



SAP Enterprise Product Development

Intelligent Development for Innovative Products

Felix Reichle, SAP
April 23rd 2021

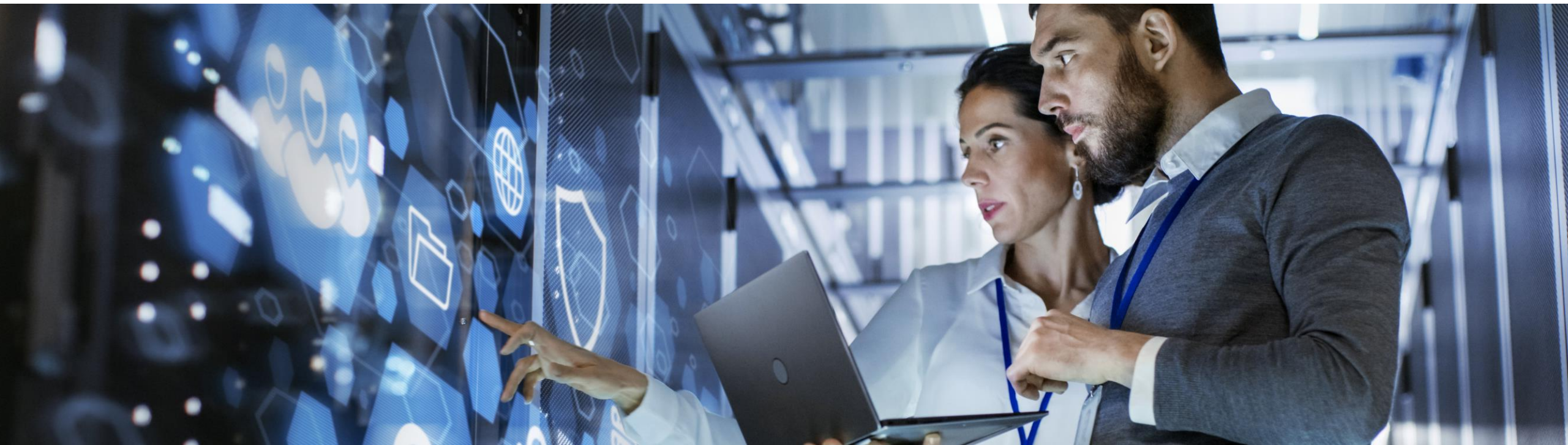
PUBLIC

Agenda

- Key Capability Features & Benefits
- Collaboration Apps & General Features
- Use Cases
- Capability in Detail

