SAP S/4HANA Cloud for Intelligent Product Design Road Map

May 2018

CUSTOMER
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For all recent and planned innovations, potential data protection and privacy features include simplified deletion of personal data, reporting of personal data to an identified data subject, restricted access to personal data, masking of personal data, read access logging to special categories of personal data, change logging of personal data, and consent management mechanisms.
Companies today are planning their digital journeys – transforming business models, reengineering business processes, and reimagining work.

**SAP road maps** highlight innovations that may help you plan and implement your digital journey. They span products relevant to lines of business in your industry and explain how our innovations may add value to your business.

In our road maps, you can learn about our innovations along four different timelines:

1. **Recent innovations** for our products that have been launched in the past weeks or months and can already be purchased

2. **Planned innovations** for our products that are intended to be launched in the short term or midterm

3. **Product direction**, providing a long-term perspective on high-level development plans for innovations for our solutions – inspired by your requirements

4. **Product vision**, providing a high-level and long-term business perspective on innovations for our products
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Product innovations
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Product description

SAP S/4HANA Cloud for intelligent product design accelerates smarter product innovation with multidiscipline collaboration, requirement-driven development of intelligent products, and live product intelligence across the value chain.

Key highlights

Project and design collaboration
- **Design collaboration:** Share, submit, and collect engineering requirements and designs. Collaborate in real time on requirements and designs, breaking down boundaries both inside and outside companies.
- **Project and task management:** Create virtual platform to plan and track the progress of joint activities, scaling from small local work groups to global product development teams, including project managers, engineers, designers, formulators, quality managers, and others.

Embedded systems engineering
- **Requirement management and systems engineering:** Streamline requirement-driven product development, enabling functional modeling and product testing. Integration with both SAP S/4HANA and SAP ERP.
- **Embedded software:** Provide role-specific tools to support the development of complex cyberphysical products. Smart products are enabled by embedding software management into the overall product development process.
- **Compatibility management:** Manage complexity of hardware and software combinations as the basis for manufacturing, sales, and service scenarios of embedded systems.

Live engineering cockpit
- **Insight and transparency:** The relevant and up-to-date information is provided to the user in the live engineering cockpit. Direct access to the various applications is provided to perform necessary actions.
- **Feedback loop:** Customer usage data is fed back to the development organization from service and IoT scenarios to leverage live data for product improvement.
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Product description

**Key capabilities**

**Instant collaboration**
- Across extended enterprise
- Collaboration workspace
- Invitation of participants
- Secure storage and sharing

**Transparency**
- Workflow-based collaboration to facilitate easier communication
- Integrated in-box to review work
- Integration to CMIS

**Collaboration on actual product data**
- Uploading documents from the document management system
- Updating of documents seamlessly
- Available on SAP S/4HANA 1709

**Integration**
- SAP PowerDesigner
- SAP Document Center, desktop and mobile
- SAP S/4HANA – digital core
- SAP Enterprise Architecture Designer, cloud edition

**Engineering requirements management**
- Centrally located for better collaboration
- Linked requirements allowing traceability
- Requirement change impact analysis
- Standard requirement interchange to exchange requirements

**Cockpit and IoT analytics**
- Transparency on collaboration and requirements
- 3D product representation
- Insights on relevant topics
- Accessing data and taking action

**Product complexity management**
- Model-based systems engineering
- Early detection of issues omission and reduction of system defects
- View of system from multiple perspectives
- Visual analysis
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In the SAP Leonardo – digital engineering product portfolio
Enable digital transformation in product and asset operations with SAP

Project and portfolio management
▪ Optimized capital investment, IT, and R&D project strategy, and execution
▪ Project analytics and commercial management for increased profitability and lowest cost
▪ Collaborative project and resource management

Capital, IT, R&D, and commercial project-intensive industries

Product engineering and development
▪ Collaborate with all stakeholders, suppliers, and outsource partners for fastest innovation cycles
▪ Integrate engineering data and CAD systems
▪ Simulate and plan product lifecycle costs for new products
▪ Integrate product data with sales, manufacturing, asset maintenance, and service LoBs
▪ Help ensure product compliance in discrete and process

Discrete and process R&D-intensive industries

Asset management
▪ Collaborative asset networks for maximum return on assets and new business models
▪ New predictive maintenance approaches for lowest costs and maximum up time
▪ Intelligently scheduled resources and materials to reduce cost
▪ Enabling the mobile workforce and managing distributed asset networks

Asset-intensive industries, O&G, chemicals, utilities, A&D, IM&C
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Key trends and impact on business and technology

