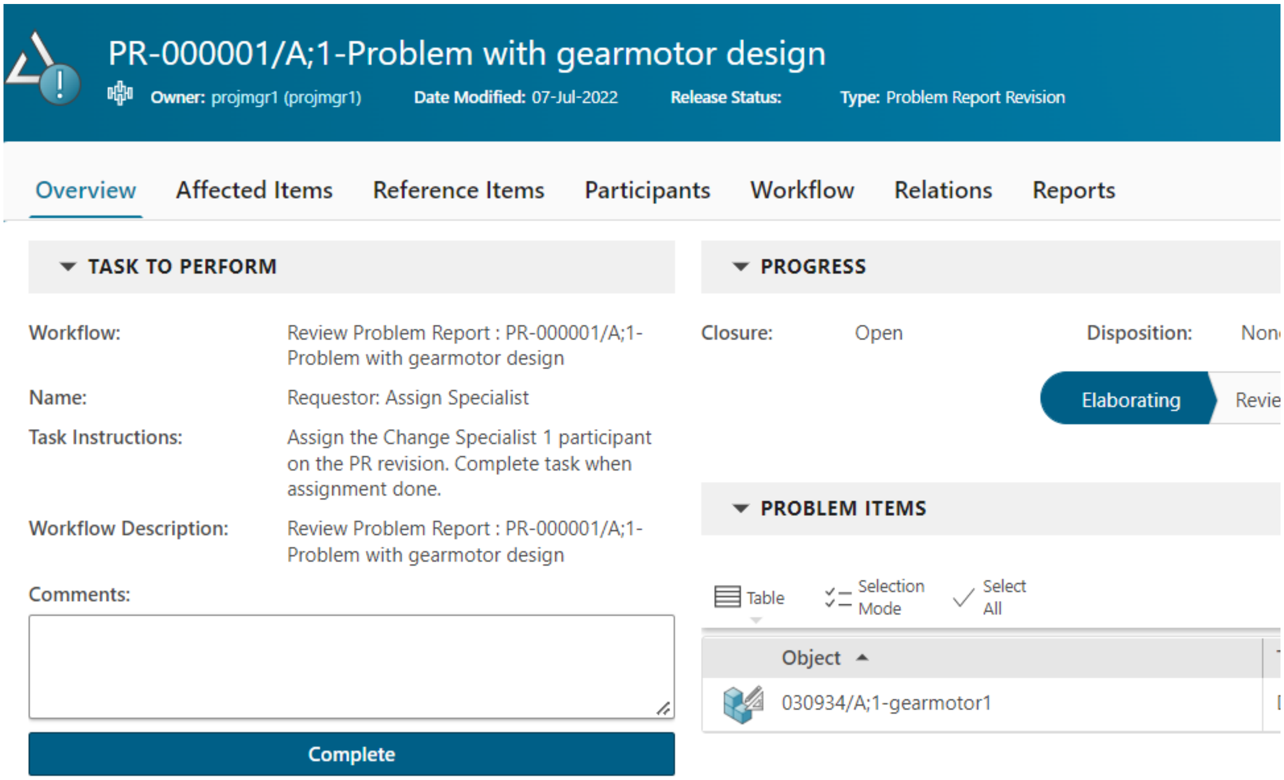
- Assign users.
- Perform tasks related to resolving the issue.
    - Reproduce the issue and find the root cause.
    - Find a solution to the issue.

5. Assign users by going to the **Participants** tab and adding users.



After assigning users, if required, you can reassign the users.

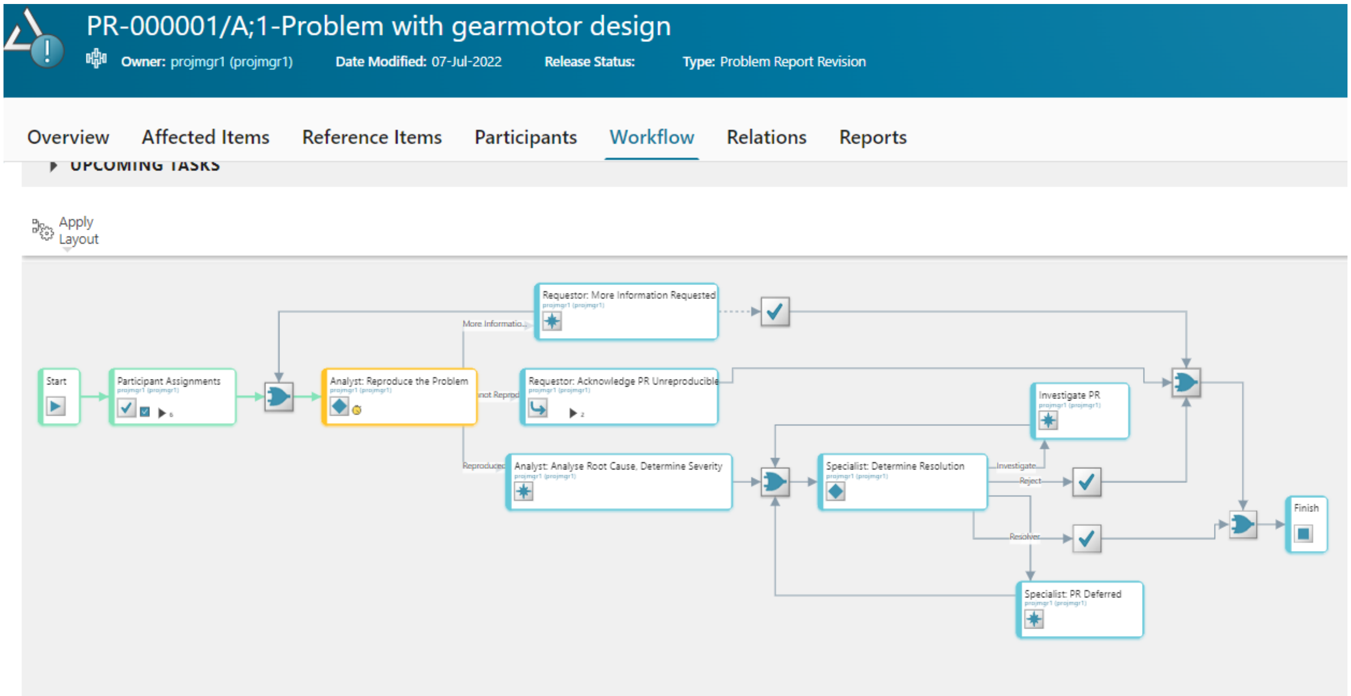
6. Go to the **Overview** tab or the **Workflow** tab and click **Complete** to complete the task.



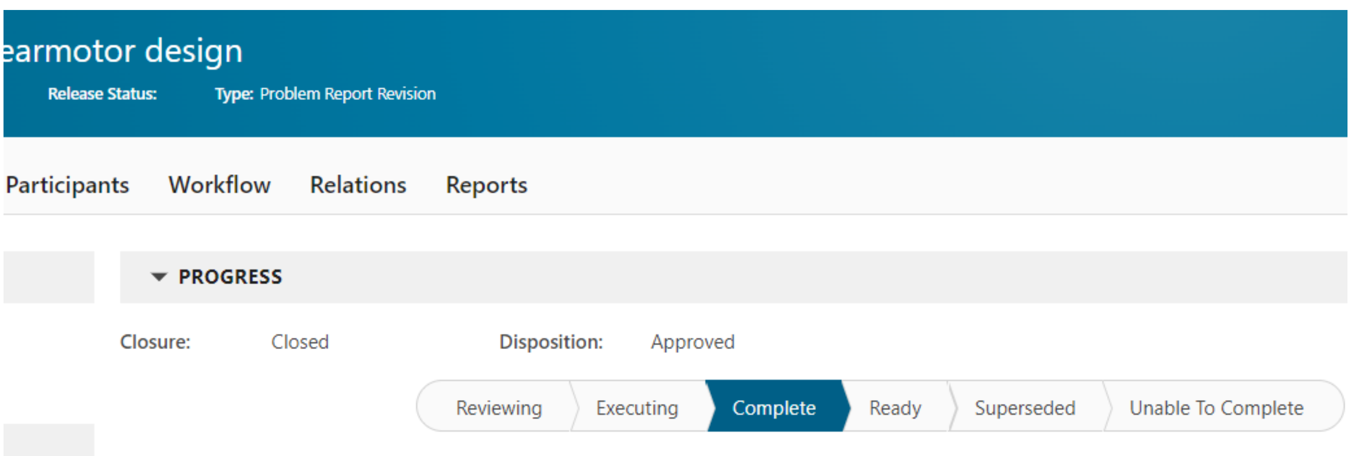
The problem report is created.

The assigned users will log on to Teamcenter, open the problem report, and complete their tasks.

You can also view the tasks in the **Workflow** tab.



Once all the tasks are complete, depending on how you have handled the issue (investigated, rejected, or resolved), the problem report is marked as resolved and shows the appropriate state in the **Progress** section of the **Overview** tab.



What are the states of a problem report?

A problem report has three key states that capture where in the process it is and what decisions about the problem report have been made.

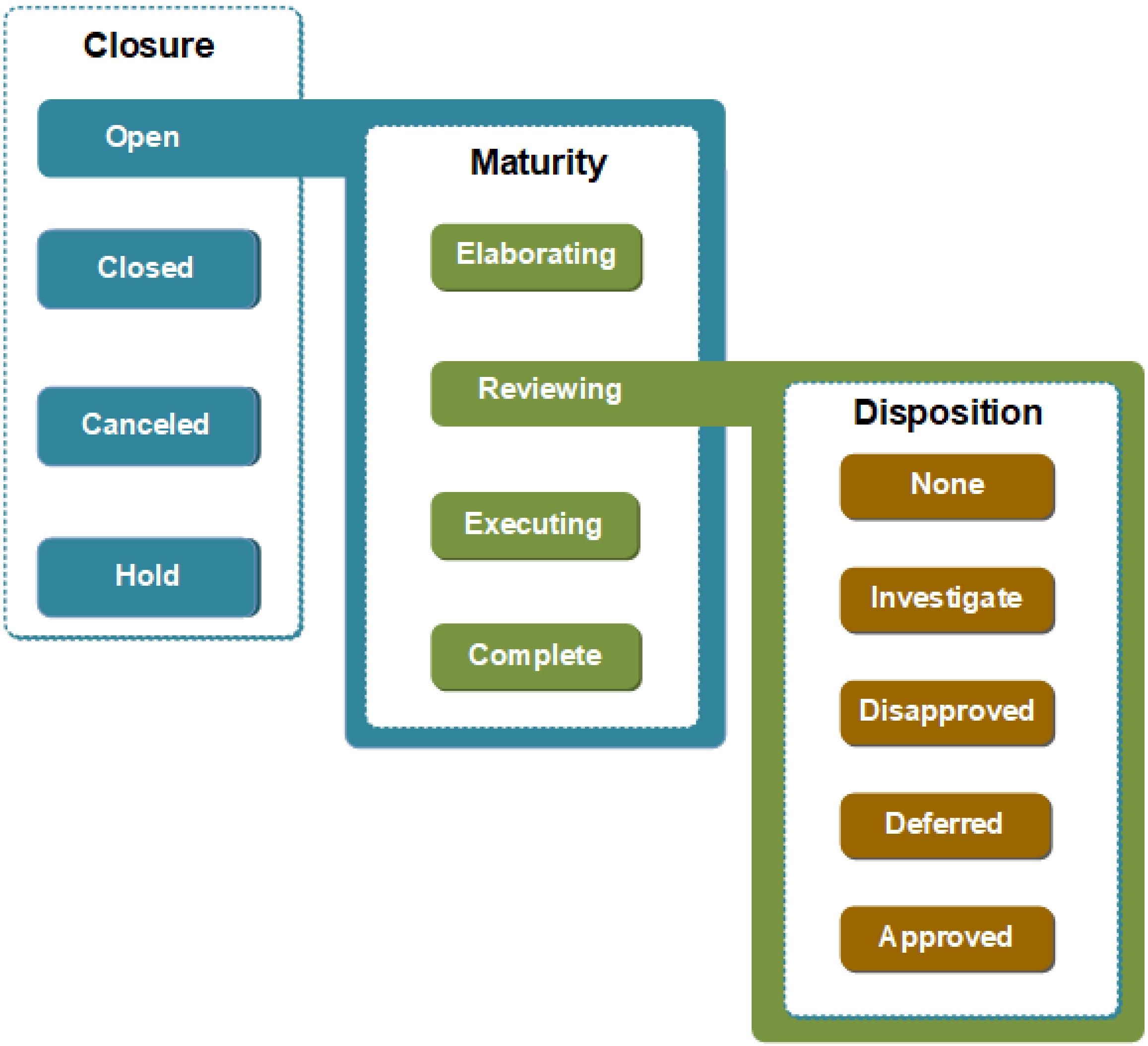
- Its status or *Closure* (for example, Open or Canceled).
- The degree of completion of the overall change process, its *Maturity*.

- The technical, business, or implementation decision by a person or review board about a problem report's approval, its *Disposition*.

The problem report states interconnect and are dependent on the other states. For example, *Maturity* is a substate of the *Closure* state and *Disposition* is a substate of *Maturity*. The states of a problem report are set during the workflow process. To move a problem report to the next phase of the process so a solution can be determined (for example, to move a problem report to a change request), the states of a problem report must be appropriate.

You can view the states of a problem report in the **Overview** tab.

The following graphic illustrates the problem report states.

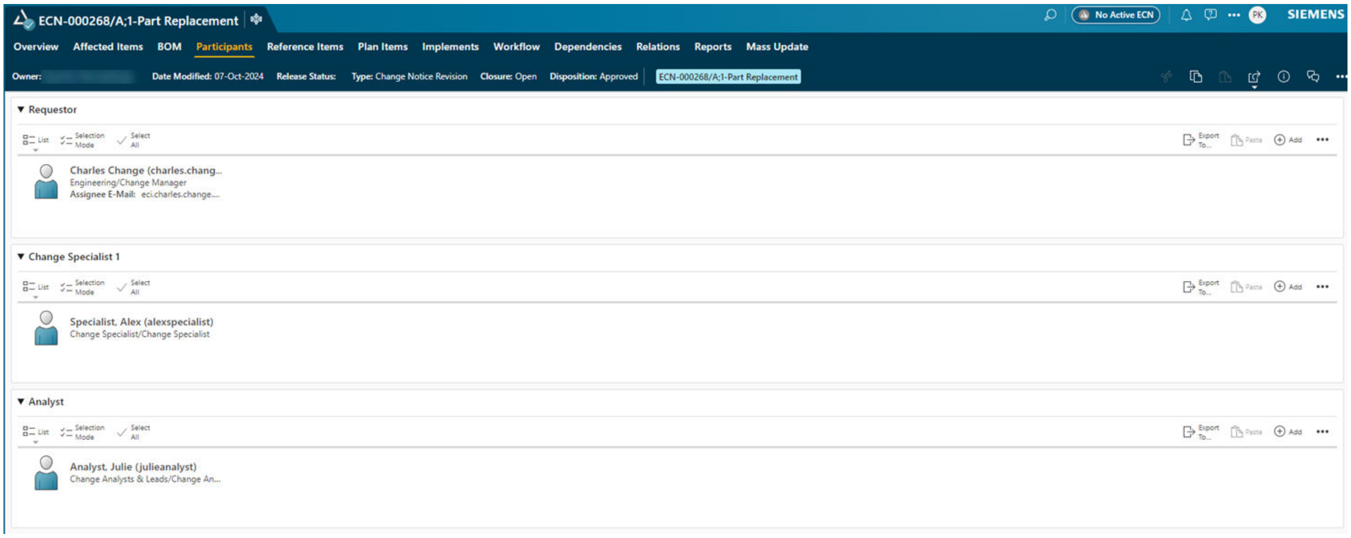


Assign or replace participants

The **Participants** tab contains all assigned participants for a problem report object. You can change, assign, or replace various participants.

