SAP Idea to Performance (I2P)

Key Market Drivers and Critical Needs
Market Trends are Driving Change

Instability is the new ‘norm’
- Regulatory Shifts
- Consumer demand
- Economic uncertainty

Enabling technologies and data
- Mobile
- Social
- Interconnected

Competition for Resources
- Greater demand
- Harder to procure
- Constrained by environmental factors

Global Customer is Changing
- Focus on Environment
- Sustainability and Development
- Have more to spend
Idea to Performance addresses the business needs of:

- The COO, and Heads of R&D, MFG, Operations, Sustainability and Compliance

Idea to Performance is adaptable to industry needs:

- All supported business processes can be tailored to Chemical Industry needs

Idea to Performance is a solution bundle of:

- R&D/Product Engineering, Manufacturing, and Sustainability Line of Business solutions
- Enterprise Asset Management and 3D Visual Enterprise applications
- Innovations from analytics, mobile and social technologies
- Powered by SAP HANA
Idea to Performance Differentiation
Integrated processes from Development through Service

Responsive Manufacturing

Sustainable Innovation
- Innovation driven by connected R&D and engineering teams
- Execution driven by connected R&D and manufacturing processes
- Customer satisfaction driven by embedded compliance processes

Operational Excellence
After Market Service
Process Optimization Zone
The Value of Idea to Performance

Smarter:
- Smarter by providing better real time insight via HANA-driven analytics

Faster
- Faster execution via insight across R&D, Asset Management, and Manufacturing with embedded sustainability

Simpler:
- Simpler user experience via new UI technologies and focused user experiences
SAP Sustainable Innovation

Support for Product Development in the Chemical Industry
Sustainable Innovation
Sell Performance – Not Products

Continuous Product and Service Innovation

Integrated Product Development - Process

Integrated Product Development - Discrete

Embedded Compliance in Product Development

Smarter Response
Information-driven insights and actions based on close connection to customers and regulatory demands

Faster Innovation
Bring innovative products or services faster to market

Simpler Experience
Development tools that keep the experience simple and effective

100% Improvement in Compliance Reporting Efficiency

400% Create four times as many product dossiers in the cosmetics division in the same time
PLM for the Process Industries

SAP PLM and Recipe Development (RD)
SAP PLM for Process Industries – Development Approach

- **User Needs**
  - Platform driven by user needs
  - Work where and how users work
  - Deliver functionality to drive development value
  - Simplify and drive efficiency

- **Data Needs**
  - Manage data seamlessly
  - Enable development processes
  - Data to do the job
  - Leverage data

- **Reporting**
  - Reporting focused on all needs
  - Simplify the product record
  - Enable internal and external presentation
  - Consolidate, analyze and distribute

- **Integration**
  - Put data where it is needed
  - Use data to make better development decisions
  - Understand the enterprise of data

**Development Impact**

- Speed
- Compliance
- Satisfaction
- Accuracy
- Transparency
- Value
- Efficiency
- Validity
- Effectiveness
SAP Solutions for R&D in the Process Industries
Deliver innovative products in efficient and effective manner in a world of accelerated change

imagine       design       plan       make       service

New user experience, Embedded analytics, On mobile

Portfolio and project management
Recipe, structure and change management

Idealation    Portfolio    Concept    Design, Variants, Recipes    Simulation    Manufacturing    Maintenance    Service

Embedded quality and compliance management
Integration

SAP Jam    Regulatory    SAP ERP    Manufacturing    Social Networks

Manage big data, understand the past and predict the future

Solution today
Recipe Development – Key Capabilities

Recipe Development is a SAP PLM solution to support the complete development of a process Product. It is fully integrated in SAP ERP and provides an easy-to-use and efficient development platform for formulation of new products.

Complete Formulation and Specification Management

Integrated Analytics and Reporting

Complete and effective Handover-to-Manufacturing (H2M)

Efficient and Effective Searching and Data Usage

Full Usage of all PLM 7.x Development Tools (e.g. ACM, PSS, ECR, etc)
Recipe Development

Major Concepts

- PLM for Process shall support an consistent development process
  - supported by common used functions of the discrete and the process industry
  - extended by process industry specific functions for product definition
- Flexible product definition and description driven by the development
  - Early product definition independent from production and material
- Integrated part of the product life cycle
- High flexibility for customer adaption without modification

