

SAP Master Data Governance for Material Data Overview

May 2014 – Including SAP Master Data Governance 7.0 SP02 (Feature Pack)



Agenda

1. **Current Reality**
2. Need for the Future
3. Solution Strategy
4. Architecture
5. Current Solution
6. Benefit from the Solution

Questions From the Manufacturing and Logistics LOB (Material Governance)



- How can I establish a “maintain once – use everywhere” best practice?
- How can I reduce cost by eliminating redundant effort to maintain master data, i.e. through avoiding duplicates?
- How can I increase the quality of my material master data (i.e. classifications etc.) through central management and governance?
- How can I get consistent insight into sales, manufacturing, and procurement volumes?
- How can I accelerate availability of up-to-date master data in my business network?
- How can I get transparency on who has changed what, when and why?
- And ... while accomplishing all that ... how can I best leverage my investment in SAP?



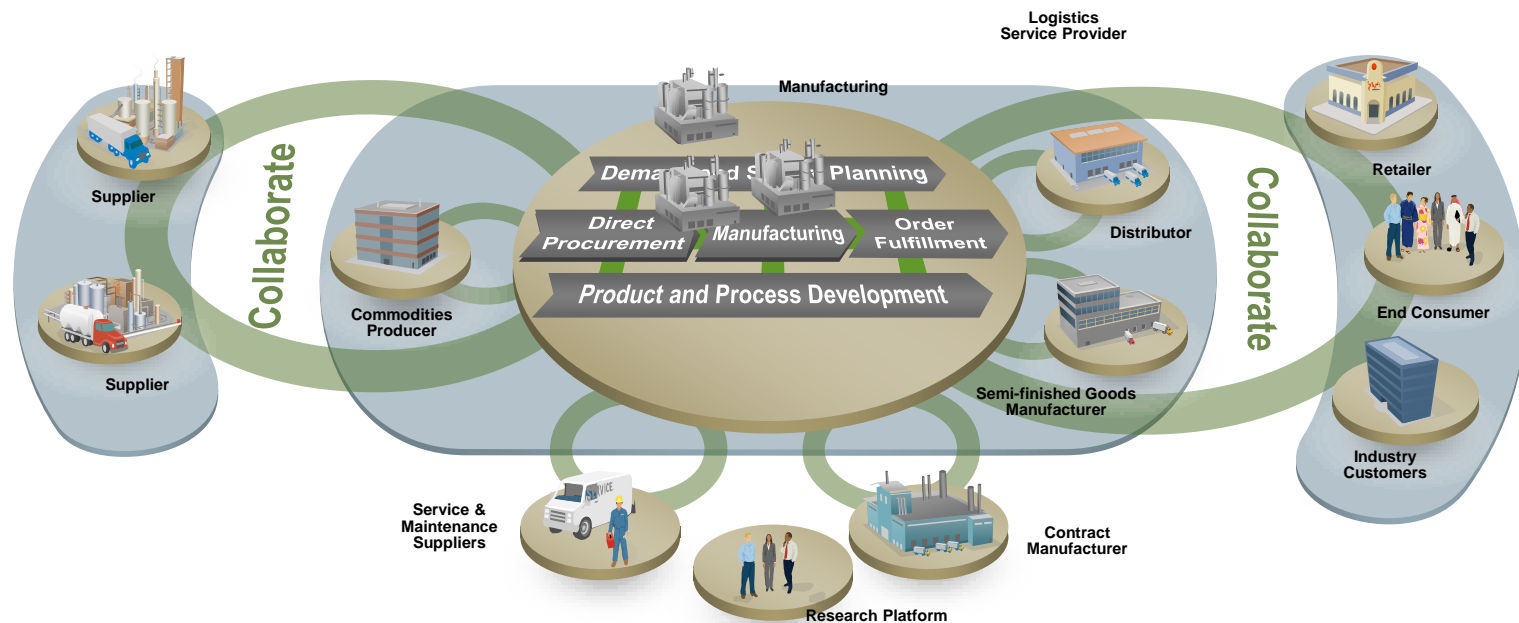
Agenda

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Central Management of Material Master Data Drives Excellence Throughout Your Business Network

Consistent material master data across the entire business network

Collaborative and traceable material master data management



Documented changes along the life-cycle of a material to ensure compliance

Single version of material master data, for higher efficiency and quality



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What is Master Data Governance for Material Data?

Master Data Governance for material data offers a central hub-based maintenance of material master data.

To address the key business issues related to such a governance solution for master data, MDG for material follows some basic principles that are shared across the domains of MDG

- Maintain once, use many
- One standardized process to be used by everybody
- One standardized user interface for everybody
- One standardized set of business logic

In order to fulfill these principles, SAP has built a Master Data Governance solution that offers

- Central hub-based maintenance of master data
- Workflow-driven processes that are flexible while ensuring governance and standardization
- Harmonized user interface, based upon Enterprise Portal or the Business Client
- Data model and business logic follow the best practices of the SAP Business Suite and reuse existing data structures, business validations and various services

Solution Strategy

**Deliver
Out-of-the-Box**

**Re-Usability
& Extensibility**

**Integrated
Object Model**

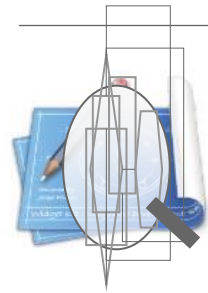
**SAP Master
Data Governance**

**Robust Data
Replication**

**Governance,
Collaboration
& Data Quality**

Solution Strategy

Deliver Out-of-the-Box



Low TCO

Flexibility

Ease of consumption

Best Practice

Process Transparency

Integration



Full Integration to SAP Systems as a client
Offer integration services for non-SAP client systems

Workflow flexibility closely integrated to a framework for defining business rules

Deliver roles on a web based UI
Deliver process-centric solution
Deliver predefined Data Quality Services

Deliver a Data Model proven by several applications & industries

Reuse of existing processing logic

Out-of-the box data replication mechanisms, using stable mechanisms

Material Content

Data Model Material Domain MDG 7.0 (MM)

Identifying Material Data ~ 10 fields

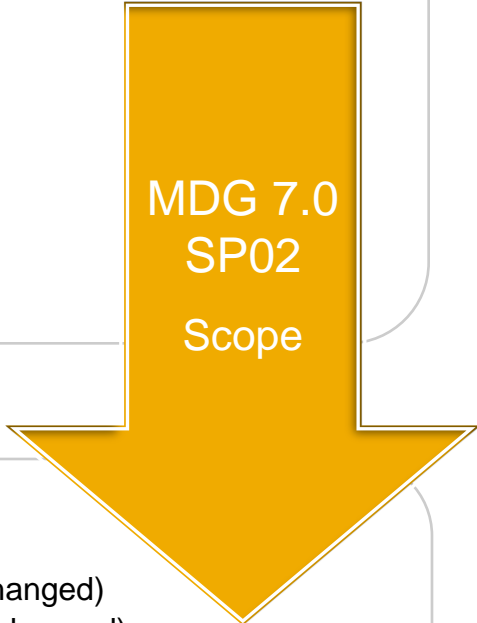
- Both SAP internal (material number) as well as external standards (GTIN)