You can select more than one user when assigning a review board.

Select a change and click the **Participants** tab to view or manage assignments.



12. Managing changes in your components

Introduction to change

Change Management is the process and tools to support the continued evolution of released product data. Typically, the change process includes identifying the goal (problems or enhancements), assigning them to users who will analyze and identify the impacts, develop solutions to address the goal, and the approval steps to authorize and validate the change.

Teamcenter provides a simple change process to manage changes to your designs and documents.

States of a simple change

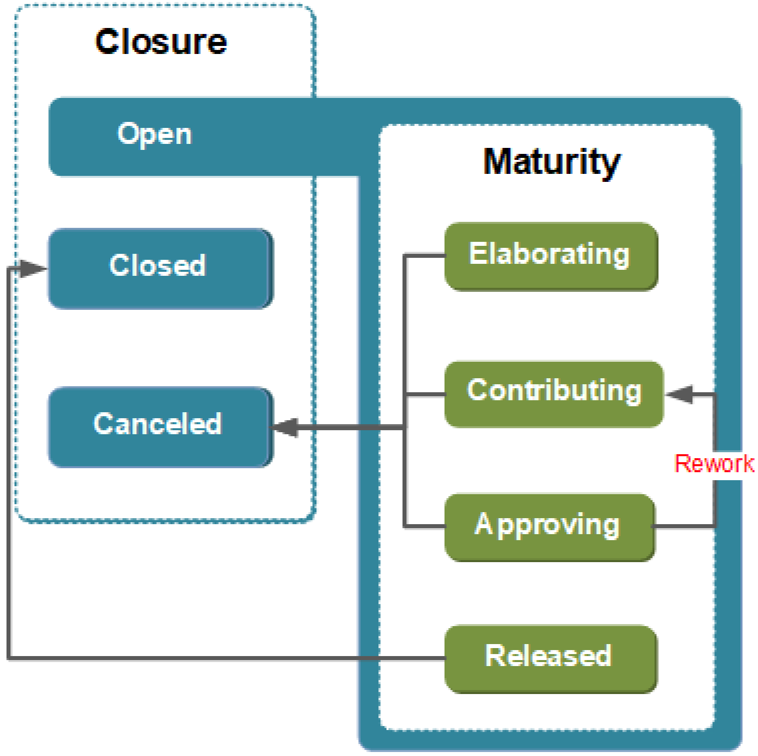
A change has two key states that capture where in the change process it is and what decisions have been made about the change.

- Its status or *Closure* (for example, Open or Canceled).
- The degree of completion of the overall change process, that is, its *Maturity*.

The change states interact with each other and are dependent on the other change states. For example, *Maturity* is a substate of the *Closure* state. The states of a change are set during the workflow process.

> Tip:
>
> You can view the states of a change in the **Overview** tab.

The following graphic illustrates the simple change states. For detailed information on change states, see *Change Management — Deployment and Rich Client Usage* in the Teamcenter help.



Create and resolve a simple change

Create a simple change

Use simple change as an alternative for making minor changes in smaller teams or organizations.

Procedure

1. Select an object and go to **More Commands** ••• > **New** > **Create Change**. Select **Simple Change** from the list.

   Alternatively, click the **Changes** tile, click **Create Change** from the top toolbar, then select **Simple Change**.

2. Fill in the required information and click **Create and Submit**.

   The change is created and automatically submitted to the simple change workflow.

Add and revise impacted items

When you start a simple change process from an object, the object is automatically added as an **Impacted Item**.

Procedure

1. Open the simple change and in the **Impacted Items** section, click **Add** ⊕.

2. Select an object and click **Add** ⊕.

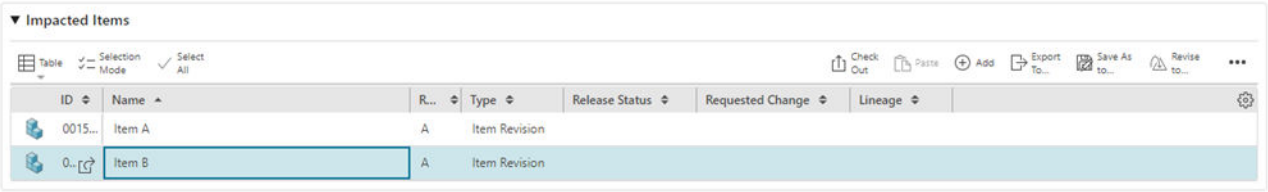
   Repeat as necessary.

3. (Optional) Select an object from your folders.

   a. Go to **More Commands •••** > **Manage** > **Add to My Changes**.

   b. Select a simple change from the list of changes, choose **Impacted Items** from the **Relation** list, and click **Add**.

4. Select any object in the **Impacted Items** table and click **Revise to Solution**.



Add solution items

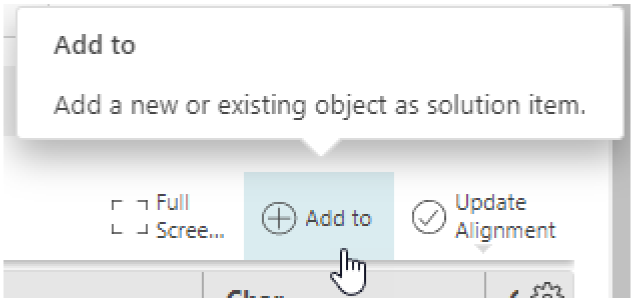
When you revise an impacted item, the new revision becomes the solution item for the same simple change.

Procedure

1. Revise any impacted items to create a solution item in the **Change Summary**.

   The relationship between an impacted item and a solution is identified by the **Lineage** column. For more information regarding lineage, refer to the Change lineage section.

2. Click **Add to** ⊕ to add a solution item that is not a revision of an impacted item.



Completing simple change tasks

If a task is assigned to you as part of the change workflow, you can access the task and mark its completion from your inbox.

If you are an authorized user, you can complete the tasks from the *simple change* **Overview** in **Change Manager**.

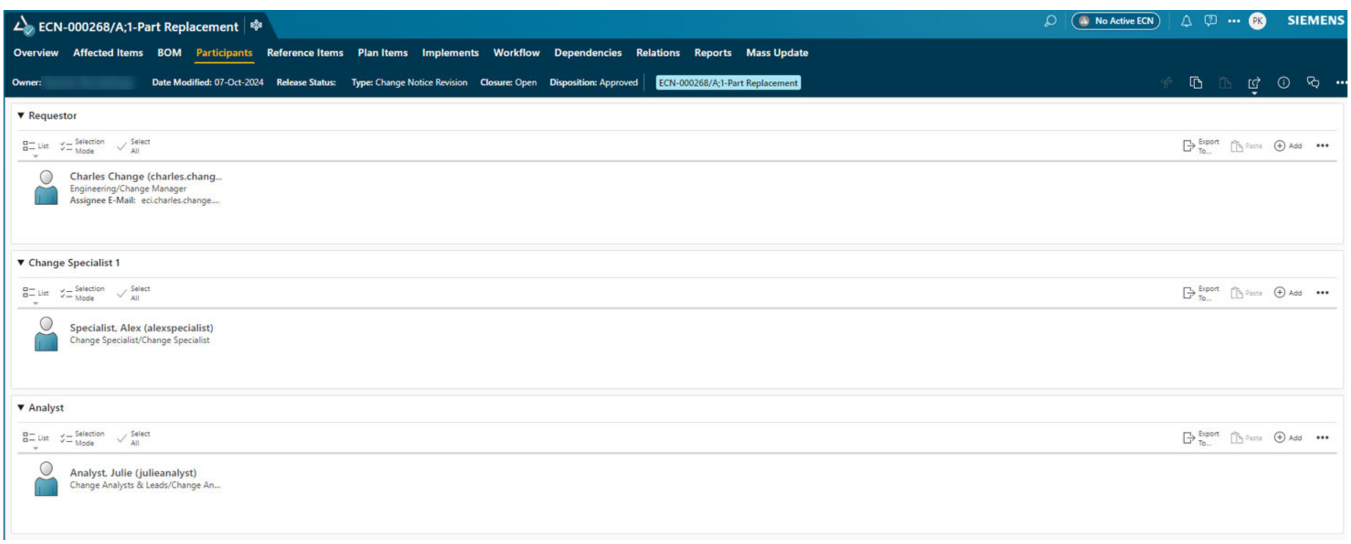
Completed tasks are displayed with the status **Released** in the progress bar.

Assign or replace participants

The **Participants** tab contains all assigned participants for a problem report object. You can change, assign, or replace various participants.

You can select more than one user when assigning a review board.

Select a change and click the **Participants** tab to view or manage assignments.



13. Managing changes in your components using the full change management functionality

With the PLM for Component Manufacturers solution, you can use the following types of change:

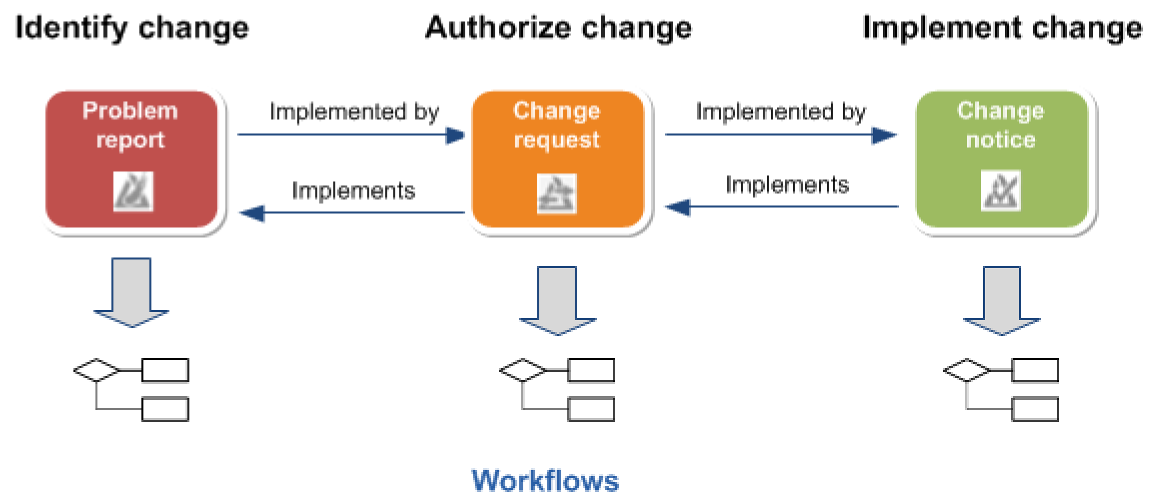
- Simple change

  You can use simple change for minor changes that have few change participants.

- Full change functionality

  Using the full change functionality, you can break down your changes process into different phases as per your business process.

Example:



Teamcenter uses simple change by default. To enable full change, contact your administrator.

For detailed information about managing changes, see Change Management documentation.

14. Generating and viewing reports

Generate and view predefined reports

Generating reports using Teamcenter predefined reports

You can use Teamcenter predefined reports to generate various types of item, summary, and custom reports.

Summary and item reports are static reports. They are generated from the persistent properties in a database. Custom reports are dynamic reports and are generated from the runtime properties in a database.

- *Item report*: These are generated in the context of a specific object, for example, reports that show the BOM list for an item or the workflow sign-off for an item.
- *Summary report*: These reports collate and summarize similar information, for example, reports that show entries for all the employees, the items belonging to a user, or the release status of items. These are generated from Teamcenter saved queries and you need not have to select any objects to run these reports.
- *Custom report*: These reports address special cases such as complex processing or calculations done through custom code or API functions, or when the data comes from external sources. For example, the *reports administrator* can create a custom report that generates and displays the BOM line attributes of a product structure. The BOM line information in the report you generate can change depending on the type of revision rule applied before generating this report.

Generate an item, summary, or a custom report

You can generate an item report or summary report or a custom report.

Generate an item report

1. Search for an item and select the item revision.
2. Choose **More Commands** > **New** > **Generate Report**.
3. Select a predefined report.
4. Specify the appropriate criteria or make the appropriate selections.
5. Select a style sheet.

You can select a style sheet with an **_html** or an **_excel** suffix to generate the report in HTML or MS Excel format, respectively.

6. (Optional) To save a report, specify a file name in the **Save to File Name** box.

   You can view this report later from the **My Reports** or the **Printouts** tab.

7. (Optional) To generate the report asynchronously, select the **Run in Background** check box.

   By default, this check box is selected if the reports administrator has enabled the **Run in Async** check box while defining a report.

8. To create the report, click **Generate**.

9. To access your saved or asynchronously generated reports, click the **PRINTOUTS** tile on the home page.

   The reports are available from the **Printouts** tab.

   Some reports can be generated only asynchronously. This depends on how the administrator configures the report template at your site. Asynchronously generated reports are available from the **Printouts** tab.

Generate a summary report or a custom report

Currently, there is no command to select a summary or custom report specifically. When you select a report from the **Templates** tab, the **Overview** tab displays the properties of the report including the name and the description. **Type: 0** indicates a summary report and **Type: 2**, a custom report.

1. On the **HOME** page, click the **REPORTS** tile.

2. Click the **Templates** tab, select a summary or custom report, and click **Open**.

   Alternatively, click the **Templates** tab, select a summary or custom report, and choose **More Commands** > **New** > **Generate Report**.

3. To quickly access a summary or custom report, click **Search**, for example, *change*. Then, select the report and click **Open**.

4. For summary reports, specify the appropriate criteria or make the appropriate selections in **REPORT FILTERS**.

5. Select a style sheet.

   You can select a style sheet with an **_html** or an **_excel** suffix to generate the report in HTML or MS Excel format, respectively.

6. (Optional) To save a report, specify a file name in the **Save to File Name** box.

   You can view this report later from the **My Reports** or the **Printouts** tab.

7. (Optional) To generate the report asynchronously, select the **Run in Background** check box.

   By default, this check box is selected if the reports administrator has enabled the **Run in Async** check box while defining a report.

8. To create the report, click **Generate**.

9. To access your saved or asynchronously generated reports, click the **PRINTOUTS** tile on the home page.

   The reports are available from the **Printouts** tab.

   Some reports can be generated only asynchronously. This depends on how the administrator configures the report template at your site. Asynchronously generated reports are available from the **Printouts** tab.

