

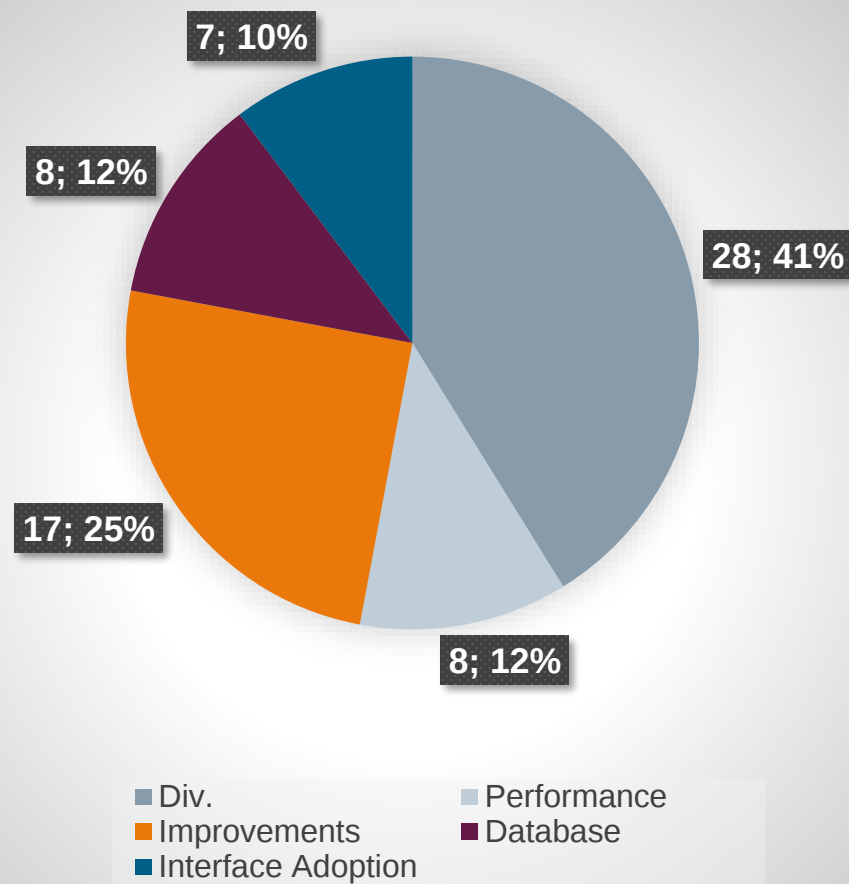
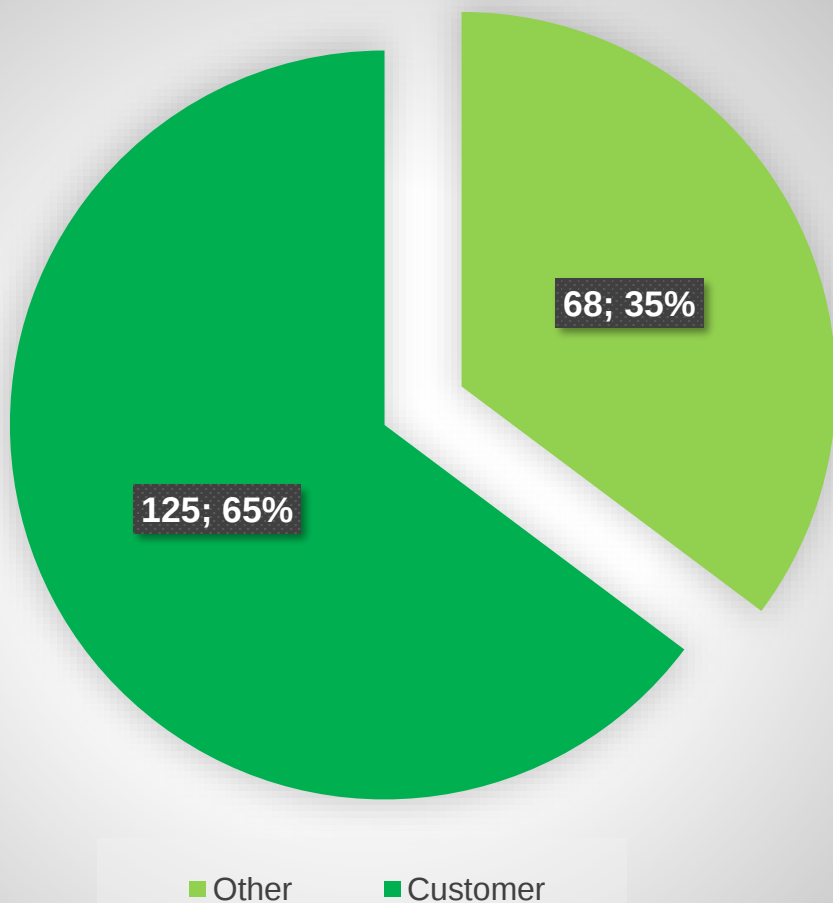
Digitaliz now Discover the value of your plant

Deutsche Kundentage
15 – 16.05.2019

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[siemens.com/comos](https://www.siemens.com/comos)

New Features in COMOS 10.3



COMOS Product Roadmap



* V10.3.1 reserved for PlantSight DE release

Version V10.3

Product Release:
Digitalization,
Modular Engineering

- COMOS Engineering Portal
- PERT / GANTT
- Modular Engineering
- Usability improvements for Operations
- Rest-API for customer use
- Bulk editing in Web environments
- Navigation and Hot-Spotting in Web reports
- COMOS as a managed Service

Basic

Description

- Modernized new TOP Control for Database query
- Support of OR conditions

Benefits

- - Easy Configuration
- - more flexibility for administrators
- - simplified end user interface

Query: Engineering objects =P1.H3.T1.A20 P001 Rotary pump

Y00A01036 LIKE Wert

UND Y00A01095 LIKE Wert

Suche und Interaktion konfigurieren

Objekt ablegen

Aktive Klassifizierungen ☒ Hierarchisch ☐ Benutzerdefiniert hierarchisch ☒ Funktional ☐ Benutzerdefiniert fun

Hierarchische Klassifizierung M22.A020.A010.A020*

Funktionale Klassifizierung O4D3 X Wähle bis zu fünf Klassifizierungsschlüssel

Klassifikationsbereich hinzufügen 'UND'-Bedingung hinzufügen 'ODER'-Bedingung hinzufügen

ODER

Objekt ablegen

Aktive Klassifizierungen ☒ Hierarchisch ☐ Benutzerdefiniert hierarchisch ☒ Funktional ☐ Benutzerdefini

Hierarchische Klassifizierung M22.A020.A010.A020*

Funktionale Klassifizierung O4D3 X Wähle bis zu fünf Klassifizierungsschlüssel

UND Y00A01036 Attribute Y00A01036 © LIKE Wert

Typ des Eingabewertes Text ☒ Änderbarer Operator Benutzereingabe Obligatorisch

UND Y00A01095 Attribute Y00A01095 © LIKE Wert

Typ des Eingabewertes Text ☒ Änderbarer Operator Benutzereingabe Obligatorisch

Klassifikationsbereich hinzufügen 'UND'-Bedingung hinzufügen 'ODER'-Bedingung hinzufügen

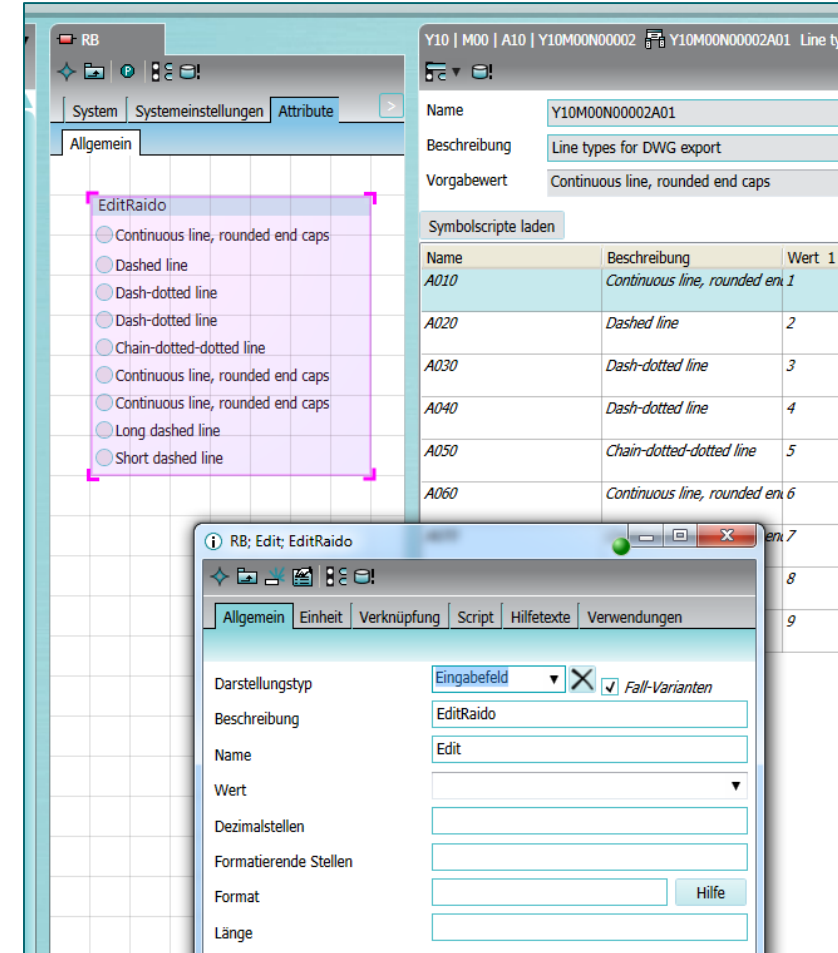
Label	Description	Specific	Operati	Operating	Operati
P003	Rotary pump	20 (kJ/K)/kg		20 °C	
P004	Rotary pump	30 (kJ/K)/kg		20 °C	
P002	Rotary pump	20 (kJ/K)/kg		20 °C	
P001	Rotary pump	20 (kJ/K)/kg		20 °C	
P001	Rotary pump	50 (kJ/K)/kg		20 °C	
P002	Rotary pump	30 (kJ/K)/kg		20 °C	
P003	Rotary pump	20 (kJ/K)/kg		20 °C	