Descriptive Material Data ~ 100 fields

- Help to understand what a material is but do not control processes
- Are as different as the products of our customers
- Typically realized via Classification (rather than Field Extension)

Process Controlling Material Data ~ 1.000 fields

- Control the behavior of SAP business processes
- Proprietary to SAP applications



MDG 7.0
SP02
Scope

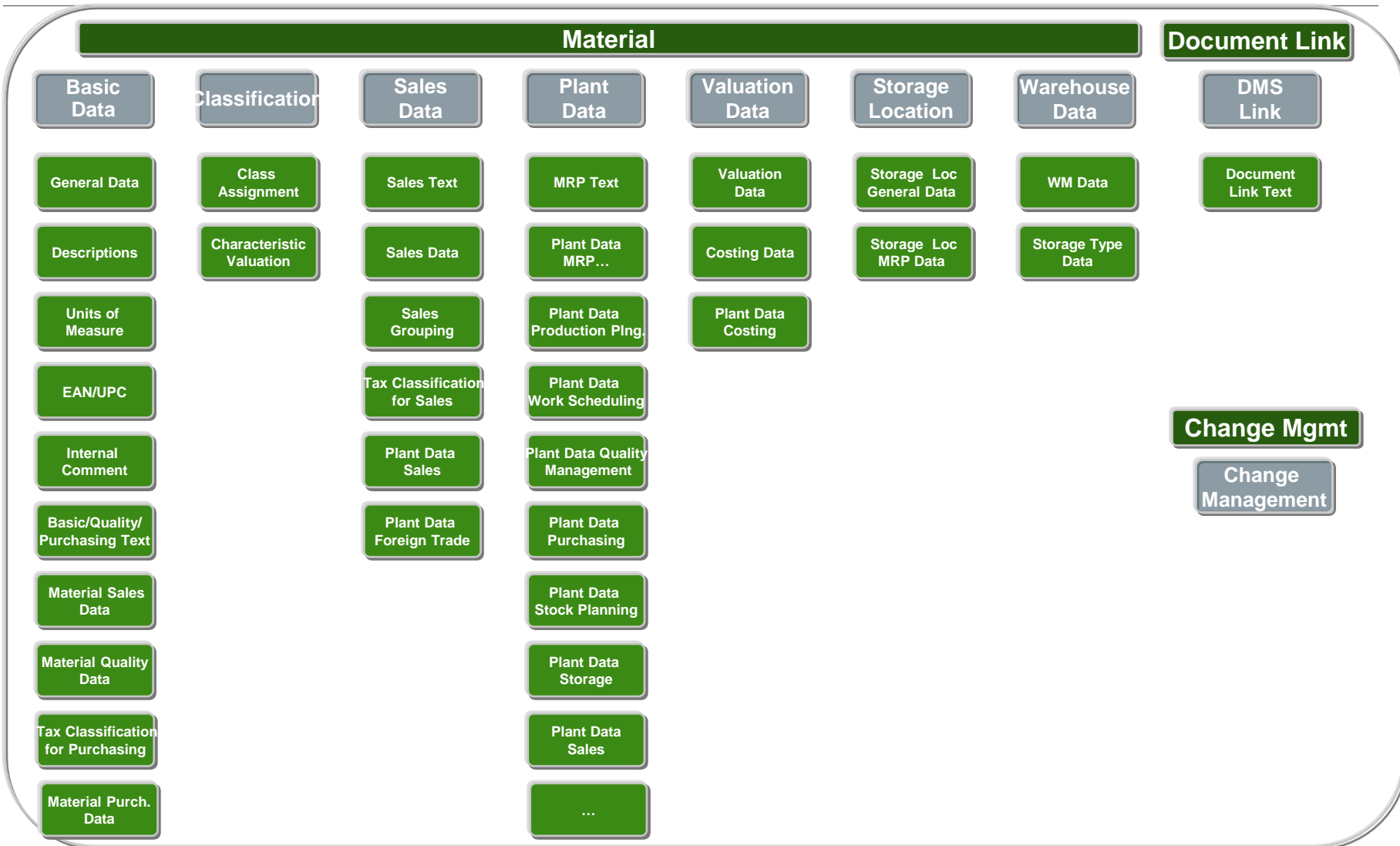
MDG 7.0 Scope includes (~ 400 fields)

- Basic Data and Long texts / notes (enhanced)
- Quantity Conversion / alternative UOMs/GTIN / EAN handling Classification (unchanged)
- Plant specific data (enhanced for Quality Data and MPOP) and Valuation data (unchanged)
- Sales Organization / Distribution Channel specific data / Tax Classification (unchanged)
- Storage Location Data (new)
- Warehouse Data (new)
- Document Assignment (new)
- Change Number and Revision Level (new)

Customers can enhance the data model

Material Content

Data Model Material Domain MDG 7.0 (MM)



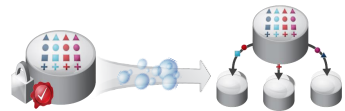
Solution Strategy

Governance, Collaboration & Data Quality



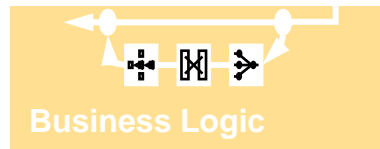
Collaboration

- Change requests drive collaboration of requester and data specialists
- Collect information from business
- Workflow-driven (org management, substitutions, re-submission)
- Linear or distributed workflow



Governance

- Enforces configurable change request process
- Allows separation of data entry and approval
- Different roles and responsibilities
- Staging of data until activation, with complete audit trail of changes