View reports specific to PLM for Component Manufacturers

When you use Teamcenter as a PLM for Component Manufacturers, you can generate and work with the following reports:

- **Open Programs**: Displays a list of programs that are still open.
- **My Deliverables**: Displays a list of program, project, and event deliverables assigned to you.
- **Open Events of Active Programs**: Displays a list of open events of all active programs by state and planned date.
- **Deliverables of active programs**: Displays a list of deliverables of active programs sorted by due date and responsible user.
- **Events of program**: Displays a list of all events that are a part of a program.
- **Deliverables of program by responsible user**: Displays a list of all deliverables that are a part of a program and is sorted by responsible users.
- **Open problem reports**: Displays a list of all problem reports that are open.
- **Design report**: Displays a list of all designs sorted by release status.
- **Product design report**: Displays a list of all product designs sorted by release status.

Generate active reports

Active reports overview

Active reports are report *definitions* that identify the content you want to include in reports. You can create report definitions for active summary reports and active item reports dynamically and add them to the database. You can select a layout and add charts and a table. After previewing and saving an active report, you can search for it and rerun the saved report to fetch the latest data from the database.

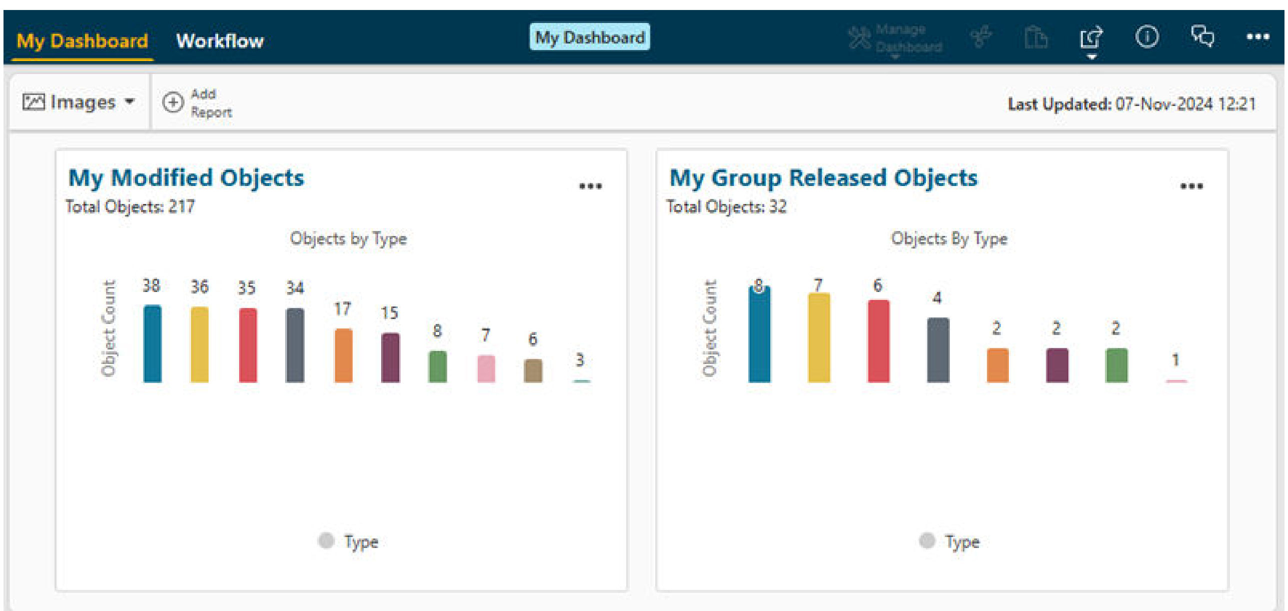
- *Active summary reports* collate and summarize similar information, for example, reports that show entries for all the employees, the items belonging to a user, or the items released in the current month.

- *Active item reports* are generated in the context of a specific object, for example, reports that show all solution items for a selected **Change Revision** or all attachments for a selected **Item Revision**.

Some business objects such as programs do not have the **Reports** tab enabled by default. In such cases, you cannot view the **Active item report**. The reports administrator or a user with DBA privileges can modify style sheets to enable this tab. For more information, see *Report Builder* on Support Center.

View My Dashboard reports

My Dashboard is a personalized list of your favorite reports. It contains both Active Summary reports and Reporting and Analytics reports (if installed and deployed).

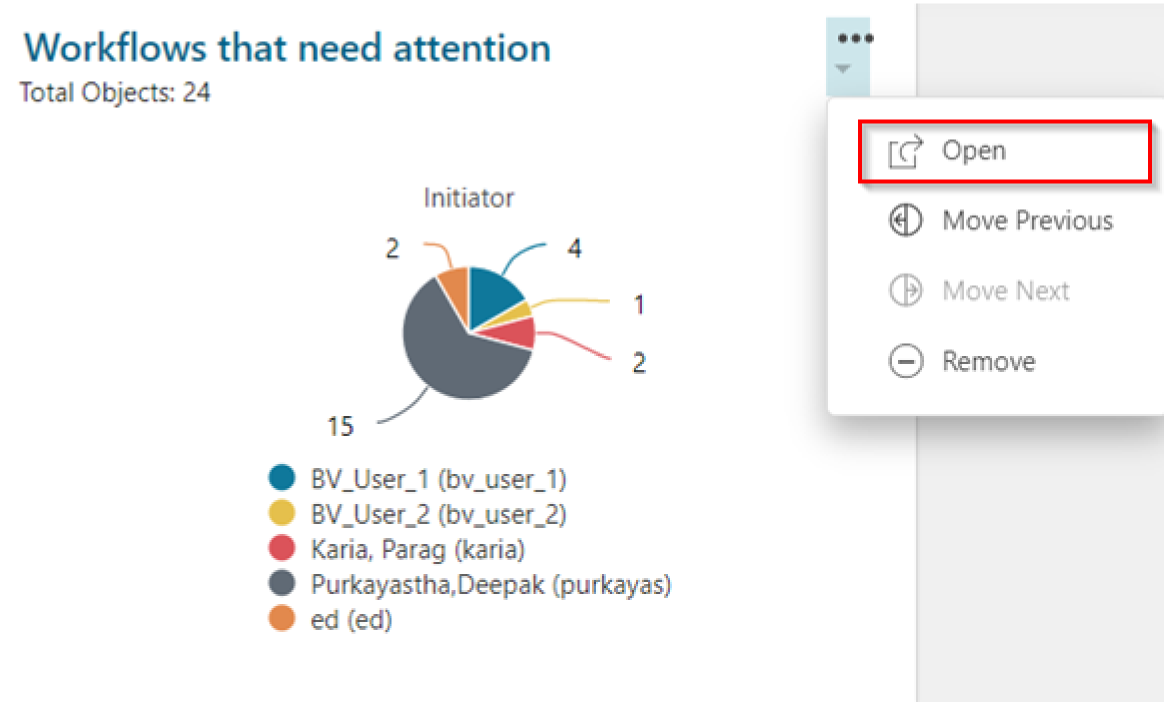


1. On the **Home** page, click the **Reports** tile.

   By default, the available reports are displayed as thumbnails in **My Dashboard**.

2. To open the report, hover over the report title until a link appears, and click the title link to open it.

   Alternatively, click **More Commands** > **Open**.

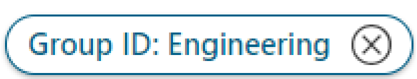


3. Drill down the report to find specific data.

   Example:

   a. Open the **My Modified Objects** report.

   b. In the **Objects By my Login Group** pie chart, click the area specific to a group, for example, the **Engineering** group. The chart and the table area show objects specific to the **Engineering** group. Click the following button to close this view.



   c. In the **Objects by Type** area, click the **Item Revision** line chart. The **Item Revision** chart area shows the **Objects By my Login Group** pie chart specific to item revisions.

      The table shows the item revisions by name, ID, group ID, and the last modifying user. If the objects have a release status, the **Object by Release** pie chart displays how many objects are unassigned or released.

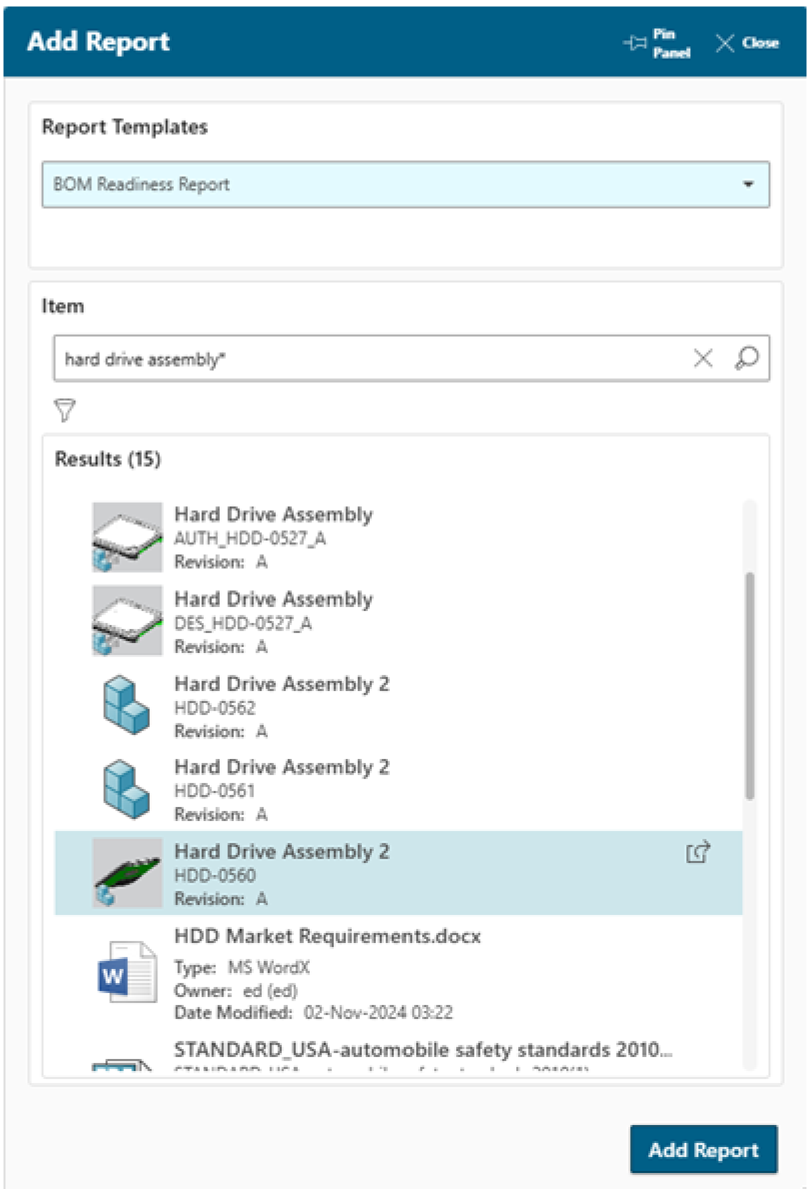
4. (Optional) Open the report and if the report contains data in a tabular format at the bottom, click the table header of the column you want to sort and choose the appropriate option. You can also

select an operator for further filtering. The valid operators are **Contains**, **Does not contain**, **Begins with**, **Ends with**, **Equals**, and **Does not equal**. For example, for a BOM readiness report, you can select **Contains** and type **released** to find the released item revisions.

5. (Optional) To remove the report from **My Dashboard**, select the report tile, choose **More Commands**, and select **Remove**.

6. To add a report from **My Dashboard**, click **Add** ⊕, search for the report in the **Add Report** panel, select it, and click the **Add** button.

   If you select an active item report, you must specify the item related to this report. To do so, click the **Add** button in the **ITEM** area of the **Add Report** panel, search for the item, select it, and click the **Add Report** button.



7. Display the table tile on **My Dashboard**.

   You can optionally display the table tile on **My Dashboard** for an existing summary or item report.

   You can open an object or sort, hide, or freeze columns directly from the table tile. Additionally, you can select multiple objects from the table tile, copy them, or add them to **My Changes**, or perform some other similar action.

   a. In **Templates**, select the report for which you want to display the table tile on **My Dashboard**.

   b. Choose **More Commands** > **Edit** > **Edit Report** and select **Set Layout**.

   c. In **Table**, if you have not selected columns, select them as appropriate, select **Template**, click **Edit**, select **Table** from **Thumbnail** list, and click **Save**.

      In reports, you can set one of the three charts or the table as the thumbnail.

   d. Navigate to **My Dashboard**.

      The report you modified displays the table tile.

8. Directly edit the report columns for reports with tables as thumbnails.

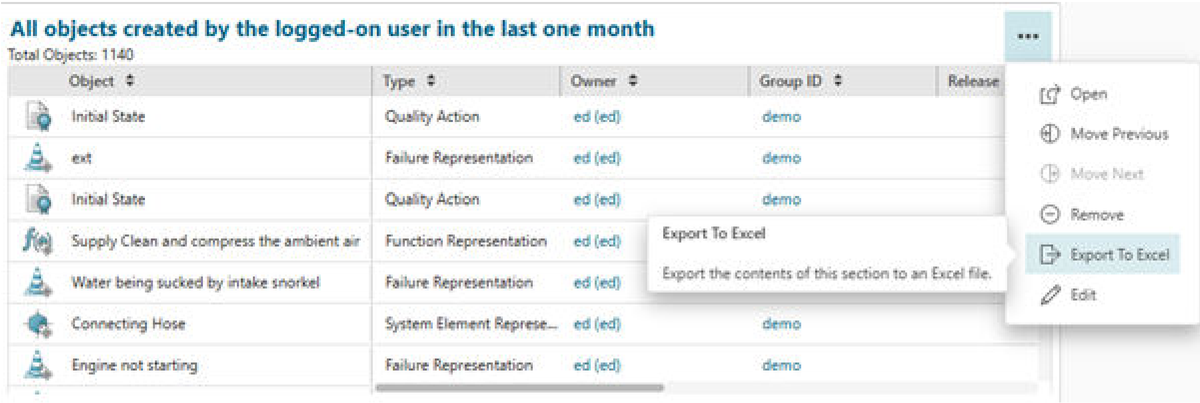
   a. To edit report columns directly from the dashboard view, select a report with a table as a thumbnail, click **More Options** > **Edit**.

   b. Click the appropriate editable column and make the necessary changes.

   c. To save your changes, click **More Options** > **Save Edits**.

9. Export reports with tables as thumbnails to Microsoft Excel directly from the dashboard view.

   a. To perform an export to directly from the dashboard view, select a report with a table as a thumbnail, click **More Options**, and choose **Export to Excel**.



b. To add properties, click **Add Properties** to add or remove additional properties that you want to display in the exported spreadsheet.

c. Click **Downloads** in your browser to open the exported file.

Duplicate an existing template and modify it to create a new report

Only the owner of the templates can edit them. However, other users can duplicate existing templates and modify them to create new reports.

1. On the **Home** page, click the **REPORTS** tile.

2. Choose the **Templates** page, search for the template you want to duplicate, and select it.

3. To duplicate the template, choose **More Commands** ••• > **New** > **Save As**.

4. Change the name, description, and ID as appropriate, and click the **Save** button.

   You cannot edit default report templates containing custom data providers such as **Workflows initiated by my groups**.

