SBN - PLM Webmeeting
SAP S/4HANA for advanced variant configuration
Overview and Roadmap

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About SAP Road Maps

SAP road maps cover innovations that focus on business solutions and processes. They span products that are relevant for customer lines of business in their industries and explain how our innovations can add value to your business.

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

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

2. **Planned innovations** for our solutions are expected to be launched in the short term or midterm.

3. **Future direction** provides a long-term perspective on high-level development plans on innovations for our solutions – inspired by your requirements.
1. Overview
2. Advanced Variant Configuration - Current Capabilities 1708/1709
3. Planned Innovations
4. Future Direction
5. Wrap-Up & Closing
Overview
Key Trends and Requirements

Customer centricity
- Customer-driven change towards products that fit exact needs at competitive prices
- Individualized products are the main differentiator for winning in the global market

Serving the “Segment of One”
- From looking at mass customers to focusing on the single customer’s needs
- Produce for a lot size of one with high asset utilization and optimal set-up times

Efficient configuration of sales orders & more efficient modeling
Product complexity management focus on data quality, consistency, and agility
Business transparency for configurable products
Coordination and collaboration between sales and engineering
Simplified, Efficient organization and process support for engineer-to-order use cases
Requirements – SAP Approach

Efficient configuration of sales orders & more efficient modeling

Product complexity management focus on data quality, consistency, and agility

Business transparency for configurable products

Coordination and collaboration between sales and engineering

Simplified, Efficient organization and process support for engineer-to-order use cases

Focus in this presentation
SAP S/4HANA for advanced variant configuration provides an efficient set of enhanced capabilities to define, develop, sell, manufacture, deliver, and maintain individualized products.

Key Advantages / Values:

- **Efficient configuration** of sales orders & more efficient modeling
- **Product complexity management** focus on data quality and consistency
- **Business transparency** for configurable products
- **Coordination** and **collaboration** between sales and engineering
- **Simplified, Efficient** organization and **process support** for engineer-to-order use cases
Advanced Variant Configuration
Current Capabilities 1708/1709
Fork Lift Manufacturer
Analyze, Adapt, Validate, and Sell with Advanced Variant Configuration
Analyze, Adapt, Validate, and Sell with Advanced Variant Configuration

Trigger: A new energy consumption law

Product Manager

S

Analyze Business Impact

Product Modeler

Adapt product configuration model

Validate product configuration model

Internal Sales Representative

Configure customer order

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<table>
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<th>Plant</th>
<th>BOM Usage</th>
<th>Alternative BOM</th>
<th>BOM Version</th>
<th>BOM Version Status</th>
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New energy consumption law in China. Forklift model CM-FL-V01 impacted. Standard electric drive needs to be replaced by electrical eco drive.

Added by John BOM_ENGINEER_US

Forklift AVC01 High-Performance
Material Description
Plant 1 DE

Added by John BOM_ENGINEER_US

Material Where-Used 08/01/2017
10:33 AM
Screenshot

Added by John BOM_ENGINEER_US
Advanced Variant Configuration –
New advanced Configurator for Sales Order Entry
Make-to-Stock / Make-to-Order Scenario
Sales Configurator Leveraging SAP Fiori

Increase sales force efficiency through higher tool support within order configuration to allow the sales force to focus on selling

Key Capabilities:

- Highly-efficient valuation supported
- Embedded into Sales Order Entry / Change
- Side panel show further details for selected characteristic
- Undo / Redo functionality
- Comprehensive filtering
- Responsive UX
Advanced Variant Configuration –
New advanced Simulation Environment for VC-Models

High-Level
object dependencies must be flagged for processing
mode: “classic” (LO-VC) or
“advanced variant configuration”

Low-Level
object dependencies work with LO-VC as well with
advanced variant configuration models
Simulation Environment

Reduce time to market for new products through highly-efficient simulation of new product variants and options

Key Capabilities:

• SAP Fiori role-based simulation environment
• Highly-efficient process-oriented screen arrangement
• Parallel evaluation, results, trace
• Integrated BOM result and technical details are shown on one screen. On demand detail screen can be hidden and unhidden.
• Trace management
New Configuration Engine

Increase quality and consistency for order configuration to accelerate ordering process and improve customer satisfaction

Key Capabilities:
- New state of the art algorithms designed together with Fraunhofer Institute Kaiserslautern, Germany
- Engine architecture design prepared for future syntax enhancements
- New engine performance-optimized for SAP HANA
- More precise restrictions of values during configuration valuation
- Supporting negative variant tables
Embedded Analytics

Increase business insights through comprehensive embedded analytics functionality for business scenarios segmented down to characteristic level

Key Capabilities:

• Real-time embedded analytics supports analyzing of configuration/classification data combined with configured business objects, e.g., sales order

• Predefined analytical sales scenario (on premise edition only)

• Flexible report allows users to select which characteristics to include in the analysis

• Easily consume query CDS* views with business intelligence tools like Analytics Cloud and Lumira

*) S/4HANA Core Data Services data views are a projection to the SAP HANA database tables
Classification

Increase operational efficiency through classification of business objects

Key Capabilities:

- SAP Fiori UI for classification
- Improved efficiency and usability
- Streamlined with configuration UI with similar functionality like undo/redo and filtering
- Embedded into Product Master (Products, Articles and Media Hierarchy), Batch Overview and Customer-Material Info Record
Advanced Variant Configuration

Planned Innovations
SAP S/4HANA for advanced variant configuration

Q3/2017

SAP S/4HANA CLOUD 1708
Variant Configuration
• New integrated advanced variant configurator supporting single-level variant configuration models
• Support for make-to-stock scenarios using material variants and make-to-order scenarios using configurable materials
• Reusable SAP Fiori configuration user experience (UX) integrated into sales order and material master providing improved user guidance through more precise value restrictions, filtering, and undo and redo functionality
• State-of-the-art configuration engine leveraging SAP HANA capabilities
• New simulation environment for bills of materials (BOMs) using SAP Fiori UX
• Syntax enhancement: negative variant tables
• Integration of VC & classification data into embedded analytics

Classification
• Backend optimization for CDS-based Odata services
• Support of Product Master, Batch Mgmt and Customer Material Info Record with SAP Fiori user experience

SAP S/4HANA CLOUD 1711
Variant Configuration
• Overview pages for VC modeler
• Enabling of fast data entry in Sales Order for advanced variant configuration
• Support of integration scenarios (IDOCs)
• Improved user experience (e.g. tracing)

Classification
• OData services
• Support of integration scenarios (IDOCs)

SAP S/4HANA CLOUD 1802
Variant Configuration
• Requirements-driven product modelling
• Integrate new configurator along key processes: customer quotation
• Improved user experience (e.g. displaying alternative values)
• Extended Output Management/Printing

Classification
• Migration

SAP S/4HANA CLOUD 1805
Variant Configuration
• Integration into SAP Hybris Revenue Cloud (CPQ) and SAP Hybris Commerce Cloud
• Integrate new configurator along key processes: production order
• Leverage Machine Learning algorithms in configuration to enhance user experience
• Variant type Matching
• Grouping

Classification
• Machine-Learning based auto-Classification

Planned Innovations
Highlights

Planned Q4/2017

Planned Q1/2018

Planned Q2/2018

Disclaimer: This is the current state of planning and may be changed by SAP at any time without notice.
Advanced Variant Configuration

Future Directions
SAP S/4HANA for advanced variant configuration
Enterprise Edition

1709 – Recent innovations*

- Advanced analytics for configuration data (on-premise)
- Classification reuse user interface component OP
- New advanced variant configuration leveraging SAP HANA capabilities (on-premise)

2018 – Planned innovations*

Variant Configuration
- Support of multi-level scenarios
- Integration into SAP Hybris Revenue Cloud (CPQ) and SAP Hybris Commerce Cloud
- Integration of new configuration along key processes
- Integration of routing with simulation environment
- Support by machine-learning algorithms
  - Enabling of variant functions
  - Improved trace functionality
  - Further Analytical scenarios
  - Grouping of characteristics in VC & Classification

Classification
- Integration of new configuration into classification
- Integration of classification SAP Fiori UI into further objects
  - Extended characteristic types (e.g. longtext, files)
  - Machine-Learning based auto-Classification
  - Extended search capabilities

2019 – Product direction*

Variant Configuration
- Separate configuration for sales and manufacturing through loose coupling
- Simplified digital modeling in engineer to order through reuse of configurable models
- Support for closed-loop engineering by enhancing variant configuration to engineering and order change management
- Enhanced product modeling environment for Hardware, Electrics, Electronics, Software and Services
- Syntax enhancements
  - New syntax editor for bill-of-material (BOM) maintenance (with SAP Fiori UX)

Classification
- Non-classifying characteristics

2020 – Product vision*

Variant Configuration
- Integrated interactive 3D visualization for configurable products in Engineering, Sales and Production processes
- Test environment supporting systematically tests and analysis of variant configuration models
- Enhanced Engineer To Order Process supported by machine-learning
- Integration into Asset Intelligence Network and Digital Twin for Business

Classification
- Simplified class types
- Extended search and where-used capabilities for classification and variant configuration
- Enhanced mass-change capabilities for classification and variant configuration

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Wrap-Up & Closing
Key takeaways

SAP S/4HANA for advanced variant configuration

- Leverages the latest technologies to accelerate configurable product modeling and change process to be ahead for your customers
- Provides an efficient set of enhanced capabilities to define, develop, supply, sell and manufacture individualized products
- Best supports your entire end-to-end business process for individualized products in an integrated fashion
Thank you.

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SAP Videos – SAP S/4HANA for advanced variant configuration

Teaser advanced VC:  
https://www.youtube.com/watch?v=wVOdPKuLfRo

Embedded Analytics with VC:  
https://www.youtube.com/watch?v=AmcnpnuWm1w

Embedded Analytics VC for Metals:  
https://youtu.be/4dH0N3gXB6g

Featuring Sven Denecken from S/4HANA Cloud:  
https://www.youtube.com/watch?v=2BLmt5bC-g0
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