



Developing intelligent products with SAP's new cloud solution in PLM: SAP Enterprise Product Development

SAP SE

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PUBLIC

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Agenda

- Introduction
- Solution Overview
- Key Capabilities & Features
- Demos
- Architecture
- Roadmap
- Summary



Introduction

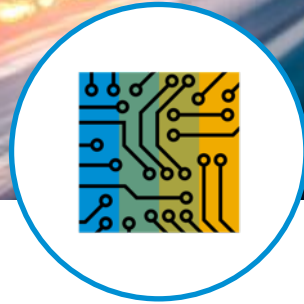


Product Lifecycle Management Trends



Customer Sentiment & Experience

Customer sentiment can make or break the success of your product in the market place



Product Complexity & Individualization

Smart products & customization are no longer an option, the market demands them



Quality & Sustainability

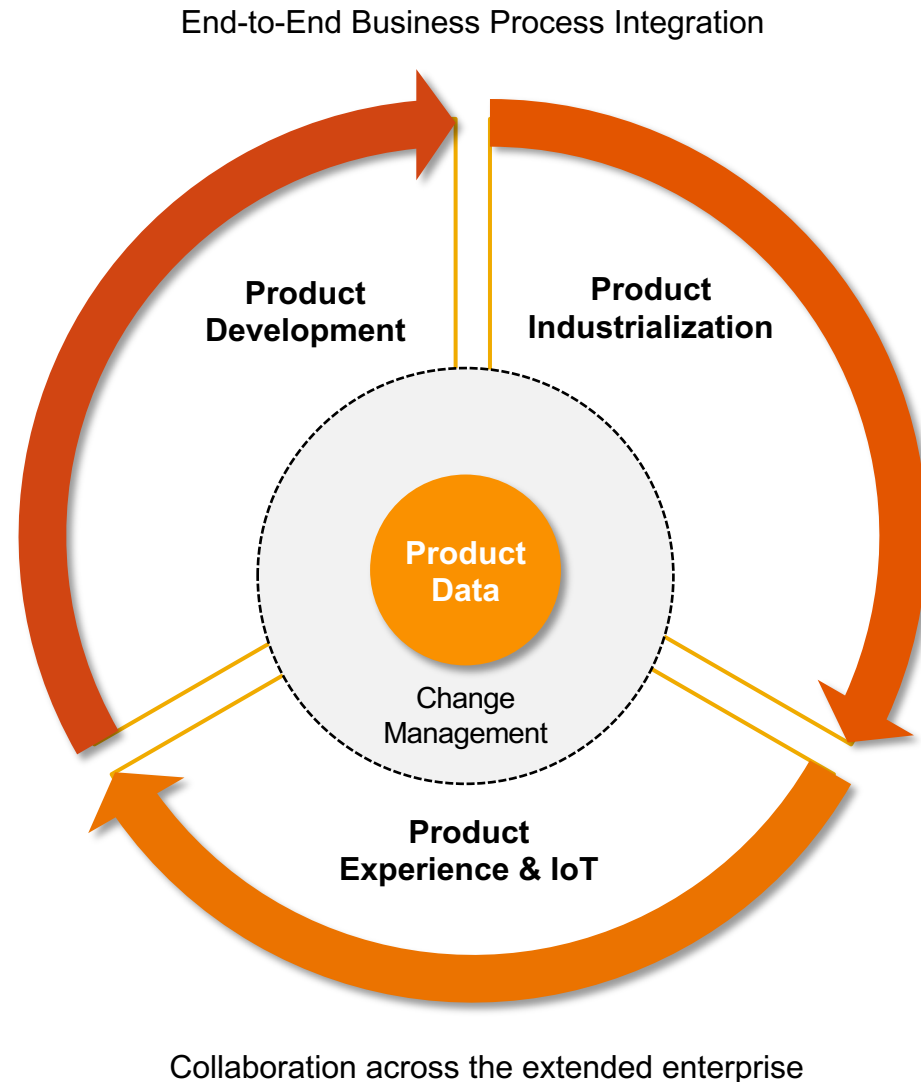
Products built sustainability and of high quality directly result in positive customer experiences



Closed-looped Enterprise Processes

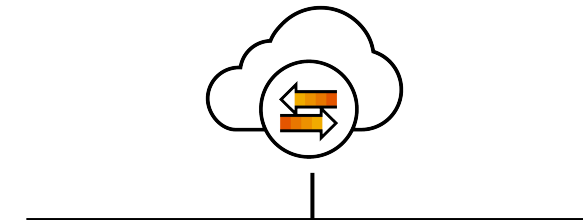
Innovation is driven by insights into a product's behavior and how a product impacts the extended enterprise

The building blocks of our SAP PLM Solution Portfolio



SAP S/4HANA PLM

We strengthen our efforts in S/4HANA and Core PLM products in a systematic way to enable the end-to-end product lifecycles.



SAP Enterprise Product Development

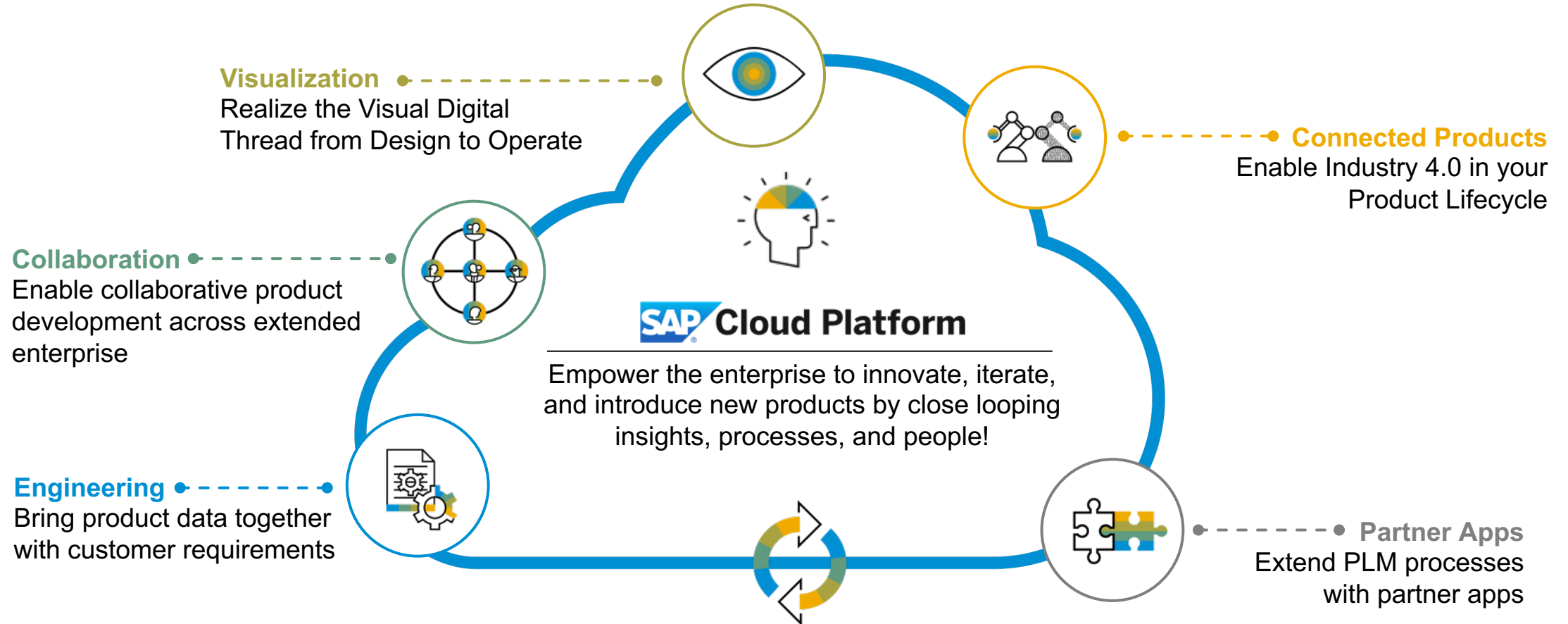
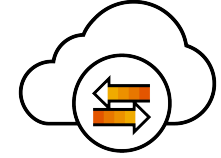
We extend our PLM portfolio with new innovations in one single consolidated PLM cloud flagship product.