Description

- New control type Radio Buttons provide extended possibilities of setting the attribute characteristics

Benefits

- All options directly visible for end user
- Existing standard tables can be reused
- Simple, intuitive handling



PQM

COMOS Lifecycle

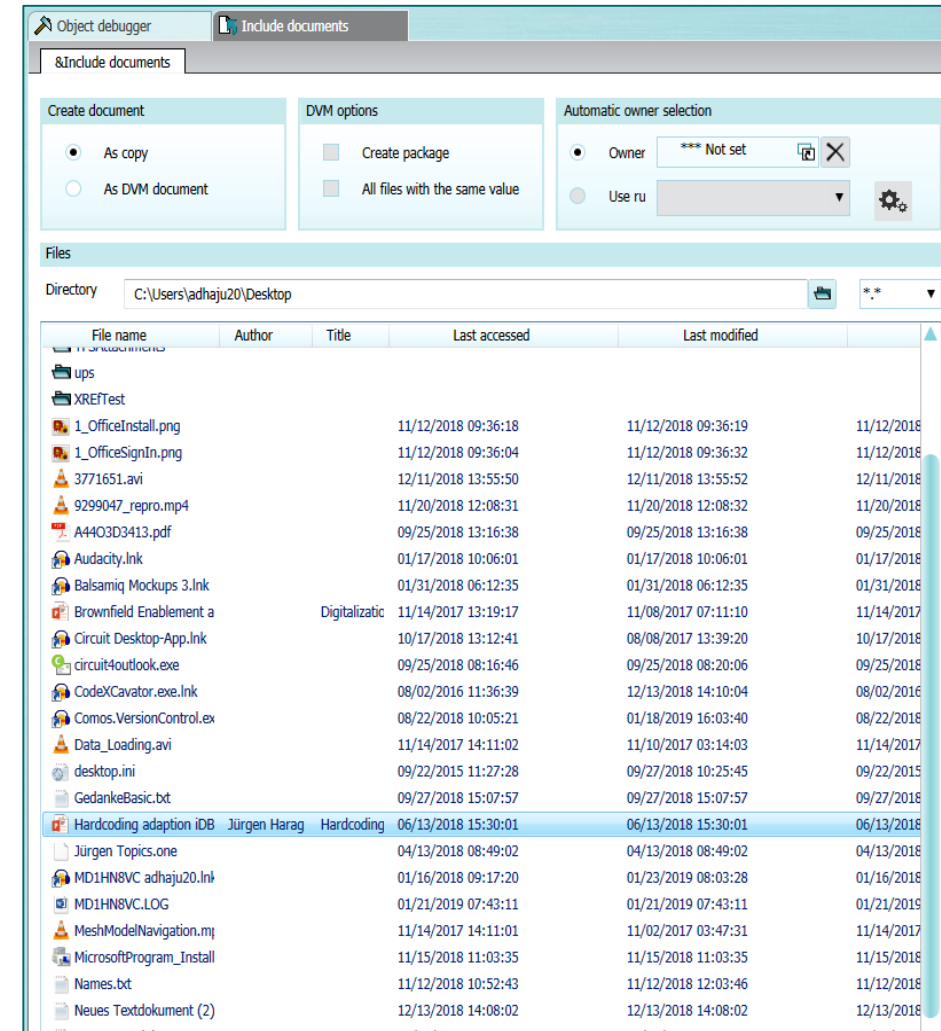
COMOS PQM – Document loading plugin

Description

- Redesign of document loading plugin
- Added as copy option
- Added rule based approach for owner

Benefits

- More documents in a batch possible
- Easy handling of document imports
- In rule based mode the owner will be searched / structure will be created
- Simplified, clear workflows
- Time savings



COMOS Lifecycle

COMOS PQM – Document execution plan

Description

- Assign documents to multiple units / plants in a bulk action
- Different catalogs can be used (simple base object structure)

Benefits

- Fast way of creating / assigning documents
- Test specifications can be applied in a bulk action
- Catalog can be reduced by selection specific nodes
- Bundled, all in one place
- Simplification of work processes for Administrators, Super- and Power User

Document execution plan

Class(es) ☒ U Unit

Start object ☒ =P1.H3 Conditioning

Catalog start object ☒ @30|M00|A30|A50|A10|A10 Level 1

Select document groups

Label	Descri...	EC.00...	EC.00...	FB.01...	FB.02...	FB.03...	FB.04...	FP.00...	MB.00...	PB.00...	PB.00...	PB.00...	PB.00...	PB.00...	PB.00...
☒ =P:	Conditio	1	0	0	0	5	0	0	0	0	0	0	0	0	0
☒ =P:	Pump station	0	0	0	0	0	0	0	0	0	0	0	0	0	0
☒ =P:	Reactor unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
☒ =P:	Subunit	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Document execution plan

Owner	Source document name	Status	Reason
=P1.H3	EC.001	☒	Success
=P1.H3	FB.03?	☒	Success
=P1.H3	FB.03?	☒	Success
=P1.H3	FB.03?	☒	Success
=P1.H3	FB.03?	☒	Success
=P1.H3	FB.03?	☒	Success

COMOS Lifecycle – COMOS PQM – Document subscription

Description

- Subscribe a document to get informed on a new revision creation or a new version checkin

Benefits

- User gets informed on changes by the system
- Only get informed for specific documents

The screenshot displays the 'A10 Document object for DVM' configuration window. The 'Attributes' tab is active, showing options to subscribe to 'New version' and 'New revision' events. The 'Current user' is set to 'A01 John Doe' and the 'Mode' is 'E-mail'. Below this, the 'E-mail settings' section allows for configuring the 'E-mail subject' and 'E-mail text'. A 'Subscribing' table lists the subscribed documents with columns for 'Name', 'Description', 'New version', and 'New revision'. The table currently contains one entry: 'A01' with description 'John Doe'. At the bottom, the 'Document subscription' section shows the same 'New version' and 'New revision' checkboxes, with the 'Mode' set to 'E-mail'. The 'Comment' field is at the very bottom.

Name	Description	New version	New revision
A01	John Doe	☐	☐

PDI Teamcenter

COMOS Platform

PDI Plant Data Interface to Teamcenter

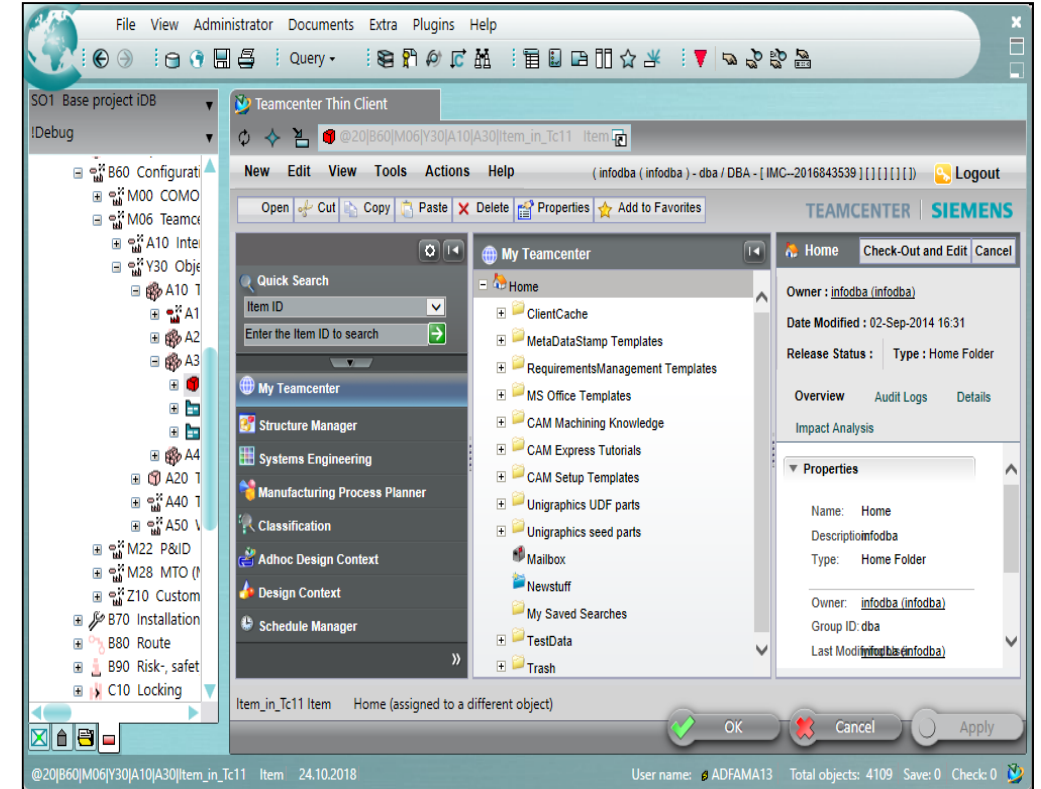


Description

- TC web browser plugin
- TC Connection status visualization

Benefits

- Direct access to TC data out of COMOS via web browser
- Search for Data/Documents with TC web client / Active Workspace
- Assign TC Objects and Documents to COMOS objects via drag and drop
- Less efforts in workflows
- Time savings