Central concepts

- Recipes are build up by specifications – no material master needed
- Identification of recipes by versions using product, alternatives and version
- Formula is a integrated part of a recipe
- Integrated product and process view during recipe development
- Recipe can include multiple production stage with intermediate outputs
PLM for the Process Industries

Current Innovations
Cornerstone of the SAP Strategy
Five market categories and R&D

<table>
<thead>
<tr>
<th>Applications</th>
<th>Analytics</th>
<th>Mobile</th>
<th>Cloud</th>
<th>Database &amp; Technology</th>
</tr>
</thead>
</table>

**KEY MESSAGE**

- **Applications**: Line of business applications with focus on fast time to delivery and value
- **Analytics**: Tools to consolidate, analyze and understand data coming from different sources
- **Mobile**: ‘Consumerization of IT’: End-user centric technologies to enable processes
- **Cloud**: Next generation applications and platforms to derive value from Cloud-based services
- **Database & Technology**: Data volumes are increasing and the need for speed and capability is expanding

**VALUE PROPOSITION**

- **Applications**: Robust, effective solutions to meet R&D needs
- **Analytics**: Ability to analyze data to meet R&D and business needs
- **Mobile**: Product development execution on the go
- **Cloud**: Comprehensive, up-to-date and flexible R&D process support
- **Database & Technology**: Fast, efficient, real-time R&D decision making.
New Release Strategy

**FOCUS TOPICS**

- Small improvements to existing applications (e.g., Customer Connection)
- Delivery cycle: quarterly

**IN-ADVANCE SHIPMENT**

- Select large investments tightly coupled to core applications
- Delivery cycle: quarterly

**ENHANCEMENT PACKAGES**

- Large investments deeply integrated into core apps
- Consolidating focus topics
- Delivery cycle: ~2 years

**SIDE-BY-SIDE**

- Large investments loosely coupled with Core Apps
- Delivery cycle: ~1 to 2 years

**RAPID DEPLOYMENT SOLUTIONS**

- Implementation packages w/o coding
- Ease adoption at customer side
- Delivery cycle: quarterly

---

**Bottom Line = More Frequent Releases of Solution Enhancements**
EhP6 Recipe Development – Summary of Key Enhancements

Recipe & Formulation
- Explosion Simulations – Determine specific explosion path
- Multi-Formula Editor – Edit/Compare several formulas simultaneously
- Specification Creation ‘on-the-fly’ & Property Specification
- WBS Assignment & Plant Recipe
- Migration tool for data loading and current RM customers

Process & General
- Equipment requirements defined within processes/recipes
- Stream Improvements
- Improvements in regards to UI & Search

Additional Functions
- Specification Enhancements: Fast Entry Screen
- Compliance Check
- Mass change
## Enhancement Topics EhP7 - Overview

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>General Description</th>
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<tbody>
<tr>
<td>Recipe Enhancements</td>
<td>Flexible Output variants for recipes, Development Recipes,</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Recipe Process Enhancements</td>
<td>Building Blocks, Selective Recipe Copy, Drag &amp; Drop for Recipe Process Maintenance,</td>
</tr>
<tr>
<td></td>
<td>Usability enhancements, Status for Translation and document changes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Formulation Enhancements</td>
<td>Manual Price for Cost Calculations, Additional formulation tools to meet pre-EhP5</td>
</tr>
<tr>
<td></td>
<td>functional abilities (Total solids, process losses (multi level), general usability</td>
</tr>
<tr>
<td></td>
<td>improvements...)</td>
</tr>
<tr>
<td>Handover to Manufacturing</td>
<td>Integration to PP-PI Master recipes, Cross System synchronization (&gt; Q1/2014)</td>
</tr>
<tr>
<td>Specification DB Improvements</td>
<td>Flexible Output variants for Specifications, Process Route for Specification,</td>
</tr>
<tr>
<td></td>
<td>Header Status for Specification</td>
</tr>
<tr>
<td>Mass Data Change and Simulation</td>
<td>Mass change for specification</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Object Sets, Different Search completion, compatibility topics, Compliance check</td>
</tr>
<tr>
<td></td>
<td>without Expert Server</td>
</tr>
</tbody>
</table>
HANA Related Recipe Development Roadmap