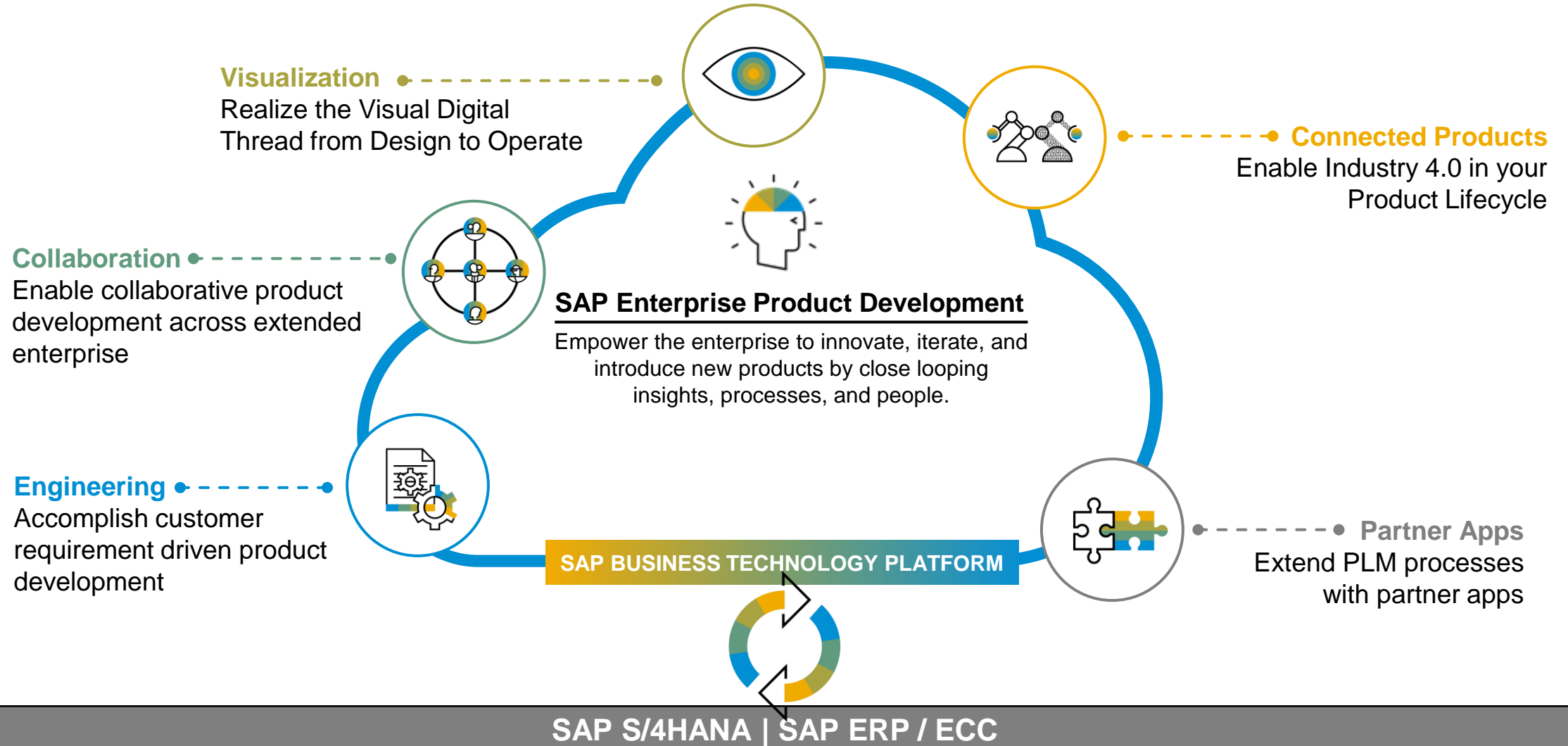


SAP Enterprise Product Development Solution Overview



SAP Enterprise Product Development

Reimagine Innovation

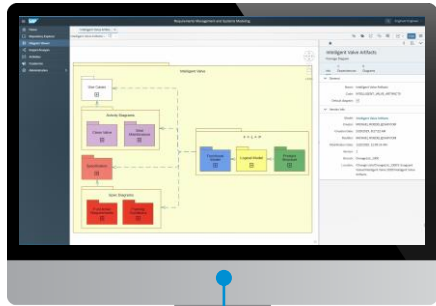


SAP Enterprise Product Development

Capabilities and Key Features



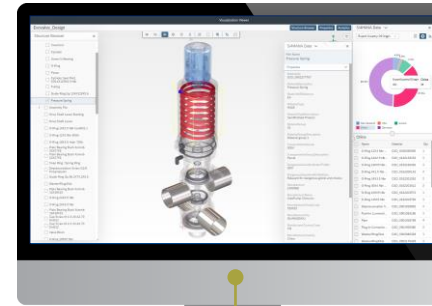
Engineering



- Requirements Acquisition
- Requirements Management
- Functional Structure Management
- Impact & Lineage Analysis
- Test Planning & Execution
- Manage Test Artefacts & Results



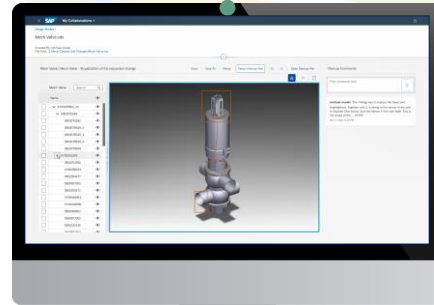
Visualization



- Simplified User Experience
- Import, Browse & Share 2D / 3D / 360 Panoramas
- Visual Data Integration
- Author, Edit & Enhance Visualizations
- Role-based Visual Application Templates
- 3D Visual Work Instructions

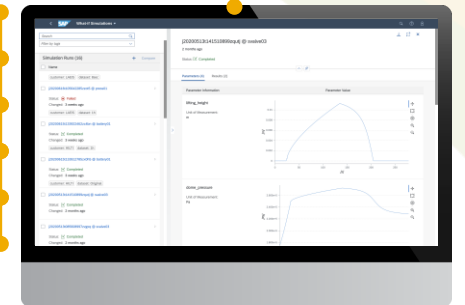


- Requirements Driven Engineering Collaboration
- Share Documents
- 3D Visual Design & Redlining
- Simple Task/Workflow Management
- Collaborate on Structured Product Data incl BoM
- Supplier Collaboration
- Collaborate on Changes
- Comments



Collaboration

- Simulation Based Digital Twin
- Virtual Sensors
- Health Prediction
- What-If Simulation
- Dynamic 3D Visualization
- Collaboration with OEMs



Connected Products

Based on our customer projects, we have identified recurring **key challenges**, many stemming from a fast-moving market environment.



Team Interaction

Constrained collaboration and limited team Interaction in today's Enterprises.



Access to Information

Lack of a secure collaboration environment to share sensitive data from backend systems.



Organizational Silos

Diverse product stakeholder group (e.g. design partners, manufacturers & suppliers).



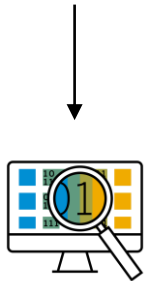
Team Productivity

Limited insights & control how products information is shared and worked on.

As part of SAP Enterprise Product Development, Collaboration is **responding to these challenges** supporting digital transformations.

Team Interaction

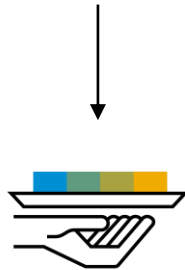
Constrained collaboration and limited team Interaction in today's Enterprises.



Consistent collaboration & business execution supported with a Process Driven (Workflow based) approach

Access to Information

Lack of a secure collaboration environment to share sensitive data from backend systems.



Drive efficiency with single source of truth for **collaboration on all types of product data** in a **secure manner**

Organizational Silos

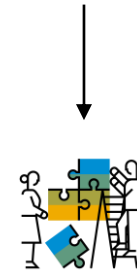
Diverse product stakeholder group (e.g. design partners, manufacturers & suppliers).



Collaborate with extended enterprise incl. suppliers, design partners, contract manufacturers.

Team Productivity

Limited insights & control how products information is shared and worked on.



Gain **actionable insights** for all collaborations, work on redlining's & mark ups on 3D product visuals