Report

COMOS Platform

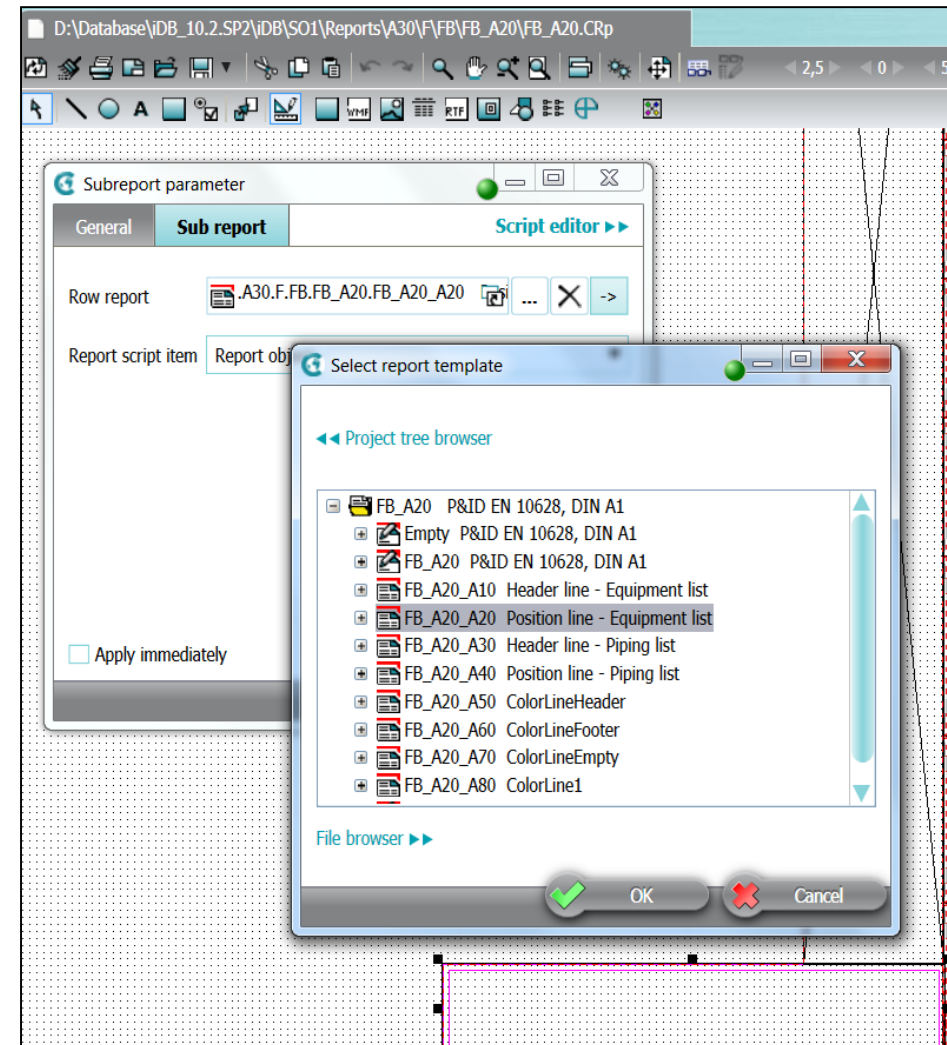
Report - Access to Subreport and Masterreport via Reference Objects

Description

- Working overlay dependent report templates supported in iDB require COMOS documents. Up to now for Subreport, List and Masterreport configuration the file full path was used.
- Now the reference objects can be used.
- Access via file path independent of usage of reference objects available

Benefits

- Simplified creation of report templates– access via COMOS documents.
- Objectoriented - the report templates are directly linked to the relevant object
- Less efforts in workflows
- Time savings



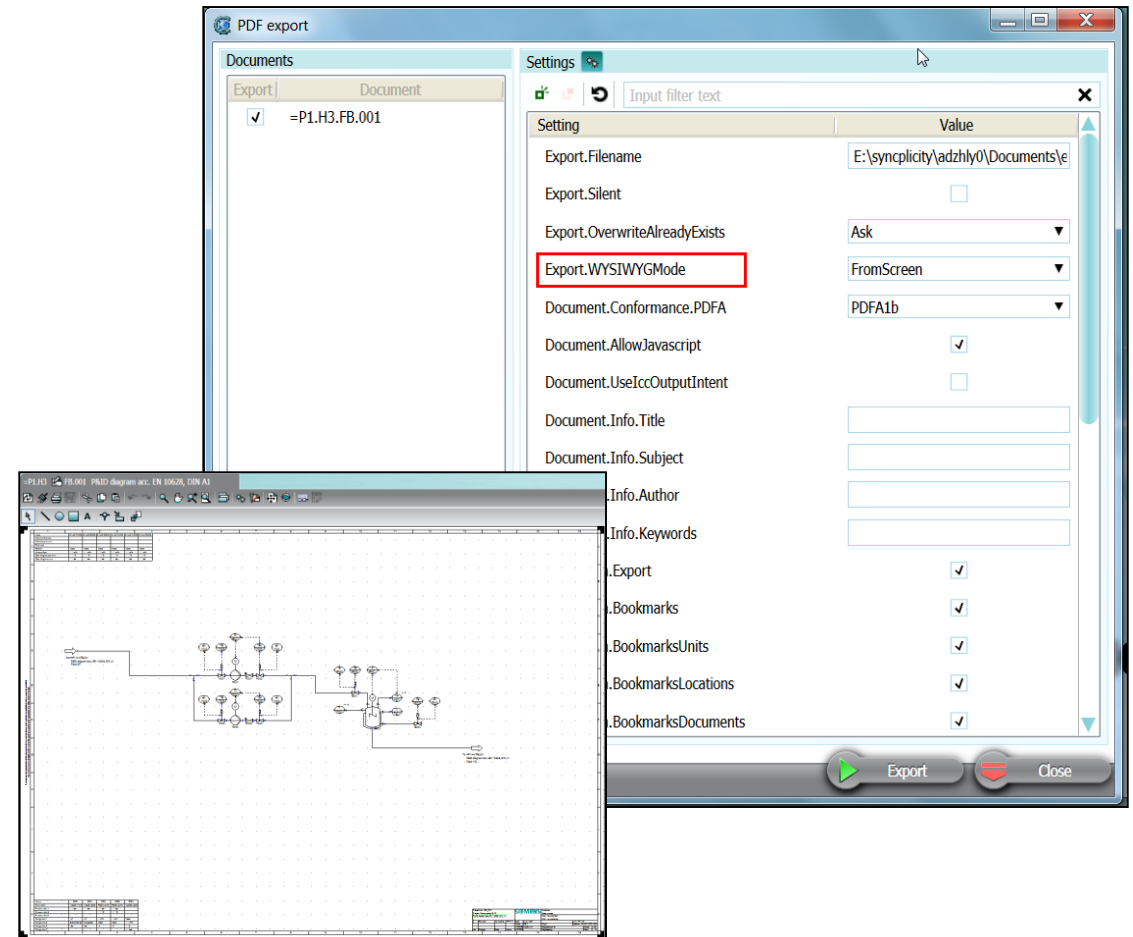
COMOS Platform Report - PDF-A Export

Description

- Export to PDF-A based on EMF technology

Benefits

- Now available: New technology provides intelligent, navigable PDF-A documents



Engineering Portal

COMOS Engineering Portal

Access to product data by web

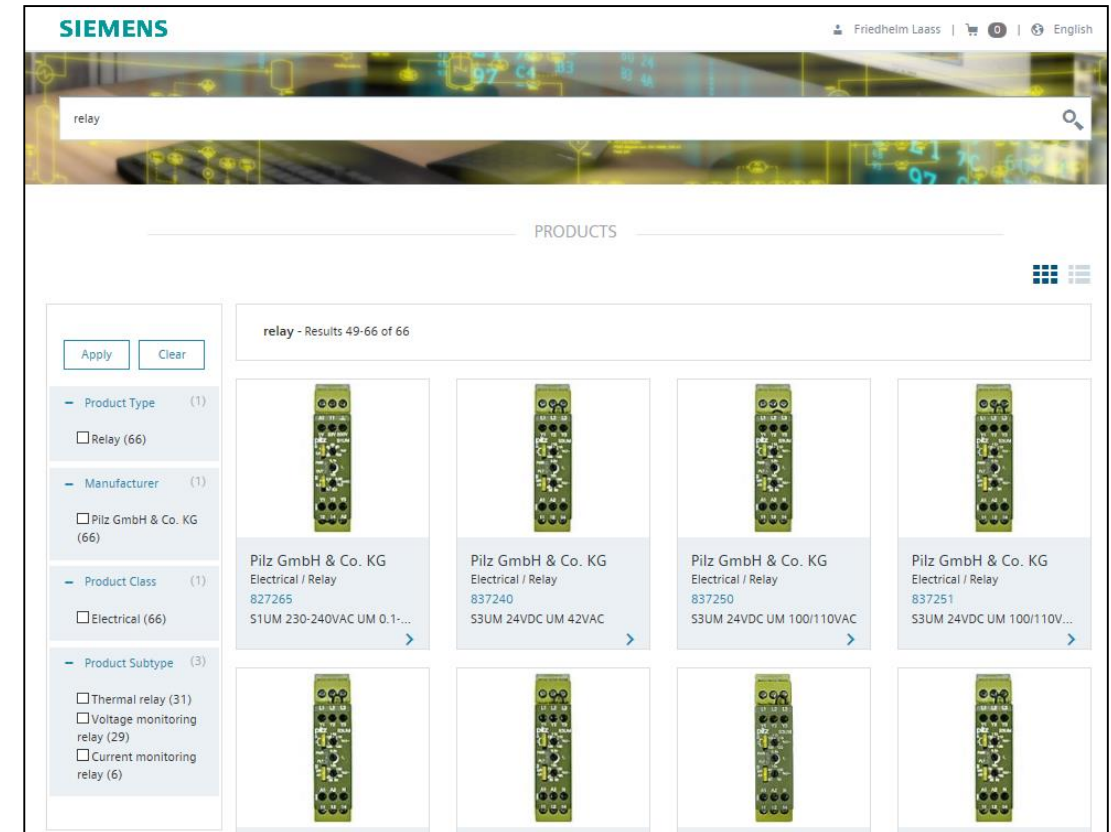


Description

- The COMOS Engineering Portal provides product data in COMOS format for easy use in the projects
- Data available for engineering and base objects
- Access by COMOS Product Selector and free for use for customers with a maintenance contract
- Filters and general search bar for easy data search

Benefits

- Speeds up engineering time & reduces administration time
- High data quality through standardization
- High accuracy of the order lists for the plant components
- Reduction of sources of error and costs
- Available in German, English and Chinese
- Supports manufacturer data sheets