Solution Overview



SAP Enterprise Product Development

Reimagine Innovation



SAP S/4HANA | SAP ERP / ECC

Key Capability Features & Benefits



SAP Enterprise Product Development – Engineering / Requirements

Capability Overview



Engineers and product developers can realize an **engineering digital thread to empower people** with insights to improve key business decisions from Design to Operate & Consume.

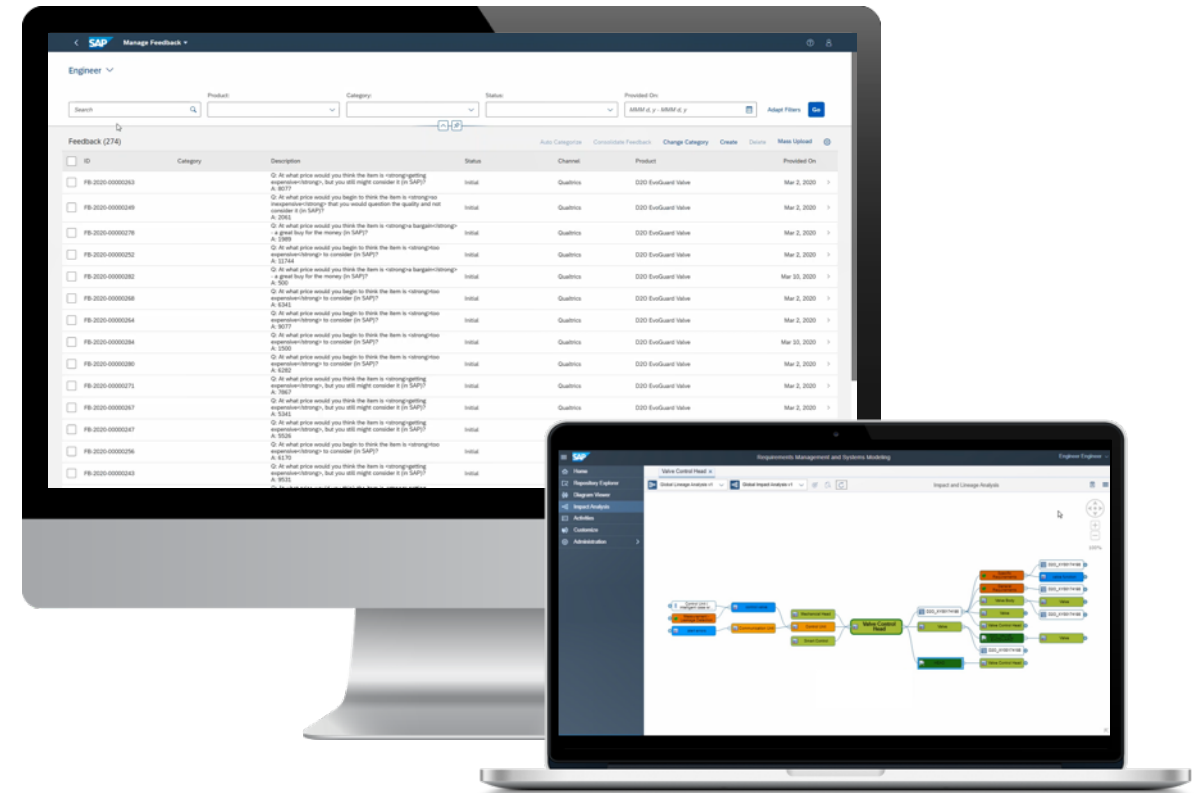
Capability features and value proposition

The Engineering capability enables companies to:

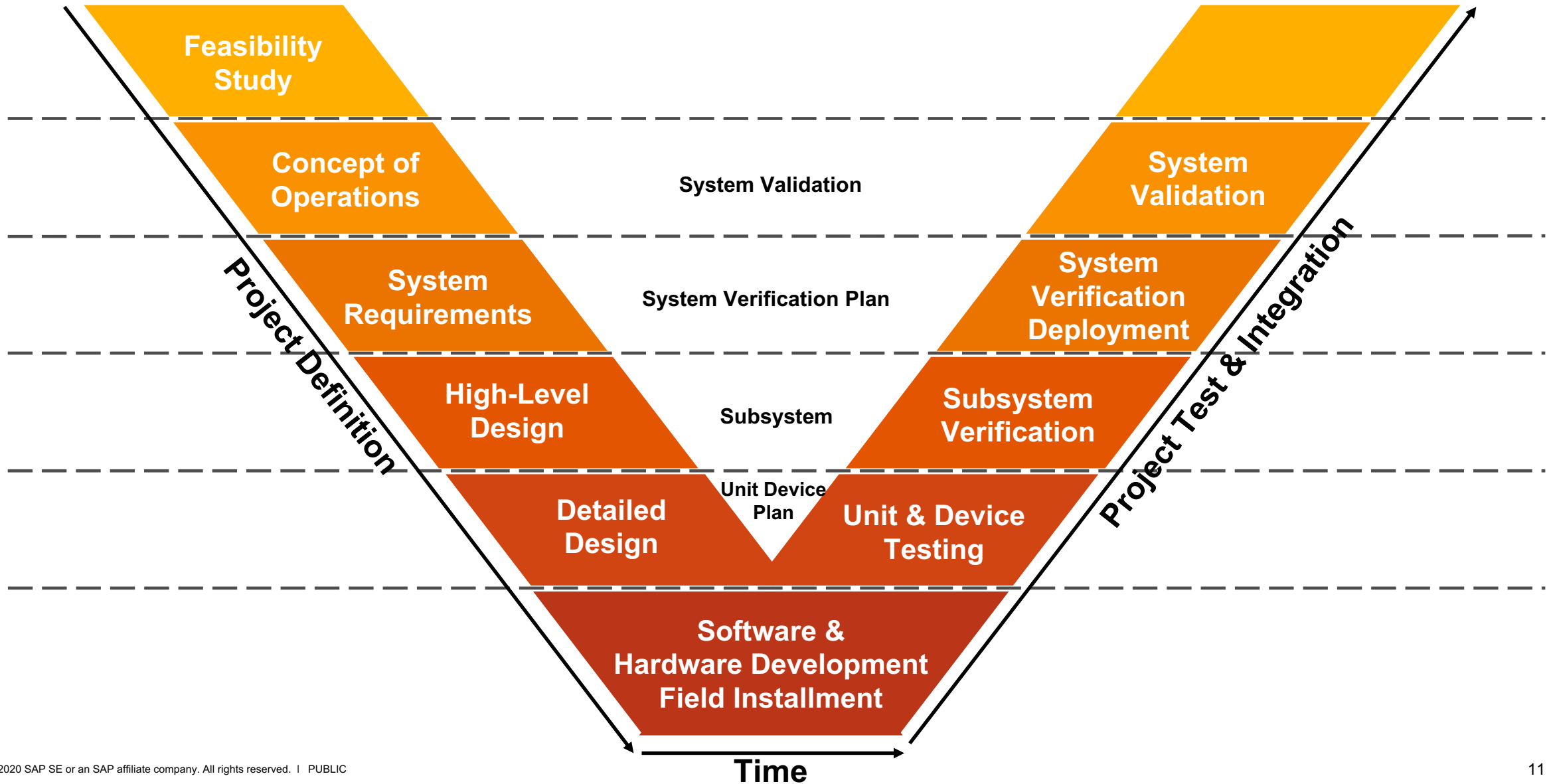
- ✓ Effectively incorporate the **experience data** related to **products** & its **users** and consolidate the true **voice of customer** into product engineering
- ✓ Translate product requirements into **multi-disciplinary digital models** for further synthesis, simulation and optimization
- ✓ Efficiently manage product **complexity** across **Mechanical, Electrical, Electronics** and **Software** disciplines
- ✓ Use **systems engineering** to model complex new products with a clear **systems engineering approach** using the **V-Model**
- ✓ Start to plan your tests for your product before even detail out the design

Value Proposition:

- Digitally transform and **accelerate time to market** proactively to address changing market needs
- **Conquer Complexity** of increasing product variations & multi-disciplinary smart product development
- **Drive efficiency** in design and development by combining engineering and business data across enterprise
- **Efficient handling** of enterprise wide product processes



V-Model Approach for Systems Engineering



SAP Enterprise Product Development – Visualization

Capability Overview



Enables a **visual digital thread that empowers people** throughout the enterprise with insights to improve key business decisions from Design to Operate

Capability features and value proposition

The visualization capability enables companies to:

- Digitally transform and simplify the User Experience (UX) by accessing information visually.
- Leverage visualizations as the oldest and most natural form of communication to provide “In Context” visual learning and retention of product and asset information.
- Connect 3D Computer Aided Design (CAD) data with business data from design, procurement, supply chain, manufacturing, quality, asset operations and service to deliver a Model Based Enterprise. Datasources can be ERP, S4, PLC, externals

Resulting in:

- Empowered people, that are engaged and motivated be more productive with next generation visual cloud applications.
- Reduction in time to make key business decisions by providing access and visibility to business data, insights and actions via a 3D visual index.
- Value measured in hours leveraging secure role-based visual application templates.
- Improved training, manufacturing execution, service and first-time fix rates of critical assets.



SAP Enterprise Product Development – Connected Products

Capability Overview

Help product centric companies to **digitize physical products** through IoT-enabled engineering models.

Capability features and value proposition

The capability enables product centric companies to:

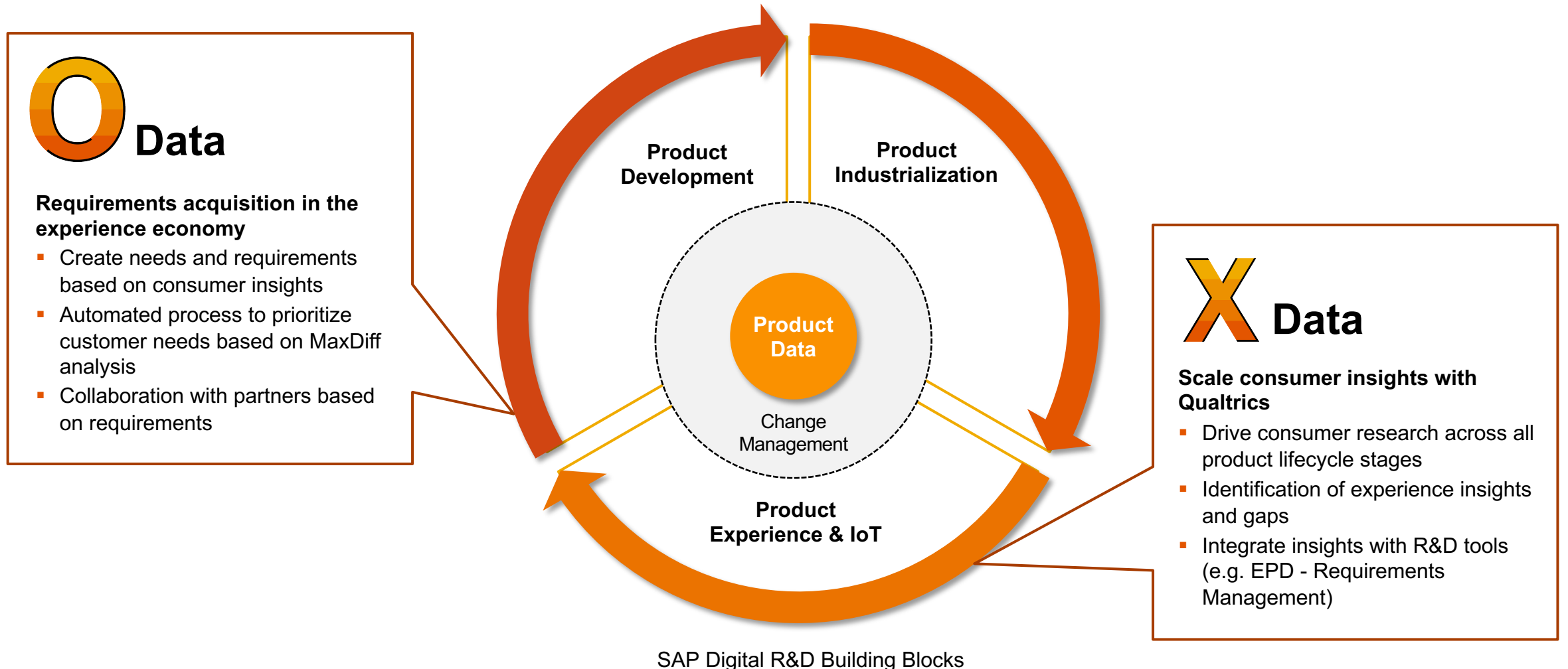
- Create Connected Products based on IoT-enabled engineering models
- Enable the usage of engineering simulation models in service and operations
- Analyse product usage and understand how operating conditions deviate from assumed conditions
- Perform what-if simulations to optimize service processes