Key trends and impacts in business and technology:
- Smart products – products with embedded system/software
- Connected – everything and everyone is connected
- Personalization – from customer to manufacturer, lot size of one
- Product data is everywhere – from design to service, supply chain to finance to HR
- Zero latency – over-the-air updates, order to delivery in days

Impact:
- Live engineering and collaboration
- Overcoming complexity
- Lower costs and faster innovations
- Better transparency of requirements and collaboration on single-source of truth cockpit

Customer needs and value proposition of the product

<table>
<thead>
<tr>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>SAP offers the end-to-end R&amp;D solutions extending our digital core.</td>
</tr>
<tr>
<td>No other solution provider can provide the ultimate platform bringing together seamless systems engineering with virtual collaboration.</td>
</tr>
<tr>
<td>SAP customers are now able to develop smarter products and provide value-added services to their buyers, enabling entry to new markets.</td>
</tr>
<tr>
<td>Orchestrating the digital twin throughout the product life cycle today is increasingly critical and strategic because it closes the feedback loop.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Customer needs and value proposition of the product</th>
</tr>
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<tbody>
<tr>
<td>Agility and speed matter more than ever in product innovation and development with Industry 4.0 and the digital economy.</td>
</tr>
<tr>
<td>Companies are seeking new innovative ways to design and develop smart and connected products, integrating mechanics, electronics, and software.</td>
</tr>
<tr>
<td>Customers want a more sophisticated but simplified R&amp;D environment that allows them to better develop cyberphysical products more efficiently and effectively.</td>
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<tr>
<td>There is a growing need to collaborate in a real-time network with suppliers and ecosystem.</td>
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Product or portfolio areas of future investment

Vision

Our vision for SAP S/4HANA Cloud for intelligent product design is to provide an end-to-end R&D solution extending our digital core. No other solution provider can provide a platform that brings together seamless systems engineering with virtual collaboration, combined with SAP Cloud Platform–based disruptive technologies to overcome complexity, drive lower costs, and induce faster innovations.

Areas of investment

- Integrated system modeling with simulation to reduce development complexity and optimize products
- Leveraging of intelligent systems engineering best practices with support of machine learning to optimize and shorten development process
- Impact evaluation in engineering change and affected downstream processes and products supported by machine learning insights
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Upcoming short-term and midterm innovations

- **Product structure management (PSM) in SAP S/4HANA Cloud**
- **Integrated systems engineering**
  Integrating system modeling with PSM
- **Live product cockpit**
  Feedback from live data provided by SAP Asset Intelligence Network
- **Collaboration with SAP 3D Visual Enterprise**
  Improved collaboration with 3D visual markups
- **Collaboration with structured product data**
  Enabling BOM collaboration with partners and suppliers
- **Business object content collaboration for SAP S/4HANA**
- **Manage DMS documents and document structures**
- **Integration of software development tools**
- **Test planning and result tracking**
- **Live product cockpit enhancements for systems engineers**
- **Integration with Ariba Network**
  Onboard collaboration partners from Ariba Network
- **R&D collaborative project execution**
  Integrating collaboration with EPPM
- **Overarching collaborative change management process**
  Including between customers, manufacturers, partners, and suppliers.
- **Collaboration with product lifecycle costing**
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Product road map overview

(1805) Recent innovations

- SysML modeling of internal block diagrams
  - Enables structured product development process for complex products
  - Involvement of multidisciplinary teams
- Live product cockpit cards for collaborations
  - Overview of process of work
  - Collaboration with work items
  - Enables clearer breakdown of activities with lists of work items

2018 – Planned innovations

- Product structure management (PSM) in SAP S/4HANA Cloud
  - Integrating systems engineering
    - Integrating system modeling with PSM
- Live product cockpit
  - Feedback from live data provided by SAP Asset Intelligence Network
- Collaboration with SAP 3D Visual Enterprise
  - Improved collaboration with 3D visual markups
- Collaboration with structured product data
  - Enables BOM collaboration with partners and suppliers
- Business object content collaboration for SAP S/4HANA
  - Managing DMS documents and document structures

2019 – Product direction

- Integration of software development tools
  - Test planning and result tracking
  - Live product cockpit enhancements for systems engineers
- Integration with Ariba Network
  - Onboard collaboration partners from Ariba Network
- R&D collaborative project execution
  - Integrated collaboration with EPPM
- Overarching collaborative change management process
  - Including between customers, manufacturers, partners, and suppliers.
- Collaboration with product lifecycle costing

2020 – Product vision

- Integrated system modeling with simulation to reduce development complexity and optimize products
- Leveraging of intelligent systems engineering best practices with support of machine learning to optimize and shorten development process
- Impact evaluation in engineering change and affected downstream processes and products supported by machine learning insights

