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2. Teamcenter Basics

2.1. topics overview

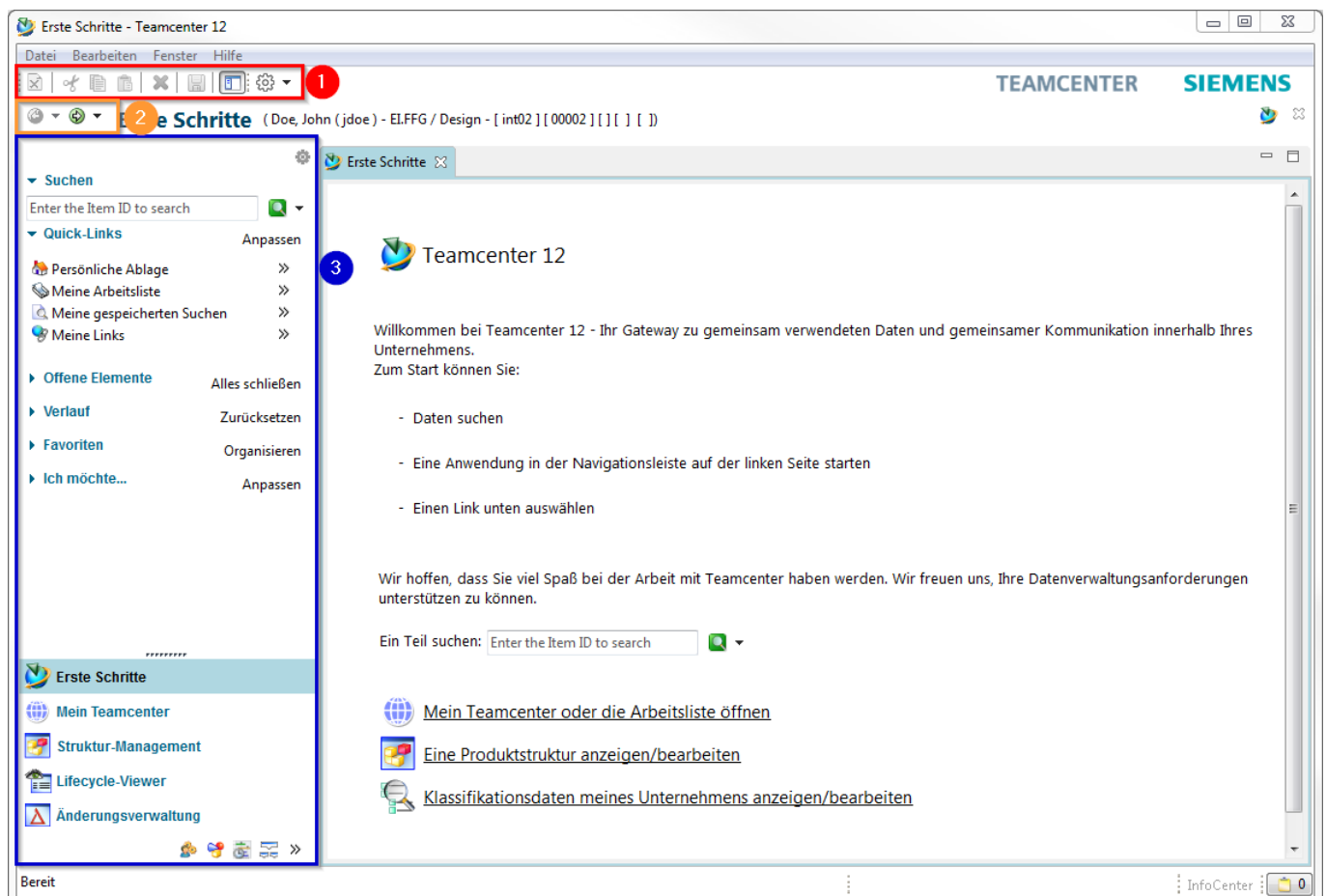
This training document deals with the elementary basics in Teamcenter.

The main focuses have been set as follows:

- User Interface
- The most important Teamcenter applications
- Organization
- Items & Revisions
- Data types
- Relations