Resulting in:

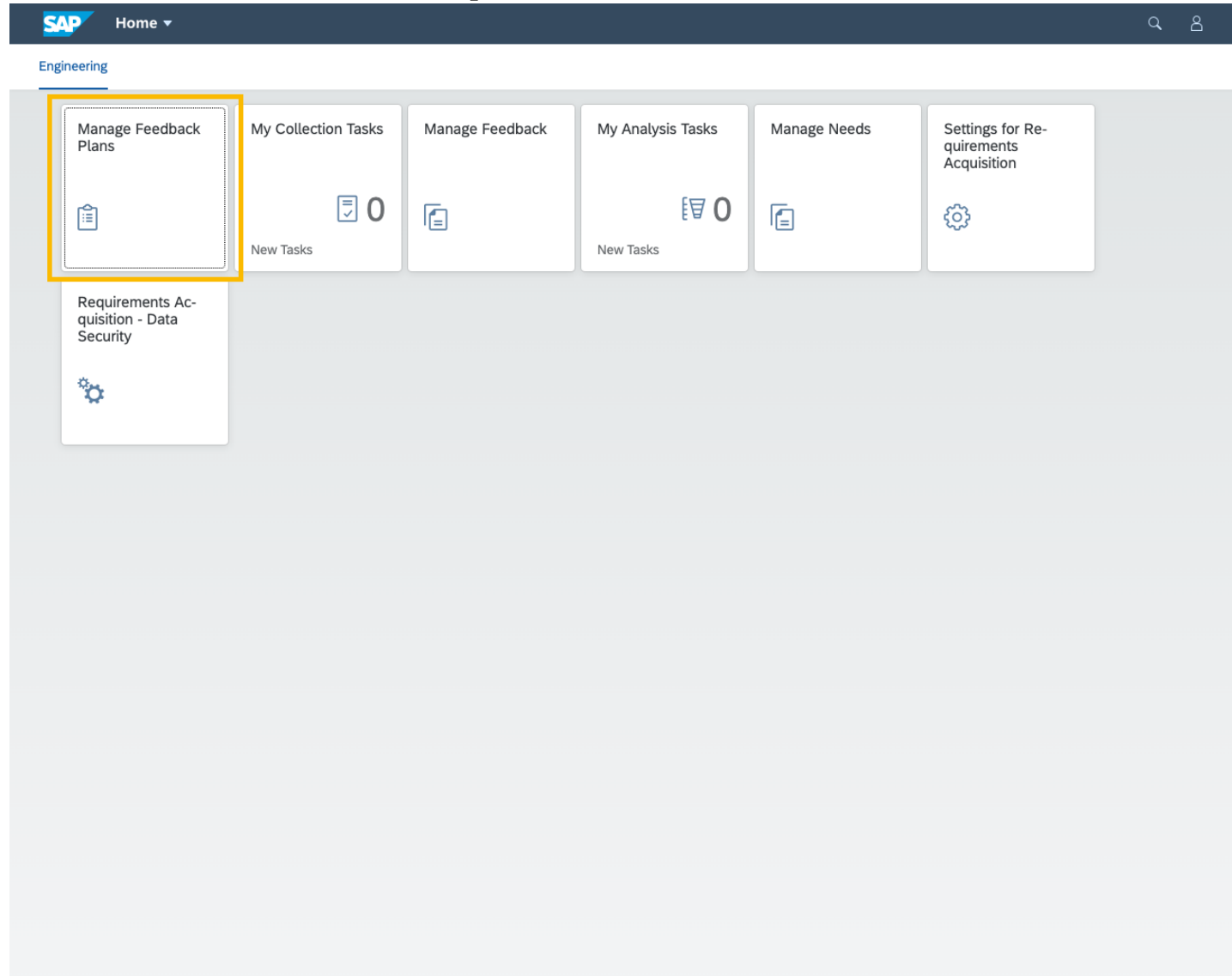
- New revenue stream(s) through value-added services
- Increased profitability in service and maintenance operations
- Improved insights for predictive maintenance through virtual sensors
- Better R&D efficiency through product usage insights (Closed loop Engineering)



Demo 1: Requirements acquisition in the experience economy



SAP Fiori Launchpad



You can access the ***Manage Feedback Plans*** app in your SAP Fiori launchpad.

Feedback Plans List

< **SAP** Manage Feedback Plans ▾

Standard ▾

Search

Product:

Status:

Adapt Filters

Go

Feedback Plan (2)

Create

Name	Product	Status	Feedback	Needs	Start Date	End Date
Feedback Plan for Valve	Valve	Initial	0	0	Jul 1, 2020	Jul 3, 2020 >
Collection Feedback Plan for Phone	Phone	Initial	0	0	Jul 31, 2020	Aug 12, 2020 >

Feedback Plans List

- All the existing feedback plans are displayed in the list.
- **Name, Product, Status, Count of Feedback, Count of Needs, Start Date and End Date** are displayed for each Feedback Plan.
- Number of Feedback Plan is calculated and displayed in the **Feedback Plan** table title.
- Each column supports the sort and filter functions.
- Support free-text search for **Name, Product, Status, Count of Feedback, Count of Needs, Start Date and End Date**.
- Support search criteria for **Product** and **Status**.