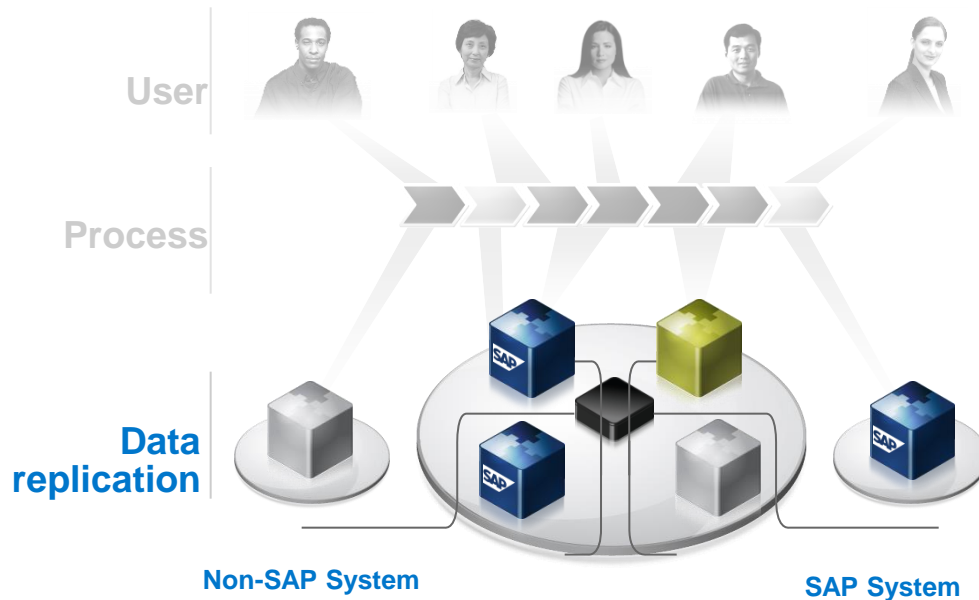


Data Quality

- Re-uses configuration, validations and business logic
- Integrates with SAP BusinessObjects Data Quality
- Configurable and coded validation and derivation rules

Solution Strategy

Data Replication Out-of-the-Box



Replication

- To SAP System is delivered out-of-the-box
- To non SAP systems

Replication Techniques

- Full integration into Data Replication Framework and into Key and Value Mapping framework
- ALE for SAP ECC systems (including older SAP releases) and Non-SAP Systems
- CIF to connect to SAP SCM
- Middleware to connect to SAP CRM or SAP SRM

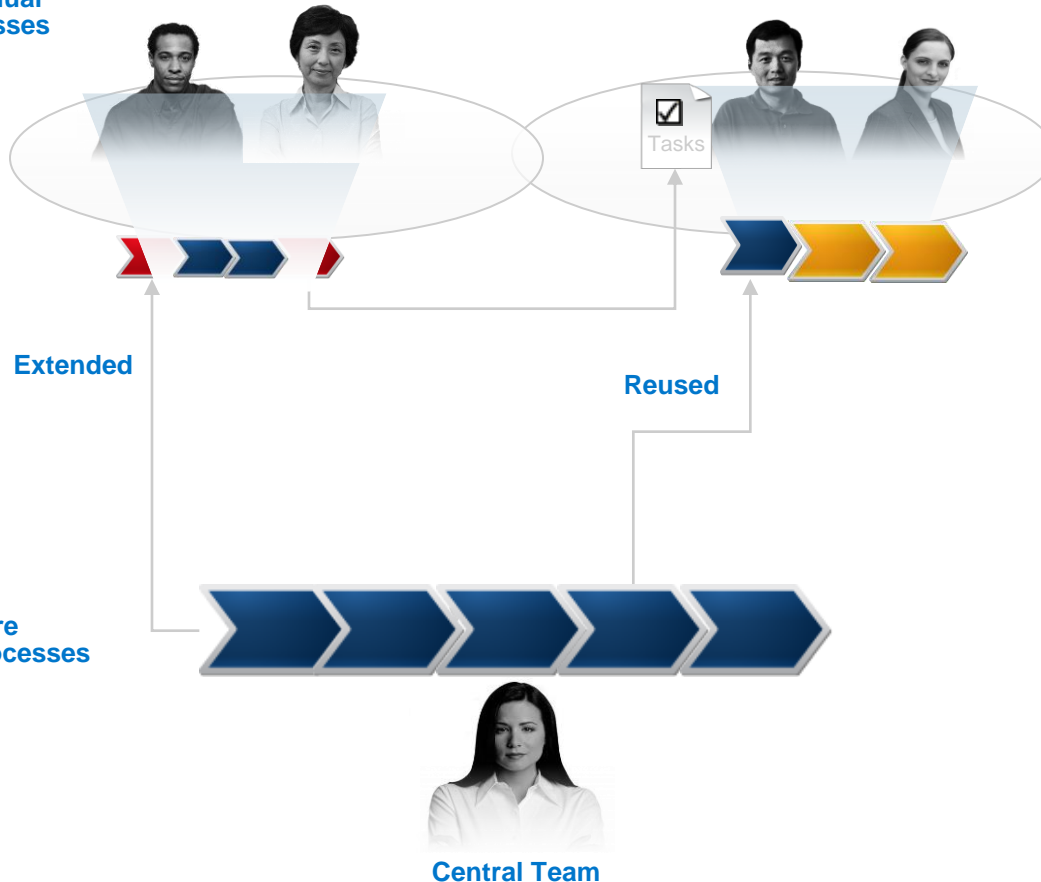
Replication Features

- Support of different material Ids between hub and client systems
- Support of different customizing keys between hub and client systems
- Monitoring and error handling

Solution Strategy

Reusability & Extensibility

Individual
Processes



Reuse standard content

Reuse existing data structures and functionality of SAP Business Suite

Enhance functionality

Be able to enhance MDG functionality based on predefined content (e.g. plant or sales data) or customer-specific extensions

Extend data structures

Provide easy-to-use extensibility capabilities for enhancing nodes and fields

- data model (extension with entities, relations, attributes)
- user interface (UI configuration and CBA)
- Processes (BRF+ Workflow or classic Workflow template)
- data replication (IDOC extension)



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Principles



User-Centric Principle

- Central Work Center for the Maintenance of Materials
- The work center for material master data governance bundles together all activities for material master data maintenance.
- Central deployment and authorization ensures governance
- Local adaptation and personalization possible



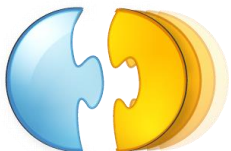
Governance Principle

- Change Requests With Built-In Approval Process
- Integrated process starts with a request to create or change a material, continues with processing and commenting by different expert users and stakeholders, and finishes with approval or rejection by authorized experts
- All processing steps are supported by workflow



Workflow Principle

- Standardized but Flexible Processes Incl. Rules Management and Tracking
- The standard SAP Business Workflow is enhanced with a rule-based engine; therefore changes in responsibilities and in processes can be reflected immediately and with ease.



Architecture Principle

- Staging Area to maintain inactive data of Material
- Active area – Holds the active data; Staging – Holds the data during the change request processing before approval

User-Centric Principle: Central Work Center for the Maintenance of Materials

All activities around the creation and maintenance of materials are bundled in one work center. Companies can establish this work center as the standard hub for creating and changing materials. For customers that do not use the SAP Enterprise Portal, a work center based on SAP Netweaver Business Client is delivered as well.