2.2. user interface

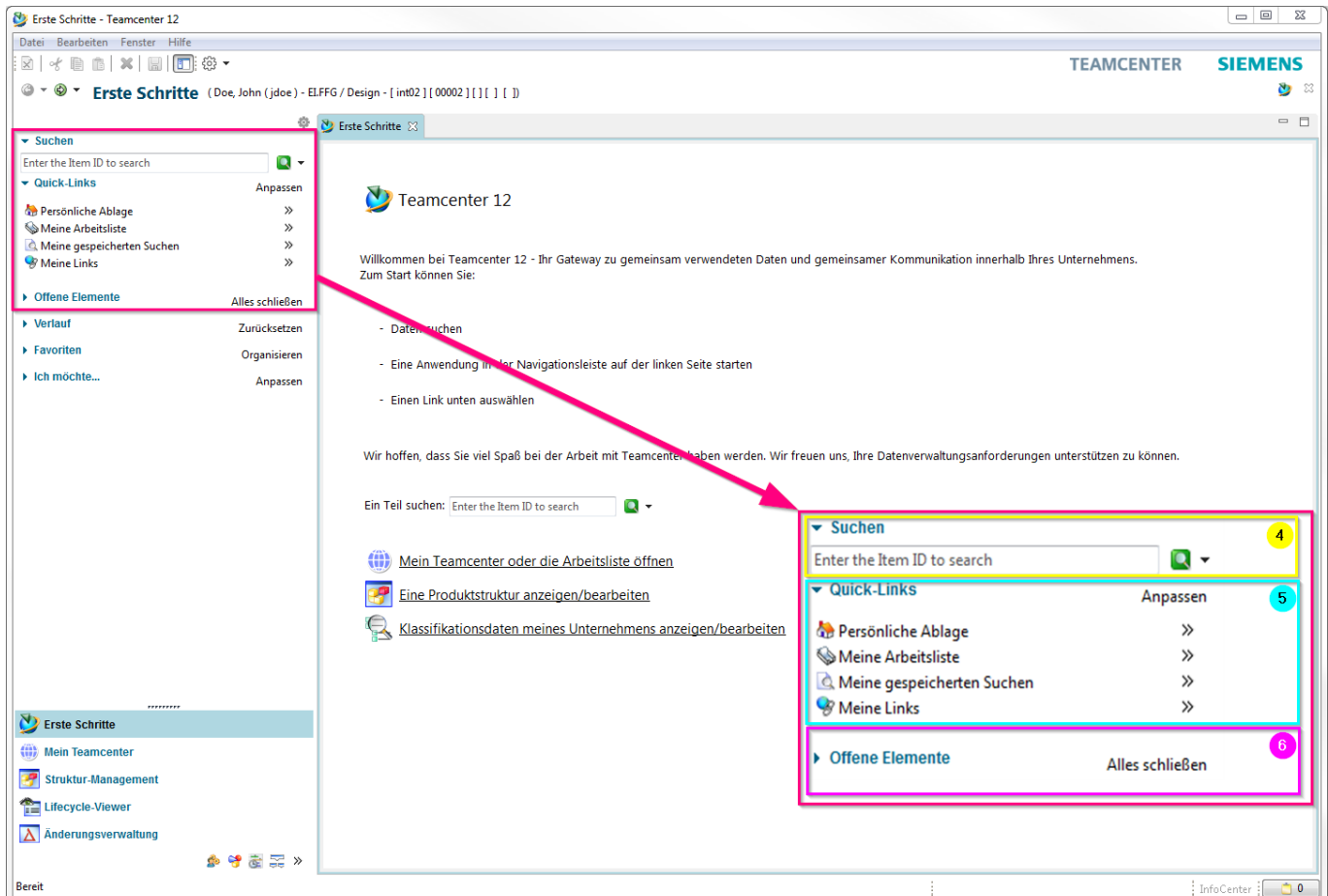
2.2.1 Rich client interface



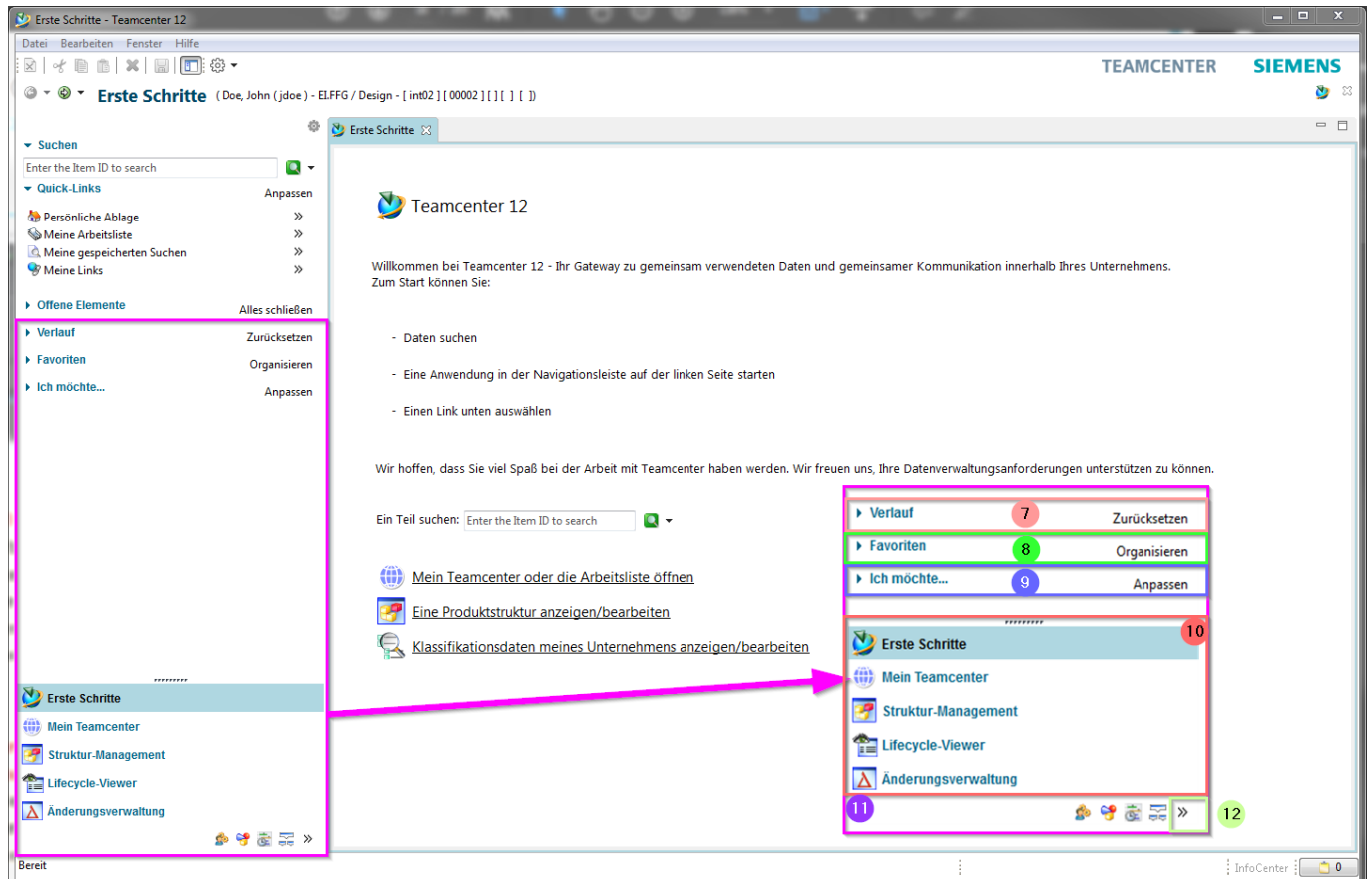
1. The **Menu- & Tool-Bar** -> Functions of the currently displayed application.

2. The „**Back**“ and „**Forward button**“ allows you to navigate between open Teamcenter applications.

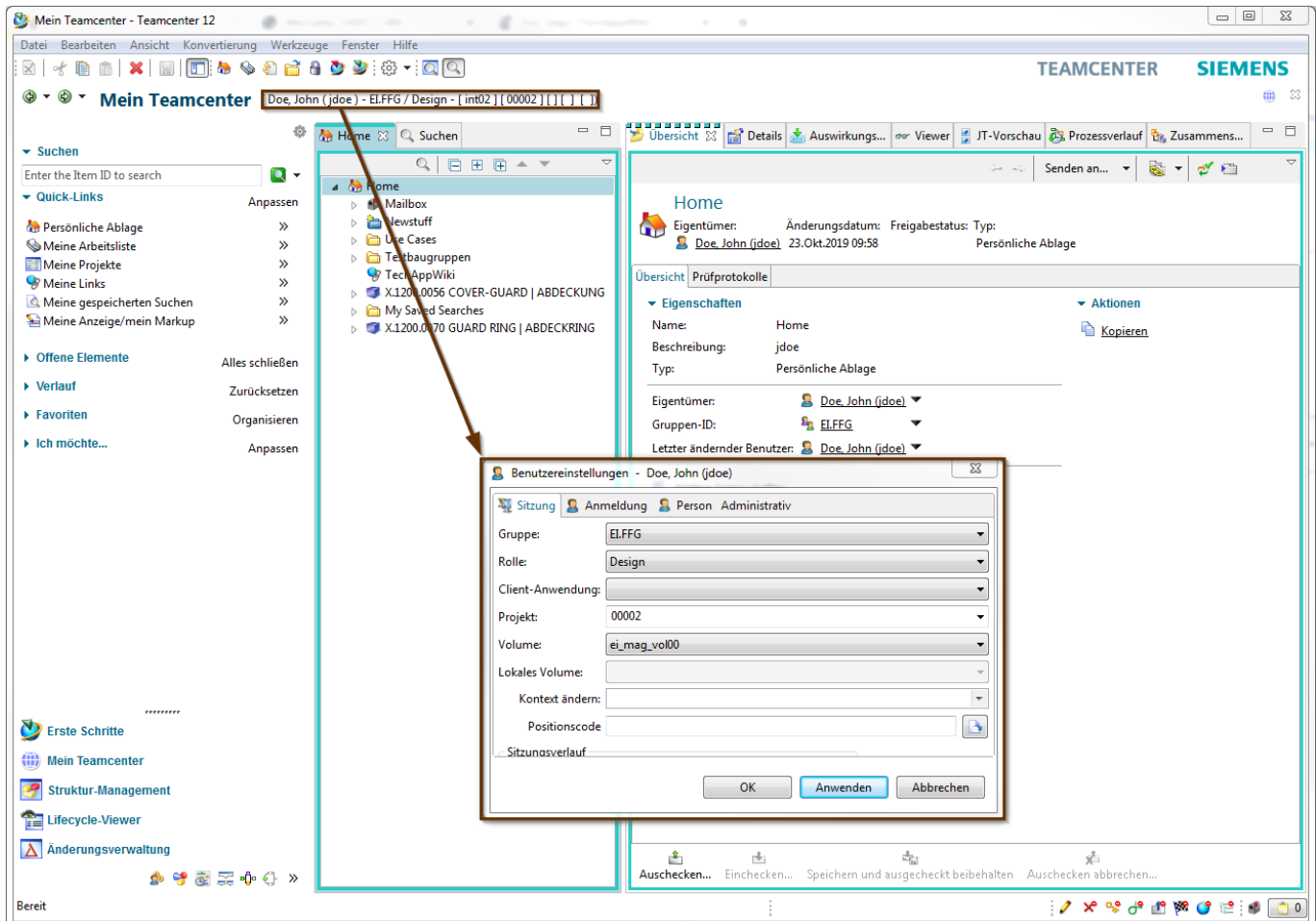
3. The **navigation window** gives you access to frequently used applications.



4. **Quick Search** („Quick Search“) offers the possibility to search for datasets, item ID, item names, keywords and advanced search options.
5. Via the „**Quick Links**“ you can jump to your personal „Home“ folder, saved searches, favorites and work lists.
6. „**Open elements**“ shows all open objects that are used in the application.



- | | |
|-----|--|
| 7. | The history shows the last opened Teamcenter application. |
| 8. | in the „ Favorites “ your specially marked „Teamcenter Objects“ are displayed. |
| 9. | About „ I want... “ connections to the tools are made available, which are used repeatedly, e.g. to initiate or change processes. |
| 10. | The „ Primary Application Button “ opens the most frequently used Teamcenter applications. |
| 11. | The „ Secondary Application button “ contains applications that are used less frequently. |
| 12. | The „ Configure Application button “ provides access to the tools to configure the display of primary and secondary applications. |



13. user settings

group:

Responds to the KV. You can be assigned to several groups, which you can control here. Other number generators are attracted according to the group.

Attention:

The SAP transfer is controlled by the assignment of a group!

roll:

If you are assigned to more than one role (*Design-Admin*, *Design*, *Plot*), you can control them using this menu.

Client application:

Here, for example, different NX environments (*NX*, *NX CAM*...) can be controlled.

project:

Corresponds to the EAC group. This must be set to 00002 after the initial login to Teamcenter.

Change context:

Here you can control whether you work in a change context. If you want to work in a change context, all changes and new installations are documented under the change number.

2.2.2 Application Perspectives

Within the user interface of the Teamcenter Rich Client, the application functionality is provided by perspectives and views. Some applications use perspectives and views to rearrange the functionality. Other applications use a single perspective and views to display information.

2.2.2.1 Procedure

You can open an application perspective using the following methods:

- Click the application button in the navigation pane.



Tip

If the navigation window is not displayed, display it using the menu command **Window → Navigation Window** or click the **Navigation Window**  icon on the toolbar.

- Select the perspective from the **Window** menu → **Open Perspective**
- Select an object from the navigation view and then select an application from the **Send To** context menu option.
- Double-click an object in the navigation view to open the perspective associated with that object type.

For example, to open My Teamcenter in Rich Client, click **My Teamcenter**  in the Navigation pane.

To switch between different application perspectives, the following methods can be used:

- Use the **Back button**  on the toolbar or select an open application from the ▼ drop down menu or press Ctrl+Shift+F8 to display the previously open application.
- Use the **Forward button**  on the toolbar or select an open application from the ▼ drop down menu or press Ctrl+F8 to display the previously opened application.
- Hold Ctrl+F8 to display the **Perspectives** menu, then release the F8 key. Select the perspective to display using the mouse button or arrow keys.

To save the active perspective you have configured, you can proceed as follows:

- Select **Window → Save Perspective As**
- Enter a new name for the perspective.
- Click **OK**.

To reset a perspective to its default state, select **Window → Reset Perspective**. This restores all default views of the current perspective to their original positions.

2.2.3 View "Overview"

The **Overview** view allows you to view properties for a selected item and edit attributes such as name or description for supported items for which you have appropriate permissions.

Configuration and content of the **View** Overview vary depending on the information display configured for the selected object type.

A view can contain several tab pages.