Create Feedback Plan – I

<

SAP

Manage Feedback Plans ▾

Standard ▾

Search

Product:

Status:

Adapt Filters

Go

Feedback Plan (2)

Create

Name	Product	Status	Feedback	Needs	Start Date	End Date
Feedback Plan for Valve	Valve	Initial	0	0	Jul 1, 2020	Jul 3, 2020 >
Collection Feedback Plan for Phone	Phone	Initial	0	0	Jul 31, 2020	Aug 12, 2020 >

Create Feedback Plan

After you select the **Create** button, the detail page of feedback plan will open in the edit mode.

Create Feedback Plan – II

< **SAP** Manage Feedback Plans ▾

New Feedback Plan

Overview

Basic Information	Plan Details
Name: * Feedback Plan for Hybrid Car	Product: * Hybrid Car
Description: One feedback plan to collection and analyze feedback for hybrid car.	Start Date: * Jul 31, 2020
	End Date: * Aug 31, 2020

1. Enter detail properties of the feedback plan:
 - **Name** - Name of the feedback plan
 - **Description** - Details of the feedback
 - **Product** - Product to which the feedback plan belongs
 - **Start Date, End Date** - Specifying the start date and end date of the feedback plan

2. Select the **Save and Continue** button to save the feedback plan and continue the process.

Create Collection Task – I

The screenshot shows the SAP 'Manage Feedback Plans' interface. The header bar includes the SAP logo and a dropdown menu for 'Manage Feedback Plans'. Below the header, the page title is 'Feedback Plan for Hybrid Car'. There are two tabs: 'Overview' and 'Collection Tasks', with 'Collection Tasks' being the active tab. In the top right corner of the main area, there are buttons for 'Create', 'Assign', 'Delete', and a settings icon. The 'Create' button is highlighted with a yellow box. Below these buttons is a table with the following columns: 'Name', 'Channel', 'Assigned to', 'Status', and 'Feedback'. The table is currently empty, and a message below it states 'No collection tasks are available currently.'

Select the **Create** button to create a new collection task in the feedback plan.

Create Collection Task for Qualtrics – II(a)

Feedback Plan for Hybrid Car Delete

Overview

Created By:
elizabeth.zhang@sap.com

Created At:
Jul 31, 2020, 5:40:45 PM

Changed By:
elizabeth.zhang@sap.com

Changed On:
Jul 31, 2020, 5:40:45 PM

Collection Tasks

Create Assign Delete

☐ Name Channel

No collection tasks are available currently.

New Collection Task Close

Information

Basic Information

Name: *
Collection Task for Hybrid Car

Description:
One collection task to collect feedback for hybrid car.

Start Date: *
Jul 31, 2020

End Date: *
Aug 31, 2020

Customer:
One customer

Task Details

Channel: *
Qualtrics

Start Date: *
Jul 31, 2020

End Date: *
Aug 31, 2020

Customer:
One customer

Task Assignment

Assigned to:
Doe John

Notes:
Please collect feedback from one appropriate Qualtrics survey.

Save Cancel

1. Enter detail properties of the new collection task:
 - **Name** - Name of the collection task
 - **Description** - Details of the collection task
 - **Channel** - Method or system that you use to collect the feedback
 - **Start Date, End Date** - Specifying the start date and end date of the collection task
 - **Customer** - Customer of the collection task

2. Enter assignment properties of the new collection task:
 - **Assigned to** - Assignment information of the collection task
 - **Notes** - Notes of the collection task

3. Select the **Save** button to save the collection task for Qualtrics.

Create Collection Task for Social Media – II(d)

<

SAP

Manage Feedback Plans

Feedback Plan for Hybrid Car

Collection Tasks

Create

Assign

Delete

☐	Name	Channel
☐	Collection Task for Hybrid Car 3	Manual
	Assigned to: Doe John	
	Status: Assigned	
	Feedback: 0	
☐	Collection Task for Hybrid Car 2	Mass Upload
	Assigned to: Doe John	
	Status: Assigned	
	Feedback: 0	
☐	Collection Task for Hybrid Car	Qualtrics
	Assigned to: Doe John	
	Status: Assigned	
	Feedback: 0	

New Collection Task

Information

Basic Information

Name: *
Collection Task for Hybrid Car 4

Description:
One collection task to collect feedback for hybrid car from TW system.

Task Details

Channel: *
TW

Start Date: *
Jul 31, 2020

End Date: *
Aug 31, 2020

Customer:
One customer

Task Assignment

Assigned to:
Doe John

Notes:
Please collect feedback from TW system.

Save

Cancel

➤ **Channel - Channel for Social Media**

Feedback List

<

SAP

My Analysis Tasks ▾

Analysis Task for Hybrid Car

Complete

Feedback
19

Needs
0

Requirements
0

Information

Feedback

Needs

Feedback (19)

Auto Categorize

Change Category

Create Needs

☐ ID	Content	Category	Status
☐ FB-0000000438	Feedback for Hybrid Car		Initial
☐ FB-0000000437	interior looks bad		Initial
☐ FB-0000000436	Exterior needs to be more stylish.		Initial
☐ FB-0000000435	it should go up to 200 km/h		Initial
☐ FB-0000000434	It takes so long to speed up to 100 km/h		Initial
☐ FB-0000000432	Q: Which color will you like for your car A: Black		Initial
☐ FB-0000000433	Q: Which size will you choose for your new car? A: Sports		Initial
☐ FB-0000000431	Q: What's your expectation for our new hybrid car? A: I want a car that can be personalized. It should be sea blue and should connect very quickly with my...		Initial
☐ FB-0000000420	Q: What's your expectation for our new hybrid car? A: The car is to slow!! It needs to accelerate much faster!! It has no Bluetooth connection for my phone...		Initial
☐ FB-0000000421	Q: What's your expectation for our new hybrid car? A: the car needs to be much faster, at least 300 mph		Initial
☐ FB-0000000422	Q: What's your expectation for our new hybrid car? A: installing child seat requires first remove two plastic covers access latch anchor points		Initial
☐	Q: What's your expectation for our new		

Feedback List

- All the existing feedback items are displayed in the list.
- **ID, Content, Category, Status** are displayed for each piece of feedback.
- Number of Feedback items is calculated and displayed in the **Feedback** table title.
- Each column supports the sort and filter functions.