SAP NetWeaver Business Client

Material Governance | Business Partner Governance | Customer Governance | Supplier Governance | Product Engineering

Change Requests

Show Quick Criteria Maintenance [Change Query](#) [Define New Query](#) [Personalize](#)

View: [Standard View] [Process Change Request](#) [Display Workflow Log](#) [Complete Processing](#) [Not Responsible](#)

[Complete](#) [Resubmit](#) [End Resubmission](#) [Forward](#) [Assign To Me](#) [Cancel Assignment](#) [Substitution](#) [Refresh](#)

[Print Version](#) [Export](#)

Subject	From	Sent On	Status
Process Change Request 81398 (Created Using MDG Initial Load)	Akshay	04.09.2013 05:43:46	Changes to Be Executed
Process Change Request 81397 (Created Using MDG Initial Load)	Akshay	04.09.2013 05:33:33	Changes to Be Executed
Process Change Request 81265 (Created Using MDG Initial Load)	Akshay	04.09.2013 03:41:44	Changes to Be Executed
Process Change Request 80222 (Created Using MDG Initial Load)	Akshay	03.09.2013 11:54:59	Changes to Be Executed
Process Change Request 80220 (Created Using MDG Initial Load)	Akshay	03.09.2013 11:34:51	Changes to Be Executed
Process Change Request 80219 (Created Using MDG Initial Load)	Akshay	03.09.2013 11:14:58	Changes to Be Executed

Customer business challenges

- Users maintained master data in different systems
- Different transactions were necessary to execute the maintenance tasks (change, create, delete)
- Planned changes were not transparent to other systems

Business value

- The new work center for material master data governance bundles together all activities for material master data maintenance.
- Central deployment and authorization ensures governance
- Local adaptation and personalization possible

User-Centric Principle: NWBC Content Uses PFCG Roles

SAP NetWeaver Business Client

Material Governance

- Change Requests
- Data Exchange

Material Governance Homepage

Material Processing

- Search Material
- Create Material
- Change Material
- Mark for Deletion

Processing of Multiple Materials

- Create Change Requests
- Mass Change
- File Download
- File Upload

Change Requests and Documents

- My Change Requests
- Display Change Requests
- Display Change Documents

Process Reporting

- Processing Time (List View)
- Processing Time (Graphical View)
- Status Report

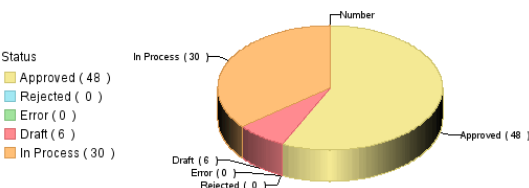
Data Replication

- Replicate by Material Selection
- Replicate by Replication Model
- Monitor Replication
- Define Filter Criteria
- Search Key Mapping
- Create and Edit Key Mapping

Data Transfer

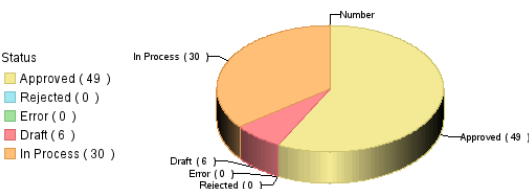
- Import Master Data
- Monitor Data Transfer

My Change Requests



Status	Count
Approved	48
Rejected	0
Error	0
Draft	6
In Process	30

Change Requests with My participation



Status	Count
Approved	49
Rejected	0
Error	0
Draft	6
In Process	30

User-Centric Principle: Enterprise Portal Integration

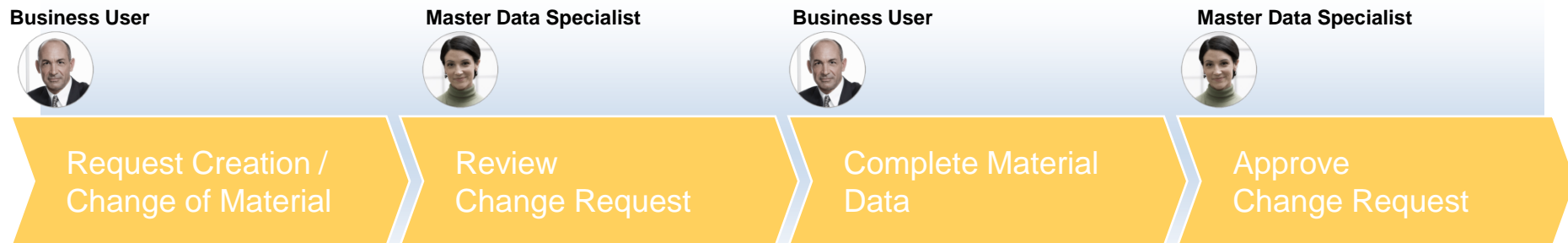
The screenshot shows the SAP Enterprise Portal interface for 'Change Requests'. The top navigation bar includes 'Home', 'Material Governance', 'system mapping', 'Content Administration', and 'Delegated User Administration'. The left sidebar shows a tree view with 'Change Requests' expanded. The main content area displays a table of change requests with columns for Subject, Sent On, Status, and Priority. The table lists 10 requests, mostly with a status of 'Changes to Be Executed'. A 'Hide Preview' button is at the bottom left of the table area.

Subject	Sent On	Status	Priority
Process Change Request 81265 (Created Using MDG Initial Load)	04.09.2013 03:41:44	Changes to Be Executed	
Process Change Request 80222 (Created Using MDG Initial Load)	03.09.2013 11:54:59	Changes to Be Executed	
Process Change Request 80220 (Created Using MDG Initial Load)	03.09.2013 11:34:51	Changes to Be Executed	
Process Change Request 80219 (Created Using MDG Initial Load)	03.09.2013 11:14:58	Changes to Be Executed	
Process Change Request 80224 (uilest)	03.09.2013 11:10:18	Changes to Be Executed	
Process Change Request 80198 (sabmatcr)	03.09.2013 11:09:59	Changes to Be Executed	High
Process Change Request 80223 (uilest)	03.09.2013 11:06:45	Changes to Be Executed	
Process Change Request 80212 (ZJP_001)	03.09.2013 10:32:43	Changes to Be Executed	
Process Change Request 80199 (Create new material P-030913-01)	03.09.2013 09:24:19	Changes to Be Executed	
Process Change Request 80202 (AHWP)	03.09.2013 09:04:41	To Be Considered and Approved	

- No new delivered portal content with MDG 7.0 for MDG-M
- Instead, the new PFCG Roles (e.g. SAP_MDGM_MENU_05) can be transferred to the portal

Governance Principle: Change Requests With Built-In Approval Process

This function allows you to implement an integrated process of master data governance that starts with a request to create or change a material, continues with processing and commenting by different expert users and stakeholders, and finishes with approval or rejection by authorized experts. All processing steps are supported by workflow.