2.2.3.1 Overview

The „**Overview** „ tab displays all editable metadata of an item revision. The **highlighted metadata** are **mandatory attributes** and must be filled in before **release after „ER „** [Engineering Release].

X.0000.3311-01 STAENDERBAUGRUPPE

Übersicht | Customer Properties | Title Block | EPLAN Properties | History Properties | Zugehörige Datasets | Verfügbare Änderungsstände | Prüfprotokolle

Kopieren | Revisionieren... | Neuer Workflow-Prozess... | Speichern unter

General Information

Material Nr.:	X.0000.3311	Alte Materialnr.:		Änderungsstand:	01
EI SAP Proj.-Nr.:		GP SAP Proj.-Nr.:	0	KV:	EI
Ben.ID:		Materialart:	HALB	Internes Dokument:	
Deutsch:		Englisch:	STAENDERBAUGRUPPE	Abmessung:	
Zusatz Deutsch:		Zusatz Englisch:		Zusatz (allg.):	

Component Properties

Material DIN:		Material US:		Gewicht:	
Norm:		Rohteil Nr.:		Modell Nr.:	
Härtetyp:		Härtegrad:		Härtetiefe:	
Abmessung:					

Classification

Produkt:		Waregroup Descr (EN):		Klasse 1:	
Standard Teil:	Nein	Waregroup Dispo (EN):		Klasse 2:	
CS:		Warengruppe:		Klasse 3:	
Bereich:		Required Classification:		Klasse 4:	
E + V Teil:				Set Class Attributes	
Umbau:	Falsch				

Disposition

Beschaffungsart:		Hersteller ID:	
Q-Code:		Hersteller Name:	
Dispo Strategie:		Pflichthersteller:	Falsch
STL Verw.:		Lieferant.Best.Nr.:	

Auschecken... Einchecken... Speichern und ausgecheckt beibehalten Auschecken abbrechen...

2.2.3.2 Customer Properties

Customer-specific information is managed in the **Customer Properties** tab.

Übersicht Details Auswirkungsanalyse Viewer JT-Vorschau Prozessverlauf Zusammensetzung

Senden an...

X.0000.3311-01 STAENDERBAUGRUPPE

Übersicht Customer Properties Title Block EPLAN Properties History Properties Zugehörige Datasets Verfügbare Änderungsstände Prüfprotokolle

General Information

Auftrag:	Kundendokument?:	Kundensprache:
Kundensprache:	Zusatz Kundensprache:	Kunden Dok.Nr.:

Auschecken... Einchecken... Speichern und ausgecheckt beibehalten Auschecken abbrechen...

2.2.3.3 Title Block

In the **Title Block** tab, you can enter the information required for the drawing frame.

Übersicht Details Auswirkungsanalyse Viewer JT-Vorschau Prozessverlauf Zusammensetzung

Senden an...

X.0000.3311-01 STAENDERBAUGRUPPE

Übersicht	Customer Properties	Title Block	EPLAN Properties	History Properties	Zugehörige Datasets	Verfügbare Änderungsstände	Prüfprotokolle
Material Nr.:	X.0000.3311	Zuletzt geändert von:	Doe, John				
Änderungsstand:	01	Änderungsdatum:	04.Dez.2019 15:33				
		Freigegeben von:					
		Freigabe Datum:					
Englisch:	STAENDERBAUGRUPPE						
Zusatz Englisch:							
Deutsch:							
Zusatz Deutsch:							
Zusatz (allg.):							
Material DIN:							
Material US:							
Gewicht:							
	Auftrag:						
	Ersatz für:						
	Ähnlich:						
	Änderungs-Nr.:						
	Werk (KV):						
	Kunden Dok.Nr.:						
	Härtetyp:						
	Härtegrad:						
	Härtetiefe:						
	Rohteil Nr.:						
	Modell Nr.:						

Auschecken... Einchecken... Speichern und ausgecheckt beibehalten Auschecken abbrechen...



Note:

The entered metadata is transferred to the „Overview“ view or from the „Overview“ view to the „Title Block“. This metadata does not need to be maintained twice.

2.2.3.4 EPLAN Properties

In the **EPLAN Properties** tab, all metadata is filled via EPLAN integration.

Übersicht Details Auswirkungen Analyse Viewer JT-Vorschau Prozessverlauf Zusammensetzung

Senden an...

X.0000.3311-01 STAENDERBAUGRUPPE

Übersicht	Customer Properties	Title Block	EPLAN Properties	History Properties	Zugehörige Datasets	Verfügbare Änderungsstände	Prüfprotokolle
-----------	---------------------	-------------	-------------------------	--------------------	---------------------	----------------------------	----------------

Vendor Part Name 1:
Vendor Part Name 2:
Vendor Part Name 3:
Vendor Part Type No.:

Lieferant ID (VP):
Lieferant Name (VP):
Hersteller ID (VP):
Hersteller Name (VP):
Beschreibung:
Gewerk:

Hersteller ID:
Hersteller Name:

Auschecken... Einchecken... Speichern und ausgecheckt beibehalten Auschecken abbrechen...



Note:
These cannot be edited in Teamcenter.

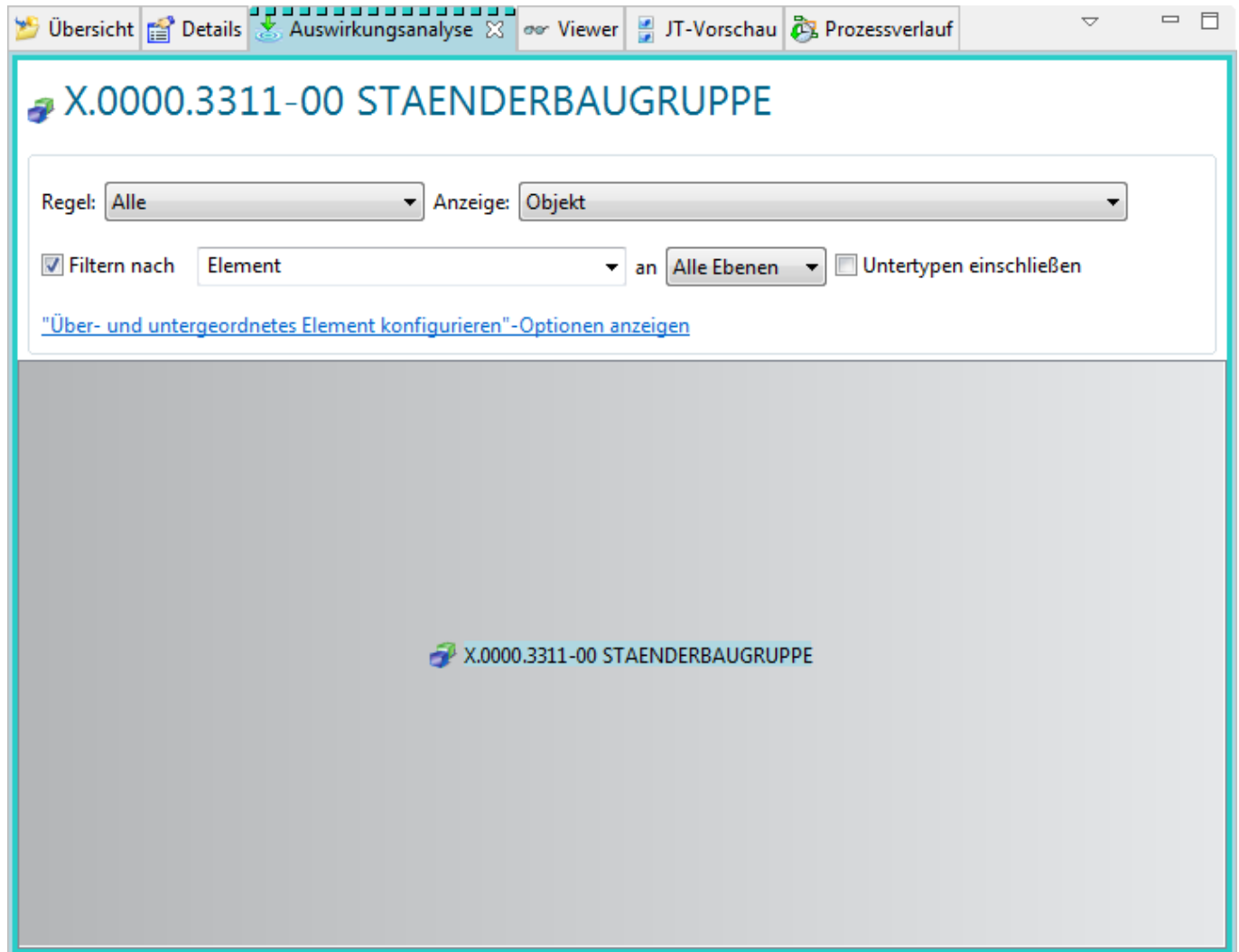
2.2.4 View "Details"

The **Details** view is a tabular display of the properties of the child elements (datasets, BOM view change status, status, SAP Transferform...) of the object currently selected in the component view.