Create Needs – I

<

SAP

My Analysis Tasks ▾

Analysis Task for Hybrid Car

Complete

Feedback
19

Needs
0

Requirements
0

Information

Feedback

Needs

Feedback (19)

Auto Categorize

Change Category

Create Needs

☐ ID	Content	Category	Status
☒ FB-0000000434	It takes so long to speed up to 100 km/h	engine	Categorized
☒ FB-0000000435	it should go up to 200 km/h	engine	Categorized
☐ FB-0000000437	interior looks bad	interior	Categorized
☐ FB-0000000438	Feedback for Hybrid Car	engine	Categorized
☐ FB-0000000436	Exterior needs to be more stylish.		Initial
☐ FB-0000000432	Q: Which color will you like for your car A: Black		Initial
☐ FB-0000000433	Q: Which size will you choose for your new car? A: Sports		Initial
☐ FB-0000000431	Q: What's your expectation for our new hybrid car? A: I want a car that can be personalized. It should be sea blue and should connect very quickly with my...		Initial
☐ FB-0000000420	Q: What's your expectation for our new hybrid car? A: The car is to slow!! It needs to accelerate much faster!! It has no Bluetooth connection for my phone...		Initial
☐ FB-0000000421	Q: What's your expectation for our new hybrid car? A: the car needs to be much faster, at least 300 mph		Initial
☐ FB-0000000422	Q: What's your expectation for our new hybrid car? A: installing child seat requires first remove two plastic covers access latch anchor points		Initial
	Q: What's your expectation for our new		

2. Select the **Create Needs** button to open New Need page in edit mode.

1. Select feedback which are to be classified into the same category.

Create Needs – II

< **SAP** My Analysis Tasks ▾

New Need

Information Selected Feedback

Basic Information

Name: *

Description: *

Selected Feedback

Feedback (2)

☐ ID	Category	Content
☒ FB-0000000435	engine	it should go up to 200 km/h
☐ FB-0000000434	engine	It takes so long to speed up to 100 km/h

Save Cancel

1. Enter detail properties of the new need:
 - **Name** - Name of the need
 - **Description** - Details of the need

2. Select **Add** button to open dialog containing feedback items which have the same category as other feedback items in this need.

3. Select a feedback item by ticking the selection checkbox and select **Remove** button to exclude the feedback from this need.

4. Select the **Save** button to save the need.

Create Needs – III

The screenshot shows the SAP 'New Need' dialog box. The 'Add' sub-dialog is open, displaying a table of categorized feedback. The first row is highlighted with a yellow border, indicating it is selected. The table has columns for ID, Content, and Category. The selected row has ID 'FB-0000000438', Content 'Feedback for Hybrid Car', and Category 'engine'. The 'Add' button at the bottom right of the 'Add' dialog is also highlighted with a yellow border. The background shows the 'New Need' form with fields for Name and Description, and a 'Selected Feedback' section.

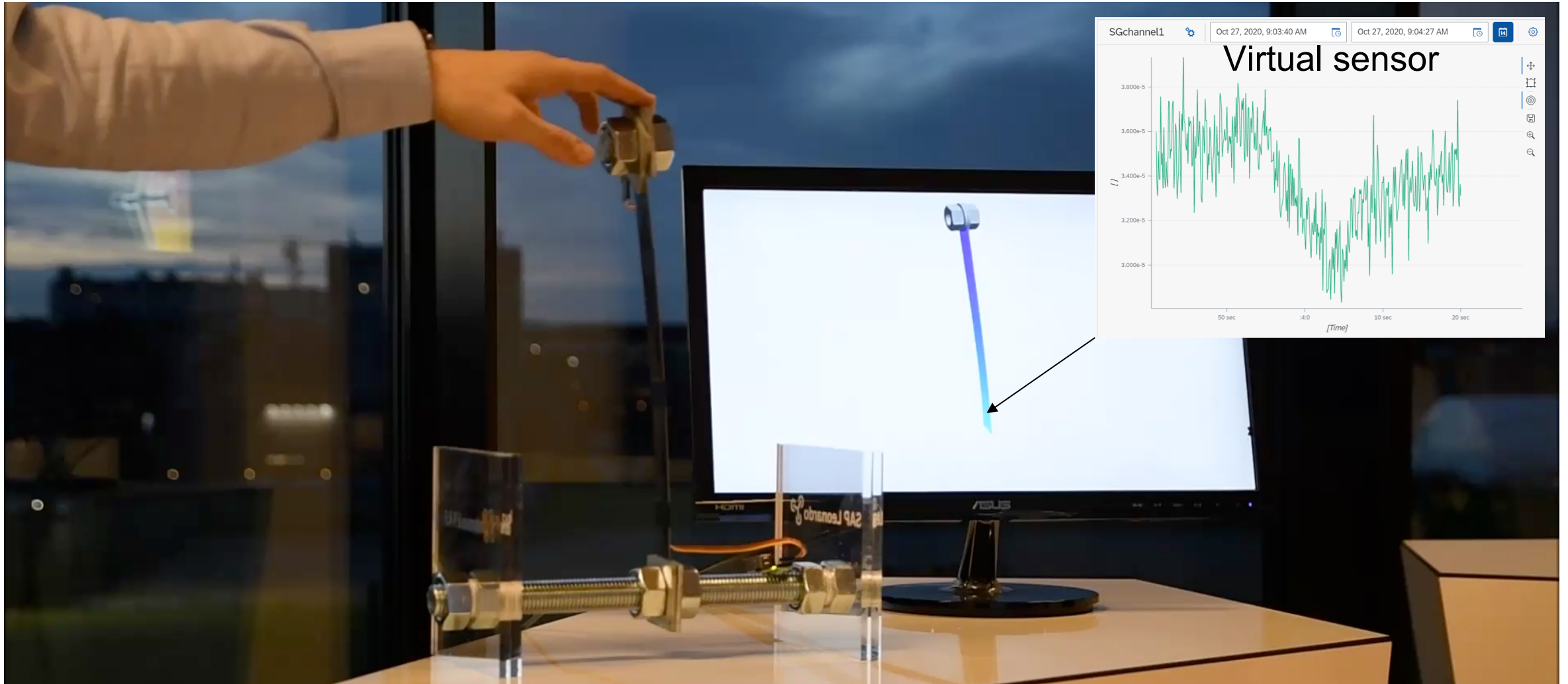
ID	Content	Category
☐ FB-0000000438	Feedback for Hybrid Car	engine