5. Search and open the template you duplicated.

6. Choose **More Commands** ••• > **Edit** > **Edit Report**.

7. Make the required changes and save the template.

Share report templates across users, roles, groups, and projects

You can share the templates you create across users, roles, groups, and projects.

When you create a report template, it is not available by default for other users to use. You must share report templates you create across users, roles, groups, and projects. The report templates you share are available in the **Templates** tab and the **Generate Report** panel.

Procedure

1. On the **Home** page, click the **Reports** tile, and choose **Templates**.

2. Search for the template you have created, select it, and choose **More Commands** > **Share** > **Share**.

3. To share this template with all users, choose **All users (Public)**.

4. Share this template with selected users.

You can share templates with selected users, roles, or groups in the organization, or across projects.

a. To share this template with selected users, choose **Selected users only**.

b. From the **Available** section, select **Users**, **Organization**, or **Projects** as appropriate.

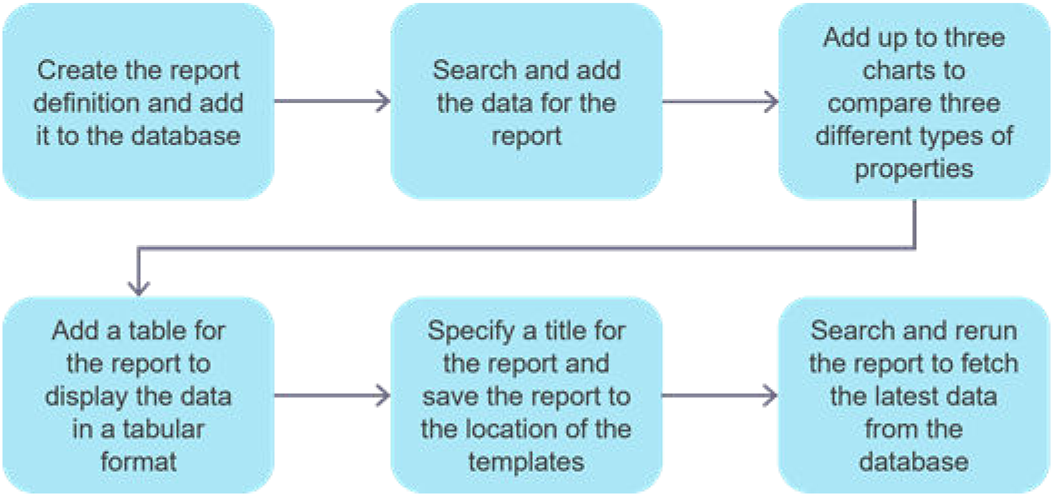
c. Make the appropriate selections from **Available** and click > to move them to **Shared With**.

5. To share the template, click **Save**.

Create and generate an active summary report

You can create summary reports to collate and summarize similar information, for example, reports that show entries for all the employees, the items belonging to a user, or the release status of items.

The process for creating and generating an active summary report is as follows:



Example:

Create a report for all business objects created by the current logged-on user for the current month. This is a generic report and it can be used by another user to view the business objects created by that user.

Procedure

1. (Optional) Create the report definition and add the data for the report.

a. On the **HOME** page, click the **REPORTS** tile.

b. In **My Dashboard** or **Templates**, choose **More Commands** ••• > **New** > **Create Report**.

c. To create a summary report, from the **Type** list, select **Active summary report**. This is the default type.

d. Search for the data you want in the report.

In this example, a report is created for all business objects created by the current logged-on user for the current month.

A. In the **Search Data** panel, search for the data you want to include in the report.

For example, type **Owner:$ME** and click **Search** to fetch all the objects owned by the currently logged-on user. The keyword for this is **$ME**.

To further filter your search criteria, for example, to fetch all objects created this month, modify the query as **Owner:$ME AND "Creation Date":$THIS_MONTH** and click **Search**.

Search criteria examples:

All item revision objects created in the last seven, fourteen, or thirty days	• ItemRevision AND "Date Modified":$LAST_7_DAYS • ItemRevision AND "Date Modified":$LAST_14_DAYS • ItemRevision AND "Date Modified":$LAST_30_DAYS
All item revision objects created in the current or last one year	• ItemRevision AND "Date Modified":$THIS_YEAR • ItemRevision AND "Date Modified":$LAST_YEAR
All objects created by the logged-on user in this month or last one month	• Owner:$ME AND "Date Modified":$THIS_MONTH • Owner:$ME AND "Date Modified":$LAST_MONTH
All released objects in the last three months	"Release Status":* AND "Date Released":$LAST_3_MONTHS
Dashboard for objects modified by the logged-on user in the current year	"Last Modifying User":$ME AND "Group ID":$MY_GROUP AND "Date Modified":$THIS_YEAR
All change requests, change notices, or problem reports created in the current year	ChangeRequestRevision AND "Creation Date":$THIS_YEAR OR ChangeNoticeRevision AND "Creation Date":$THIS_YEAR OR

	ProblemReportRevision AND "Creation Date":$THIS_YEAR

B. To include the data in the report, click **Save**.

2. Select a layout for the report and add charts.

   You must first create the report definition and add the data for the report before you can select a layout and add charts and a table.

   a. Specify a report title.

   b. Specify the number of charts you want to add for this report by selecting the appropriate option.

   c. Select **Bar Chart**, **Pie Chart**, or **Line Chart** for the type of chart you want to create.

   d. To create a layout for the report, click **Edit** above the chart.

   e. To add a property for the chart, from the **Chart On** list, select a value, for example, **Status**.

   f. Specify a title for the chart type or accept the default title.

   g. To save this chart type, click **Save**.

   h. To add the second and third charts, repeat the above steps. You can choose other properties for the second and the third chart, for example, **State** and **Priority**, respectively.

      You can add additional chart properties depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

   i. After creating more than one chart, to move the chart, click **... More Commands** and select the appropriate option.

3. To display the data in a tabular format, add a table for the report.

   a. In the **Table** area, click **Table Settings** > **Arrange**.

   b. From **Available Columns**, select column name properties such as **Object**, **Task Type**, **Description**, **State**, and **Status**, and click > to move them to **Displayed Columns**.

   c. (Optional) To rearrange the columns in the table, in the **Column Name** area, select a column name, click the column widget, and move the column up or down.

   d. To save the column arrangement, click **Arrange**.

> Note:
>
> (Optional) You can add additional columns to the table depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

4. Save the report as a template.

   a. To save the report as a template, click **Save as Template**.

   b. (Mandatory) Specify a name for the report.

   c. (Optional) Include a description.

   d. (Mandatory) Specify an ID for the report or accept the default ID for the report.

   e. (Optional) Specify a Thumbnail for the report or accept the default value.

   f. (Optional) To include the report in **My Dashboard**, select the **Add to Dashboard** check box.

   g. Click **Save**.

5. Edit the report from the **Templates** page.

   a. Navigate to the **Templates** location.

   b. Search for the report definition you want to edit, select it, and choose **More Commands** > **Edit** > **Edit Report**.

   c. Make the necessary changes and save the report.

6. Generate the report.

   a. From the **Templates** page, select the report you want to generate.

   b. To generate the report, click **Open**.

      The report is generated by fetching the latest data from the database.

7. Export the table area of the report to Microsoft Excel.

   a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

From **Templates**, select the report and click **Open**.

b. Click **Export to Excel** above the table area of the report.

c. Click **Add Properties** and deselect the properties that you do not want to be displayed in the exported report.

d. To download the report, click **Export**.

e. Click **Downloads** in your browser to open the exported file.

Perform a search and convert the search results to an active summary report

You can perform a search and convert the search results to a summary report.

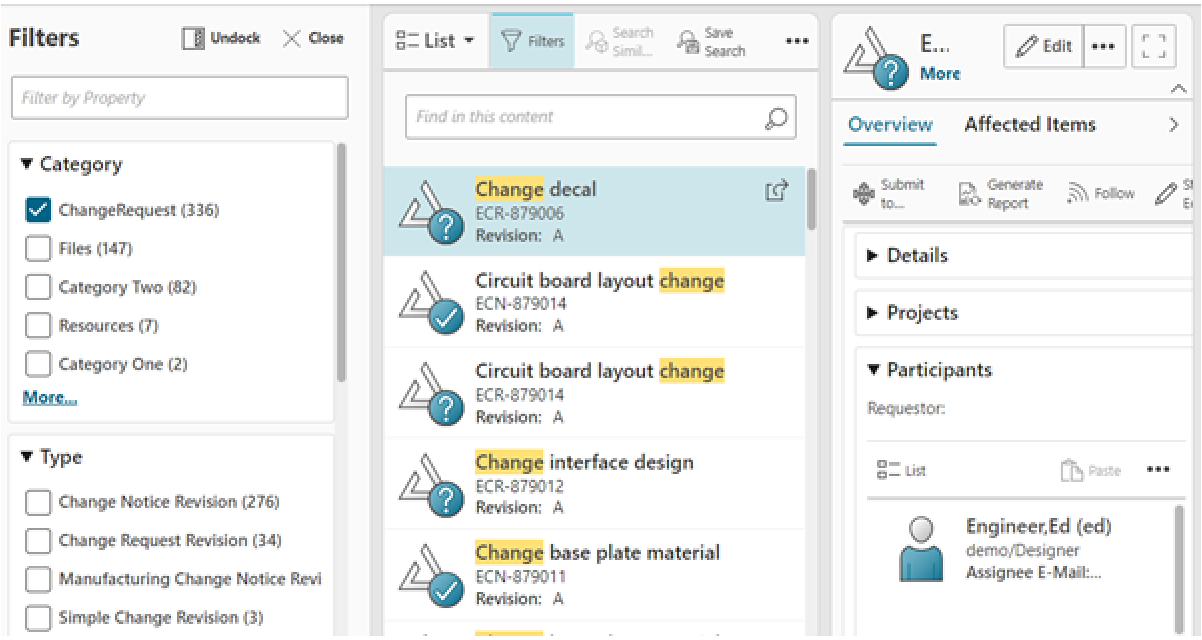
Summary reports are used to collate and summarize similar information, for example, reports that show entries for all the employees, the items belonging to a user, or the release status of items.

Procedure

1. Create a search.

   a. Perform a search, for example, type *change* in the search box.

   b. Select a filter, for example, **ChangeRequest** from the **Category** filter.



   c. Select other filters as appropriate.

2. Create the report.

   a. Choose **More Commands** > **New** > **Create Report**.

   b. Select **Active summary report** and click **Create**.

3. Select a layout for the report and add charts.

   You must first create the report definition and add the data for the report before you can select a layout and add charts and a table.

   a. Specify a report title.

   b. Specify the number of charts you want to add for this report by selecting the appropriate option.

   c. Select **Bar Chart**, **Pie Chart**, or **Line Chart** for the type of chart you want to create.

   d. To create a layout for the report, click **Edit** above the chart.

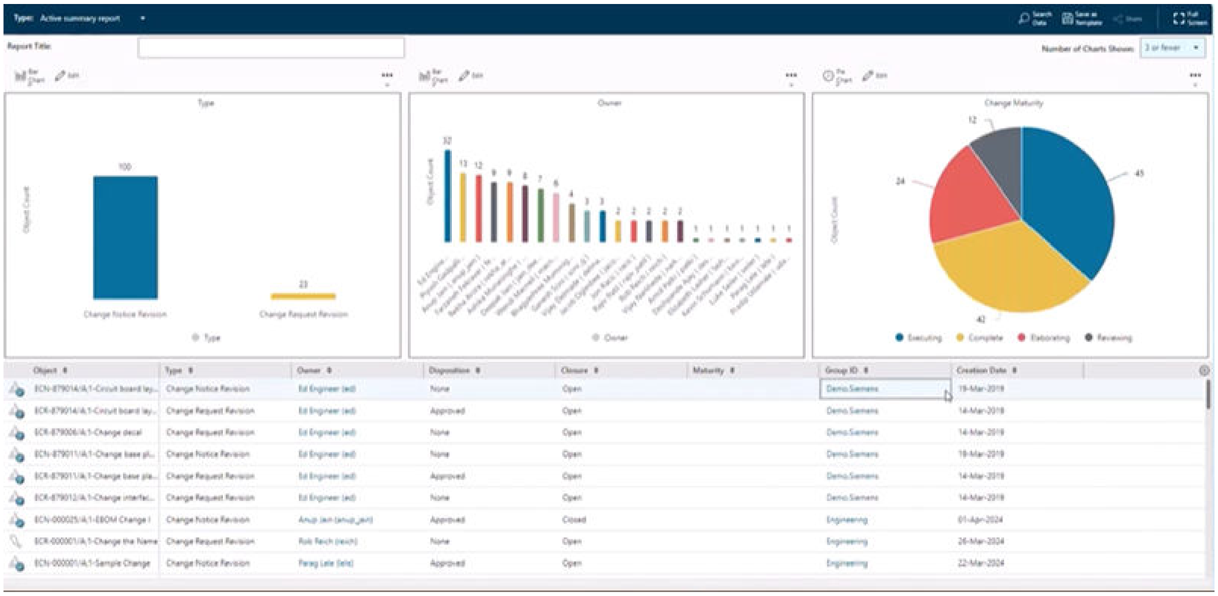
   e. To add a property for the chart, from the **Chart On** list, select a value, for example, **Type**.

   f. Specify a title for the chart type or accept the default title.

   g. To save this chart type, click **Save**.

   h. To add the second and third charts, repeat the above steps. You can choose other properties for the second and the third chart, for example, **Owner** and **Change Maturity**, respectively.

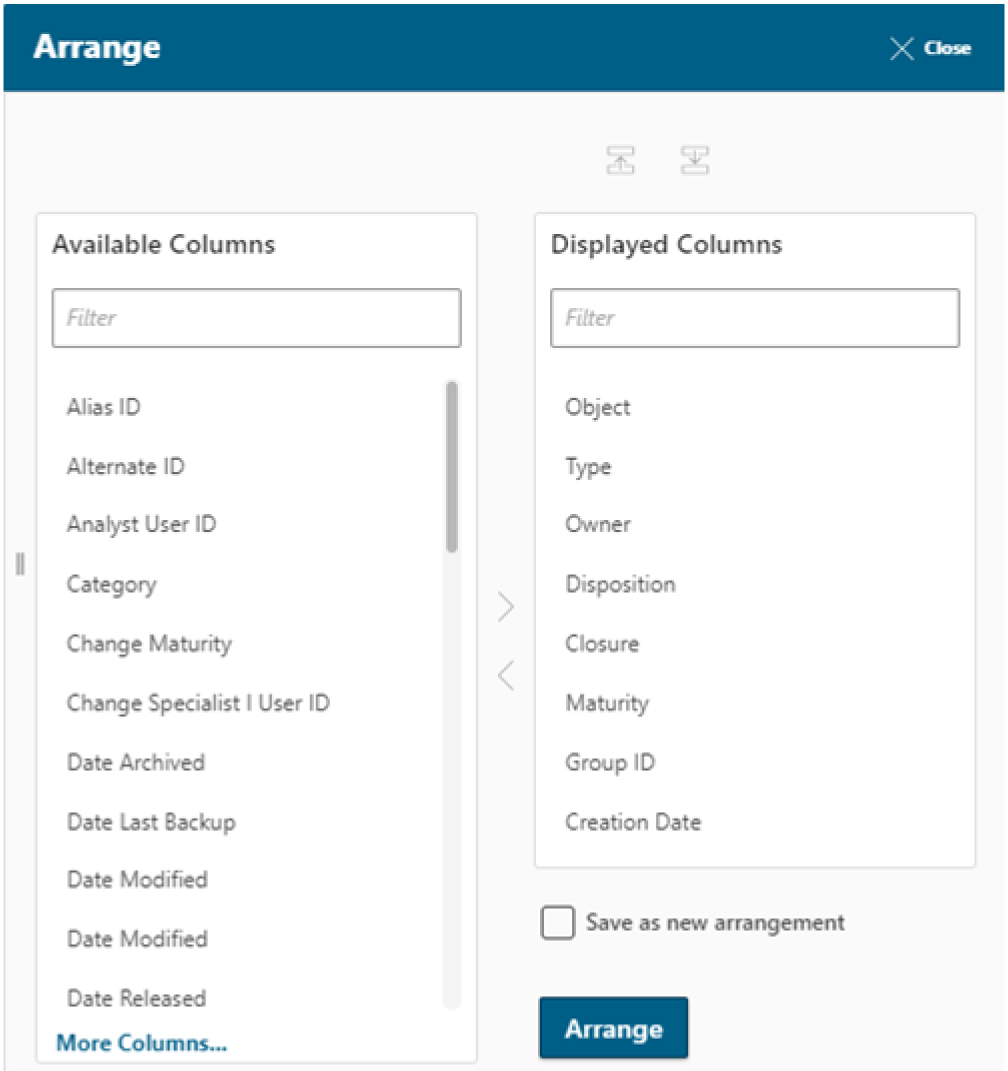
      You can add additional chart properties depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.