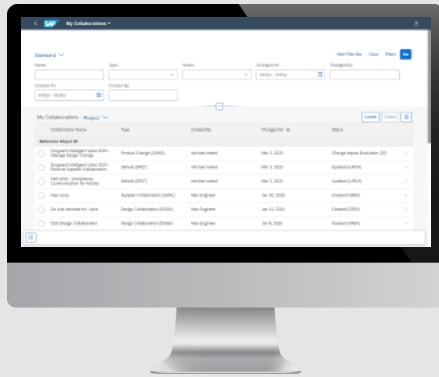
Collaboration Apps & General Features



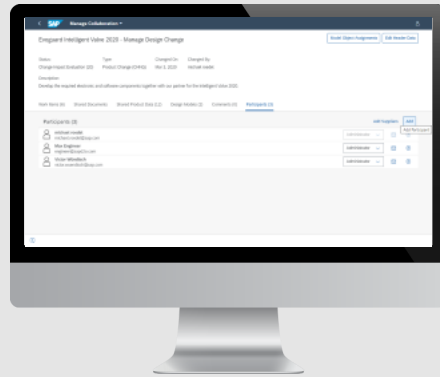
Key Features

SAP Enterprise Product Development – Collaboration

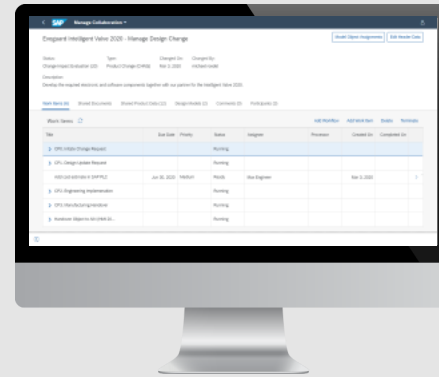
Working with My Collaborations



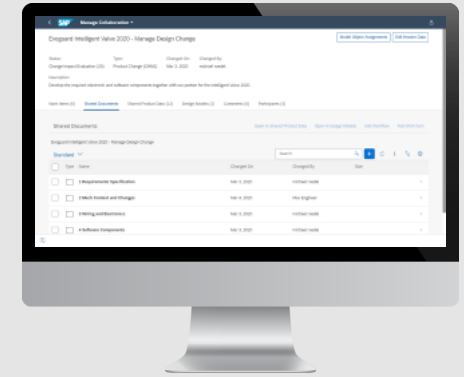
Participants



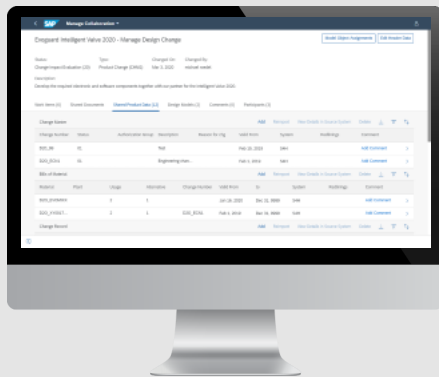
Work Items



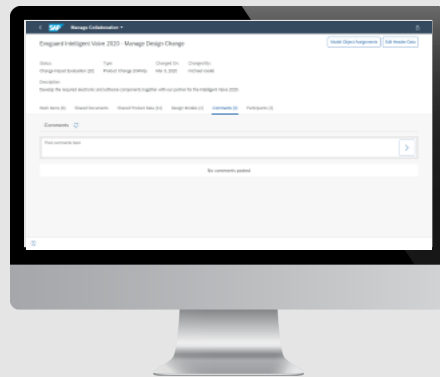
Shared Documents



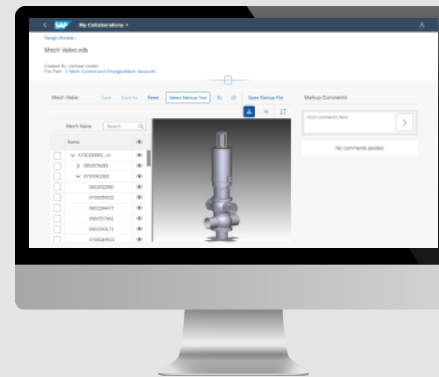
Collaborating on Product Data



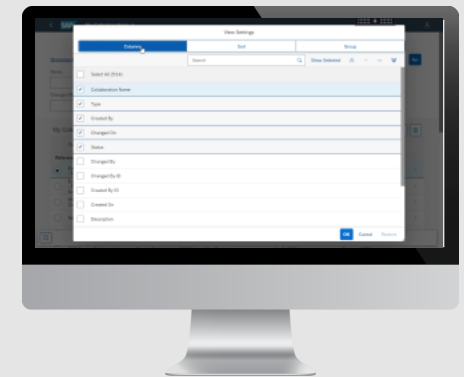
Comments



Collaborating on a Design Model



Actions on Collaboration



Collaboration Apps

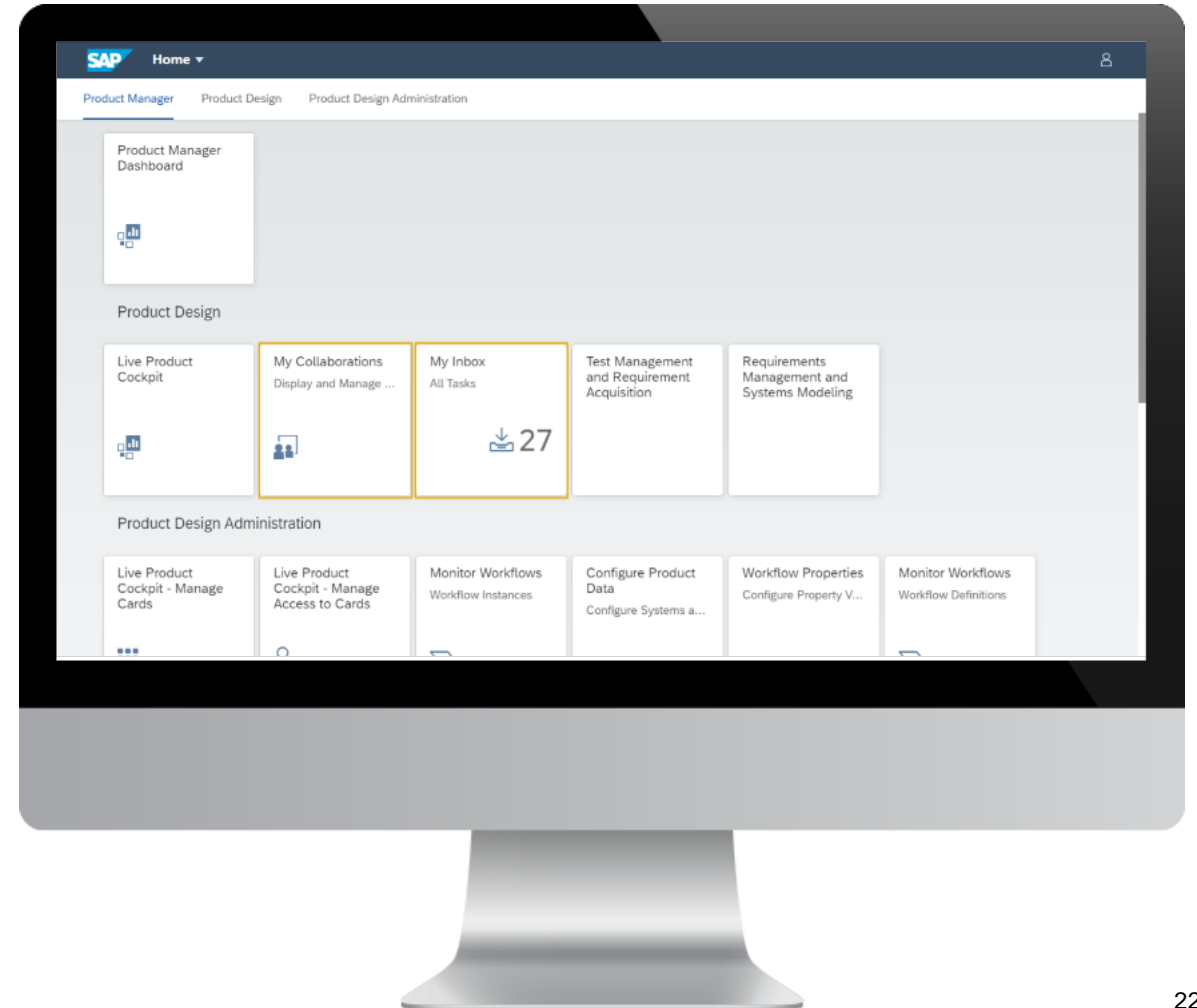
for SAP Enterprise Product Development – Collaboration