X.0000.3311-00 STAENDERBAUGRUPPE							
Objekt	Typ	Beziehung	Eigent...	Grupp...	Änderungsdat...	Au...	Freigabestatus
Ansicht		Zusammenste					
X.0000.3311-00 ER	UGMASTER	Spezifikatione	Groezi	EL.FFG	18.Jul.2019 17:37		ER ER
X.0000.3311/00-Ansicht ER	Stücklistenansicht-Änderungsstand	Stücklistenans	Groezi	EL.FFG	18.Jul.2019 17:37		ER ER
ER ER	ReleaseStatus	Freigabestatus					
SAP Transferform	SAP Transfer Form	SAP Transfer F	Groezi	EL.FFG	16.Jul.2019 14:34		

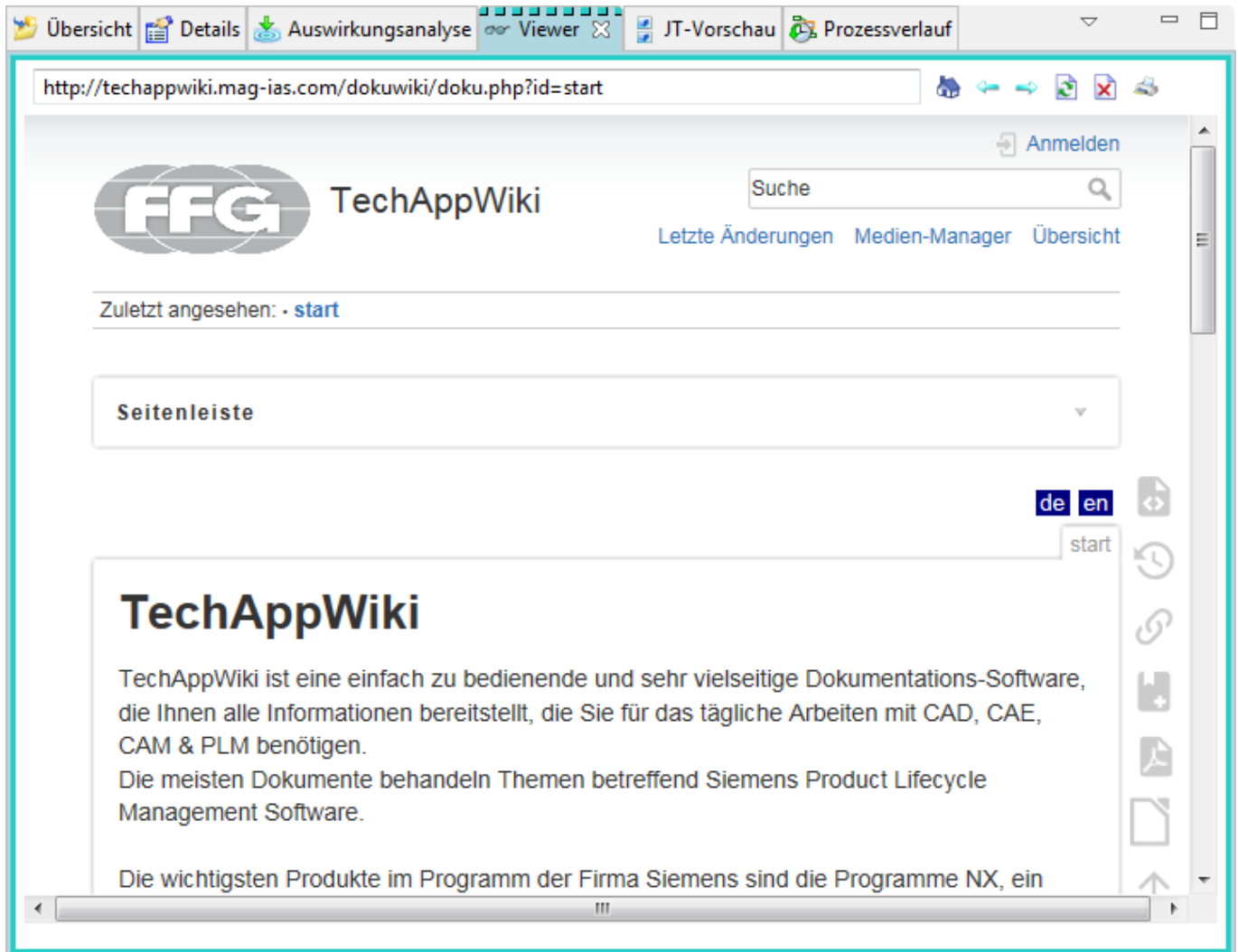
2.2.5 Impact Analysis View

The **Impact Analysis** view responds to the current selection in the active component view and graphically displays the relationship to the objects where it is used or referenced, and displays it in one layer, all layers, or just the main layer.



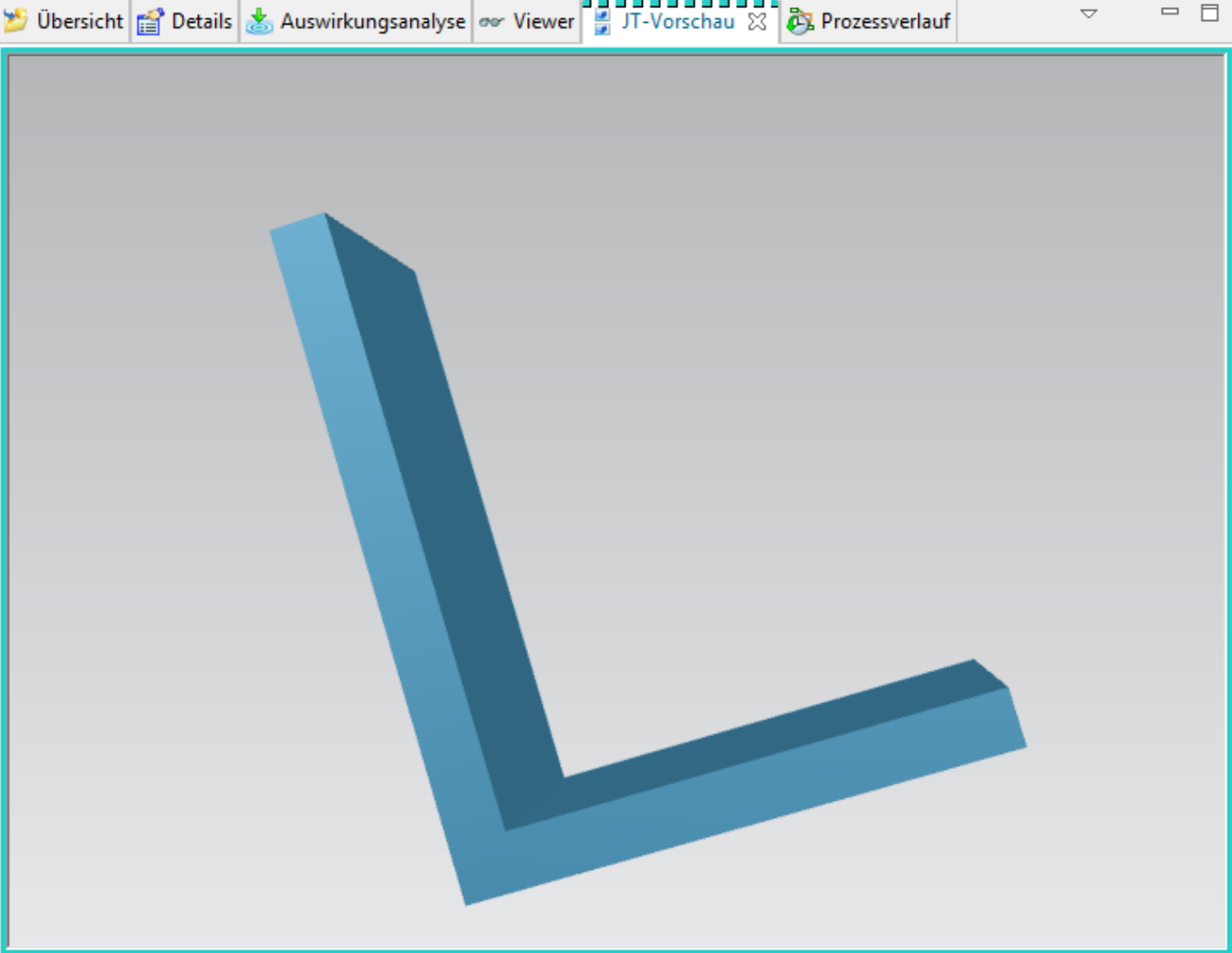
2.2.6 View "Viewer"

The content of the **Viewer** view depends on the selected object type in the current component or detail view. For example, if you select an Office dataset or an added link, it will be displayed in the „Viewer“ view.



2.2.7 View "JT Preview"

If a revision or a selected node has a JT dataset associated with it, it is displayed in the **JT Preview** view.



Note:

Modules can only be displayed via the LifecycleViewer. No assembly JT is generated, since the UGMaster does not contain any geometry.

2.2.8 View "Process history"

The **Process History** view displays the workflow or schedule management process of the business object selected in My Teamcenter on the Home page or in the My Worklist or Search Results views.