4. To display the data in a tabular format, add a table for the report.

    a. In the **Table** area, click **Table Settings** > **Arrange**.

    b. From **Available Columns**, select column name properties such as **Object**, **Type**, **Owner**, **Disposition**, **Closure**, **Maturity**, **Group ID**, and **Creation Date** and click to move them to **Displayed Columns**.



c. (Optional) To rearrange the columns in the table, in the **Column Name** area, select a column name, click the column widget, and move the column up or down.

d. To save the column arrangement, click **Arrange**.

e. (Optional) You can add additional columns to the table depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

5. Save the report as a template.

   a. To save the report as a template, click **Save as Template**.

   b. (Mandatory) Specify a name for the report.

   c. (Optional) Include a description.

d. (Mandatory) Specify an ID for the report or accept the default ID for the report.

e. (Optional) Specify a Thumbnail for the report or accept the default value.

f. (Optional) To include the report in **My Dashboard**, select the **Add to Dashboard** check box.

g. Click **Save**.

6. Generate the report.

   a. From the **Templates** page, select the report you want to generate.

   b. To generate the report, click **Open**.

      The report is generated by fetching the latest data from the database.

7. Export the table area of the report to Microsoft Excel.

   a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

      From **Templates**, select the report and click **Open**.

   b. Click **Export to Excel** above the table area of the report.

   c. Click **Add Properties** and deselect the properties that you do not want to be displayed in the exported report.

   d. To download the report, click **Export**.

   e. Click **Downloads** in your browser to open the exported file.

Create and generate an active item report from various sublocations

You can create and generate an active item report by selecting an object from any sublocation other than **Reports**.

Procedure

1. From the **Home** page, click **Advanced Search**.

2. Select an appropriate option such as **Item Revision**, specify other parameters as appropriate,and click **Search**.

3. Create the report.

a. Select an object from the search results and click **More Commands** > **New** > **Create Report**; OR

b. On the **Home** page, you can choose **Explorer**, **Changes**, **Programs**, or **Schedules**, select an object, and click **More Commands** > **New** > **Create Report**.

4. To create the report, click **Create**.

5. Add relations for the report.

   a. To add the relations, click **Add** and click **Pin Panel** to add multiple relations.

   The system displays all the possible relations of the source object.

Column name	Description
Relation (Object)	Displays the relation name and the type of object this particular relation returns.
Relation Type	Displays the relation type such as primary, secondary, reference, or referenced by.
Count	Displays the number of objects that are related.

   b. Select the appropriate relation object and click **Add**. Keep adding relations as appropriate.

6. Select a layout for the report and add charts

   You must first create the report definition and add the data for the report before you can select a layout and add charts and a table.

   a. Specify a report title.

   b. Specify the number of charts you want to add for this report by selecting the appropriate option.

   c. Select **Bar Chart**, **Pie Chart**, or **Line Chart** for the type of chart you want to create.

   d. To create a layout for the report, click **Edit**.

   e. To add a property for the chart, from the **Chart On** list, select a value, for example, **State**.

   f. To add the second and third charts, repeat the above steps. You can choose other properties for the second and the third chart, for example, **Status** and **Work Complete Percent**, respectively.

   You can add additional chart properties depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

g. Specify a title for the chart type or accept the default title.

h. To save this chart type, click **Save**.

i. After creating more than one chart, to move the chart, click **... More Commands** and select the appropriate option.

7. To display the data in a tabular format, add a table for the report.

a. In the **TABLE** area, click **Table Settings** > **Arrange**.

b. From **Available Columns**, select column name properties such as **State**, **Status**, **Object**, **Finish Date**, **Schedule**, and **Actual Start Date**, and click > to move them to **Displayed Columns**.

c. (Optional) To rearrange the columns in the table, in the **Column Name** area, select a column name, click the column widget, and move the column up or down.

d. To save the column arrangement, click **Arrange**.

8. Add filters to the relations you have added.

a. To add the relations, click **Add** and click **Pin Panel** to add multiple relations.

The system displays all the possible relations of the source object.

Column name	Description
Relation (Object)	Displays the relation name and the type of object this particular relation returns.
Relation Type	Displays the relation type such as primary, secondary, reference, or referenced by.
Count	Displays the number of objects that are related.

b. Select the appropriate relation object and click **Add**. Keep adding relations as appropriate.

9. Save the report as a template.

a. To save the report as a template, click **Save as Template**.

b. (Mandatory) Specify a name for the report.

c. (Optional) Include a description.

d. Click **Save**.

10. Edit the report from **Templates**.

    a. Navigate to the **Templates** location.

    b. Search for the report definition you want to edit, select it, and choose **More Commands** > **Edit** > **Edit Report**.

    c. Make the necessary changes and save the report.

11. Generate the report.

    a. Search for the object for which you want to generate the report.

    b. Select the object, and choose **More Commands** > **New** > **Generate Report**.

    c. Select the report you created and click **Generate**.

       The report is generated by fetching the latest data from the database.

12. Drill down the report to find specific data.

    a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

       From **Templates**, select the report and click **Open**.

    b. Select a specific area of the chart, for example, **Complete** in the **State** or **Status** charts.

       The chart and the table area show objects specific to the selection.

    c. Click the **State Complete** button to close this view.

    d. Click the bar chart in the **Work Complete Percent** area.

       The chart and the table area show objects specific to the selection.

    e. Click the **Work Complete Percent** button to close this view.

13. Export the table area of the report to Microsoft Excel.

    a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

       From **Templates**, select the report and click **Open**.

b. Click **Export to Excel** above the table area of the report.

c. Click **Add Properties** and deselect the properties that you do not want to be displayed in the exported report.

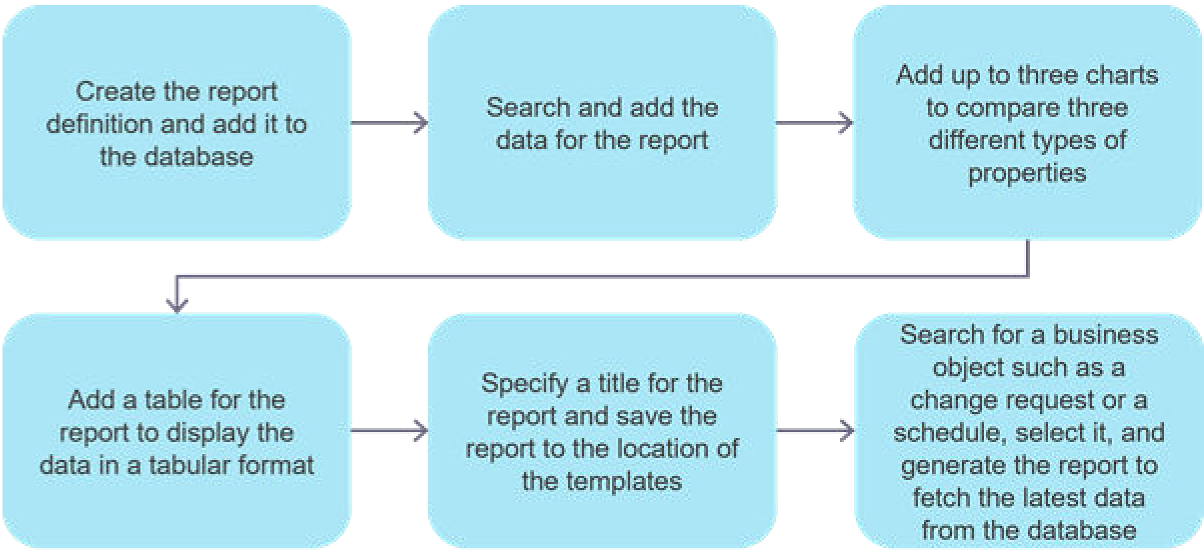
d. To download the report, click **Export**.

e. Click **Downloads** in your browser to open the exported file.

Create an active item report for a program

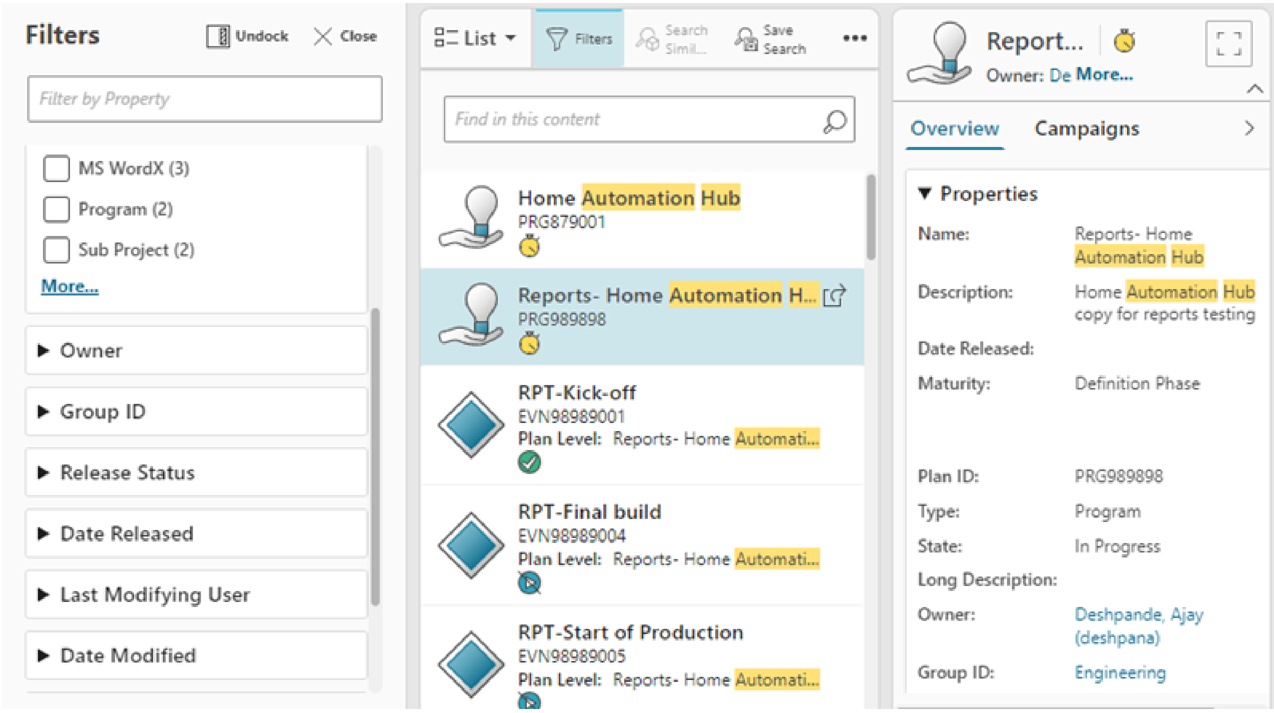
You can create an active item report for a program.

The process for creating and generating an active item report is as follows:



Procedure

1. Search for the program, select it, apply appropriate filters, click **More Commands** > **New** > **Create Report** and select **Active item report**.



Alternatively, create the report definition and add the data for the report by performing the following steps:

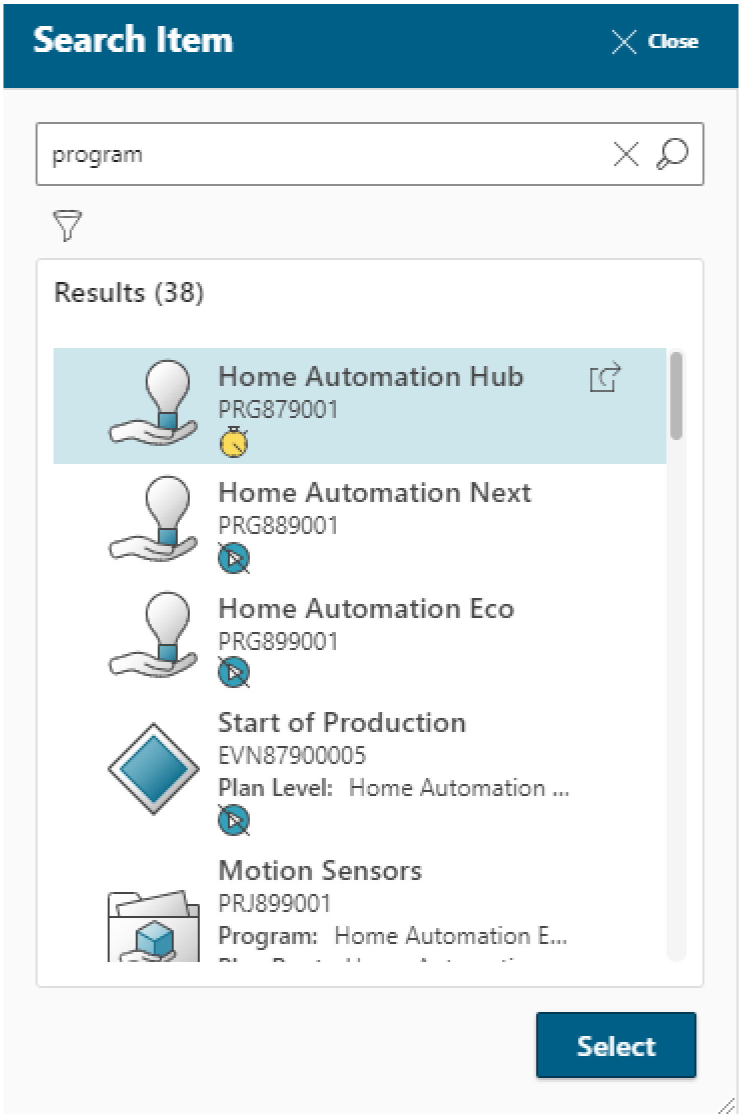
a. On the **HOME** page, click the **REPORTS** tile.

b. In **My Dashboard** or **Templates**, choose **More Commands** > **New** > **Create Report**.

c. To create an item report, from the **Type** menu, select **Active item report**.

d. Search for the data you want to include in the report in the **Search Item** panel, select it, and click **Select**.