My Collaborations

Display and manage
Collaborations

My Inbox

Display and manage
work items added from collaborations



Recent Innovations



SAP Enterprise Product Development - Collaboration

S/4 Hana Cloud Support in Collaboration

The screenshot displays the SAP My Collaborations interface. The top section shows the 'Add Product Data' form with 'Product Data' set to 'BOM-QM7-002'. Below this, there are fields for Material, Plant, BOM Usage, Alternative BOM, Change Number, and Valid From. A search results table is visible, listing materials like 'Coffee Machine' and 'JP01-HALB-01'. The bottom section shows a detailed view of a 'Shared_Product_Collaboration' with a 'Bill of Material' table. The table includes columns for Material, Plant, BOM Usage, Alternative, Change Number, Valid From, Valid To, System, and Redlinings. The data row shows 'COFFEE_MACHINE' with BOM Usage 1 and Alternative 2.

Material	Plant	BOM Usage	Alternative	Change Number	Valid From	Valid To	System	Redlinings
COFFEE_MACHINE	0001	1	2	TESTVMP	Nov 24,2015	Apr 20,2050	QM7-002	1

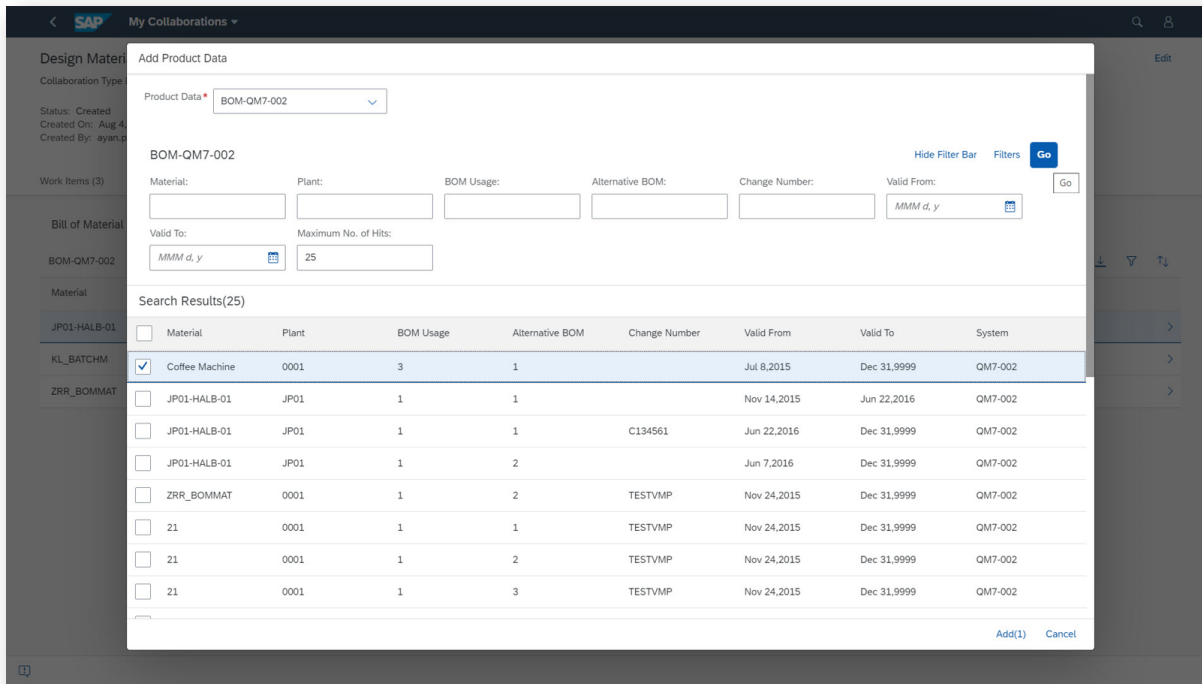


Highlights

- Add Bill of Material Data from an S/4 Hana Cloud System into Collaboration
- **View Details** for the BOM in **Source System** from Collaboration
- Add **Redlining** to S/4 Hana Cloud BOM

SAP Enterprise Product Development - Collaboration

Order-BOM Support in Collaboration



The screenshot displays the 'Add Product Data' dialog in SAP Collaboration. The 'Product Data*' dropdown is set to 'BOM-QM7-002'. Below, there are input fields for Material, Plant, BOM Usage, Alternative BOM, Change Number, and Valid From. A 'Go' button is present. Below the input fields, there are fields for 'Valid To' and 'Maximum No. of Hits' (set to 25). The 'Search Results(25)' table is shown below, with the first row selected (checked).