<table>
<thead>
<tr>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optimization (SoH)</strong></td>
<td><strong>Calculations</strong></td>
<td><strong>Recipe Explosion</strong></td>
<td><strong>Compliance Check for recipes</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Multilevel Search, Where used</strong></td>
<td></td>
<td><strong>Compl. check for label</strong></td>
</tr>
<tr>
<td><strong>Analytics (VDM)</strong></td>
<td><strong>Specification, RCP VDM</strong></td>
<td><strong>Combined VDMs with Sales data,</strong></td>
<td><strong>Simulation &amp; Impact Analysis</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Combined VDMs with Production data:</strong> PP order, resources,..</td>
<td><strong>Mass change using Simulation</strong></td>
</tr>
<tr>
<td><strong>New analytical Apps</strong></td>
<td><strong>Analysis Dashboards (R&amp;D Cockpit)</strong></td>
<td><strong>Wave 1. Product based Analysis</strong></td>
<td><strong>Wave 2. R&amp;D KPIs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Perf. Optimization of Critical Areas

Today
Mass Simulation and Impact Analysis – Example HANA App

Example mock-up from the digital version of the 4th prototype
SAP PLM Recipe Development – Windows 8

Scope

Simple to use interface to support product development professionals as they work in laboratory environment

Key Pain Points Addressed

- Portability to work in the lab environment
- Simplification of repetitive tasks in development of formulations

Key Features

- Leverage Win8 capability as tablet and laptop
- Simplification of key tasks such as recipe copy, searching and calculations
- Real-time connection
SAP PLM Recipe Development – iRecipe

Scope

Simple to use interface to support product development professionals as they work in laboratory environment based on iOS

Key Pain Points Addressed

- Portability to work in the lab environment
- Simplification of repetitive tasks in development of formulations

Key Features

- Simplification of key tasks such as recipe copy, searching and calculations
- Real-time connection
SAP PLM for Process Industries
Rapid Deployment Solutions

PLM Foundation
http://service.sap.com/rds-plm-discrete

Implement PLM Web UI within 6 weeks.
Solution Scope: Web UI, Workflow, Embedded Search, Viewer, Access Control Mgmt., BOM Redlining, Document Browser, Digital Signature

PLM for Process Manufacturing
http://service.sap.com/rds-pl-process

Implement basics for Recipe Development including specification setup and formulation tool configuration
Solution Scope: Specifications, Recipes, Labels
Question and Answer
Thank you

Contact information:

Dan Bender
LoB R&D Solution Management
daniel.bender@sap.com
Appendix
Recipe Development
Recipe Calculation Enhancements

Solution Enhancements

- Functional Enhancements
  - Total Solids Calculation
  - Loss calculation cross production levels / Hierarchical nutrient calculations
- Manual Composition
- Manual Price

Benefits

- Increased functionality for calculation
- Increased usability
Recipe Development
Development Recipe

Solution Enhancements

- **Functional Enhancements**
  - Recipes with a predefined Output
  - Identification by auto generated recipe number

- **Benefits**
  - Support of early development based on trial with a dedicated product output
  - Increased usability
Recipe Development
Specification Enhancements

Solution Enhancements

- **Functional Enhancements**
  - Header level status framework for PLM
  - Status & Action Management
  - Mass change for Specification

- **Benefits**
  - Increased usability
  - Specification support on Header Level
Recipe Development Compliance Check

Solution Enhancements

- **Functional Description**
  - New columns on the result list view:
    - Limit for Constraint %
    - Component Quantity %
  - Compliance result shows overall compliance statement
  - Individual check result can be viewed
  - Detailed information on the checks performed are shown

- **Enhancement**
  - TCO reduction by Execution support without Expert Server
Recipe Development
Object Sets

Solution Enhancements

- **Functional Description**
  - User defined object container for work process optimization for individuals and groups
- **Mixed objects in a Object Set**
- **User definable access authorization**
- **Drag and Drop support so increase usability**
Recipe Development
WWI Support for Labels

Solution Enhancements

- **Functional Description**
  - Label preview can be defined and generated by using WWI Functionality

- **Benefits**
  - Flexible report definition and generation
  - One type of report generation for labels, specifications & Recipes
  - Faster recipe creation
Recipe Development
Import Recipe and Building Blocks

Solution Enhancements

- Functional Description
  - Re-Use of predefined recipes
  - Re-Use of elements of existing/formerly created recipes
  - Load and use of predefines and pre-approved recipe elements

- Benefits
  - Faster recipe creation
  - Use of pre-approved recipe elements
1, Building Blocks for Recipe Development
Recipe Development
Master Recipe Synchronization