Example:



2. Add relations for the report.

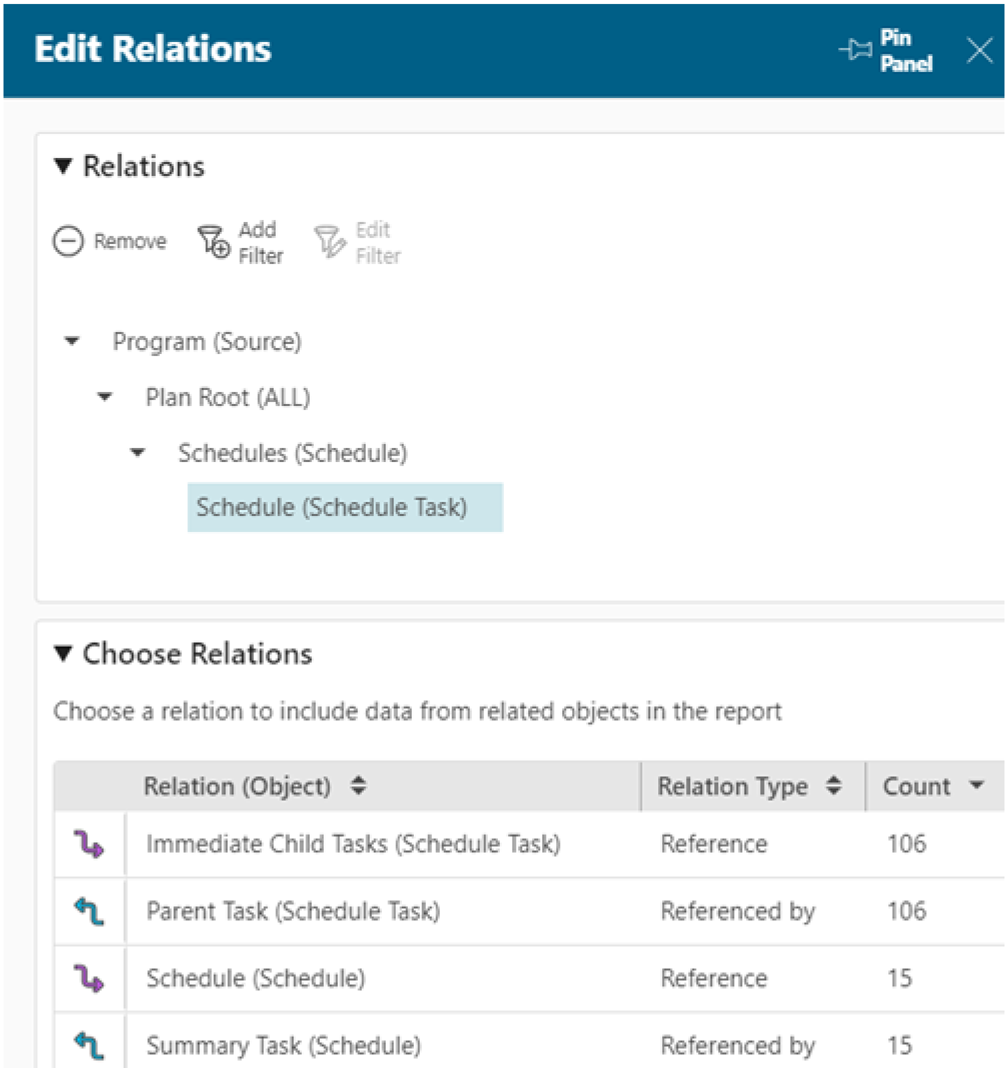
   a. To add the relations, click **Add** and click **Pin Panel** to add multiple relations.

      The system displays all the possible relations of the source object.

Column name	Description
Relation (Object)	Displays the relation name and the type of object this particular relation returns.
Relation Type	Displays the relation type such as primary, secondary, reference, or referenced by.
Count	Displays the number of objects that are related.

   b. Select the appropriate relation object and click **Add**. Keep adding relations as appropriate.

Example:



3. Select a layout for the report and add charts

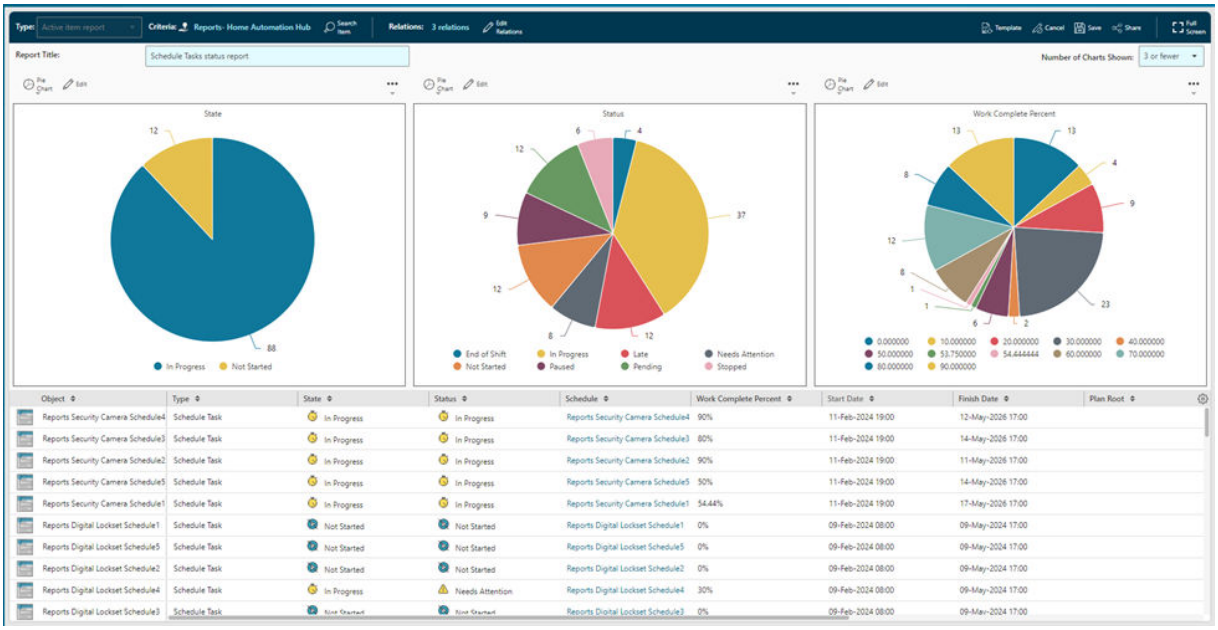
   You must first create the report definition and add the data for the report before you can select a layout and add charts and a table.

   a. Specify a report title.

   b. Specify the number of charts you want to add for this report by selecting the appropriate option.

   c. Select **Bar Chart**, **Pie Chart**, or **Line Chart** for the type of chart you want to create.

   d. To create a layout for the report, click **Edit**.



e. To add a property for the chart, from the **Chart On** list, select a value, for example, **State**.

f. To add the second and third charts, repeat the above steps. You can choose other properties for the second and the third chart, for example, **Status** and **Work Complete Percent**, respectively.

   You can add additional chart properties depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

g. Specify a title for the chart type or accept the default title.

h. To save this chart type, click **Save**.

i. After creating more than one chart, to move the chart, click **... More Commands** and select the appropriate option.

4. To display the data in a tabular format, add a table for the report.

   a. In the **TABLE** area, click **Table Settings** > **Arrange**.

   b. From **Available Columns**, select column name properties such as **State**, **Status**, **Object**, **Finish Date**, **Schedule**, and **Actual Start Date**, and click 〉 to move them to **Displayed Columns**.

   c. (Optional) To rearrange the columns in the table, in the **Column Name** area, select a column name, click the column widget, and move the column up or down.

   d. To save the column arrangement, click **Arrange**.

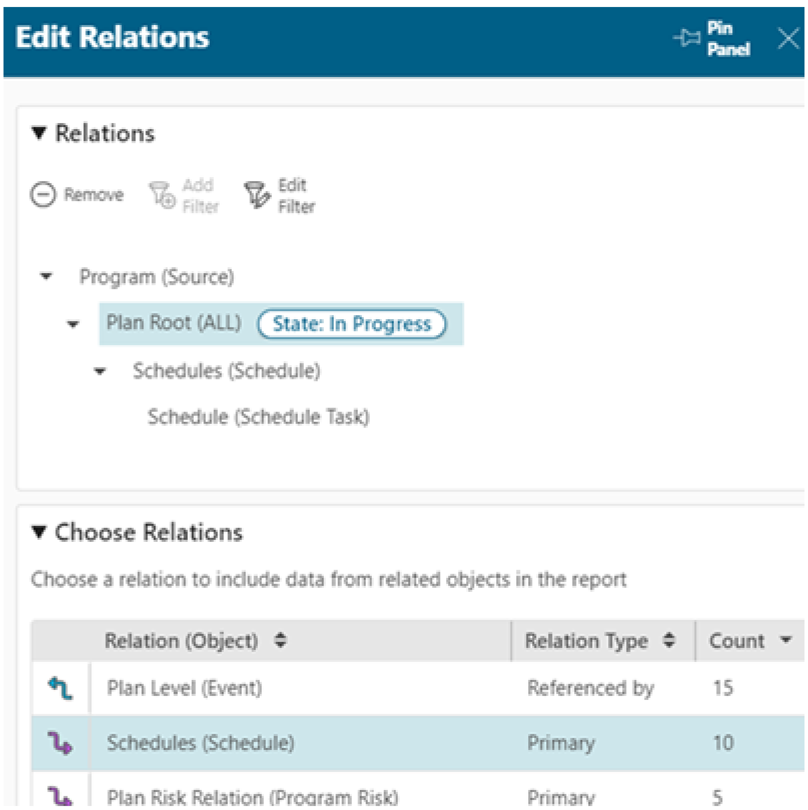
5. Add filters to the relations you have added. You can add filters, for example, to display only schedules that are in progress or display only tasks that are complete or not started.

    a. To display only schedules that are in progress in the report you are creating, select **Edit Relations** and click **Add Filter**.

       The system displays a warning message.

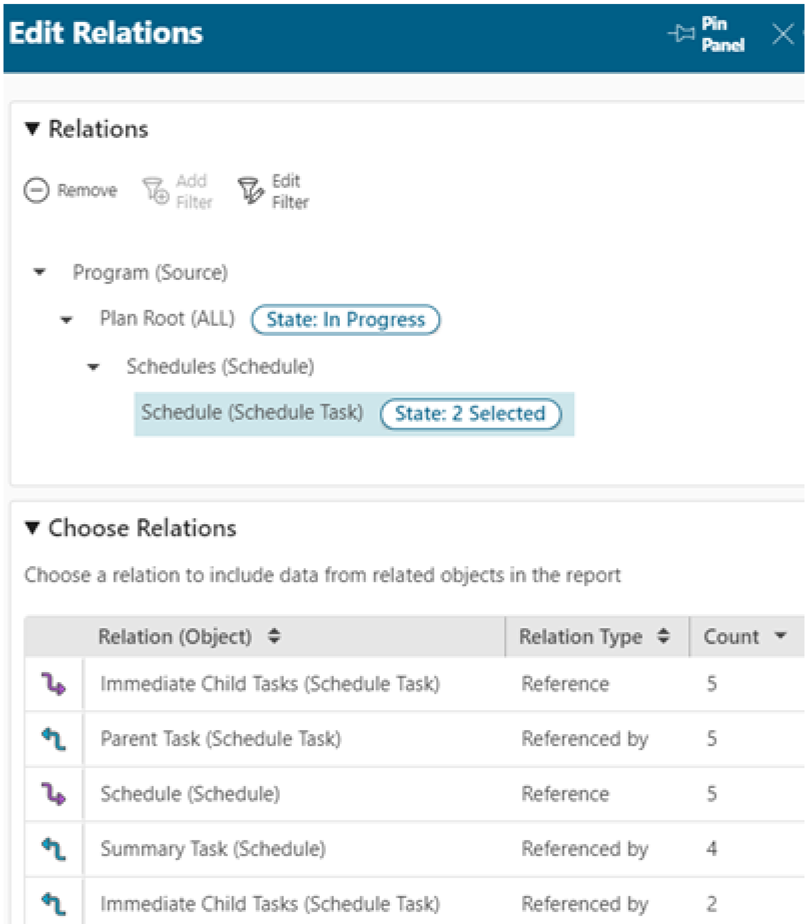
    b. Select **Keep** to retain dependent relations.

    c. Select **In Progress** from the **State** filter and click **Add Filter**.



    d. To display only tasks that are complete or not started in the report you are creating, repeat step a and step b.

    e. Select **Completed** and **Not Started** from the **State** filter and click **Add Filter**.



6. Save the report as a template.

   a. To save the report as a template, click **Save as Template**.

   b. (Mandatory) Specify a name for the report.

   c. (Optional) Include a description.

   d. Click **Save**.

7. Edit the report from **Templates**.

   a. Navigate to the **Templates** location.

   b. Search for the report definition you want to edit, select it, and choose **More Commands** > **Edit** > **Edit Report**.

   c. Make the necessary changes and save the report.

8. Generate the report.

a. Search for the object for which you want to generate the report.

b. Select the object, and choose **More Commands** > **New** > **Generate Report**.

c. Select the report you created and click **Generate**.

   The report is generated by fetching the latest data from the database.

9. Drill down the report to find specific data.

   a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

      From **Templates**, select the report and click **Open**.

   b. Select a specific area of the chart, for example, **Complete** in the **State** or **Status** charts.

      The chart and the table area show objects specific to the selection.

   c. Click the **State Complete** button to close this view.

   d. Click the bar chart in the **Work Complete Percent** area.

      The chart and the table area show objects specific to the selection.

   e. Click the **Work Complete Percent** button to close this view.

10. Export the table area of the report to Microsoft Excel.

    a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

       From **Templates**, select the report and click **Open**.

    b. Click **Export to Excel** above the table area of the report.

    c. Click **Add Properties** and deselect the properties that you do not want to be displayed in the exported report.