Übersicht Details Auswirkungsanalyse Viewer JT-Vorschau Prozessverlauf					
X.0001.0934-00 WINKEL					
Eigentümer:		Letztes Änderungsdatum:		Freigabestatus:	
Groezinger, Dominik (dgroezinger)		30.Jul.2019 09:36			
Objektanzeigename	Auftragsname	Ereignistypname	Protokolliert...	Aufgabenerg...	Unterzeichnungs-Ei
▲ X.0000.9515-00 MASCHINE	X.0000.9515-00 Ende		30.Jul.2019 16:52		
▲ FFG 20 Create Neutral Files	X.0000.9515-00 Abschließen		30.Jul.2019 16:52	Completed	
Select Neutral Formats	X.0000.9515-00 Zuweisen		30.Jul.2019 12:08	Unset	
Select Neutral Formats	X.0000.9515-00 Abschließen		30.Jul.2019 12:24	Completed	
▲ Smart Neutral Formats	X.0000.9515-00 Abschließen		30.Jul.2019 16:50	Completed	
Check Create JT	X.0000.9515-00 Abschließen		30.Jul.2019 12:25	Completed	
Check Create DXF	X.0000.9515-00 Fehlschlag		30.Jul.2019 12:34	33093,33083	
Or Task 2	X.0000.9515-00 Abschließen		30.Jul.2019 12:36	Completed	
Check Create STEP	X.0000.9515-00 Fehlschlag		30.Jul.2019 12:38	33093,33083	
Or Task 3	X.0000.9515-00 Abschließen		30.Jul.2019 12:40	Completed	
Check Create DWG	X.0000.9515-00 Fehlschlag		30.Jul.2019 12:42	33093,33083	
Or Task 4	X.0000.9515-00 Abschließen		30.Jul.2019 12:43	Completed	
Check Create PDF	X.0000.9515-00 Fehlschlag		30.Jul.2019 12:45	33093,33083	
Or Task 6	X.0000.9515-00 Abschließen		30.Jul.2019 12:47	Completed	
Check Create TIFF	X.0000.9515-00 Fehlschlag		30.Jul.2019 12:48	33093,33083	
Or Task 1	X.0000.9515-00 Abschließen		30.Jul.2019 12:49	Completed	
Check Create Iges	X.0000.9515-00 Fehlschlag		30.Jul.2019 12:50	33093,33083	
Or Task 7	X.0000.9515-00 Abschließen		30.Jul.2019 12:51	Completed	
Model to JT	X.0000.9515-00 Abschließen		30.Jul.2019 16:47	Completed	
Or Task 5	X.0000.9515-00 Abschließen		30.Jul.2019 16:48	Completed	
Wait to Complete	X.0000.9515-00 Abschließen		30.Jul.2019 16:49	Completed	

2.3. the most important Teamcenter applications

2.3.1 My Teamcenter

The application perspective „My Teamcenter“ is the workspace for using and managing product information (articles, documents, parts lists, specifications, requirements...).

This is the starting point for many standard functions such as

- Search and find PDM data
- Create and modify PDM objects
- Check-in / check-out of objects
- Managing my tasks
- Starting and monitoring processes / workflows
- Executing queries

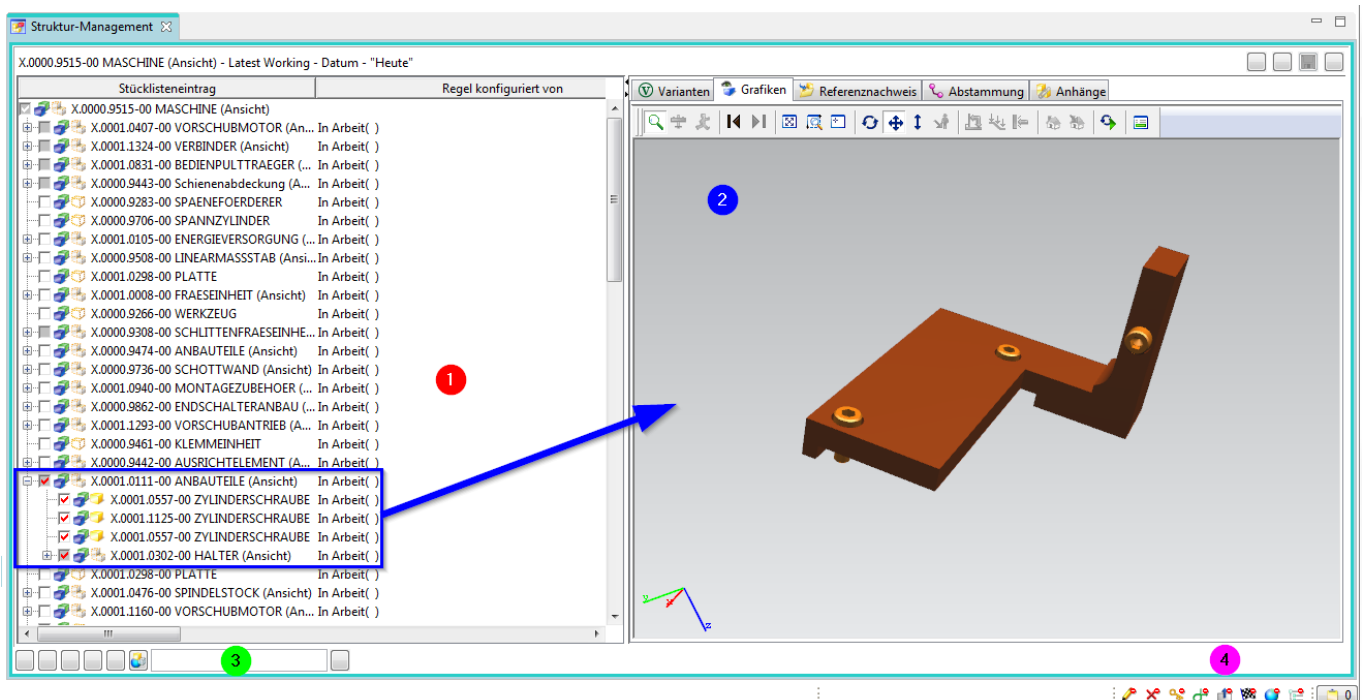
2.3.2 Structure Manager

The Structure Manager allows you to create general product structures (BOM = Bill of Material) that can be configured to display the product structure at a specific time or for a specific unit, such as

- The valid component structure of an assembly
- A specific approved manufacturing design of the product

- The current design structure in product development
- The product structure that was valid on a certain date
- A specific variant of a product

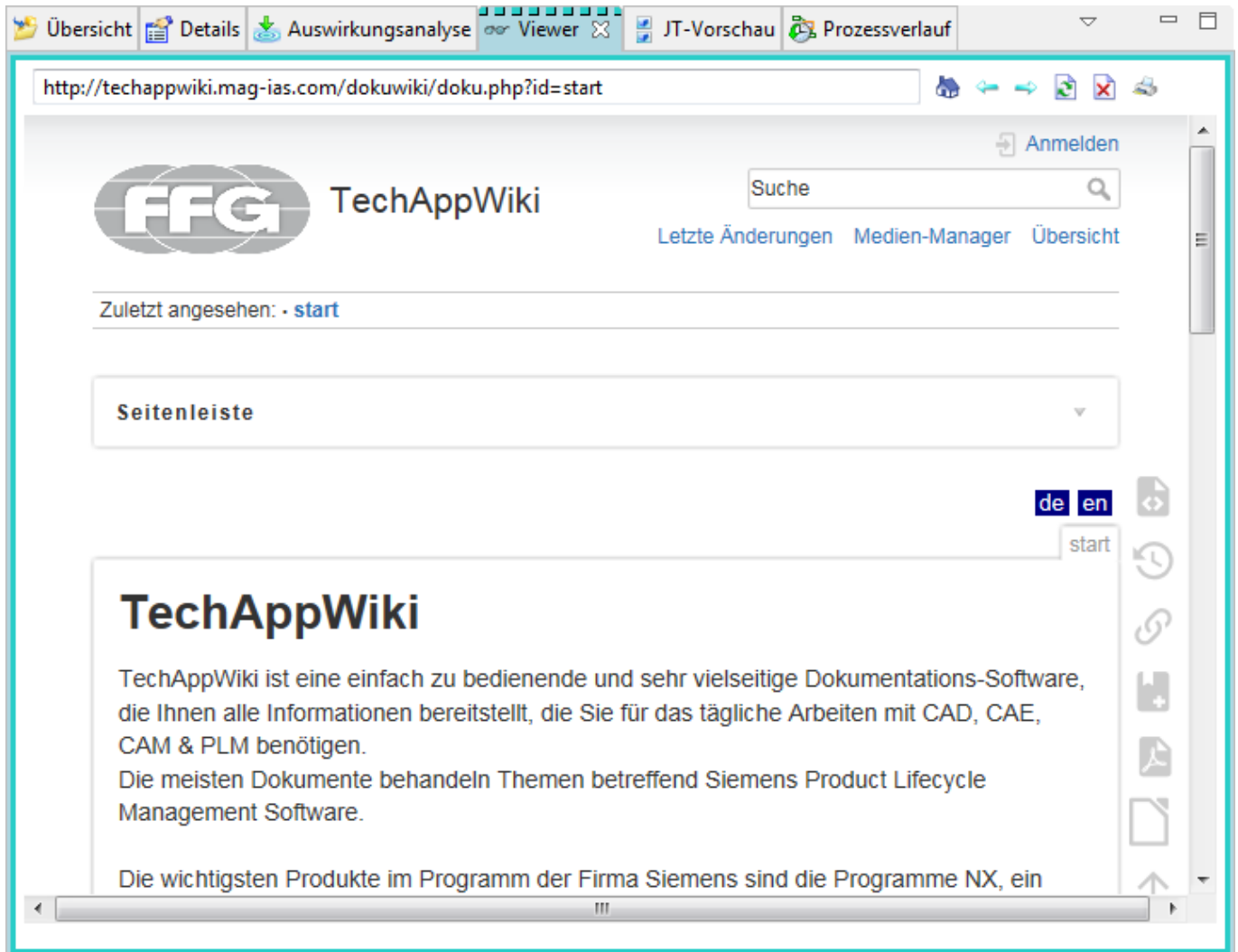
2.3.2.1 User Interface



1. The **structure navigation tree** enables you to navigate in the product structure and to extend or reduce the nodes to display the corresponding data. The symbols in the tree structure indicate the purpose of each node. The **property columns** to the right of the ID can be adapted to your requirements.
2. The **data window** allows you to display data for the selected entry. To display a data window, click on its tab. To do so, click Show / Hide Data Window in the **Tool Bar** .
3. The search area allows you to search for a structure to configure it with frequently used data.
4. The status icons show the current status of the selected entry.