Customer business challenges

- Requests and reasons for new or changed master data had to be communicated by phone or e-mail to master data specialists. They had to gather any further information in a time-consuming process from other experts and stakeholders. Follow-up processing by certain specialists had to be triggered manually. An approval process with a two man rule could not be assured.

Business value

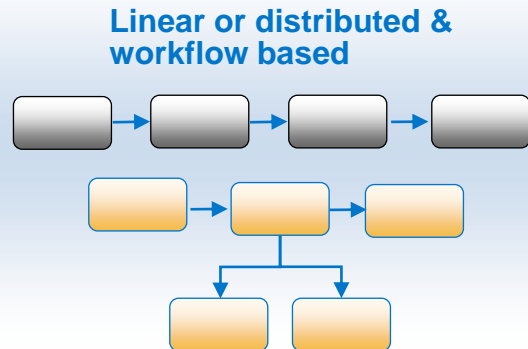
The approval process for maintenance of master data enables:

- Fulfillment of compliance requirements
- Better data quality
- Faster and transparent decisions
- Relevant information in one place

Workflow Principle: Standardized but Flexible Processes Incl. Rules Management and Tracking

The data maintenance activities are bundled via a change request that is linked to a workflow. The workflow can be linear or distributed. Besides automated steps, ad hoc steps, delegation etc. can be used.

The standard SAP Business Workflow is enhanced with a rule-based engine; therefore changes in responsibilities and in processes can be reflected immediately and with ease.



Flexible enough to respect the distributed responsibilities existing in a company across various business units



Customer business challenges

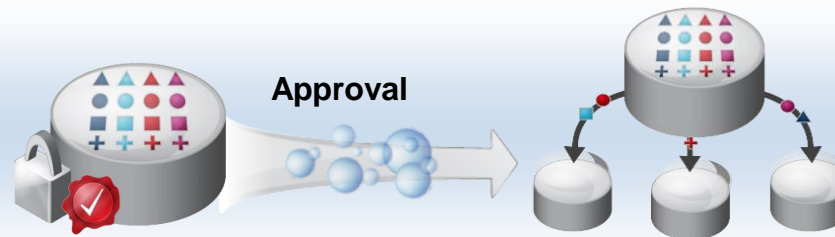
- Processes were unstructured and neither guided nor controlled
- High effort in data collection, change processing and issue resolution
- High TCO and low flexibility if hard-coded semi-automated processes are used

Business value

- Build-in guidance, monitoring and reporting using a standard workflow tool provides process and data governance
- Integrated tool for keeping data, process and issue resolution in one place
- Enhanced flexibility by integrated rules management

Architecture Principle: Staging Area to Maintain Inactive Versions of Material Data

As long as the change request for the creation or change of a material is in progress, the attributes of the material are stored in an inactive version that exists (in the case of a change) in parallel to the active version. When the change request is approved then the data is written as the active version to the master data tables and this new or updated record is then available for business processes.



Customer business challenges

- Several users from different departments are involved in the creation of a material item
- Material items were immediately available in the system as soon as the first user saved the entries
- Many incomplete material items and partial changes could exist
- Planned changes were usually not visible to the business

Business value

- Incomplete material (changes) are stored in an inactive version so the material can only be used in business processes when it is approved (better process quality)
- Rejected change requests don't create a material number in SAP ERP (better data quality)
- Planned changes are visible to the concerned user groups (better transparency)

Handling of Active and Inactive Data

Concepts and Architecture During Changes

To enable the master data governance process MDG separates

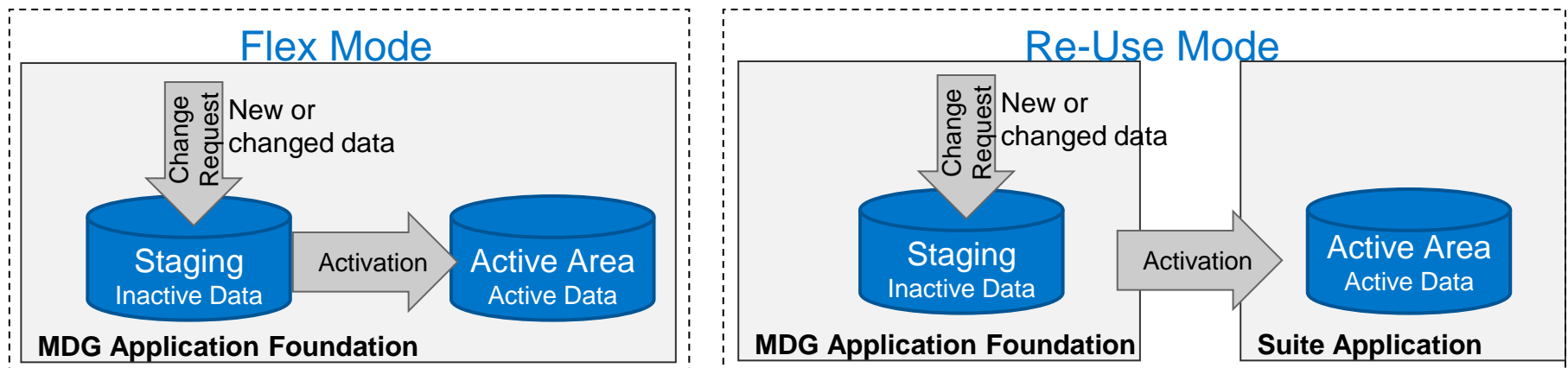
- Active data – Ready to be used by applications, can be distributed to client systems
- Inactive data – Not yet approved, currently part of a change request