<input type="checkbox"/>	Material	Plant	BOM Usage	Alternative BOM	Change Number	Valid From	Valid To	System
<input checked="" type="checkbox"/>	Coffee Machine	0001	3	1		Jul 8,2015	Dec 31,9999	QM7-002
<input type="checkbox"/>	JP01-HALB-01	JP01	1	1		Nov 14,2015	Jun 22,2016	QM7-002
<input type="checkbox"/>	JP01-HALB-01	JP01	1	1	C134561	Jun 22,2016	Dec 31,9999	QM7-002
<input type="checkbox"/>	JP01-HALB-01	JP01	1	2		Jun 7,2016	Dec 31,9999	QM7-002
<input type="checkbox"/>	ZRR_BOMMAT	0001	1	2	TESTVMP	Nov 24,2015	Dec 31,9999	QM7-002
<input type="checkbox"/>	21	0001	1	1	TESTVMP	Nov 24,2015	Dec 31,9999	QM7-002
<input type="checkbox"/>	21	0001	1	2	TESTVMP	Nov 24,2015	Dec 31,9999	QM7-002
<input type="checkbox"/>	21	0001	1	3	TESTVMP	Nov 24,2015	Dec 31,9999	QM7-002

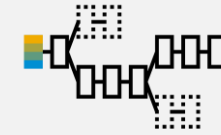


Highlights

- Add **Order bill of materials** (Order BOM) from SAP S/4HANA into collaborations
- **Add, re-import, sort, filter, and delete** Order BOMs in collaborations
- Perform **redlining** on Order BOM items in collaborations

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Process Variant



Highlights

- Configuration of **process variants** for LoB experts, process extensions, decisions and responsibilities.
- Based on the **business variations** and level of complexity, you can create your own Process Variants, from standard or customizable set of processes, via simple **drag and drop**

SAP Enterprise Product Development - Collaboration

Workflow Forms



00 - Collect Product Performance Information (Service Engineer)

Dear Service Team,
Please provide us with the details of the performance twin of the subjected product.
Thanks,
Product Manager

Created On: May 3, 2020 Priority: Medium Due On: May 5, 2020
Created By: ayan.pandey@sap.com

Sales Analysis Cost Analysis Manufacturing Analysis Decision

Was sales forecasting triggered and analyzed?:*

Which existing sales orders and customers are impacted?:*

Cost Analysis

Are all affected modules, parts/documents, requirements, ingredients, labels or products added to collaboration?:*

Was the feasibility of the change assessed?:*

Was the cost of the change assessed and scheduled?:*

30 - Perform Pilot Production
archana.shukla@sa... Medium

What's the new COGM (manufacturing cost)?*

Plant (Enter id):*

Gross Margin (new VS old)?*

One time change cost (material scrap cost, new tooling cost, Liquidated damages if the purchase order/subcontracts is cancelled, engineering cost etc.) evaluated?:*

30 - Approve Change Proposal (Product Manager)
ayan.pandey@sap... Very High
Due on 5/5/20, 6:07 PM