COMOS Engineering Portal Product Selector - New interface for data transfer

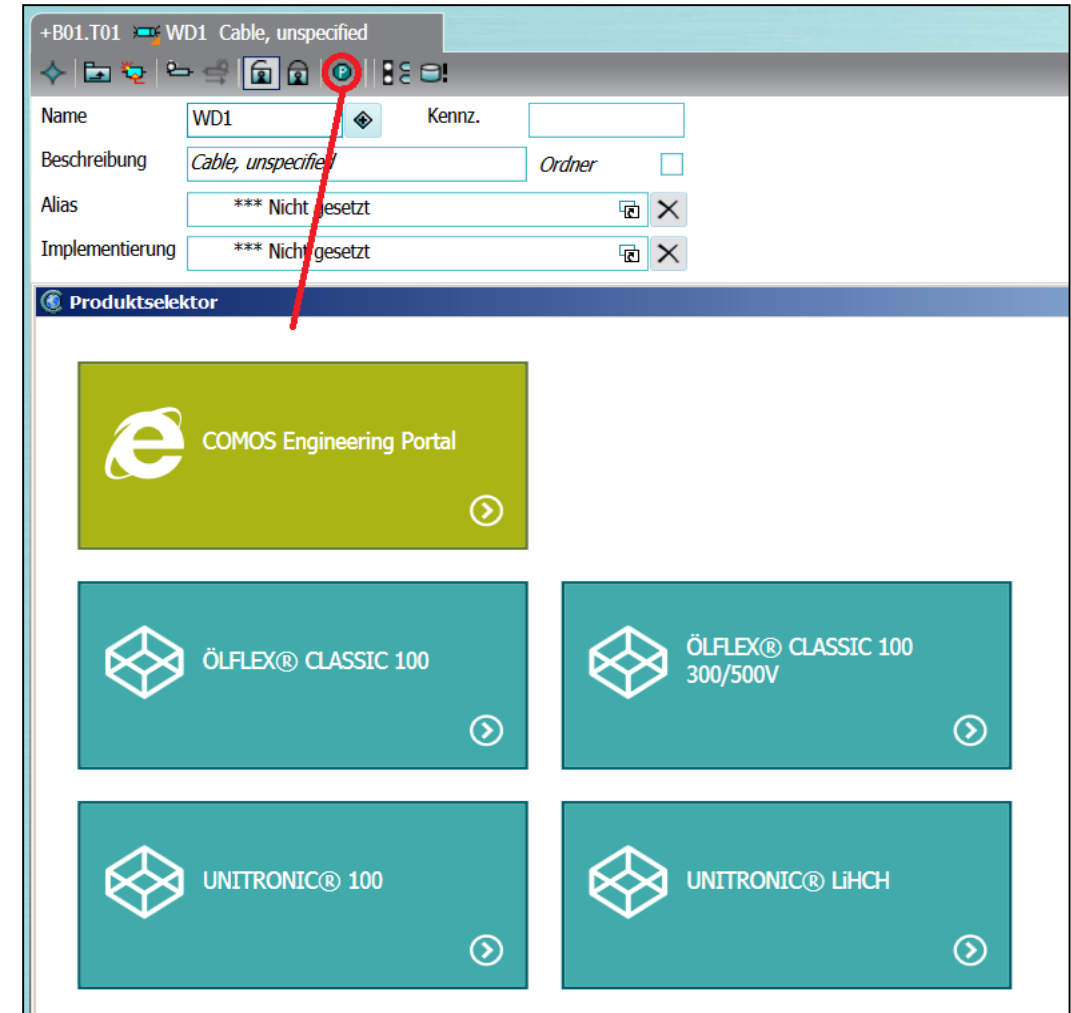


Description

- The COMOS Product Selector makes it easy to add your own product data to the ones provided by the portal
- Supports the COMOS Engineering portal, local base objects and configurators

Benefits

- Compatibility to already defined products in the customer database
- New procedure caller, no change in existing software
- One interface for all products



Automation

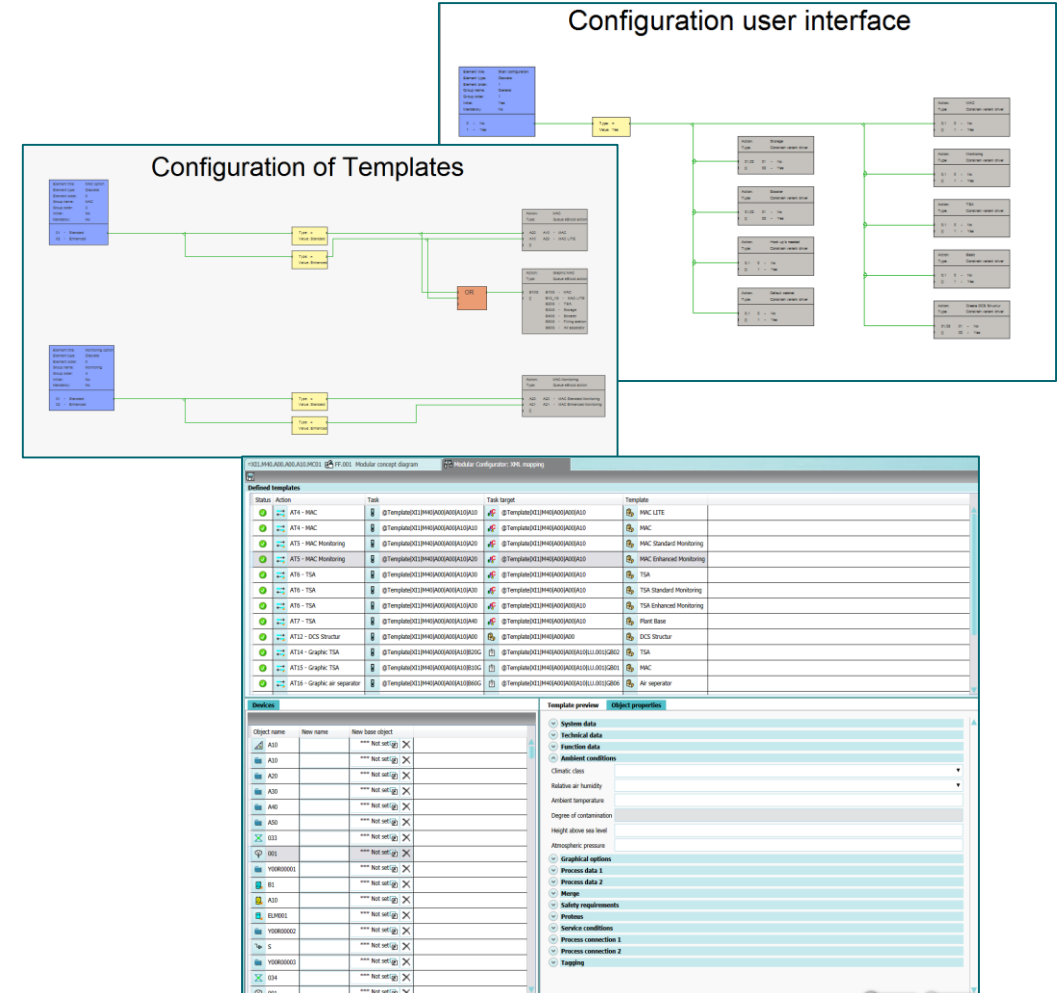
COMOS Automation

COMOS Modular Concept Design



Description

- Graphical definition of engineering rules
- Parametrization UI for Rename, Merge, Set Attribute and base object change
- Define rules for Configurator UI and execution
- Enhance your existing templates for rule based use



Benefits

- Task specification made easy
- Define your dynamic configurator UI fast and easy
- Simplified workflows enable significant time and cost savings

COMOS Automation

COMOS Modular Configurator

Description

- Dynamic rule based Configurator
- User guidance throughout the configuration
- Variant handling based on Value driver definition
- Relevant value driver shown dynamically
- Modular Engineering for all disciplines

Benefits

- Configure your plant rule based
- Easy configuration even in proposal phase
- Variant handling over disciplines
- Simplified workflows enable significant time and cost savings

The screenshot displays the 'Modular Configurator' window for a plant rule named '=A10 Plant'. The interface is organized into sections with expandable/collapsible headers. The 'General' section is expanded, showing options for 'Start configuration' (Yes), 'Hook ups needed' (Yes), and 'Default cabinet' (Yes). The 'Air separation unit' section is also expanded, showing options for 'MAC' (Yes), 'Monitoring' (Yes), 'TSA' (No), 'Basic' (Yes), 'Storage' (No), and 'Booster' (Yes). The 'MAC' section is expanded, showing 'MAC option' (Standard). The 'Monitoring' section is expanded, showing 'Monitoring option' (Standard). The 'DCS Structure' section is expanded, showing 'Create DCS Structure' (Yes).

Section	Option	Value
General	Start configuration	Yes
	Hook ups needed	Yes
	Default cabinet	Yes
Air separation unit	MAC	Yes
	Monitoring	Yes
	TSA	No
	Basic	Yes
	Storage	No
	Booster	Yes
MAC	MAC option	Standard
Monitoring	Monitoring option	Standard
DCS Structure	Create DCS Structure	Yes