Accordingly there are two separate storage locations

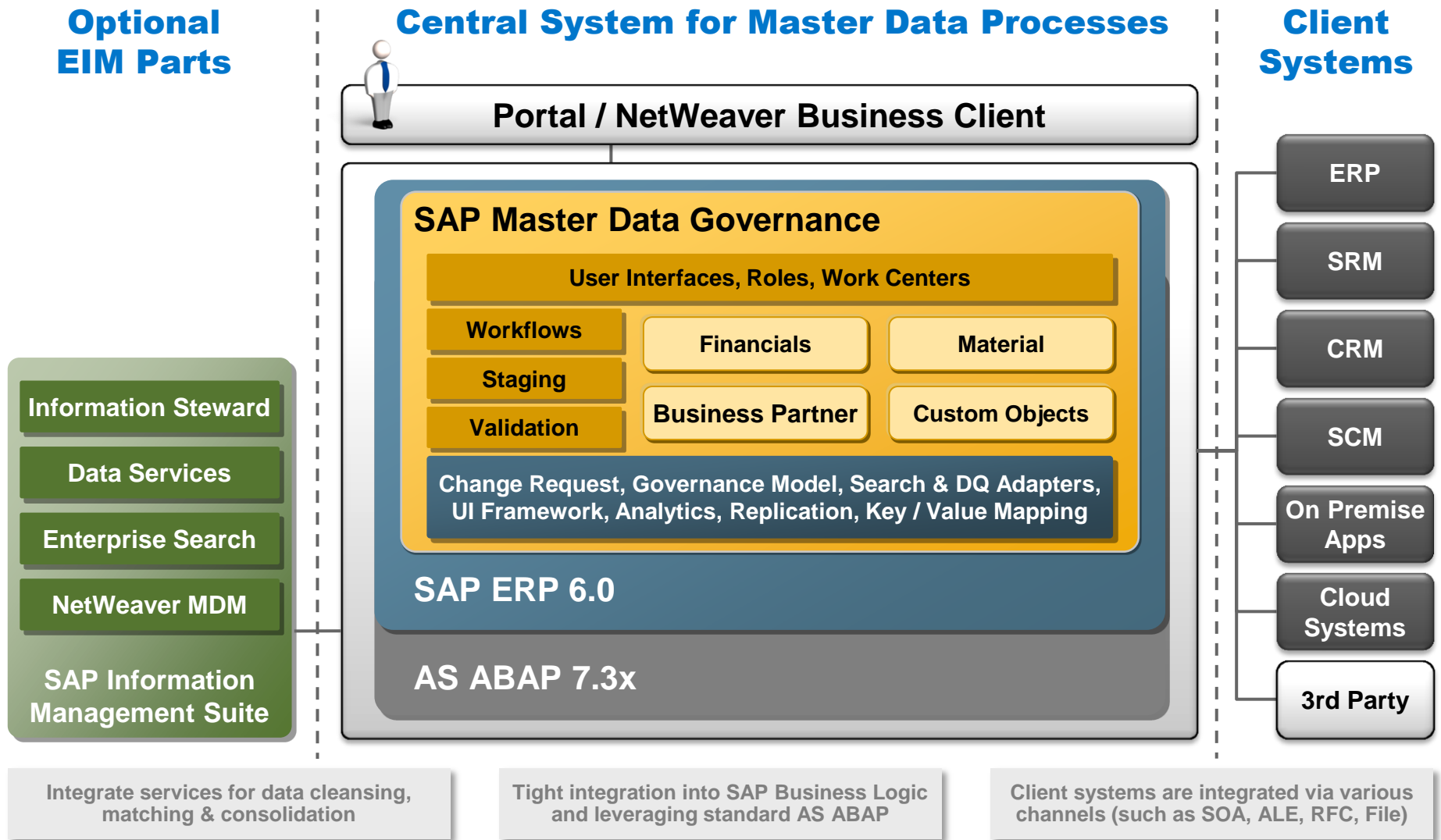
- Active area – Holds the active data
- Staging – Holds the data during the change request processing before approval

For optimal integration into SAP Business Suite MDG allows two modes

- Re-Use active area (re-use mode) – Existing structures of applications are used. For example, MDG for material makes use of the MARA table in ECC.
- Generated active area (flex mode) – Tables as defined in the MDG data model are used to store active data.



Summary: Architecture Overview

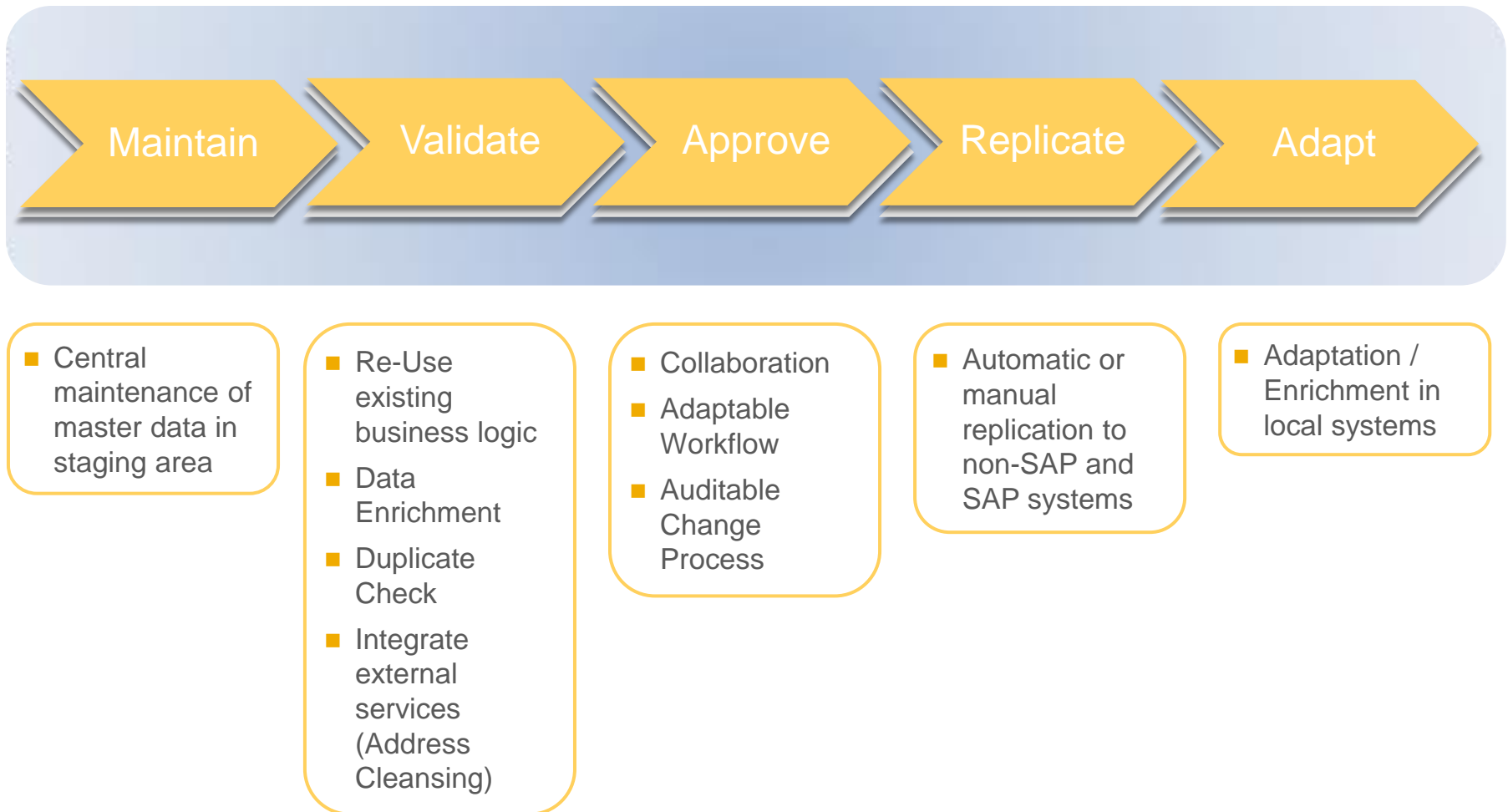




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SAP Master Data Governance – Process Flow



Material Processes

Search Functionality

- In their work centers, users can search for materials that are stored in the active area or in the staging area.
- Fuzzy search possible using Enterprise Search TREX or using HANA.
- The user can start a change request directly from the results list.