Solution Enhancements

- **Functional Description**
  - Plan and synchronize the handover to production
  - Support to create and synchronize PLM Recipe process definition into PP-PI Master Recipe

- **Benefits**
  - Reduced TCO by integrated, system supported handover to PP-PI Recipes
Recipe Development at different levels

- The ISA S88 batch manufacturing standard requires the three-level recipe hierarchy:
  
  **General Recipe (in PLM)**
  
  **Site Recipe (in PLM)**
  
  **Master Recipe (in PP-PI)**

- General recipe used company-wide as template

- Site recipe variations used for regional, country-specific, or legal compliance variations

- Master recipe for production fitting to resources in production plant
PLM recipe to PP-PI Master Recipe

Product Lifecycle Management
- Recipe Management
  - General Recipe
  - Site Recipe
  - Master Recipe, BOM

Supply Chain Management
- Purchasing, Planning
  - Manufacturing Execution, Batch Management
  - Quality Management
    - Inspection plan
    - Inspection lots
PLM recipe to PP-PI Master Recipe

![Image of process structure and change master recipe]

<table>
<thead>
<tr>
<th>Operations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0010</td>
<td>Making syrup</td>
</tr>
<tr>
<td>0020</td>
<td>Mixing</td>
</tr>
<tr>
<td>0030</td>
<td>Creaming</td>
</tr>
<tr>
<td>0040</td>
<td>Waiting</td>
</tr>
</tbody>
</table>

Recipe Group: 50000022
Recipe: Strawberry Cream Joghurt
Plant: 0001
Test Plant: Yes

Recipe header: Operations | Materials | Administrative data

<table>
<thead>
<tr>
<th>Oper...</th>
<th>Sup...</th>
<th>Des...</th>
<th>Resource</th>
<th>Co...</th>
<th>Stand...</th>
<th>Description</th>
<th>L...</th>
<th>Rel...</th>
<th>Ca...</th>
<th>Ob...</th>
<th>Base Qty</th>
<th>ACT...</th>
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<tbody>
<tr>
<td>0010</td>
<td></td>
<td></td>
<td>PI01</td>
<td></td>
<td></td>
<td>Making syrup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20,075KG</td>
<td></td>
</tr>
<tr>
<td>0020</td>
<td></td>
<td></td>
<td>PI01</td>
<td></td>
<td></td>
<td>Mixing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20,075KG</td>
<td></td>
</tr>
<tr>
<td>0030</td>
<td></td>
<td></td>
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<td>20,075KG</td>
<td></td>
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<tr>
<td>0040</td>
<td></td>
<td></td>
<td>PI01</td>
<td></td>
<td></td>
<td>Waiting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20,075KG</td>
<td></td>
</tr>
</tbody>
</table>
Reconciliation Workbench – Show details for BOM
Reconciliation Workbench – Show details for PI
## Customer Connection PLM7 WebUI
implemented Improvement Requests

<table>
<thead>
<tr>
<th>ID</th>
<th>Improvement Request title</th>
<th>Note</th>
<th>EHPs of ERP 6.0</th>
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<tbody>
<tr>
<td>14045</td>
<td>Search - Ability to export the output from a search to Excel</td>
<td>1882166</td>
<td>EHP 5, EHP 6, EHP 7</td>
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<tr>
<td>14220</td>
<td>SEARCH: Multiple input for one search criterion needed</td>
<td>1878923</td>
<td>EHP 5, EHP 6, EHP 7</td>
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<tr>
<td>13101</td>
<td>Engineering Record - &quot;Add Object&quot; Search Enhancement</td>
<td>1878923</td>
<td>EHP 5, EHP 6, EHP 7</td>
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<tr>
<td>3398</td>
<td>Search: Search Result Layout for the object-related Search should be the same as for cross-object Search</td>
<td>1881838</td>
<td>EHP 5, EHP 6, EHP 7</td>
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<tr>
<td>14117</td>
<td>Document - Link to current version of a DIR</td>
<td>1886339</td>
<td>EHP 5, EHP 6, EHP 7</td>
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<tr>
<td>13275</td>
<td>Document: Display specific revision level</td>
<td>1879889</td>
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<td>14055</td>
<td>Engineering Record: Classification functionality for extending attributes</td>
<td>1883470</td>
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<tr>
<td>13421</td>
<td>BoM Tab on MM UI</td>
<td>1889068</td>
<td>EHP 5, EHP 6, EHP 7</td>
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</tbody>
</table>
**Customer Connection PLM7 WebUI**
Consulting notes + improvements delivered by other projects