COMOS Process

COMOS P&ID – Modular Engineering

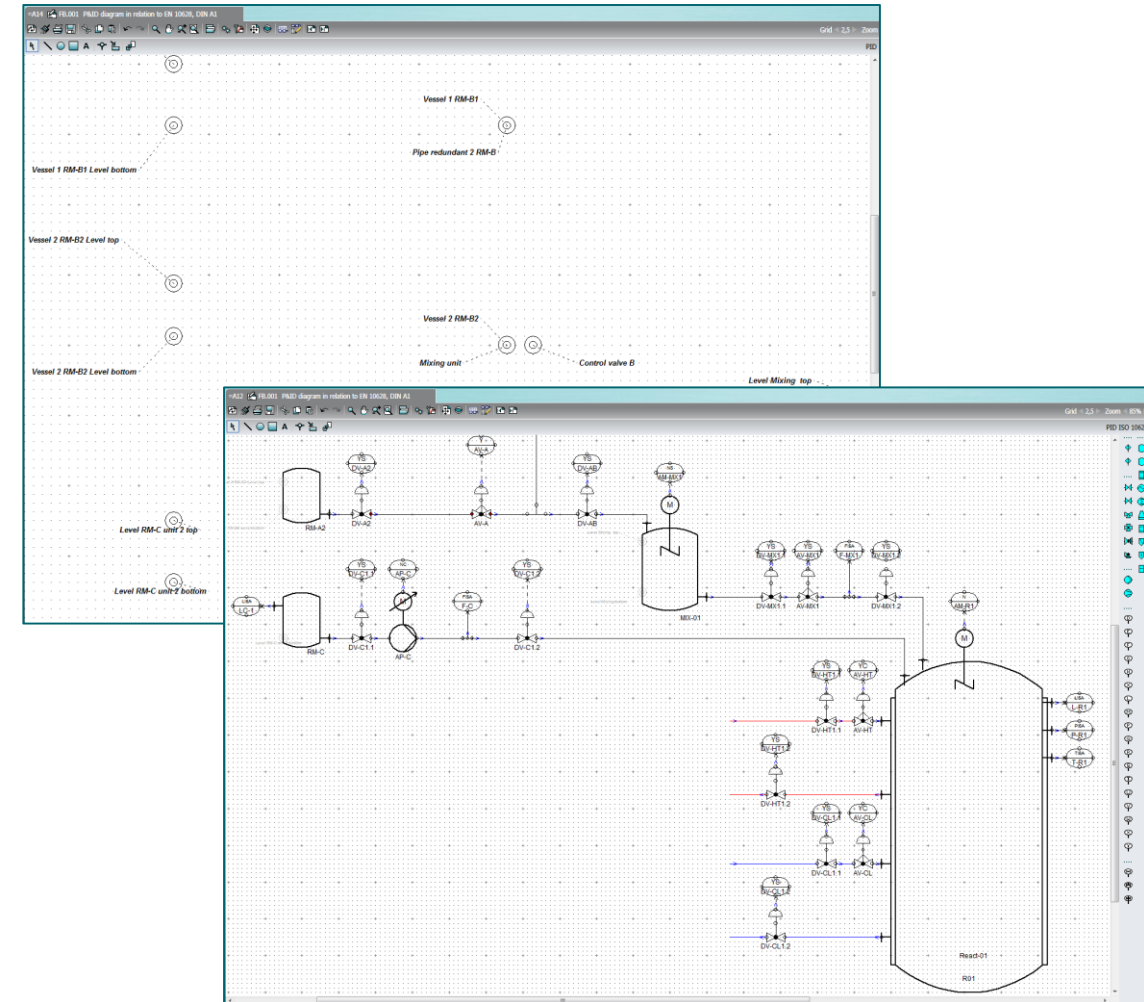


Description

- Based on COMOS Modular Configurator
- Place & dissolve configurable assemblies in one step incl. creation of connections & undo/redo capability
- Connect pipes across assemblies

Benefits

- Configure your plant with rule based assemblies
- Speed up your proposal and design phases
- Handle & compare variants of your plant
- Simplified workflows enable significant time and cost savings



PDMS

COMOS Process

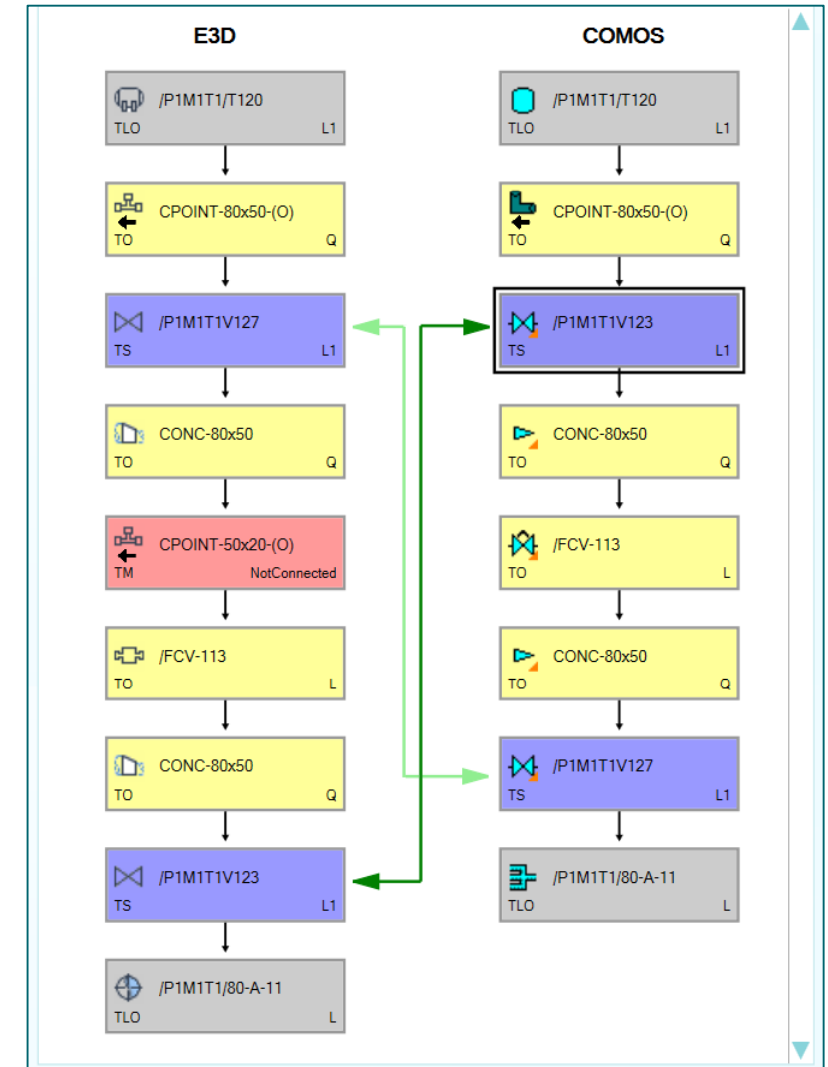
PDMS/E3D Engineering Interface - Sequence check

Description

- Allows the assignment of E3D to COMOS in a graphical way
- Piping component sequences can be calculated per pipe in COMOS and PDMS/E3D and compared against each other.
- Inconsistencies are displayed in a graphical list. The tool provides zoom and add utilities to clarify inconsistencies between the sequences.

Benefits

- Out of the Box solution! No customizing required when running on iDB
- Clear overview of all components at a glance
- Graphical representation of sequences including assignment information
- Various ways of displaying inconsistencies
- Untagged items are assigned & missing components are created in order



Mobile Solutions

COMOS Lifecycle Mobile Solutions - REST WEB API

Description

- Defined REST WEB API Functionalities GET, SET and CREATE COMOS data
- Creation of own application for customer specific workflows
- Editable in COMOS Web

Benefits

- Higher flexibility
- Simplified work processes
- Time savings
- Allows working in COMOS anywhere, at any time

swagger

http://localhost:65200/swagger/docs/v1

api_key

Explore

Comos Services API

PublicApiDiscovery

Show/Hide | List Operations | Expand Operations

PublicApiDocuments

Show/Hide | List Operations | Expand Operations

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/documents/{docid} Downloads a document based on document Id

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/documents/{docid}/revisions Gets the revisions of a document

PublicApiProjects

Show/Hide | List Operations | Expand Operations

GET /public/api/projects/v1/dbs/{dbid}/projects Gets a collection of projects

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/overlays Gets a collection of working overlays

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/objects/{objid} Gets the object

PATCH /public/api/projects/v1/dbs/{dbid}/projects/{projid}/objects/{objid} Updates the given object

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/languages Gets a collection of supported languages

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/languages/default Gets default project language

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/objects/{objid}/specs Get the specifications for an object

PATCH /public/api/projects/v1/dbs/{dbid}/projects/{projid}/objects/{objid}/specs Updates the specifications for an object

POST /public/api/projects/v1/dbs/{dbid}/projects/{projid}/objects/{objid}/specs/actions/validate Validates the specifications update

GET /public/api/projects/v1/dbs/{dbid}/projects/{projid}/queries/{qid}/result Gets the data for a given query

POST /public/api/projects/v1/dbs/{dbid}/projects/{projid}/objects Create new object under the existing object

PublicApiSessions

Show/Hide | List Operations | Expand Operations

POST /public/api/sessions/v1/sessions/actions/login Creates a new session for the current user

POST /public/api/sessions/v1/sessions/actions/logout Remove the session based on session Id

POST /public/api/sessions/v1/sessions/actions/send_heartbeat Update the specified session (heartbeat) passed

PublicApiUsers

Show/Hide | List Operations | Expand Operations

GET /public/api/users/v1/users/current_user Get the details of the current user

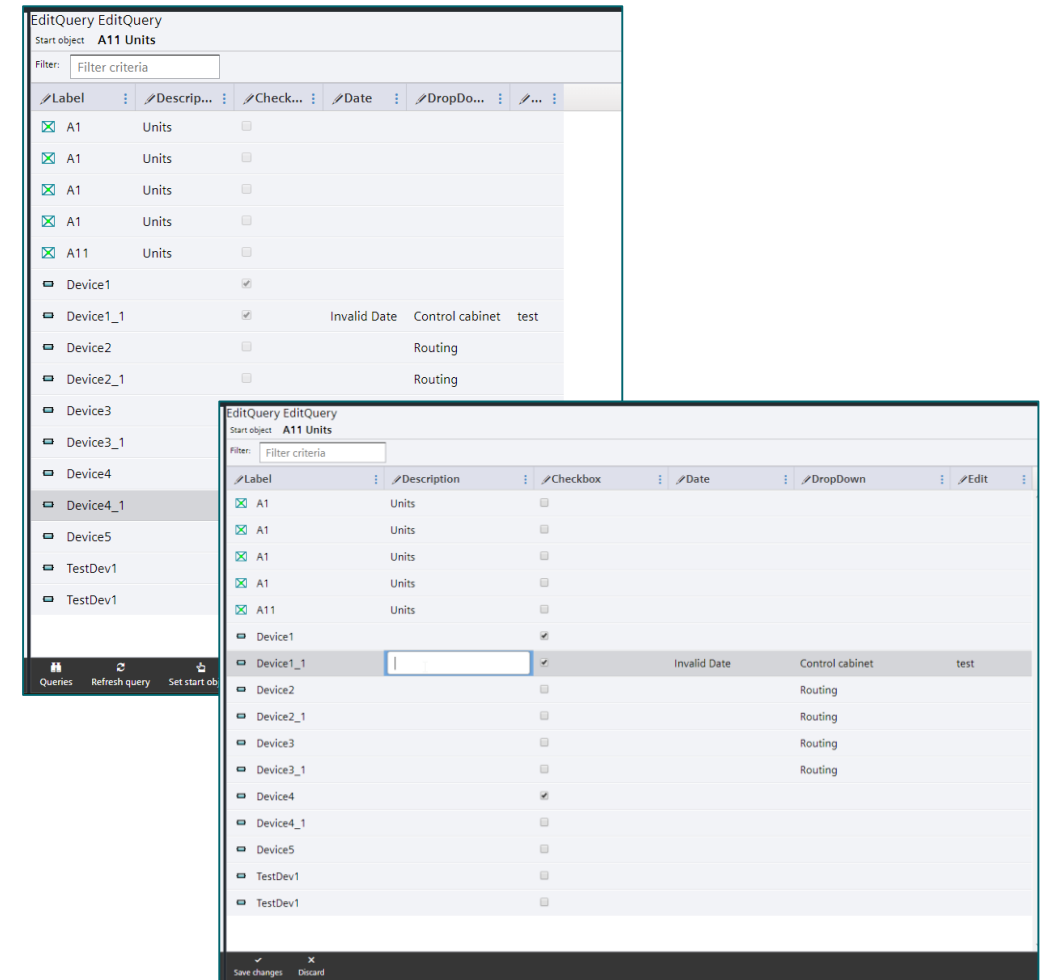
COMOS Lifecycle Mobile Solutions - Editable Queries