2.3.3 Visualization tools

2.3.3.1 Viewer



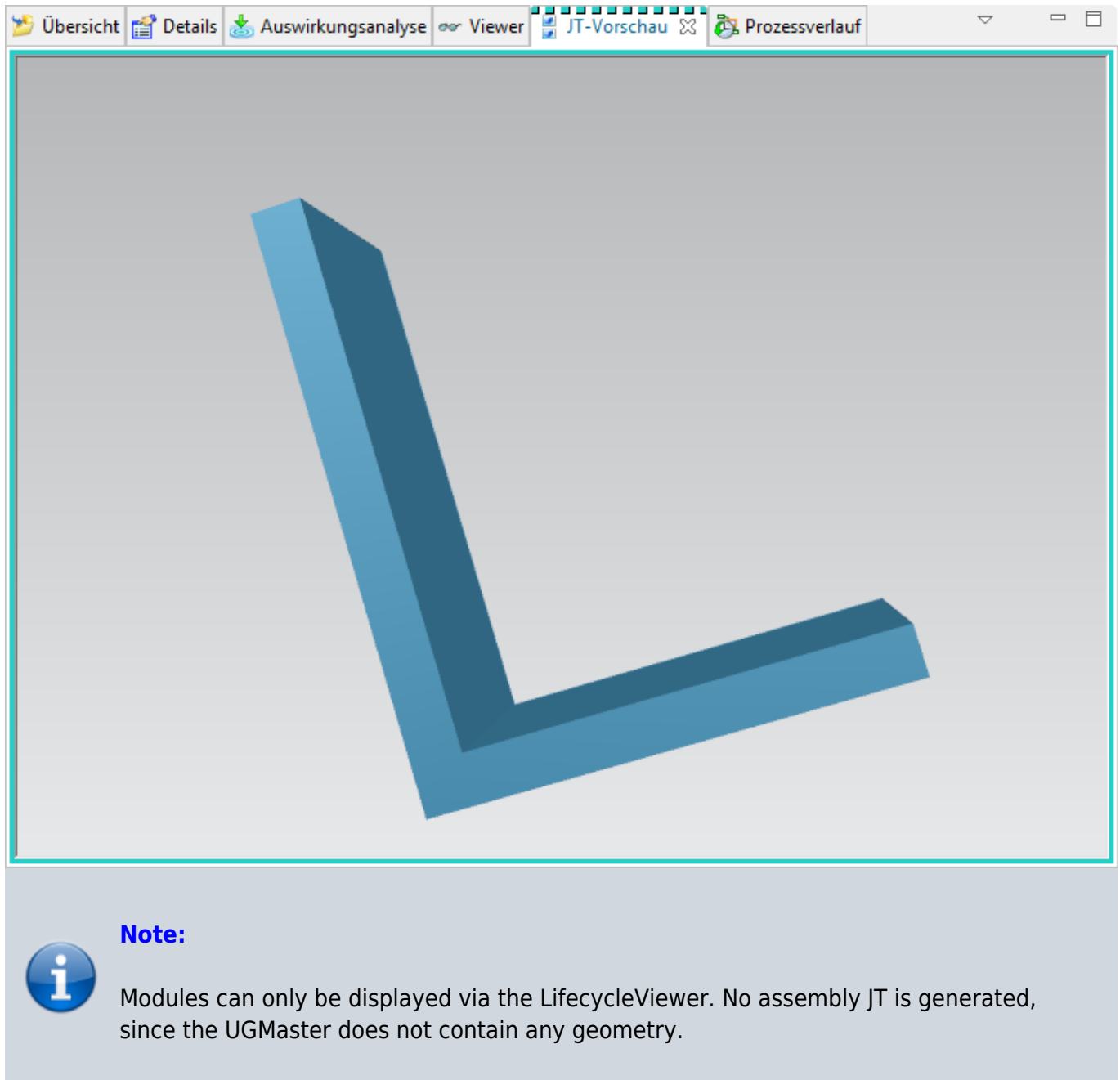
The content of the Viewer view depends on the selected object type in the current component or detail view.

The following types of datasets can be displayed in the Viewer view:

- Microsoft Office datasets
- Web links
- TIFF
- Meta data of different datasets, which were not visualized
- ...

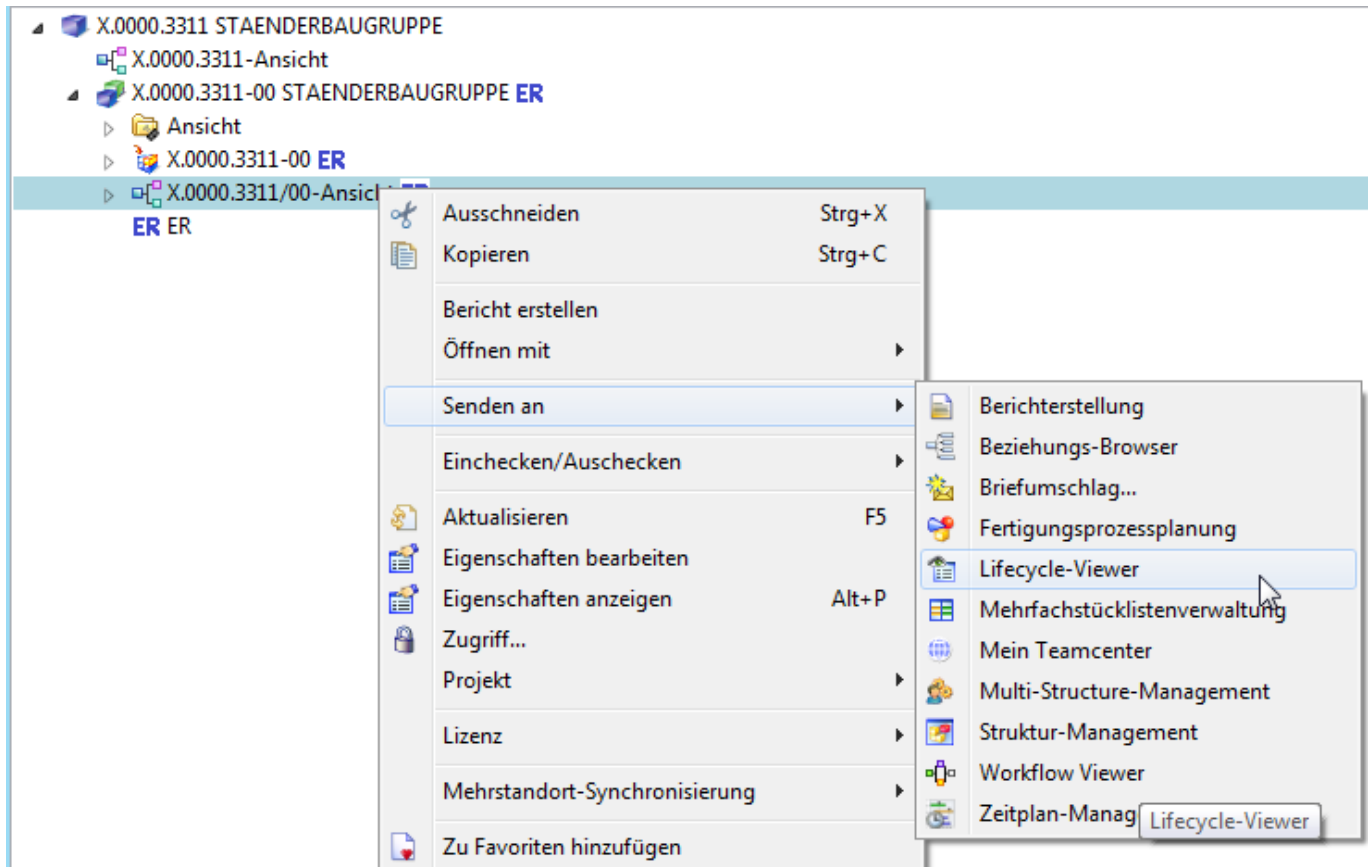
2.3.3.2 JT Viewer

If a JT dataset is assigned to an Engineering Item Revision, it is displayed in the **JT Preview** view.