<table>
<thead>
<tr>
<th>ID</th>
<th>Improvement Request title</th>
<th>Note</th>
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<tbody>
<tr>
<td>14076</td>
<td>Timeout results in Dump</td>
<td>1879886</td>
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</table>

<table>
<thead>
<tr>
<th>ID</th>
<th>Improvement Request title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>13272</td>
<td>Document: Improve whitelist setup and maintenance</td>
<td>1896169</td>
</tr>
<tr>
<td>14106</td>
<td>Document - Preinstallation for WEB UI usage</td>
<td>1896169</td>
</tr>
</tbody>
</table>
Update on H2M – Skip versions for synchronization

It’s possible to start synchronization from any version of a Recipe.

It’s possible to skip a version on synchronization on any subsequent versions (but not possible to go back to any earlier versions)

This option is available for Recipe to BOM and Recipe to Master Recipe
Update on H2M – Example: Skip version – Initial sync

‘Current Synch’ column is open for editing and will be saved for Sync Unit. After synchronization it will be locked for editing (continued no next page).
Update on H2M – Example: Skip version – Follow-up sync.

‘Currently Synch’ column is open for editing for versions after the last ‘Aligned’ entry. All skipped versions will have status ‘Not Aligned’ and will not be selectable.

```
<table>
<thead>
<tr>
<th>Source Recipe</th>
<th>R.</th>
<th>Target Change N.</th>
<th>Valid From</th>
<th>Change Number</th>
<th>Current Synch.</th>
<th>Map. Status</th>
<th>Created By</th>
<th>Created On</th>
<th>Last Changed By</th>
<th>Last Changed On</th>
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<tbody>
<tr>
<td>KN_20121129/0000/002</td>
<td>002</td>
<td>KN_4CHG</td>
<td>01.11.2014</td>
<td>2014-re change...</td>
<td>✅</td>
<td>Not Aligned</td>
<td>MAJKO</td>
<td>03.09.2013</td>
<td>MAJKO</td>
<td>03.09.2013</td>
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<tr>
<td>KN_20121129/0000/001</td>
<td>001</td>
<td>KN_2CHG</td>
<td>01.11.2013</td>
<td>2013-as étée</td>
<td>✅</td>
<td>Aligned</td>
<td>I077965</td>
<td>29.11.2012</td>
<td>I077965</td>
<td>24.01.2013</td>
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</tbody>
</table>
```
Update on H2M – Usability improvements for Planner UI

User Interfaced is updated to latest UI technology available for Web Dynpro

Tables are supporting latest usability and personalization features like export, filter and sort

More columns available for Synch Units table as well as for Mapping table

Synch Units/General Data tab is redesigned and new fields added with advanced personalization options

Personalization can be created as configuration content and distributed through transports to any system.
Update on H2M – Usability improvements for Planner UI 1

Technology update for the latest UI technology available for Web Dynpro. Tables are resizable with mouse drag. Table support exporting to Excel and Advanced Personalization.
Table personalization allows to create advanced layouts that support hierarchy display, grouping, summarization (if applicable) and filtering. Columns can be resized and rearranged by drag-and-drop.
Update on H2M – Usability improvements for Planner UI 3

Further personalization of tables enables:
- Column fixing for table start and end with fixed pixel width for columns or proportional column definition
- Sorting and Grouping with Grouping (hierarchy display) option
- Filtering with advanced options
- Personalization can be user level but also possible to define company wide layouts

![Personalization interface screenshot](image-url)
Update on H2M – Usability improvements for Planner UI 4

General data is rearranged and contains more relevant information

New UI enables personalization and hiding contents on personalization level
Update on H2M – Usability improvements for Planner UI

With Administrative Mode the application can be configured for the complete company (mandant) and will be valid by default for all users. There is NO NEED for a developer key for these changes and changes are transportable.
Update on H2M – Enhanced application for Synchornization Recipe to BOM

The new Service in the NWBC menu SAP_PLMWUI_PROCESS_MENU3 will enable to start Planner UI directly from NWBC not only through link but also using an initial screen.

The application enters into a kind of cockpit that allows BOM and Master Recipe synchronization items to be used or changed.
Source tree displays ingredients from Formula in condensed format.

Source Qty and UoM columns show values calculated based on Recipe in UoM defined for the Formula Qty field.