Description

- Editable results of Queries in COMOS WEB
- Single and Multiediting of Values in COMOS Web
- Sorting and Filtering of the Query results

Benefits

- Higher transparency when working in COMOS Web
- More efficiency through Multiediting of Values
- Allows working in COMOS anywhere, at any time



COMOS Lifecycle

Mobile Solutions - Integration of 2D Client and Walkinside

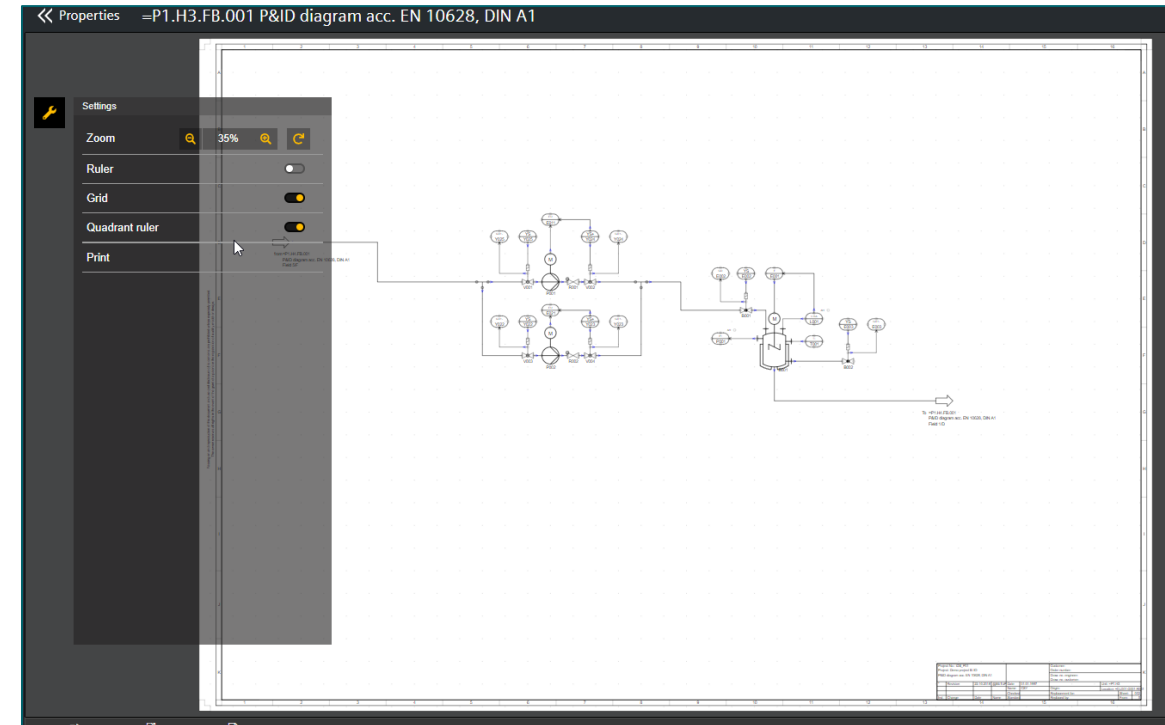


Description

- Interactive Reports can be shown in COMOS WEB without revision
- Seamless navigation through 1D to 2D and 3D data
- Navigation from object to the 3D View in Walkinside
- COMOS Data can be visualized in 2D and 3D in COMOS WEB

Benefits

- Always up-to-date status of data visible
- Reduction of error sources
- Data (COMOS Objects) can be visualized in 1D, 2D or 3D (Walkinside)
- Allows working in COMOS anywhere, at any time



Walkinside

COMOS Lifecycle Walkinside - Viewer

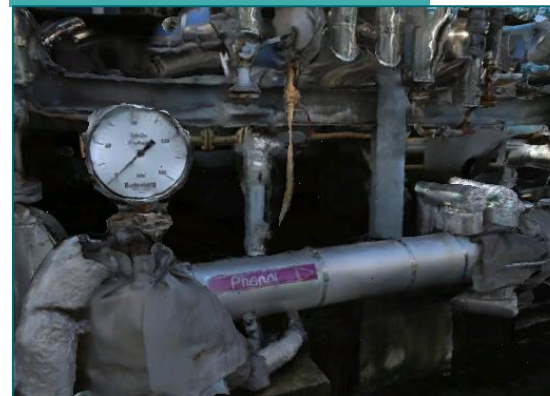
Description

- New 'Unlit' rendering mode allows much better representation of the graphics

Extra mode



NEW Unlit mode



Benefits

- Enhances Brownfield project visualization to make them look more realistic

iDB

Description

- **Universal tagging system**
- Extended symbol library
- New sheet references
- Extended datasheets
- Combined FEED and P&ID structure
- Template project allows user to start Best practice O&G out-of-the-box

Benefits

- Industry proven standard solutions to reduce costs and raise quality
- Allow customers to implement COMOS in less time

Consistent process
engineering and design



Universal Tagging System (UTS)

Tagging system selection: Universal Tagging System (UTS) ▼

Tree node base objects

Tree node 1 base object (Plant): Plant ... ✕ ↗

Tree node 2 base object (Unit): ... ✕ ↗

Full tag configuration

Index ▲	Category	Inscription	Level 1	Delimiter 1	Level 2	Delimiter 2	Level 3	Delimiter 3	Level 4	Delimiter 4	Level 5	Delimiter 5
1	Equipment/Device	No	Plant	-	Unit	-	ID	-	Number	-	Suffix	
2	Valve	No	Plant	-	Unit	-	ID	-	Number	-	Suffix	
3	Instrumental function	No	Unit	-	Section	-	ID	-	Number	-	Suffix	
4	Process line	No	Unit	-	Service	-	Number	-	Nominal size	-	Pipe spec	-
5	Document	No	Project	-	Unit	-	Section	-	Type	-	Number	-

Reset

Short tag configuration

Index ▲	Category	Inscription	Level 1	Delimiter 1	Level 2	Delimiter 2	Level 3	Delimiter 3	Level 4	Delimiter 4	Level 5	Delimiter 5
1	Equipment/Device	Yes	ID	-	Number	-	Suffix					
2	Valve	Yes	ID	-	Number	-	Suffix					
3	Instrumental function	No	ID	None	Number	-	Suffix					
4	Process line	No	Number									

Reset

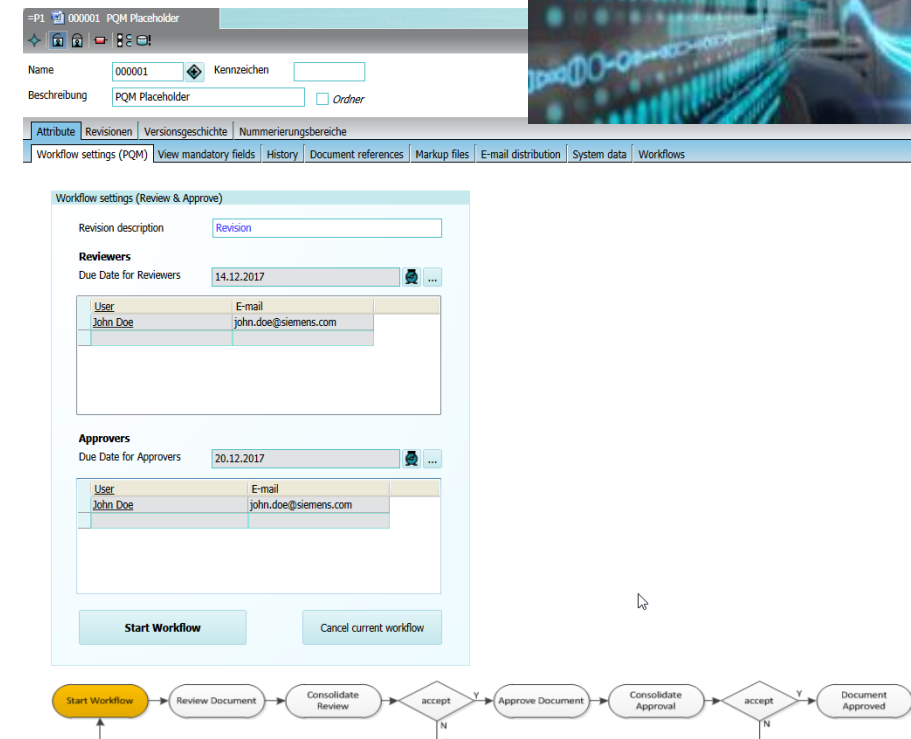
Description

- **Extended Platform functionalities**
 - Workflow settings, new approval workflows, new tasks for task management, Esign)
- **Extended PQM functionalities**
 - Document references, markup files, email distribution, workflow list, version history, AutoCAD Revision
- **Extended WebPQM**
 - New Web task type, new actions, Web Esign

Benefits

- Supporting customer projects by using COMOS as a project quality management tool
- Allow customers to implement COMOS in less time