Business User



Search Functionality

Search in
Active Area

Search in
Staging
Area

Fuzzy
Search

Refinement
of search

Save and
Load Search
Criteria

Trigger
Change
Request

Customer business challenges

- Search results only took operational or active data into account, not the inactive data in the staging area related to planned or future changes
- Business activities could not be directly triggered from a search result list

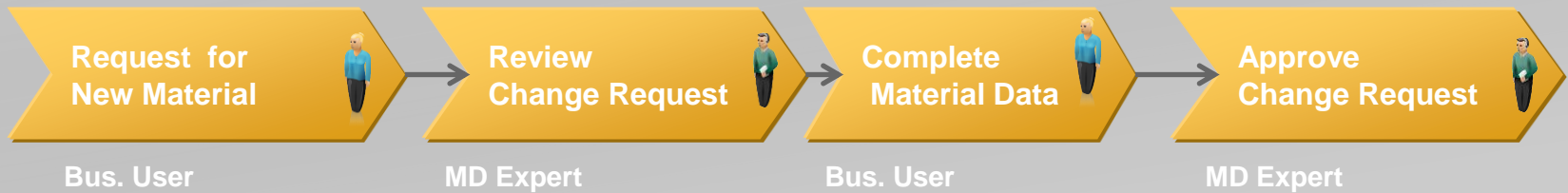
Business value

- Comprehensive search functionality simplifies daily work
- Integration into change request processing enhances productivity
- Including inactive data from staging area reduces parallel change processes

Material Processes

Create Material With Template, Initial Screen

MDG-M: simple two-man rule



Material: New

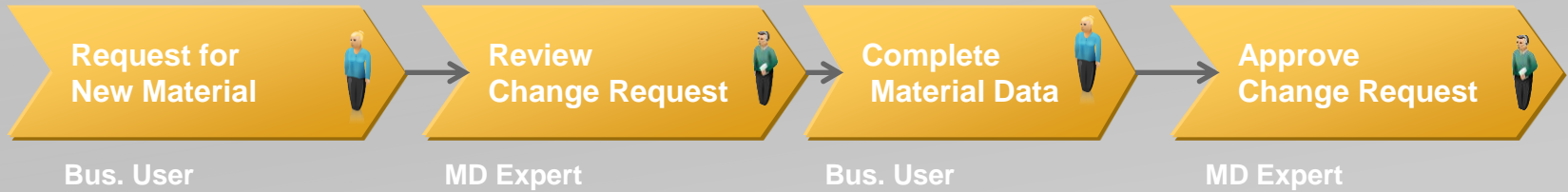
Material	Material (Template)
Material: P-20000	Material: P-100
Organizational Levels	
Plant: 0001	Plant: 0002
Storage Location: 0001	Storage Location: 0002
Sales Organization: 0001	Sales Organization: 0002
Distribution Channel: 01	Distribution Channel: 01
Warehouse Number: 001	Warehouse Number: 001
Storage Type: 001	Storage Type: 001
View	
* Change Request Type: MAT01	Version
	Change Request: 0

- Copy from a template: Enter Material, and if necessary a Plant, Storage Location, Sales Organization and Distribution Channel, Warehouse Number and Storage Type
- Field values will be taken over based on backend customizing (table T130F)
- If you specify a Change Request as template than inactive data of the material is copied
- Only specified organizational levels of template are copied. Otherwise no organizational level is copied.

Material Processes

Create Material

MDG-M: simple two-man rule



Material: New P-100; Plant: 0001; Storage: 0001; Distribution Chain: 0001/01

Save Submit Cancel Edit Expand all Collapse all Check

Change Request Edit

General Notes Attachments

General Data

Change Request ID: 81883

*Description: New Material

Priority:

Due Date:

Process Data

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 05.09.2013 16:25:25 Elke

Changed On/By: 05.09.2013 16:26:27 Elke

Basic Data Edit

General Data

*Material: P-20000

*Base Unit of Measure: EA each

*Material Type: HALB Semifinished Product

*Industry Sector: M Mechanical engineering

Material Group: 01 Material group 1

Old Material Number: EM-100

Authorization Group: EM

Cross-Plant Material Status: 01 Blocked for procurement 20.02.2013

Batch Management: ☐ No

Approved Batch Record Required Ind...: ☐ No

Division: 01 Product Division 01

Dimension

Net Weight: 10,000 KG Kilogram

Gross Weight: 10,000 KG

Length: 10,000 MM Millimeter

Grouping

External Material Group:

Product Hierarchy:

Generic Item Group Category:

Material Group Packaging Materials:

Design Data

Lab/Office: 001 Laboratory 1

Industry Standard Description:

Basic Material: SEA_BASIC_MAT_01

Production/Inspection Memo:

Page Format of Production Memo:

CAD Indicator: ☐ No

Configuration

Cross-Plant Configurable Material:

Material Configurable: ☐ No

Environment

- Several actions are possible for processing a change request (Customizing)
- Workflow is controlled by the BRFplus decision tables when using the Rules based Workflow template or controlled by the Classic Workflow template
- Dedicated users or organizational units are derived for further processing
- Delivered template configuration: BS_MAT_OVP_05

Material Processes

Duplicate Check Using Enterprise Search or HANA

A basic duplicate check is offered to avoid the creation of already existing materials. The information on potential duplicates is provided during when checking or submitting the change requests. It can be switched on or off per workflow steps.

Business User



Master Data Specialist



Duplicate Check

Duplicate Check during Search

Ad Hoc Duplicate Check within Change Request

Duplicate Check during change request approval processing

Customer business challenges

- Users often created a new material item even if the material master already existed in the system. This resulted not only in bad data quality, but also generated unnecessary cost since every master data record has its price tagged during its lifecycle.