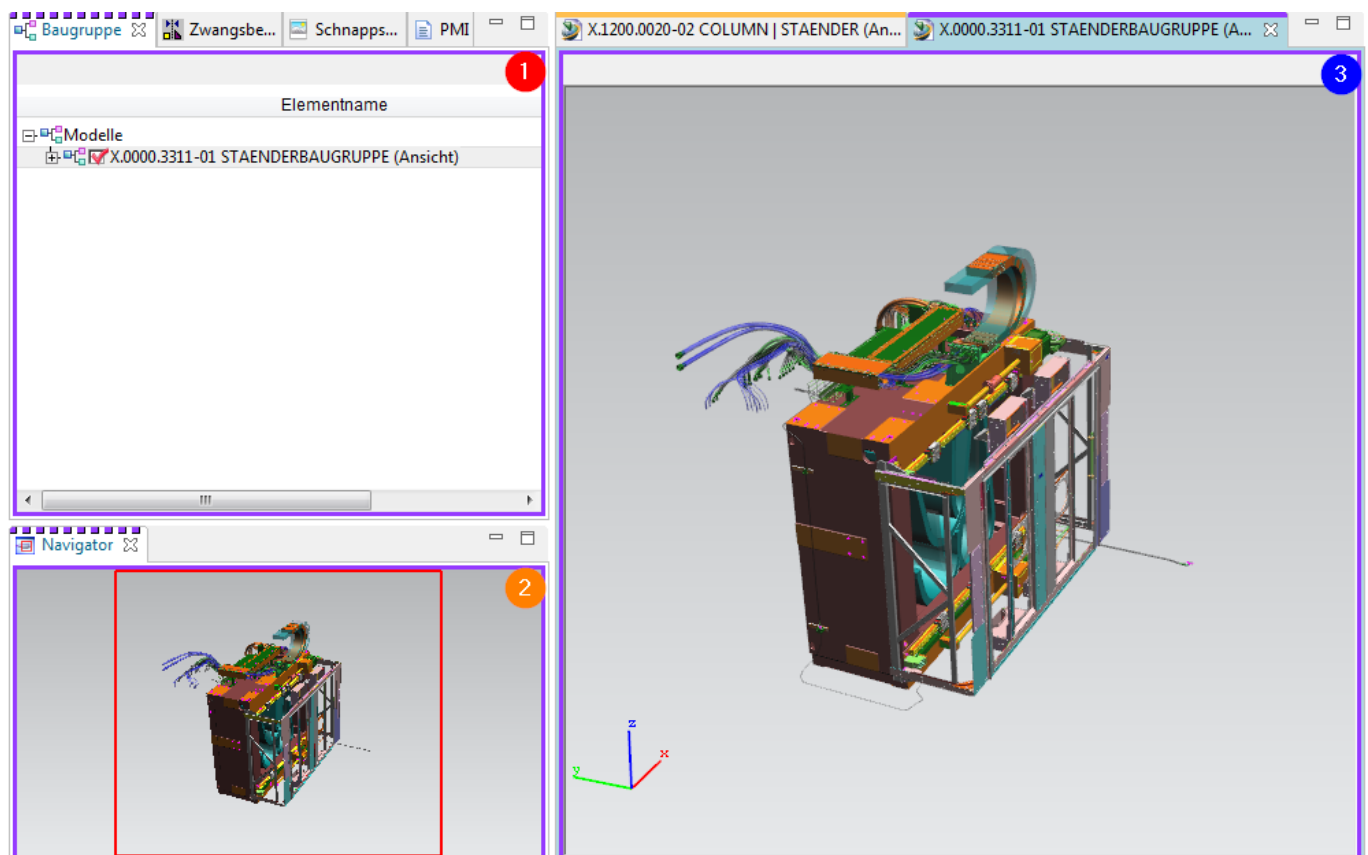


2.3.3.3 Lifecycle Viewer

To visualize the structure of the product in the Structure Manager - the Teamcenter Lifecycle Visualization Viewer must be called via the right mouse button above the BOM View . You will find this in the selection of „Send to“.



You must then proceed as follows to visualize the product structure:



To be able to display a structure, subassemblies or individual parts, you must activate them by left-clicking in Field. Now all item revs that have a JT are displayed. If a field is filled in green, there is no JT for this item rev.

2. After loading has been successfully completed, the structure is now displayed visually. You can add additional functions by right-clicking in the toolbar and, for example, execute measurement commands directly in the viewer.
3. Using the navigator you can enlarge a desired area.

2.3.4 Workflow Viewer

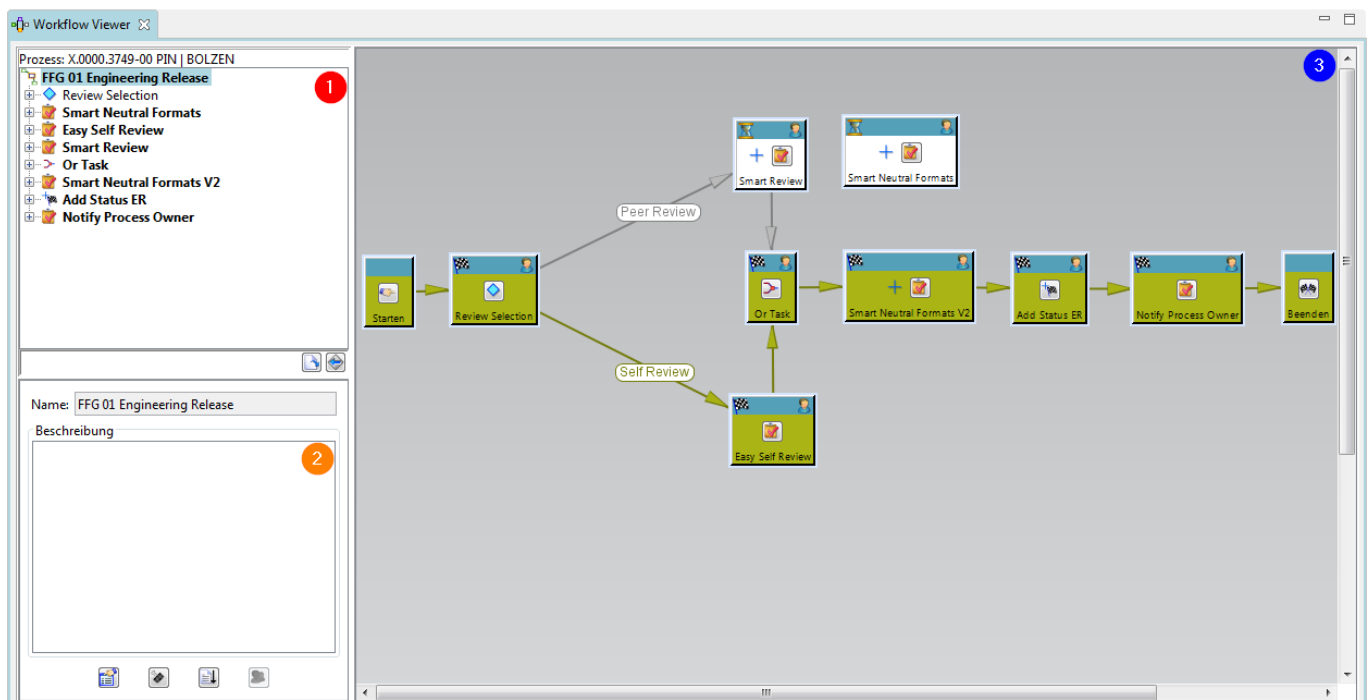
The Workflow Viewer is used to visualize the workflow of the currently selected item. Here you can check which task the workflow is currently in.

Tip:



The Workflow Viewer can be called up as follows:

Right mouse button -> Send to -> Workflow Viewer



1. The **task hierarchy tree structure** displays the workflow process at the main level, together with the associated tasks and subtasks, in a hierarchical listing. The task order in the task hierarchy tree is based on the order in which the tasks were created.
2. The **Template Manager window** displays the name and description of the selected process.
3. The **process flow window** graphically displays the various workflow process levels. You can display all tasks that exist in a workflow process, or the subtasks contained in a task, or the subtasks of subtasks, etc.

2.3.5 Change Manager

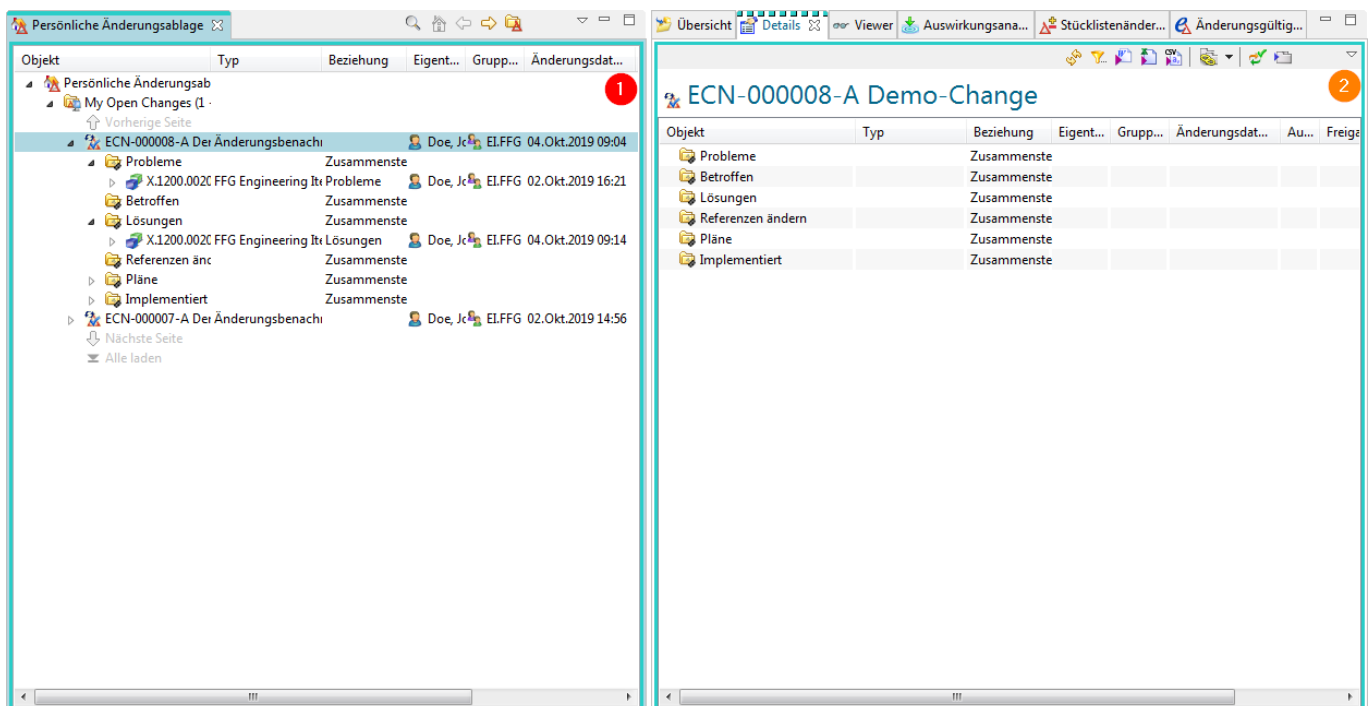
Change management helps you track changes to a product throughout its entire life cycle. You can propose changes to a product and manage the entire cycle of review, approval, and implementation of the change.