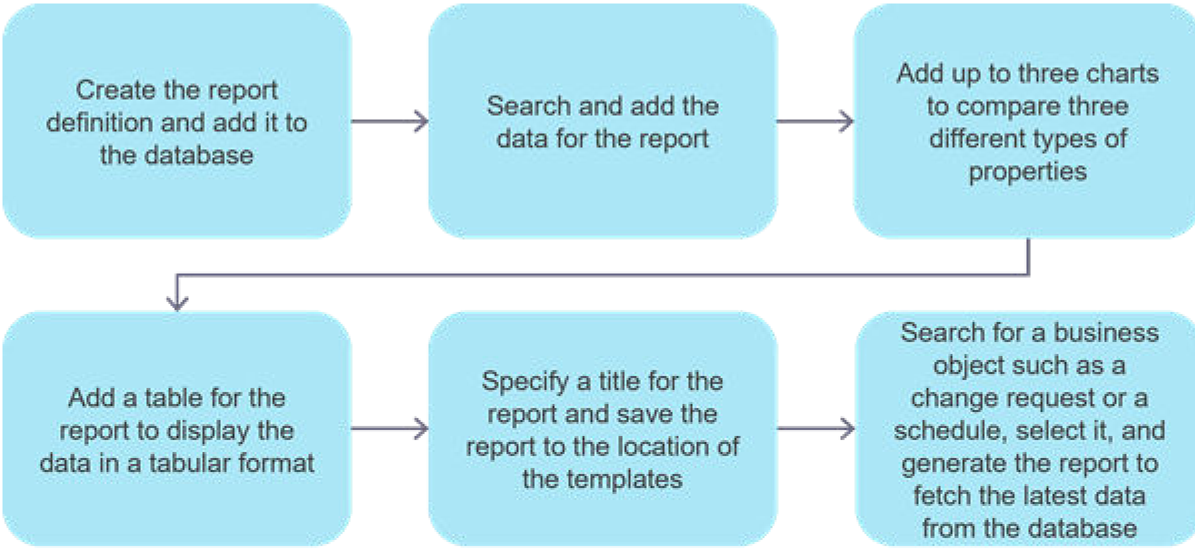
    d. To download the report, click **Export**.

    e. Click **Downloads** in your browser to open the exported file.

Create an active item report for scheduled tasks

You can create an active item report for scheduled tasks.

The process for creating and generating an active item report is as follows:



Procedure

1. (Optional) Create the sample data for scheduled tasks.

   The following procedures are optional. These tasks have a schedule object as the parent in this example. At your site, you can search for the appropriate object to add as the sample source to validate the related data.

   a. On the **HOME** page, click the **Schedules** tile.

   b. Choose **More Commands** > **New** > **Create Schedule** > **Schedule** and specify the name as **Test_Schedule**.

   c. Specify information as appropriate and click **Create**.

   d. Open the schedule you created, click the **Tasks** tab, click **Add Schedule Task** and select **Schedule Task**.

   e. Specify the name, add other information as appropriate, and click **Add**.

2. Create the report definition and add the data for the report.

   a. On the **HOME** page, click the **REPORTS** tile.

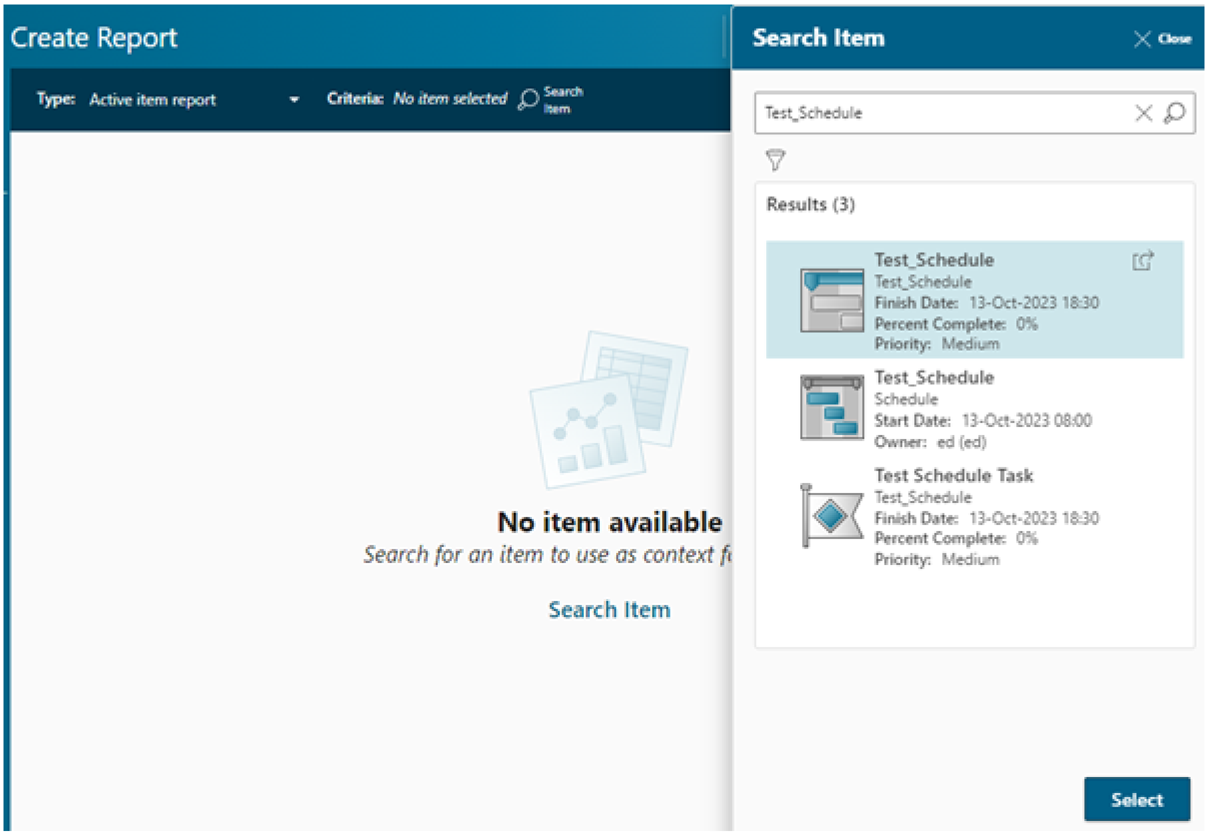
b. In **My Dashboard** or **Templates**, choose **More Commands** > **New** > **Create Report**.

c. To create an item report, from the **Type** menu, select **Active item report**.

3. Search for the data you want to include in the report.

a. To search for the item you want to include in the report, type, search for a schedule in the **Search Item** panel, select it, and click **Select**.

In this example, you can search for **Test_Schedule** as per the sample data you created.

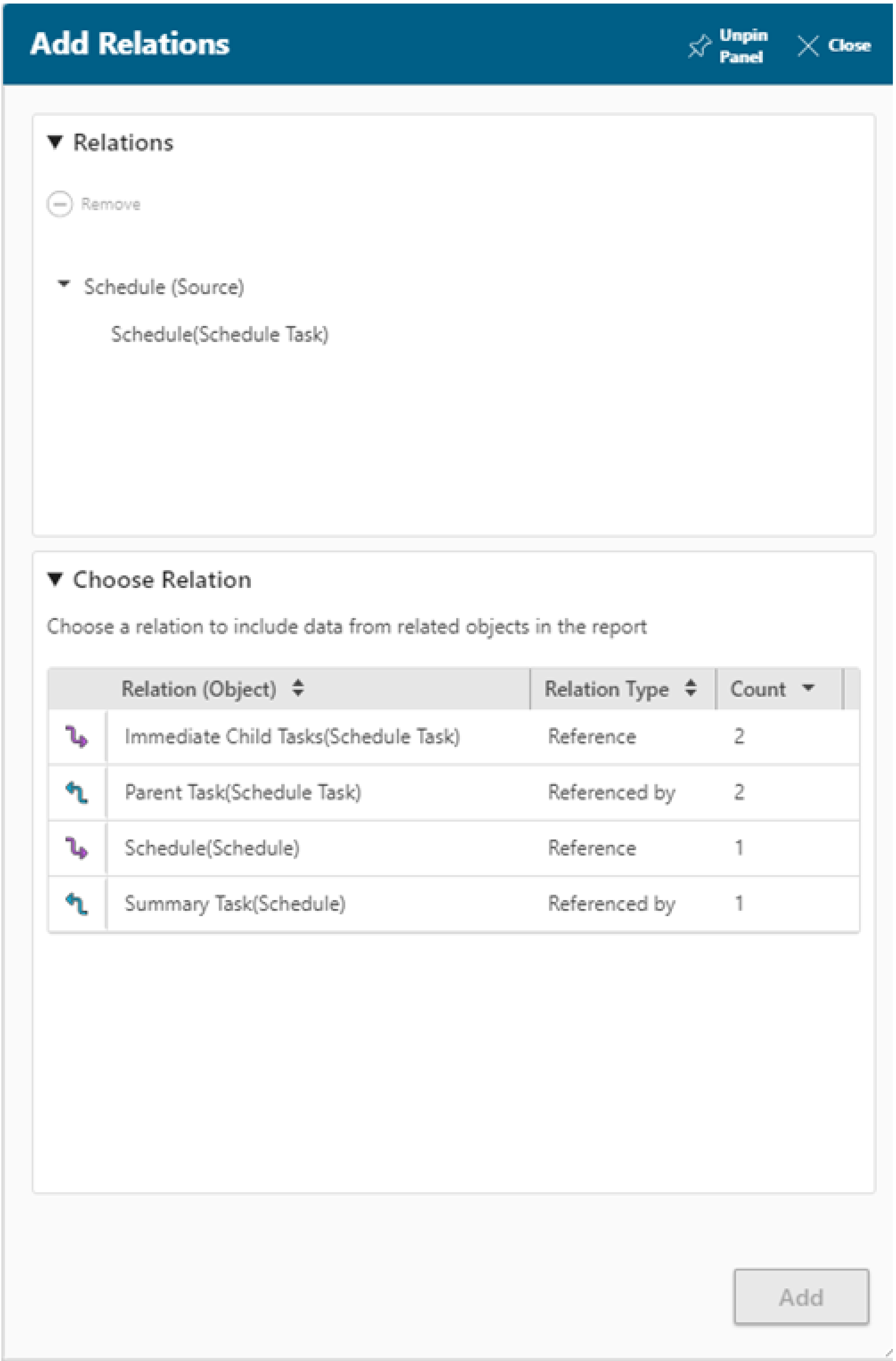


b. To add the relations, click **Add** and click **Pin Panel** to add multiple relations.

The system displays all the possible relations of the source object.

Column name	Description
Relation (Object)	Displays the relation name and the type of object this particular relation returns.
Relation Type	Displays the relation type such as primary, secondary, reference, or referenced by.
Count	Displays the number of objects that are related.

c. Select the appropriate relation object and click **Add**. Keep adding relations as appropriate.



4. Select a layout for the report and add charts

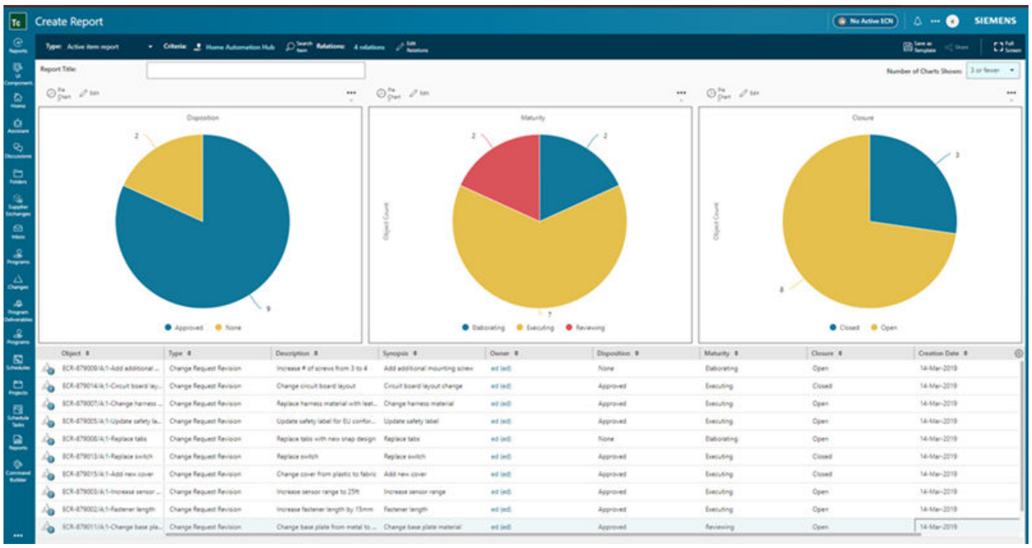
You must first create the report definition and add the data for the report before you can select a layout and add charts and a table.

a. Specify a report title.

b. Specify the number of charts you want to add for this report by selecting the appropriate option.

c. Select **Bar Chart**, **Pie Chart**, or **Line Chart** for the type of chart you want to create.

d. To create a layout for the report, click **Edit**.



e. To add a property for the chart, from the **Chart On** list, select a value, for example, **Status**.

f. Specify a title for the chart type or accept the default title.

g. To save this chart type, click **Save**.

h. To add the second and third charts, repeat the above steps. You can choose other properties for the second and the third chart, for example, **State** and **Priority**, respectively.

You can add additional chart properties depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

i. After creating more than one chart, to move the chart, click **... More Commands** and select the appropriate option.

5. To display the data in a tabular format, add a table for the report.

a. In the **TABLE** area, click **Table Settings** > **Arrange**.

b. From **Available Columns**, select column name properties such as **Object**, **Task Type**, **Description**, **State**, and **Status**, and click > to move them to **Displayed Columns**.

c. (Optional) To rearrange the columns in the table, in the **Column Name** area, select a column name, click the column widget, and move the column up or down.

d. To save the column arrangement, click **Arrange**.

6. Save the report as a template.

   a. To save the report as a template, click **Save as Template**.

   b. (Mandatory) Specify a name for the report.

   c. (Optional) Include a description.

   d. Click **Save**.

7. Edit the report from **Templates**.

   a. Navigate to the **Templates** location.

   b. Search for the report definition you want to edit, select it, and choose **More Commands** > **Edit** > **Edit Report**.

   c. Make the necessary changes and save the report.

8. Generate the report.

   a. Search for the object for which you want to generate the report.

   b. Select the object, and choose **More Commands** > **New** > **Generate Report**.

   c. Select the report you created and click **Generate**.

      The report is generated by fetching the latest data from the database.

   d. (Optional) Create another schedule task.

      A. Open the schedule you created, click the **Tasks** tab, click **Add Schedule Task**, and select **Schedule Task**.

      B. Specify a name, add other information as appropriate, and click **Add**.

      C. (Optional) Run the report again to see the new scheduled task.

9. Export the table area of the report to Microsoft Excel.

    a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

       From **Templates**, select the report and click **Open**.

    b. Click **Export to Excel** above the table area of the report.

    c. Click **Add Properties** and deselect the properties that you do not want to be displayed in the exported report.