Buttons: Add, Cancel

1. Select one piece of categorized feedback.

2. Select **Add** button to add selected feedback into this new need.

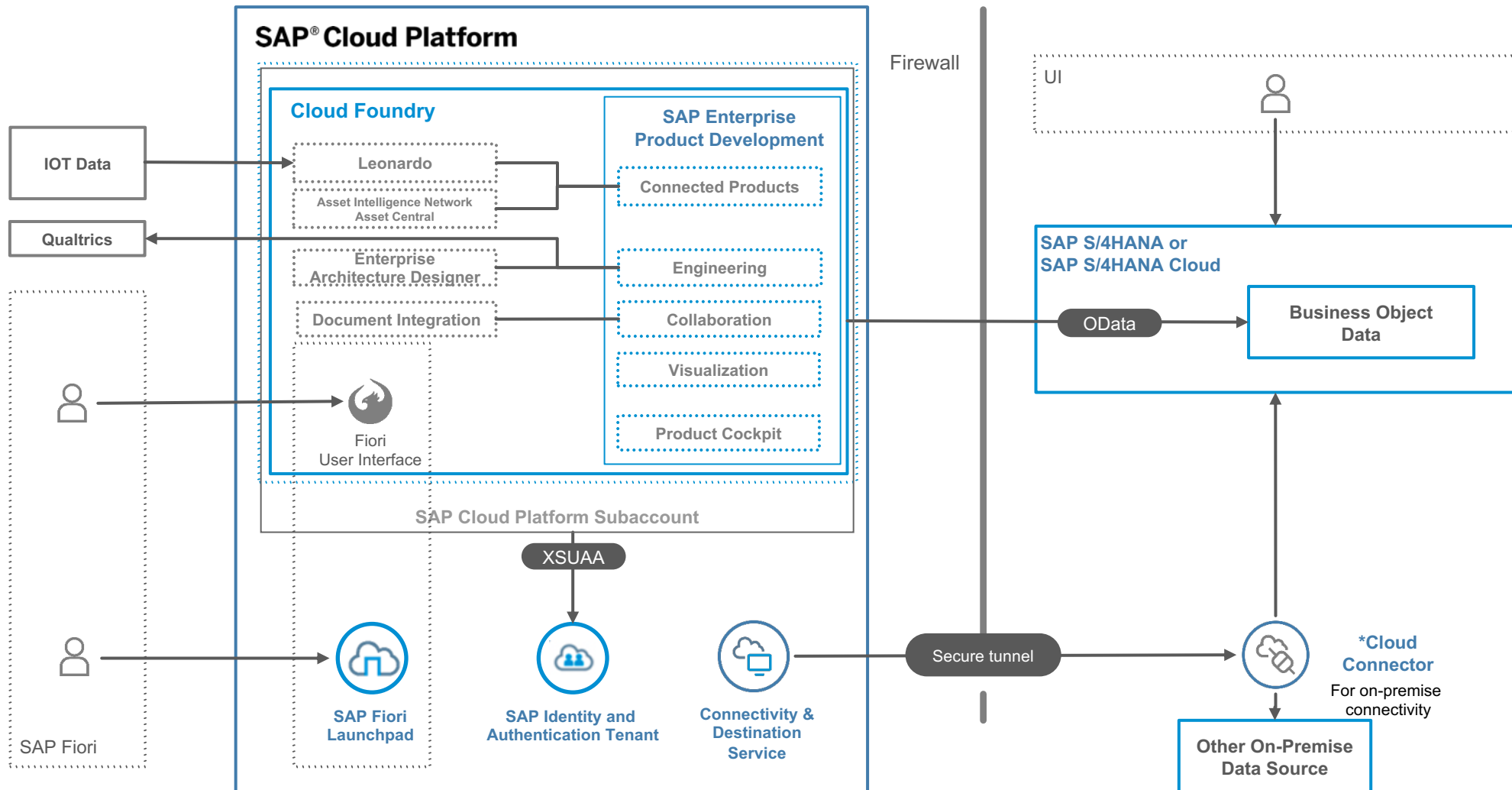
Demo 2: IoT-enabled Engineering Simulations (Connected Products)



Architecture



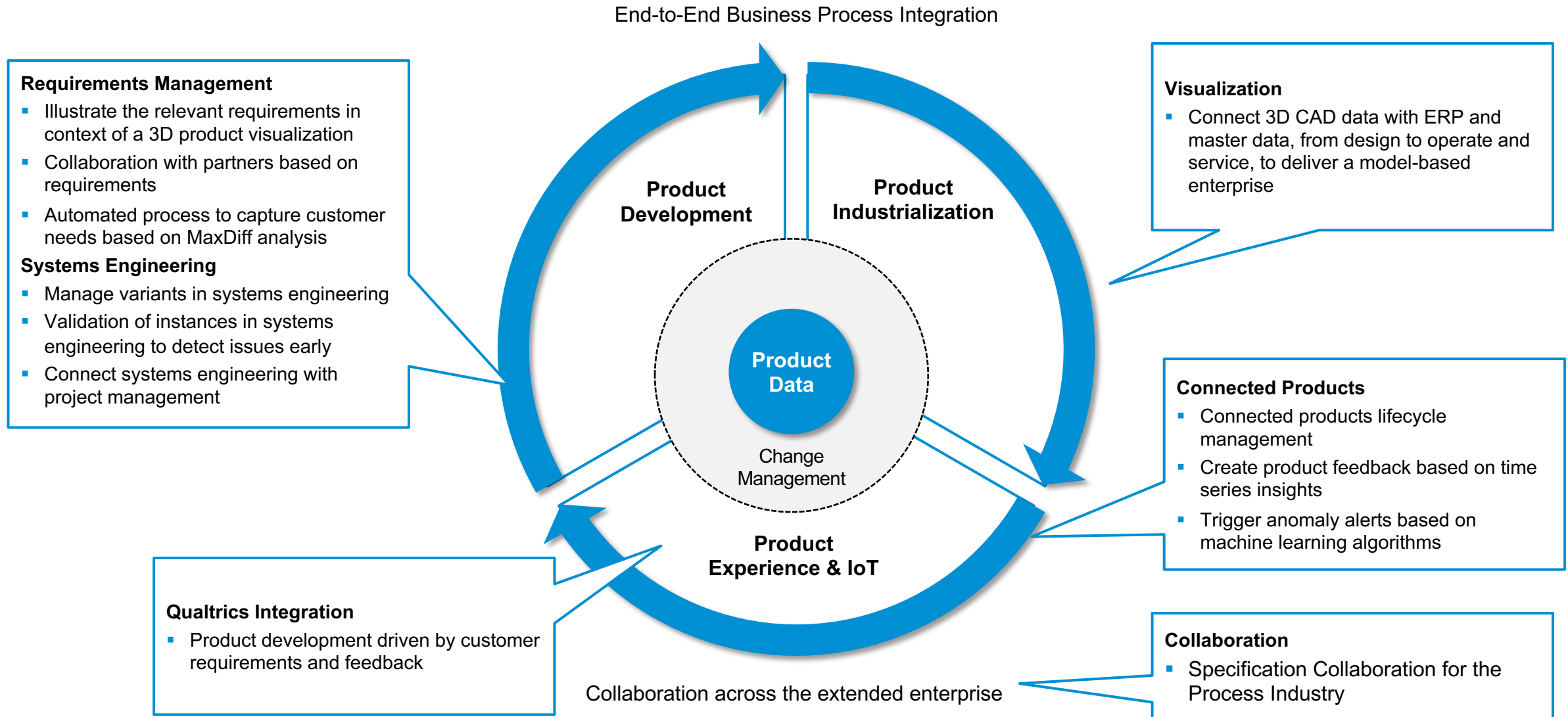
SAP Enterprise Product Development Solution Architecture