Material Qty and UoM columns show values expressed in Material Qty and UoM that would be the Target Qty and UoM after any conflict resolution

Qty columns use the precision of the recipe’s qty field (6 decimals) rounded.

Rounding difference is expressed between the source material column and the target’s Qty column
Update on H2M – Source Tree for Reconciliation Workbench - Screenshot

Customized view with personalized column width
## Planned innovations for SAP PLM (PI)

### Overview

<table>
<thead>
<tr>
<th>Key needs</th>
<th>Key innovations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Usability Enhancements</td>
<td>• Customer Connect project underway to improve UI performance for Specification and Formula handling</td>
</tr>
<tr>
<td></td>
<td>• Quick use (Fiori) tools for release processing</td>
</tr>
<tr>
<td>• PSS Improvements</td>
<td>• PSS Cross System (More than one SAP ERP)</td>
</tr>
<tr>
<td></td>
<td>• PSS Usability Improvements</td>
</tr>
<tr>
<td>• Reporting and Analytics</td>
<td>• VDM for Specification and Formula Data</td>
</tr>
<tr>
<td></td>
<td>• Specification analytics</td>
</tr>
<tr>
<td></td>
<td>• Compliance Checking</td>
</tr>
</tbody>
</table>

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**Planned innovations**

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Update on H2M - BAdI for customer specific GSS Source vertex key creation (Technical enhancement)

With the BAdI definition /PLMI/EX_GSS_VERTEX_ID_CHG it’s possible to change the internally defined GSS Source key to customer specific source key (source vertex id) that will be stored in the key mapping table for GSS. This BAdI is not implemented by default but could be implemented on customer side.

You can use this BAdI to enable the system to load different values into the Guided Structure Synchronization (GSS) vertex ID instead of the input formula items' ITEM_GUID field.

This BAdI used in the Recipe Development in PLM Web UI (PLM-WUI-RCP) component and will be called for any Recipe to Any synchronization through Recipe’s application on GSS.
SAP PLM - Recipe Development

• Primary Product Development Toolset for Formula/Recipe Development

Solution Enhancements

- Completely new User Interface (UI) with specific focus on development of formulation
- Highly configurable UI design allows the system to be tailored to a specific user role
- End user has capability to adjust layout to tailor to their specific needs
- Integrated formula optimization tools to assist user in development of targeted formulations
- Integrated process development tools to define product process needs and parameters

Key Benefits

- New user interface is focused on the needs of the end user specifically and works to balance the data needs of the system and working needs of the user
- UI configuration capabilities allow the customer to set up variations based on user role (advanced user vs. casual user)
- Tools within formulation provide end user a set of tools to make effective and accurate decisions about formula properties
New UI to support the development of specifications for product development and management

- Completely new User Interface (UI) with specific focus on the use cases of managing the specifications during initial and on-going product development

**Specification functions**
- Flexible & configurable structure for product & raw material properties
- Inheritance of properties
- Usage dependent data
- Flexible Reporting using WWI

**Solution Enhancements**

- UI configuration capabilities allow the customer to set up variations based on user role (different people managing specification data)
- Improved usability by providing a toolset that is focused on the use cases of product development.

**Key Benefits**
- New user interface is focused on the needs of the end-user. Provides a balance the data needs of the system and working needs of the user
SAP PLM - Handover to Manufacturing

Synchronize the development results with production

Solution Enhancements

- Completely new User Interface (UI) allowing the user to see the differences between development & production.
- Plan and synchronize the hand over to production
- Combine multilevel of recipes in development to one level in production

Key Benefits

- Identify differences between development and production.
- Control the release and alignment between development & productive information
- Transfer development view of recipes to production view

Summary

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Core PLM Functions

A single, new PLM UI platform that supports the full set of users needs in product development

- Business Context Viewer (BCV) providing point of use data that is relevant for the product development associate
- Cross object searching with full text search capabilities
- Object relationship investigation and evaluation using Object Navigation functions
- New UI’s for BOM’s, DIR, MMR and ECM
- Access Control Management (ACM) to support further security models
- Engineering Record to support ad-hoc product/process workflows

Solution Enhancements

Key Benefits

- 1 PLM solution for all product development associates with tools to support individual needs
- Significant improvements in overall usability of PLM toolsets
- Better leverage of SAP integration value through tools such as BCV and Object Navigator
- Better process support using ad-hoc workflows
- Enhancements in security model using ACM deliver value in collaboration and internal data management