1. This is the current state of planning and may be changed by SAP at any time without notice.
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## Product road map overview

<table>
<thead>
<tr>
<th>Planned Q2/2018</th>
<th>Planned Q3/2018</th>
<th>Planned Q4/2018</th>
<th>Planned Q1/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engineering</strong></td>
<td><strong>Engineering</strong></td>
<td><strong>Engineering</strong></td>
<td><strong>Engineering</strong></td>
</tr>
</tbody>
</table>
| ▪ SysML modeling of internal block diagrams | ▪ SysML modeling of activity diagrams | ▪ Handover of sensor data to thing model for IoT  
  – Create thing model based on sensor information defined in the design process | ▪ Integration software development tools  
  – Enable the integration of software development tools with the digital core |
| ▪ Hand over product information for SAP Asset Intelligence Network model creation | ▪ Feedback from live data provided to R&D  
  – Software update to SAP Asset Intelligence Network | ▪ SAP S/4HANA Cloud  
  ▪ Enhancements for product structure management | ▪ Collaboration with structured product data (data exchange Q1/2019 updates)  
  ▪ Integration to SAP S/4HANA Cloud 1811, EPPM work packages and milestones  
  ▪ Direct integration of collaboration to SAP Engineering Control Center |
| ▪ Restrict the requirements in cockpit cards to favorites | ▪ Software update to SAP Asset Intelligence Network  
  ▪ ReqIF delta exchange  
  ▪ Import Microsoft Word files in requirement management | ▪ Collaboration with structured product data (data exchange) | ▪ Integration to SAP Ariba Solutions for Direct Spend scenarios |
| ▪ Live product cockpit cards for collaborations | | ▪ Collaboration with structured product data  
  ▪ Import Microsoft Word files in requirement management  
  ▪ Direct integration of collaboration to SAP Engineering Control Center | |
| ▪ SAP ERP  
  ▪ Enable requirement linking to business objects | | ▪ Business content management for DMS in SAP S/4HANA  
  ▪ Q2 updates  
  – Management of documents and folders in corporate repository  
  – Document search database and enterprise search  
  – Document check in/out, file versioning  
  – File sync/share | ▪ Business content management for DMS in SAP S/4HANA  
  ▪ Q4 updates  
  – Default settings for document type, user role- based MIME types  
  – Default values for attributes |
| ▪ Collaboration  
  ▪ Collaboration with document folders  
  ▪ Integration to SAP S/4HANA Cloud 1805, EPPM project review scenario | | ▪ Collaboration with structured product data  
  ▪ Import Microsoft Word files in requirement management  
  ▪ Direct integration of collaboration to SAP Engineering Control Center  
  ▪ Collaboration with structured product data (data exchange Q1/2019 updates) | |
| **Business content management for DMS in SAP S/4HANA** | **Business content management for DMS in SAP S/4HANA** | **Business content management for DMS in SAP S/4HANA** | **Business content management for DMS in SAP S/4HANA** |
| ▪ Q2 updates  
  – Management of documents and folders in corporate repository  
  – Document search database and enterprise search  
  – Document check in/out, file versioning  
  – File sync/share | ▪ Q3 updates  
  – User interface personalization  
  – Display additional files  
  – Integration into SAP S/4HANA Cloud for intelligent product design | ▪ Q4 updates  
  – Default settings for document type, user role- based MIME types  
  – Default values for attributes | ▪ Q1 updates  
  – Linking documents to business objects  
  – Managing document and folder templates |

**1. This is the current state of planning and may be changed by SAP at any time without notice.**
Our customers are asking for clear guidance for their digital journey to reimagining business models, business processes, and how their people work.

The self-service SAP Transformation Navigator tool recommends an SAP S/4HANA–centric product map based on the products a customer is currently using and on their business and IT priorities.

SAP Transformation Navigator builds on SAP road maps and produces an individualized document that highlights business value, shows integration from SAP S/4HANA to our cloud solutions, explains available transformation services, and provides license information for additional products and solutions.

Discover **SAP Transformation Navigator** for guidance to your future SAP S/4HANA–centric product map.

*Accessible to all internal users and S-users as of May 15, 2017*
Learn more
SAP customers and partners

► SAP Road Maps
► SAP Community
► IT Planning Resources
► Innovation Discovery
► SAP Transformation Navigator
► SAP User Groups
► Intelligent Product Design Video
► Digital Twin Video
► Machine Learning Video
► SAP PLM Compendium
Thank you.