Compliant data and document management



COMOS iDB Content – Out-of-the-box MRO

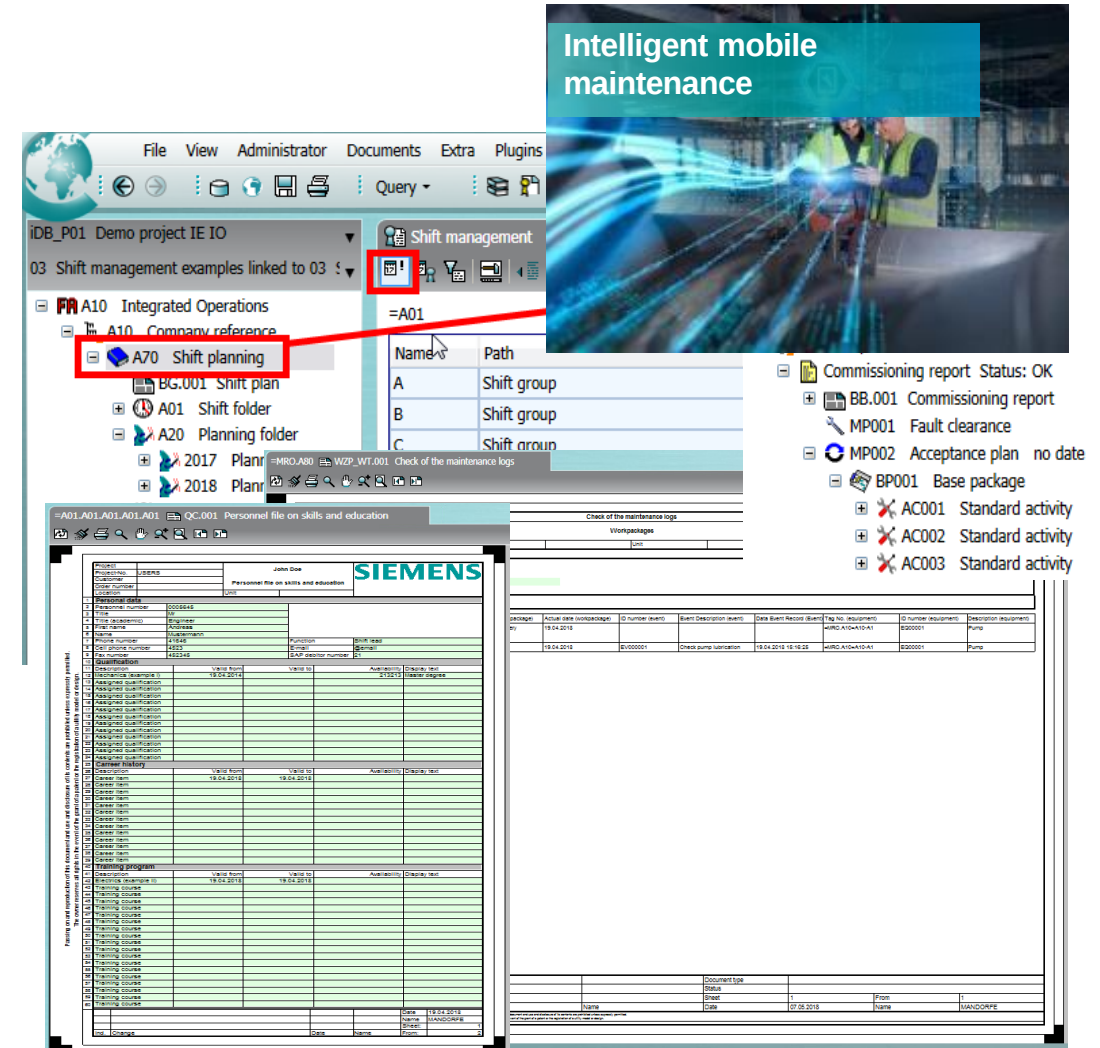


Description

- **Best practice workflow examples for MRO & commissioning**
- MRO Reports
- Enhanced shift management
- Statistics, Work permission
- Feedback enhancements

Benefits

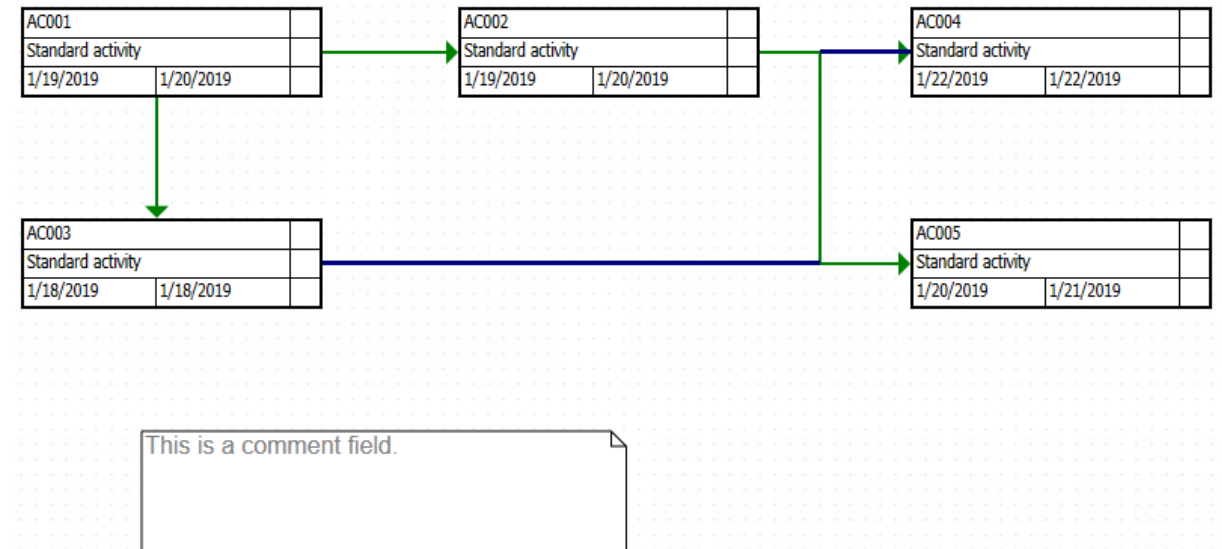
- Reduce costs by using single source of information and pre-defined MRO-strategies
- Allow customers to implement COMOS in less time



Operations

Description

- Highlight overlapping dependencies
- Free selectable connection points at the symbols
- Comment fields



Benefits

- Better overview about the course of the dependencies
- Possibility to choose the exit and the entry of task object
- Easy communication with other users on the diagram by using comment fields.

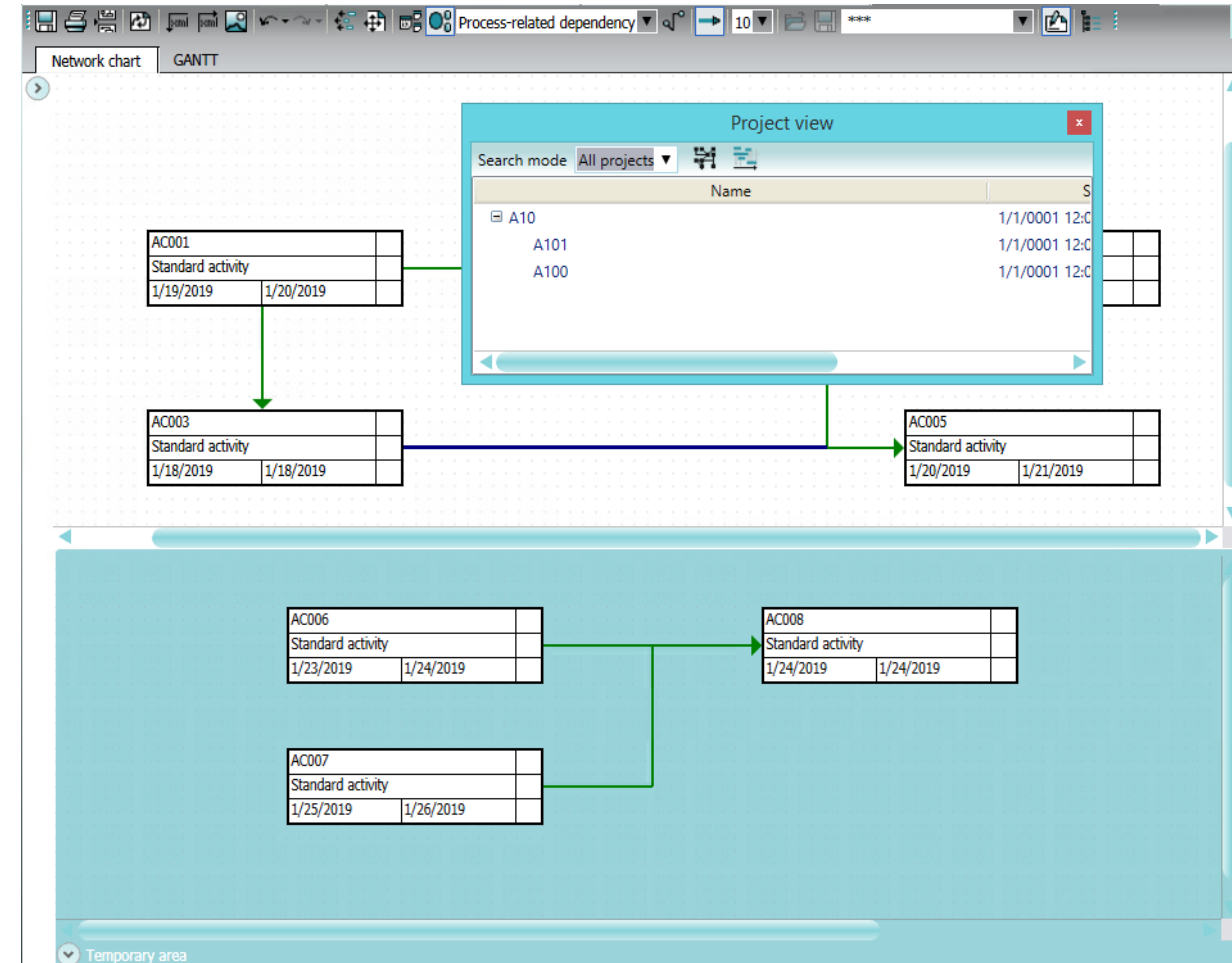
COMOS Operations – PM Chart

Description

- Temporary area
- Project structure view control

Benefits

- Possibility to preconfigure a part of the diagram and drag & drop it all together to the correct place of the network diagram
- Clear view on the project structure and an easy way to open the Gantt chart or network diagram from other projects