Decision

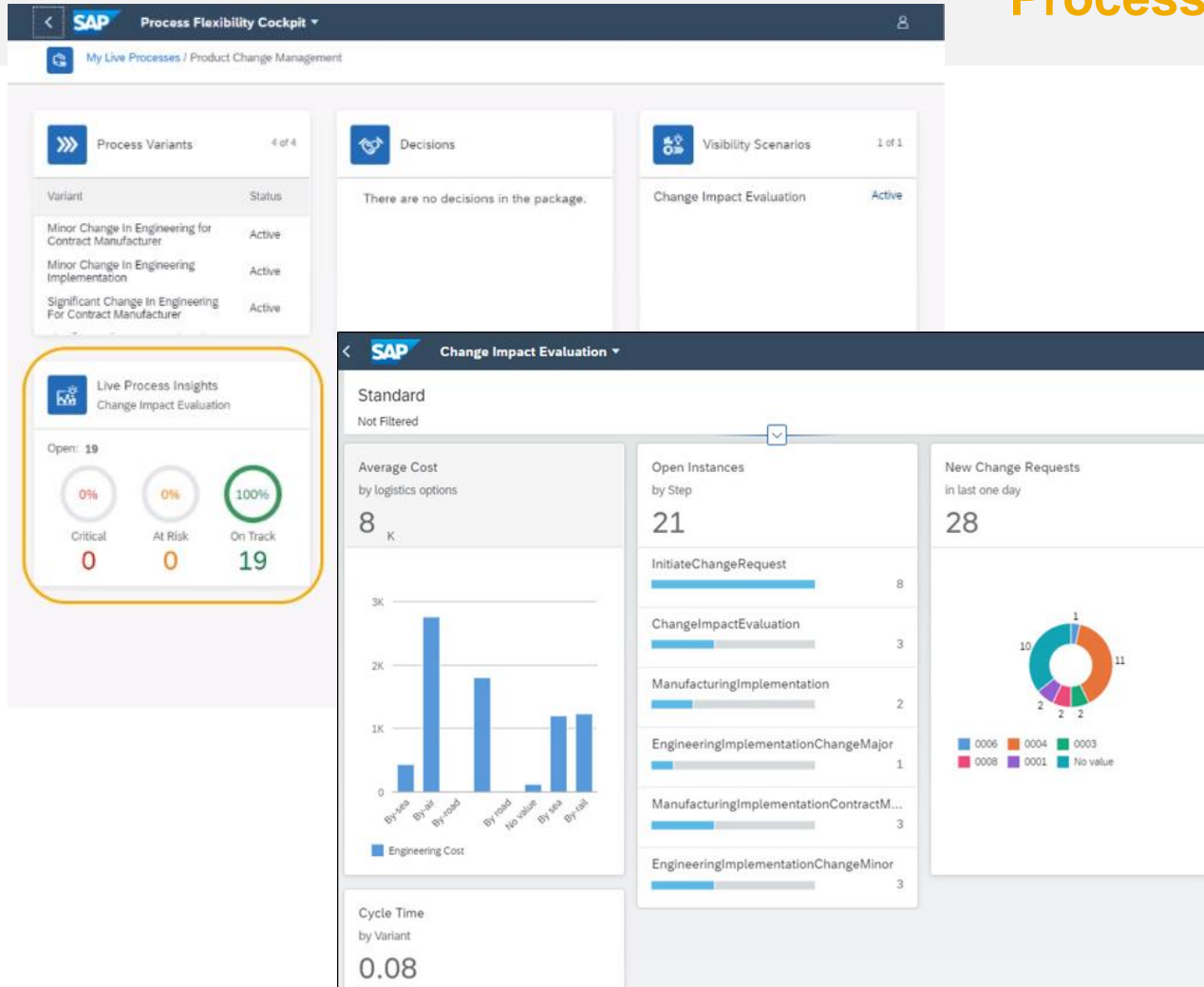


Highlights

- Capture **structured feedback** for recurring process tasks in your organization
- Tasks can be **claimed** by an individual from a group of people
- Allows to capture **mandatory input** before completing or approving a task to ensure crucial information documentation

SAP Enterprise Product Development - Collaboration

Process Visibility



Highlights

- Gain **end-to-end** process visibility
- Always know how processes are running and gain an overview on status progress and further key information **in one view**.
- Enable real-time process management
- Based on the **configured key performance indicators**, evaluate e.g. the change status

SAP Enterprise Product Development - Collaboration

External Reference Objects



SAP My Collaboration

NexGen e-scooter

Engineering Change for Discrete Industry (ECCT)

Status: **In Evaluation**
Changed On: Mar 12, 2020
Changed By: [Ayan Pandey](#)

Description: To change the Disc Braking to Regenerative Braking of a NexGen e-scooter for energy recovery.

External Reference: [AribaNetwork](#)

Edit Model Object Assignment

Work Items Shared Documents Shared Product Data **External Reference Objects** Design Models Comments Participants

Specification

SpecID	Name	SpecSubID	Status	Attachments	Comments
Spec_1234	Health Drink	Ingredient_10	In Process	2	1
Spec_2345	Paracetamol	Ingredient_10	Evaluation	3	2

Material

MatID	Mat In Use	MatSubID	Status	Attachments	Comments
Mat_1234		Ingredient_10	Approved	3	1

Change Master

MatID	Mat In Use	MatSubID	Status	Attachments	Comments
Mat_1234		Ingredient_10	In Process	2	2

Linked Collaborations

Collaboration Name	Description	Participants	Created On	Last Updated On
Disc_Alignment In Evaluation	To change the Disc Alignment of a NexGen e-scooter for energy recovery.	John Miller, Janet Johnson	Jun 15, 2019	Jun 15, 2020
Disc_HeatingUpdate2020 Complete	To evaluate the Disc Heating for the updated changes of a NexGen e-scooter for energy recovery in 2020.	Robbie Scott, Will	Jun 15, 2018	Jun 15, 2018



Highlights

- Link Objects from other EPD capabilities to a Collaboration e.g. Provisional Specifications or Engineering Objects from the Collaboration UI
- Configure and enable any external reference and assign them to Collaboration Types
- Add external reference objects from other applications to a Collaboration using the provided API
- Enable Navigation to objects in external applications

SAP Enterprise Product Development - Collaboration

Notification on Document Events

The screenshot displays the SAP Enterprise Product Development Collaboration interface. At the top, there's a navigation bar with 'SAP My Collaborations' and a user profile icon. Below it, the collaboration name 'ProxyAPINotificationDemo' is shown, along with 'DLFT (DLFT)' and 'Edit Model Object Assignments'. A menu bar includes 'Work Items (0)', 'Shared Documents', 'Shared Product Data(0)', 'Reference Objects (0)', 'Comments (0)', 'Participants (1)', and 'History'. The 'Shared Documents' section is active, showing a table of documents. A yellow box highlights the 'Email Notification' button in the top right of the document list. An arrow points from this button to a callout box that says 'Email notification enabled.'. Another arrow points from the 'Design Documents' folder in the table to an email notification window. The email notification is titled 'SAP Enterprise Product Design: Notification For Docu...' and is from 'SAP Intelligent Product Design notification' to 'SAP Intelligent Product Design'. The body of the email reads: 'SAP Enterprise Product Development Notification', 'Dear User,', '"Design Documents Sub folder" folder was deleted by [redacted]@sap.com at 2021-01-08 08:13:45UTC in Collaboration ProxyAPINotificationDemo'. It includes a link to open the collaboration and a URL: 'sap.hana.ondemand.com/portal.portal/site#Collaboration-Display?sap-ui-app-id-hint=epd.collaboration.MyCollaboration&/CollaborationDetails/73e4f221-fcb7-4519-b1bc-ae871528e333/SharedDoc/wxaMplH2xObIUQR.JGLRQkbKf414k5i7ZjI01k8st11A'. The email ends with 'Best Regards, SAP Enterprise Product Development'.