Your company can ensure the quality of any change made to the product through a mechanism for problem identification, change authorization, coordination and planning, cost and benefit analysis and record keeping. You can structure the work to perform the following:

- Implement a change.
- Assess its impact on any managed business elements such as parts or documents.
- Notify lifecycle participants of proposed and approved changes.
- Track the progress and completion of work.
- Compare product configurations before and after the change.

2.3.5.1 User Interface



1. The view **Personal Change Repository** contains saved searches for change objects defined by system administrators and users. The default search is **My Open Changes**. When you expand a change, the change folders and linked forms or other objects are displayed.
2. The perspective contains views for displaying change properties, linked items, BOM changes, change validity, and schedule line tasks.

2.4. organization

2.4.1 Access Rights & Organization

- **Persons**
Real existing persons in the company with first and last name. One person can have more than one user.
⇒Max Mustermann
- **User (User)**
Is the identification of a user in the system. Users can belong to several groups.

⇒Max Dummy ⇒Administrator & User

- **Groups**

Correspond to summaries of users.

Group = Corresponds to a department or a project.

Groups can also be structured hierarchically (according to the company organization).

⇒Administrator ⇒dba, project administrators,...

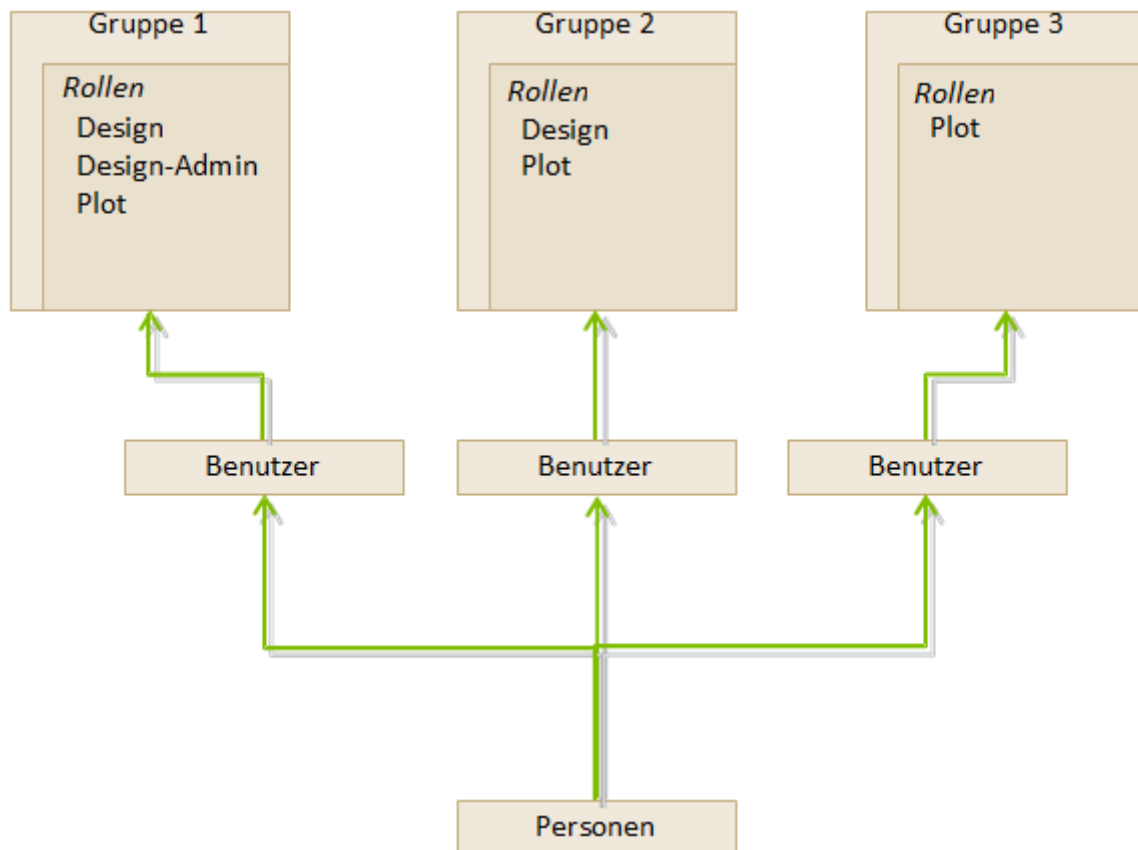
- **Roles**

Activities of users in the organization (e.g. admin, employee, project manager, ...) Different roles can be assigned to a user.

A role corresponds to certain rights that the user has.

Groups and roles can be used for:

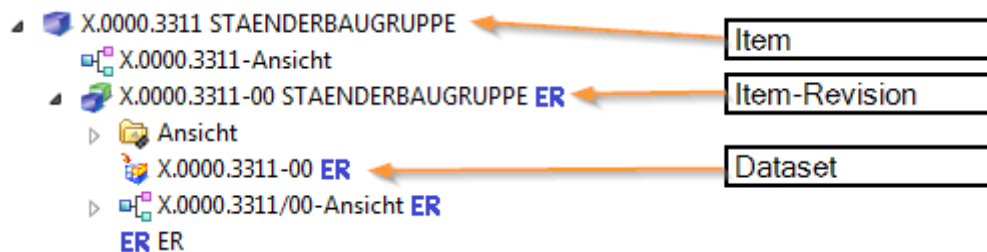
- To manage access rights (read, write, delete) per group and role
- Definition of control/approval instances (for workflows) based on groups and roles
- Organization of the data according to the group you have created.



2.5. Items & Revisions

2.5.1 Basic Items & Revisions

An item (element) in Teamcenter is a structure of a connected object. The basic structure of each item consists of the following objects:



Item	Gathers data that is generally applicable to all revisions of the item.
Item Revision	Collects data applicable to a single revision of an item.
Dataset	The dataset forms the direct link to the data set on the Vault.

2.5.2 Properties of an item

- **Items are basic objects** that are used to manage information
- They represent physical or conceptual entities that enable audits and information changes.
- Imagine an item as the top level, which contains all information about a specific object or product.
- The item ID is composed as follows - here in the example for the European MAG locations - X.0000.0000
- No two items may have the same item ID. **An item ID is always unique!**
- An item provides access to all the information needed to design a part, including all changes, together.
- When creating an item, Teamcenter also automatically creates an Item Master Form

2.5.3 Properties of an item Revision

- **Item revisions manage the changes to an item** and save the changes within the item.
- When you create an item, Teamcenter automatically creates the item revision.
- There must be at least one item revision for each item.
- Item revisions are the items that receive a release status
- Contains the SAP master form - here the link between the SAP material number and the item in Teamcenter is linked.
- Contains one or more datasets

2.6. Datasets

2.6.1 Dataset Objects

Files which are started from Teamcenter with non Teamcenter applications (e.g.: NX, Word, Excel, ...) are managed by Teamcenter ⇒ Dataset Objects.

Here are some examples:

Symbol	Type	File	Application
	Text	.txt	Text Document
	MS Word	.doc	MS Word document
	MS Excel	.xls	MS Excel spreadsheet
	Direct Model	.jt	3D Visualization Model
	UGMASTER	.prt	NX Partfile
	UGPART	.prt	NX Partfile
	PDF/A	.pdf	NX PDF document

2.6.2 Importing a dataset

- You can insert datasets in Teamcenter under your item revisions.
- In case the datasets are not yet stored in Teamcenter, you can import the dataset.
- If you import the dataset under your Revision item, you must remember that the dataset is not found under the item but only under the Revision item.
- The revisions that are revised from this item revision also have the dataset reference in the item revisions.
- You can also create a completely new dataset directly in Teamcenter.

2.7. relations

2.6.1 Relation types

- Much information describes an item or is linked to the item, revision
- Teamcenter uses relations to define the relationship between data objects and items / revisions.
Automatically defined relation types:

Revision

JTSession & 3DMarkup

BOM view & BOM view revision

IMAN_Drawing

Relation between UGMaster & UGPart

2.6.2 User defined relation types

(e.g. when copying / inserting objects into an item / revision)

- **Specification Relation.** Documents of an audit. Are checked and blocked during a release (e.g. 3D masters, drawings, NC programs, ...)
- **Requirement Relation**
Contain criteria that must be met by the design, but do not define how the design is to be executed. (e.g. specifications)
- **Altrefs**
(alternative representation) - Alternative description of the component (e.g. spring tensioned / not tensioned. As this is only a state description, it will not appear in parts lists parallel to the part.
- **Manifestation Relations**
Relationship of documents with explanatory character only. These have no meaning in the sense of a relevant or legal product description (e.g. internal presentations, films, photos...)
- **Reference Relation**

General, undefined relationships between data objects and items / revisions.
(e.g.: field reports, technical articles, laboratory reports notes...)