Roadmap



Strategic EPD Innovation Highlights in 2021



SAP Road Map Explorer: R&D / Engineering

 **Road Map Explorer**

ProductsProcessesIndustries

My Road Maps |   Disclaimer

R&D / Engineering x | 167 Innovations x 🔍

Products 1 Processes Industries Focus Topics Suite Qualities

Current - Latest |    Save

Q4 2020 CURRENT 67 Innovations

SAP S/4HANA 2020 +1

Authoring Tool Integration

Integration of Zuken E3.series and CR-8000

SAP Engineering Control Center for SAP S/4HANA

Commercial Project Financials

Mass valuation of newly added line items during forecasting

SAP S/4HANA 2020

New import methods to import WBS planned data into financial planning

SAP S/4HANA 2020

Plan and forecast role-specific demand on the PPM structure with...

SAP S/4HANA 2020

Setting of commercial projects in the

Q1 2021 26 Innovations

Future Release

Connected Products

Connected products lifecycle management

SAP Enterprise Product Development

Dangerous Goods Management

Enhanced apps to manage unpackaged and packaged...

SAP S/4HANA Cloud

Engineering Product Cost Controlling

Calculate intercompany costs and margins

SAP Product Lifecycle Costing

Calculate intercompany costs and margins (cloud)

SAP Product Lifecycle Costing, cloud edition

Q2 2021 23 Innovations

Future Release

Authoring Tool Integration

Continuous improvements for SAP Engineering Control Center in 2021

SAP Engineering Control Center for SAP S/4HANA

Dangerous Goods Management

Dangerous goods checks in transportation demand and freight...

SAP S/4HANA Cloud

Enhanced dangerous goods classification for China

SAP S/4HANA Cloud

Integration of a check for dangerous goods purchase order processing

SAP S/4HANA Cloud

Material Requirements Planning

Q3 2021 12 Innovations

Future Release

Commercial Project Management

Integration between master projects and portfolio items and projects

SAP S/4HANA

Dangerous Goods Management

Provide dangerous goods data via a SOAP service for freight orders to...

SAP S/4HANA Cloud

Engineering Product Cost Controlling

Use of up-to-date sales volumes defined in SAP Integrated Business...

SAP Product Lifecycle Costing, cloud edition

Portfolio Management

Integration between master projects and portfolio items and projects

Q4 2021 18 Innovations

Future Release

Commercial Project Management

Enhanced integrations with PPM in SAP S/4HANA

SAP S/4HANA

Dangerous Goods Management

Integrate classic safety data sheet authoring with new product...

SAP S/4HANA

Engineering Product Cost Controlling

Automatic archiving of calculation versions

SAP Product Lifecycle Costing

Automatic archiving of calculation versions (cloud)

SAP Product Lifecycle Costing, cloud edition

SAP Road Map Explorer



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

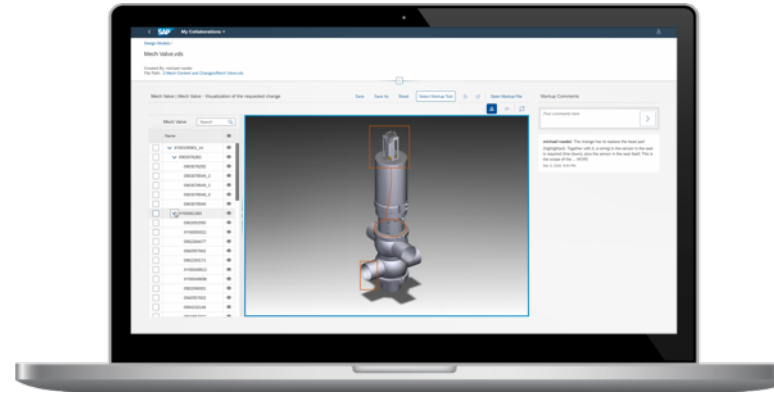
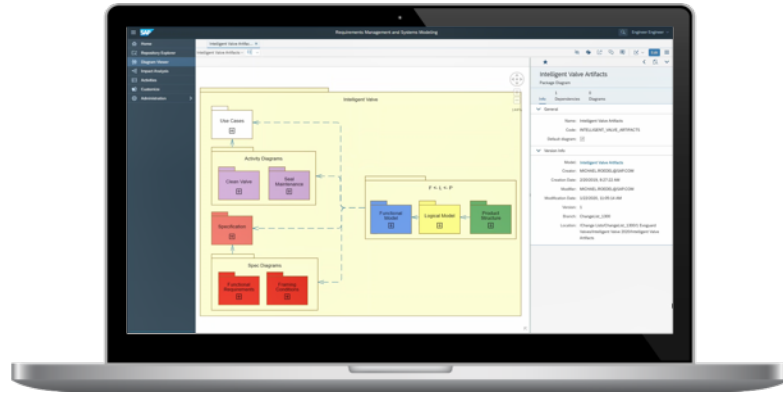
Discover Now

The screenshot shows the SAP Road Map Explorer website. The header includes the SAP logo, 'Road Map Explorer', and navigation links for 'Products', 'Processes', 'Industries', 'My Road Maps', a mail icon, a user icon, and a 'Disclaimer' link. The main section features a dark, starry background with the text 'SAP Road Maps' and a subtext: '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.' Below this is a search bar with the placeholder text 'Search SAP Road Maps by keywords, topics, processes or products.' and a magnifying glass icon. The 'Most viewed Road Maps' section displays three cards: 'SAP S/4HANA' (labeled 'Product' with an image of two men looking at a screen), 'Automotive' (labeled 'Industry' with an image of two hikers), and 'SAP S/4HANA Cloud' (labeled 'Product' with an image of a smiling woman).

Summary



SAP Enterprise Product Development Summary



Innovate New Products

Develop quality, connected, compliant and sustainable products



Provide Actionable Information

Enterprise collaboration with all relevant information, insights and stakeholders



Empower the Enterprise

Close looped enterprise processes to synchronize the digital thread from Design-to-Operate & Design-to-Consume

Thank you.