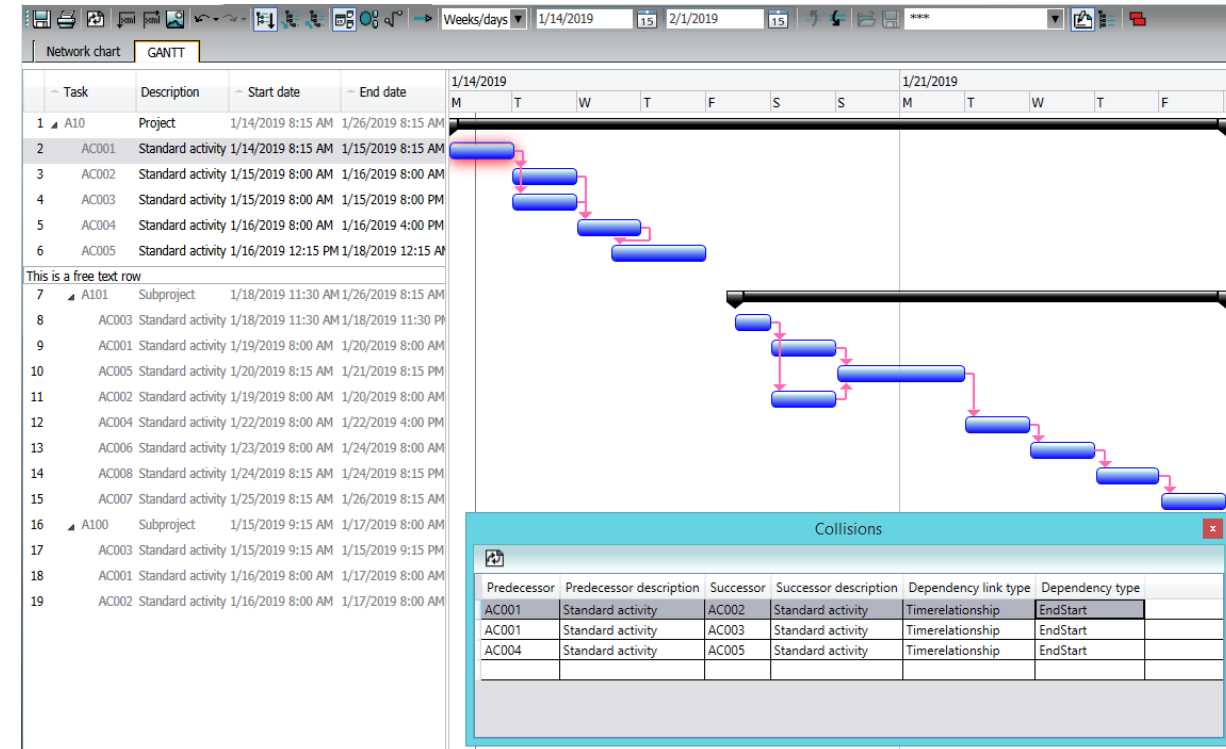
COMOS Operations – PM Chart

Description

- Hierarchical structure in the Gantt list
- Check of date collisions
- Free text row in the Gantt list

Benefits

- Good overview about complex project structures
- Automatic check for date collisions with the possibility to navigate to the related activities
- Possibility to create a separator row between activities or projects with comments



Mobile Operations

COMOS Operations

COMOS MRO – Mobile Operations

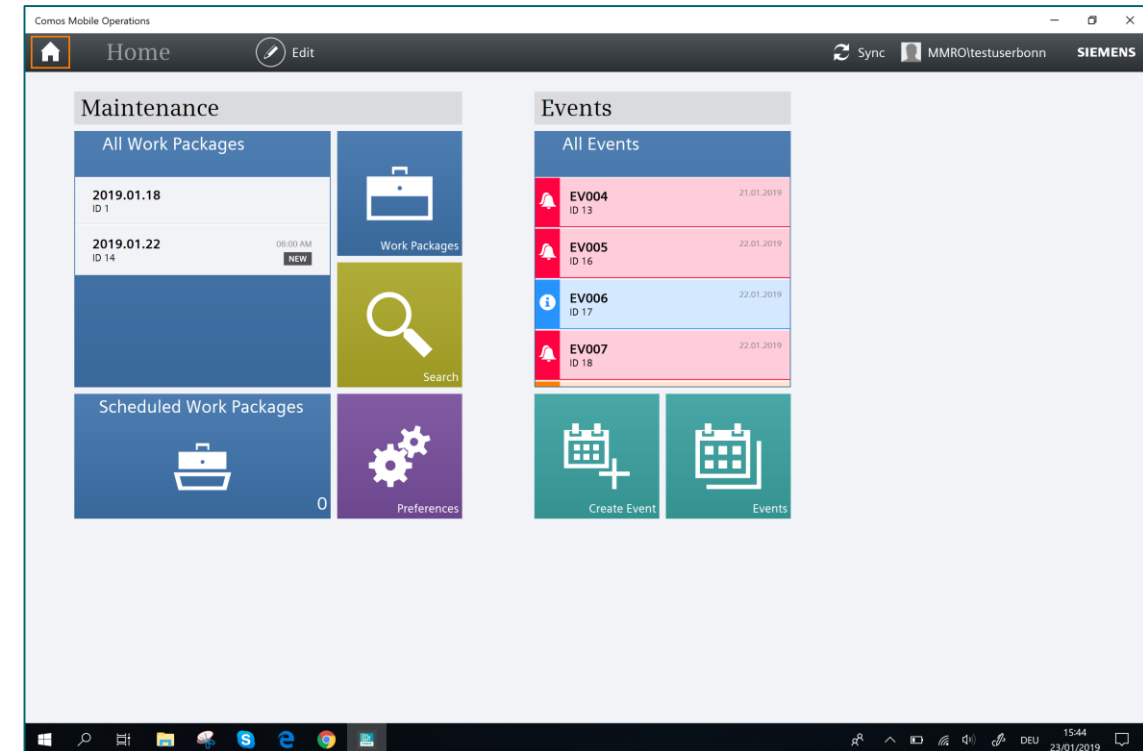


Description

- Now available: Win10 Support

Benefits

- Provides a wider range of mobile devices
- Increased flexibility in work processes



Ausblick

The published roadmap is **NOT A COMMITMENT FOR DELIVERY** but rather a forward looking view to communicate the product directions and plans

- The products organization reserves the **right to adjust the roadmap** at any time and in any way
 - as refinements to the requirements and costs are better understood
 - to accommodate changing priorities, technologies, and commitments
- When a customer requires a commitment for a future deliverable, there is a formal commitment request process
 - This process requires that a specification is agreed upon between the requesting party and the products organization along with an approval process that considers the assesses the risk of making the commitment to the overall plans and roadmap
- This document is intended to provide a broad and hi-level overview of the key solutions and themes for COMOS releases coming out in the next 1 year timeframe. It is NOT intended to be a replacement for the Release Notes or detailed enhancements in various releases of COMOS.

COMOS Product Roadmap



* V10.3.1 reserved for PlantSight DE release

Version

V10.3.2/V10.3.3

Product Release: Data Management

- SWS-Requirements
- UX Mobile
- Smart Plant P&ID Interface
- Free Property
- VB Script Alternative
- Central Storage Management
- 2-D Viewer
- Task management
- Tagging Service
- Enterprise Server via Webservices

COMOS Product Roadmap



* V10.3.1 reserved for PlantSight DE release

Version V11

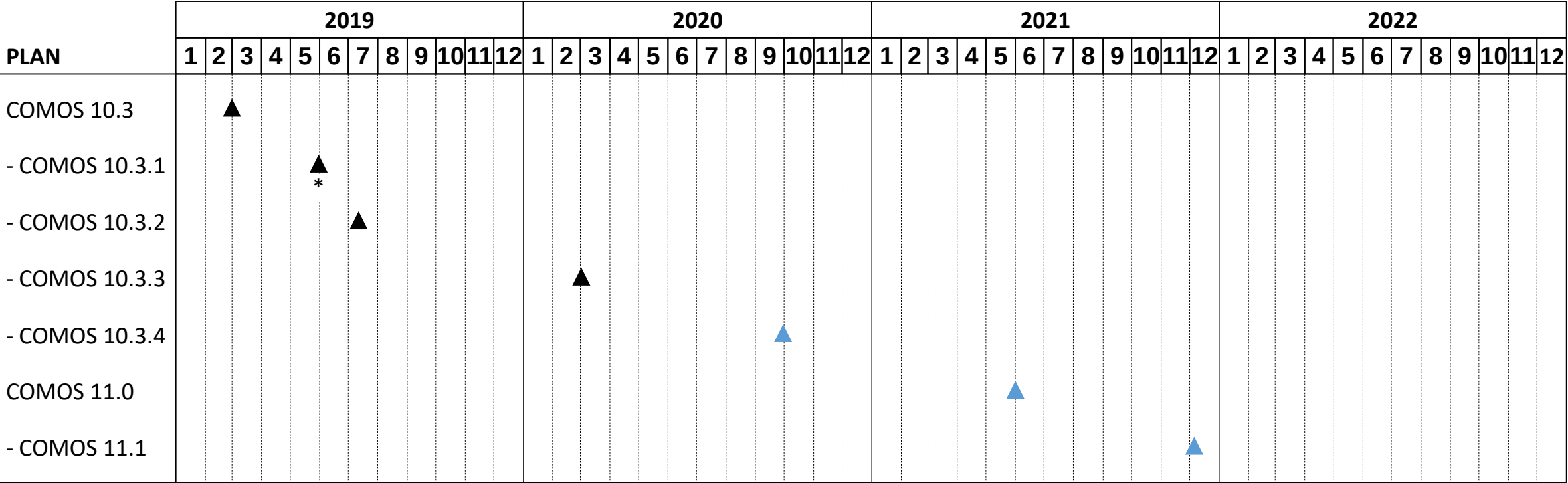
Product Release:
Cloud, Services

- SWS Requirements
- Micro Service enabled
- 2-D-Editor
- iModel data interface
- Cloud Agnostic
- XHQ/Mindsphere
- Working Layer enabled for the future
- Single Source of Truth
- UX Web
- UX Desktop

For a better time-to-market a new release strategy will be established



- To release much faster and more often new features
 - ➔ For development COMOS versions only service packs



Dankeschön



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