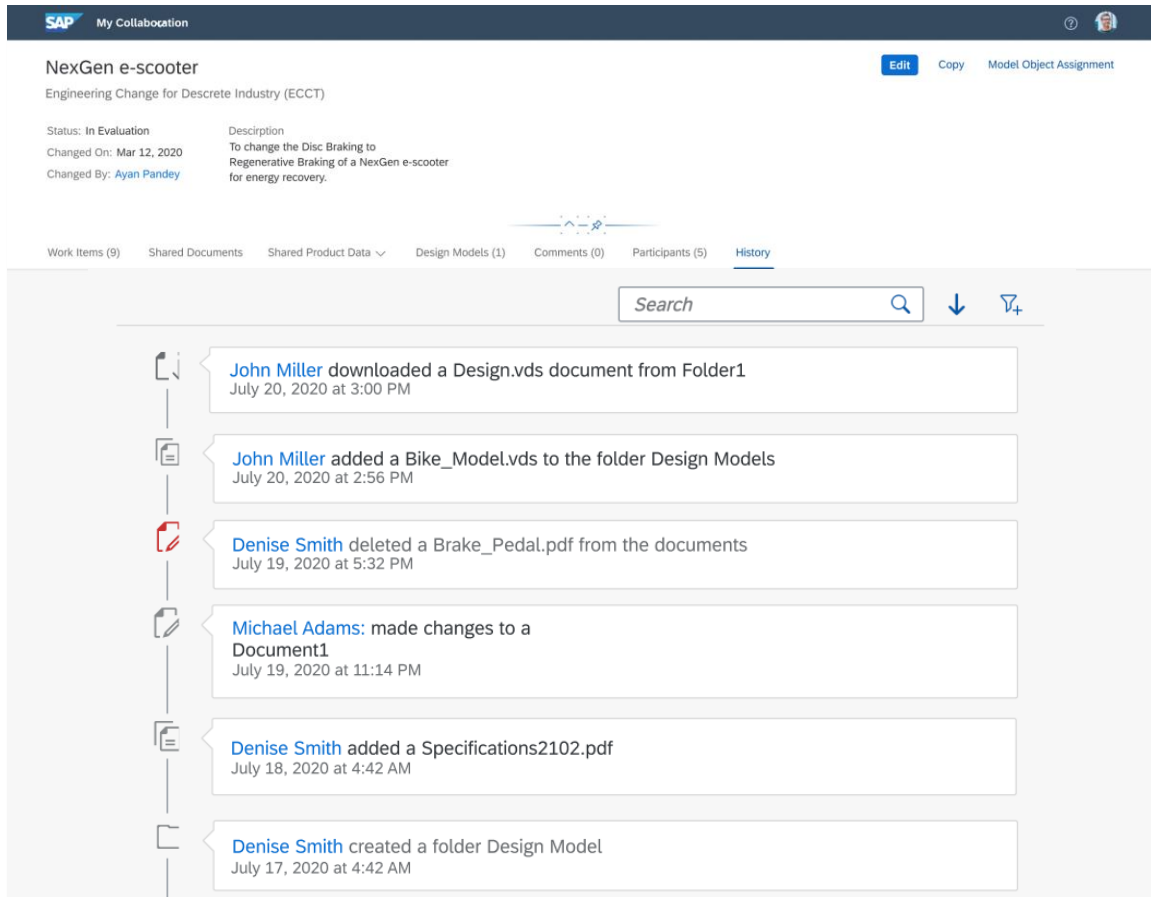


Highlights

- Improved document driven collaboration without requiring Workflow definition
- Users can subscribe to favorite documents or Folders and receive an instant notification on document changes
- Allow navigation to the relevant Document and collaboration context directly from the email notification

SAP Enterprise Product Development - Collaboration

Collaboration Activity Logging and Traceability



The screenshot displays the SAP My Collaboration interface for a project named 'NexGen e-scooter'. The interface includes a header with the SAP logo and 'My Collaboration' text. Below the header, there are tabs for 'Work Items (9)', 'Shared Documents', 'Shared Product Data', 'Design Models (1)', 'Comments (0)', 'Participants (5)', and 'History'. The 'History' tab is active, showing a list of activity logs. Each log entry includes a user name, an action, and a timestamp. The activity logs are as follows:

- John Miller downloaded a Design.vds document from Folder1 (July 20, 2020 at 3:00 PM)
- John Miller added a Bike_Model.vds to the folder Design Models (July 20, 2020 at 2:56 PM)
- Denise Smith deleted a Brake_Pedal.pdf from the documents (July 19, 2020 at 5:32 PM)
- Michael Adams: made changes to a Document1 (July 19, 2020 at 11:14 PM)
- Denise Smith added a Specifications2102.pdf (July 18, 2020 at 4:42 AM)
- Denise Smith created a folder Design Model (July 17, 2020 at 4:42 AM)



Highlights

- Enable Traceability and Auditability of Collaborations through event logging.
- Ensure document receipt for third parties
- Control and ensure traceable access to e.g. confidential documents.
- Gain awareness of recent activities in Collaborations at one glance

SAP Enterprise Product Development - Collaboration

Copy Collaboration

The top screenshot shows the '3. Shared Document (Optional)' step. It includes a table with the following data:

File Name	Size
Shared Product Data	
TestChildFolder	
TestSegndChildFolder	
FG126_1010_1_M.BOMNZS	26.768 KB

The bottom screenshot shows the '2. Select Participant (Optional)' step. It includes a table with the following data:

Participants	Role
<input checked="" type="checkbox"/>	Administrator
<input checked="" type="checkbox"/>	Contributor
<input type="checkbox"/>	Reader



Highlights

- Allow copying of one collaboration to one or multiple copies using a wizard to pick content and participants to take over.
- Set up individual collaborations for multiple suppliers e.g. in Purchasing scenarios where every supplier has the same set of Documents and Information available.

Extensibility & Integration through API's



Integrate using Public APIs

for SAP Enterprise Product Development – Collaboration

Idea / Requirements

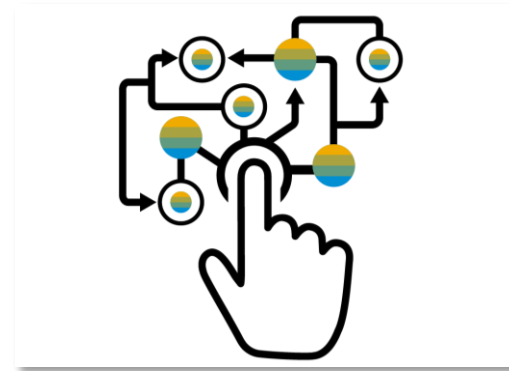
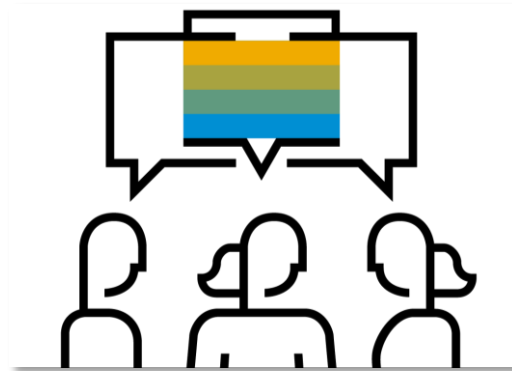
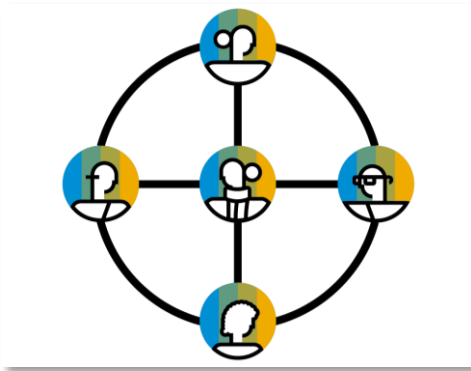
Early Engineering