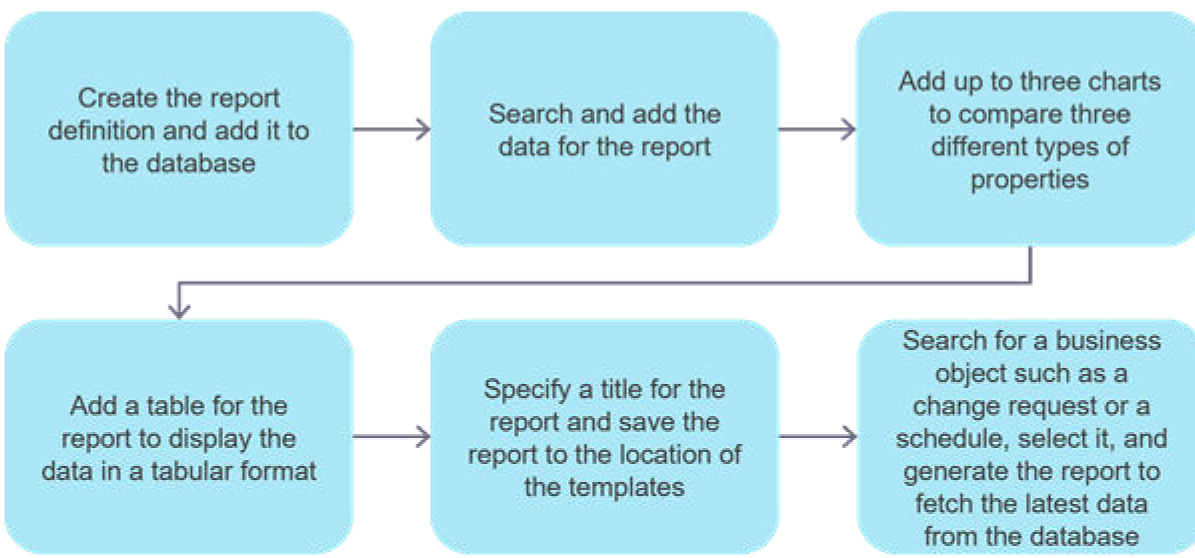
    d. To download the report, click **Export**.

    e. Click **Downloads** in your browser to open the exported file.

Create an active item report for change requests

You can create an active item report for change requests.

The process for creating and generating an active item report is as follows:



Procedure

1. (Optional) Create the sample data for the change request.

   The following procedures are optional. These change requests have part revisions as a problem item in this example. At your site, you can search for the appropriate object to add as the sample source to validate the related data.

a. Select **Explorer** and choose **More Commands** > **New** > **Add** > **Part** and specify the name as **Test_Part**.

b. In **Explorer**, select the part you created and choose **More Commands** > **New** > **Create Change** > **Change Request**, fill the required boxes, and click **Create and Submit**.

c. Open the change request and choose the **Affected Items** tab. It displays the **Test_Part** part revision. In this example, while creating the report, a backward traversal rule is being created from the part revision to the change request.

d. Open the part revision and choose the **Changes** tab. This part has a relation type of **Problems** with the change request you created.

2. Create the report definition and add the data for the report.

   a. On the **HOME** page, click the **REPORTS** tile.

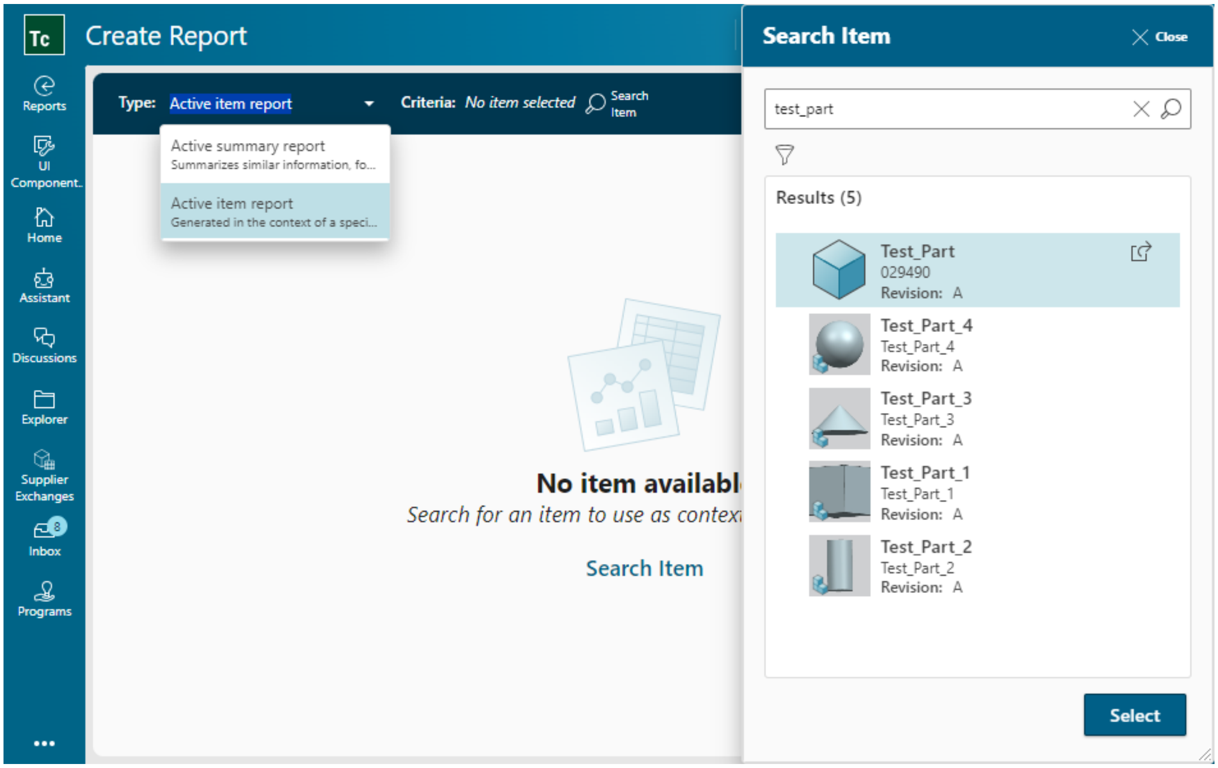
   b. In **My Dashboard** or **Templates**, choose **More Commands** > **New** > **Create Report**.

   c. To create an item report, from the **Type** list, select **Active item report**.

3. Search for the data you want to include in the report.

   a. To search for the item you want to include in the report, click **Search Item**.

   For example, type **Test_Part** to search for a part in the **Search Item** panel, select it, and click **Select**.

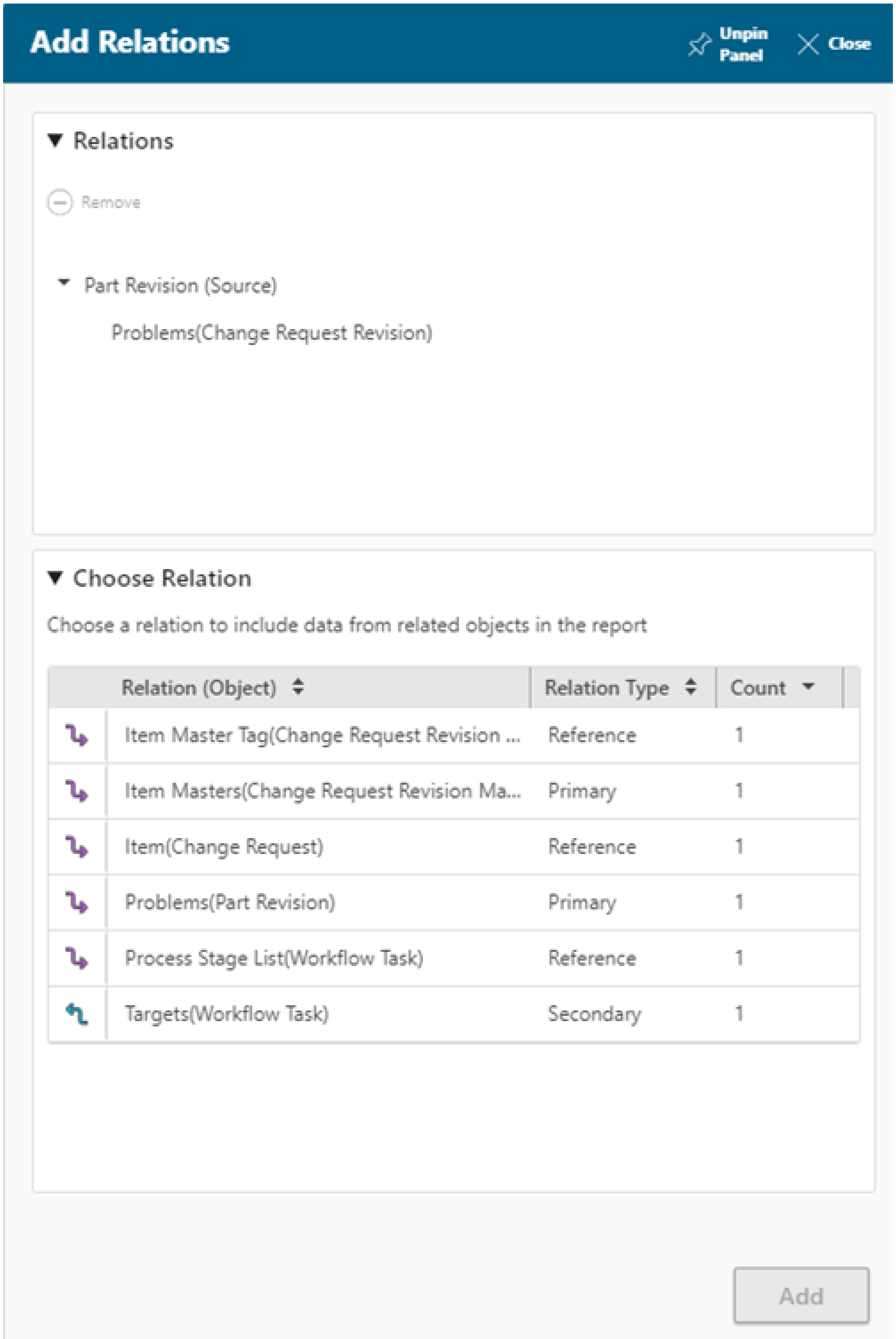


b. To add the relations, click **Add Relations** and click **Pin Panel** to add multiple relations.

The system displays all the possible relations of the source object.

Column name	Description
Relation (Object)	Displays the relation name and the type of object this particular relation returns.
Relation Type	Displays the relation type such as primary, secondary, reference, or referenced by.
Count	Displays the number of objects that are related.

c. Select the appropriate relation object and click **Add**. Keep adding relations as appropriate.



4. Select a layout for the report and add charts.

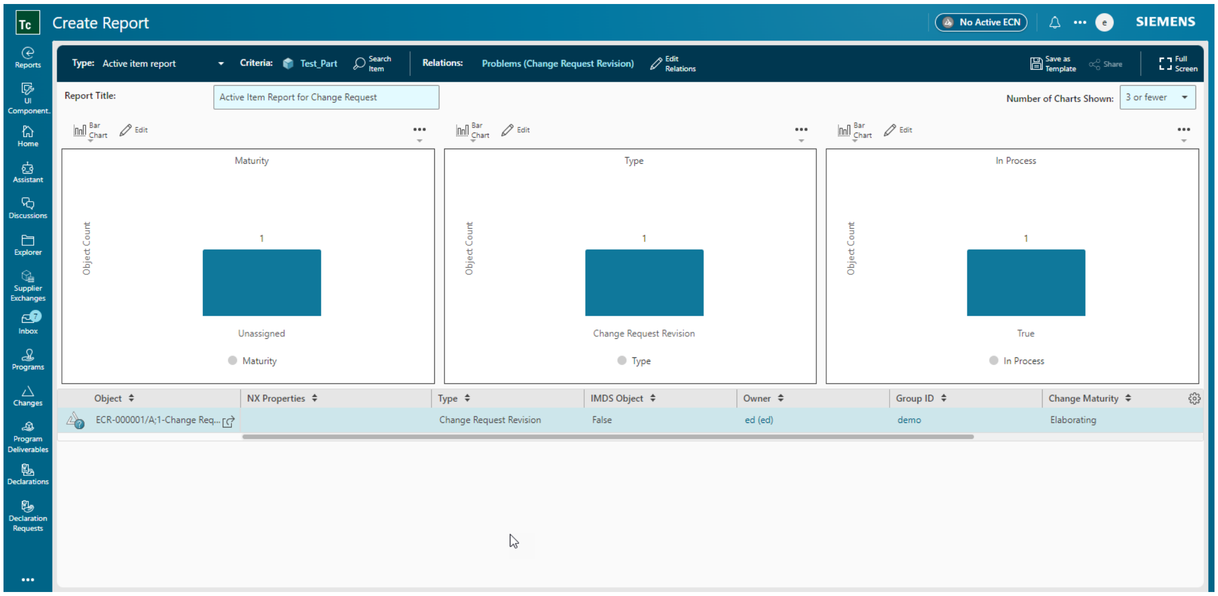
   You must first create the report definition and add the data for the report before you can select a layout and add charts and a table.

a. Specify a report title.

b. Specify the number of charts you want to add for this report by selecting the appropriate option.

c. Select **Bar Chart**, **Pie Chart**, or **Line Chart** for the type of chart you want to create.

d. To create a layout for the report, click **Edit**.



e. To add a property for the chart, from the **Chart On** list, select a value, for example, **Status**.

f. Specify a title for the chart type or accept the default title.

g. To save this chart type, click **Save**.

h. To add the second and third charts, repeat the above steps. You can choose other properties for the second and the third chart, for example, **State** and **Priority**, respectively.

   You can add additional chart properties depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

i. After creating more than one chart, to move the chart, click **... More Commands** and select the appropriate option.

5. To display the data in a tabular format, add a table for the report.

   a. In the **TABLE** area, click **Table Settings** > **Arrange**.

   b. From **Available Columns**, select column name properties such as **Maturity**, **Disposition**, **Closure**, and **Creation Date**, and click > to move them to **Displayed Columns**.

   c. (Optional) To rearrange the columns in the table, in the **Column Name** area, select a column name, click the column widget, and move the column up or down.

   d. To save the column arrangement, click **Arrange**.

   > Note:
   >
   > (Optional) You can add additional columns to the table depending on how the administrator has configured your Teamcenter environment. Consult your administrator for more information.

6. Save the report as a template.

   a. To save the report as a template, click **Save as Template**.

   b. (Mandatory) Specify a name for the report.

   c. (Optional) Include a description.

   d. Click **Save**.

7. Edit the report from **Templates**.

   a. Navigate to the **Templates** location.

   b. Search for the report definition you want to edit, select it, and choose **More Commands** > **Edit** > **Edit Report**.

   c. Make the necessary changes and save the report.

8. Generate the report.

   a. Search for the object for which you want to generate the report.

   b. Select the object, and choose **More Commands** > **New** > **Generate Report**.

   c. Select the report you created and click **Generate**.

      The report is generated by fetching the latest data from the database.

   d. (Optional) Create another schedule task.

   A. Open the schedule you created, click the **Tasks** tab, click **Add Schedule Task** ⊕, and select **Schedule Task**.

   B. Specify a name, add other information as appropriate, and click **Add**.

   C. (Optional) Run the report again to see the new scheduled task.

9. Export the table area of the report to Microsoft Excel.

   a. To open the report from any dashboard, hover over the report title until a link appears, and click the title link to open it. Alternatively, select the report and click **More Commands** > **Open**.

      From **Templates**, select the report and click **Open**.

   b. Click **Export to Excel** above the table area of the report.

   c. Click **Add Properties** and deselect the properties that you do not want to be displayed in the exported report.

   d. To download the report, click **Export**.

   e. Click **Downloads** in your browser to open the exported file.