Detailed Design

Prototyping

Production

Operate



Integrate Collaboration

Integrate with SAP Enterprise Product Development – Collaboration option using OData APIs

Create & Invite

Create and manage collaborations and invite participants or user groups to collaborations

Manage Workflows

Manage workflows for collaborations

Retrieve List

Get a list of collaborations, participants and workflows

Roadmap



SAP Road Map Explorer



Stay up to date with our latest innovations in the SAP Road Map Explorer

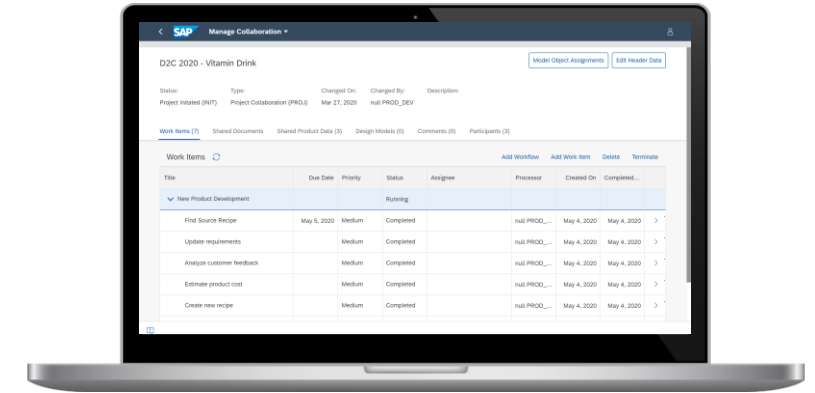
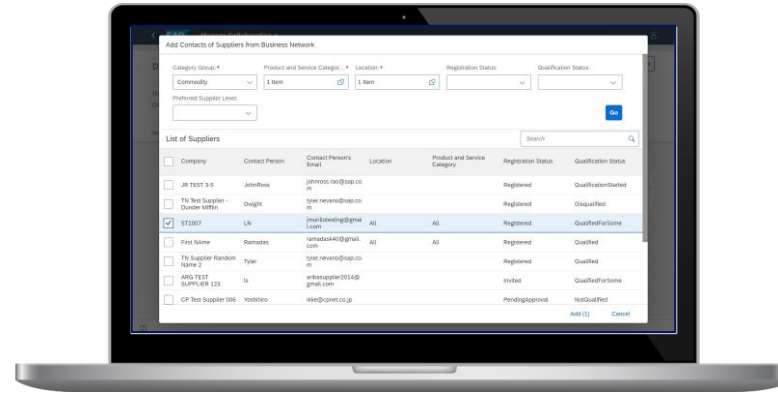
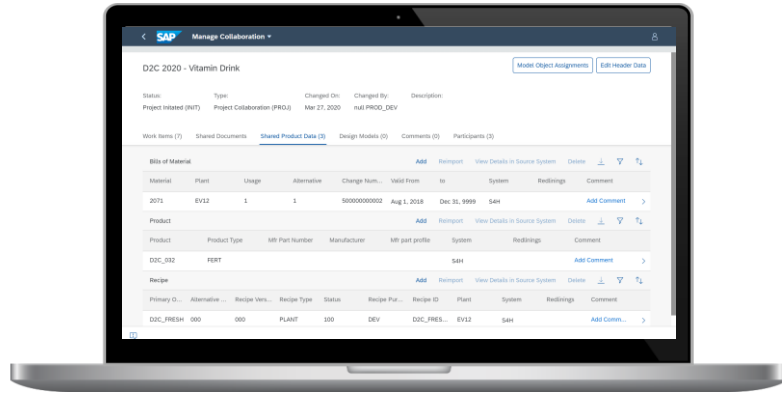
Discover Now

The screenshot shows the SAP Road Map Explorer website. At the top, there is a navigation bar with the SAP logo, 'Road Map Explorer', and links for 'Products', 'Processes', 'Industries', 'My Road Maps', an email icon, a user profile icon, and a 'Disclaimer' link. The main header features a dark, starry night sky background with the text 'SAP Road Maps' in large white font. Below this, a sub-header reads: 'SAP Road Maps support the journey to SAP's future product portfolio and the Intelligent Enterprise. Explore our road maps, webinars, and transformation guides to learn more.' A search bar is positioned below the sub-header with the placeholder text 'Search SAP Road Maps by keywords, topics, processes or products.' and a magnifying glass icon. The main content area is titled 'Most viewed Road Maps' and displays three featured items:

- SAP S/4HANA**: Labeled as a 'Product', with an image of two men in a meeting.
- Automotive**: Labeled as an 'Industry', with an image of two hikers on a trail.
- SAP S/4HANA Cloud**: Labeled as a 'Product', with an image of a smiling woman.

SAP Enterprise Product Development – Collaboration

Realize the Collaboration Digital Thread from Design to Operate



Consistent Collaboration

Establish single source of truth for collaboration on unstructured and structured product data



Extended Enterprise processes

Collaborate seamlessly to support processes in product development, sourcing & beyond across the extended enterprise



Actionable Insights

Empowering product developers & users with insights to act in the moment

Thank You.

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