Business value

- The duplicate check improves the data quality as well as the decision and business process quality in the connected systems
- Avoiding duplicates as early as possible saves time and money in the master data process

Material Processes

Display Material

Material: P-100; Plant: 0001; Storage: 0001; Distribution Chain: 0001/01; Warehouse: 001

Save Cancel Edit Expand all Collapse all Pending Change Requests

Basic Data Edit Details

General Data		Grouping	
Material:	P-100	External Material Group:	
Base Unit of Measure:	EA each	Product Hierarchy:	
Material Type:	HALB Semifinished Product	Generic Item Group Category:	
Industry Sector:	M Mechanical engineering	Material Group Packaging Material...	
Material Group:	01 Material group 1		
Old Material Number:	EM-100		
Authorization Group:	EM		
Cross-Plant Material Status:	01 Blocked for procurement/whse 20.02.2013		
Batch Management:	<input type="checkbox"/> No		
Approved Batch Record Required I...:	<input type="checkbox"/> No		
Division:	01 Product Division 01		
Dimension		Design Data	
Net Weight:	10,000 KG Kilogram	Lab/Office:	001 Laboratory 1
Gross Weight:	10,000 KG	Industry Standard Description:	
Length:	10,000 MM Millimeter	Basic Material:	SEA_BASIC_MAT_01
Width:	10,000 MM	Production/Inspection Memo:	
Height:	10,000 MM	Page Format of Production Memo:	
Volume:	10,000 L Liter	CAD Indicator:	<input type="checkbox"/> No
Size/Dimensions:	10X10 MM		
ATP		Configuration	
Product Allocation:		Cross-Plant Configurable Material:	
		Material Configurable:	<input type="checkbox"/> No
		Environment	
		Environmentally Relevant:	<input type="checkbox"/> No
		Dangerous Goods Indicator Profile:	
		GTIN/EAN	
		EAN/UPC:	2050000000409
		EAN Category:	IE Instore EAN (int. assignment possible)
		EAN Variant:	

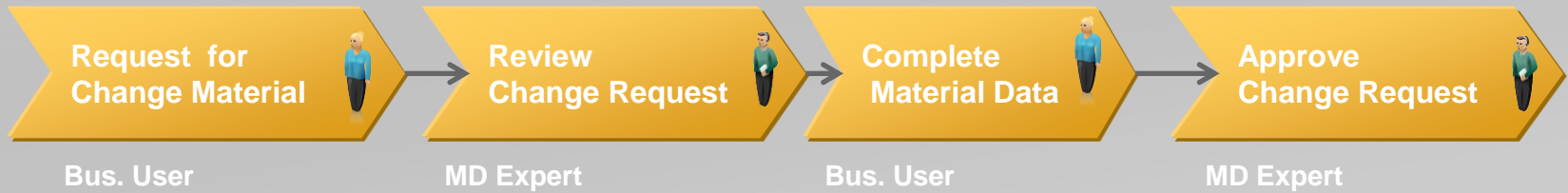
Distribution Chains
 Plants
 Plant: Storage Locations
 Valuation Area Plant
 Warehouses

- Display material via WebDynpro Application Change Material
- Or display material via Web Dynpro Application Search Material and click on the Material Number link
- Switch with the edit mode to create a new change request or to go to existing change request

Material Processes

Change Material With Template, Initial Screen

MDG-M: simple two-man rule



Material

Continue

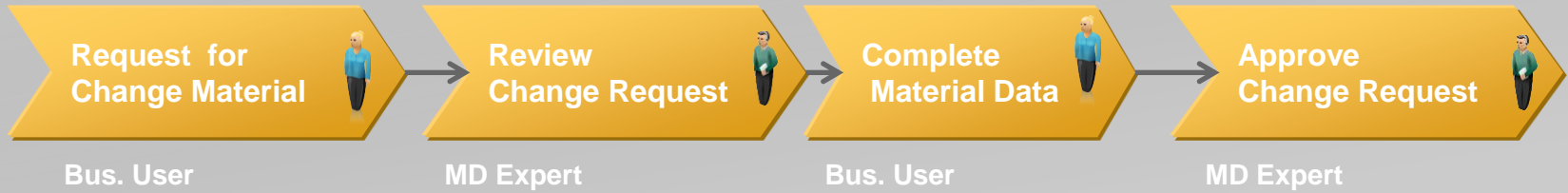
Material	Material (Template)
*Material: P-100	Material: P-100
Organizational Levels	Organizational Levels (Template)
Plant: 0003	Plant: 0001
Storage Location: 0001	Storage Location: 0001
Sales Organization: 0002	Sales Organization: 0001
Distribution Channel: 02	Distribution Channel: 01
Warehouse Number:	Warehouse Number:
Storage Type:	Storage Type:
View	Version
Change Request: 0	Change Request: 0
Change Request Type: MAT02	

- Copy from a Template: Enter Material, and if necessary a Plant, Storage Location, Sales Organization and Distribution Channel, Warehouse Number and Storage Type
- If you specify a Change Request as template than inactive data of the material is copied
- Only specified organizational levels of template are copied. Otherwise no organizational level is copied.

Material Processes

Change Material

MDG-M: simple two-man rule



Material: P-100; Plant: 0003; Storage: 0001; Distribution Chain: 0002/02; Warehouse: 001

Save Submit Cancel Edit Expand all Collapse all Switch to Active Version Check

Change Request Edit

General Notes Attachments

General Data

Change Request ID: 81888

*Description: Change P-100: new Plant 0003 and DC 0002

Priority:

Due Date:

Process Data

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 05.09.2013 17:26:34 Like

Changed On/By: 05.09.2013 17:26:36 Like

Basic Data Edit Details

General Data

Material: P-100

*Base Unit of Measure: EA each

*Material Type: HALB Semifinished Product

Industry Sector: M Mechanical engineering

Material Group: 01 Material group 1

Old Material Number: EM-100

Authorization Group: EM

Cross-Plant Material Status: 01 Blocked for procurement 20.02.2013

Batch Management: ☐ No

Approved Batch Record Required Indicat... ☐ No

Division: 01 Product Division 01

Dimension

Net Weight: 10,000 KG Kilogram

Gross Weight: 10,000 KG

Length: 10,000 MM Millimeter

Grouping

External Material Group:

Product Hierarchy:

Generic Item Group Category:

Material Group Packaging Materials:

Design Data

Lab/Office: 001 Laboratory 1

Industry Standard Description:

Basic Material: SEA_BASIC_MAT_01

Production/Inspection Memo:

Page Format of Production Memo:

CAD Indicator: ☐ No

Configuration

Cross-Plant Configurable Material:

Material Configurable: ☐ No

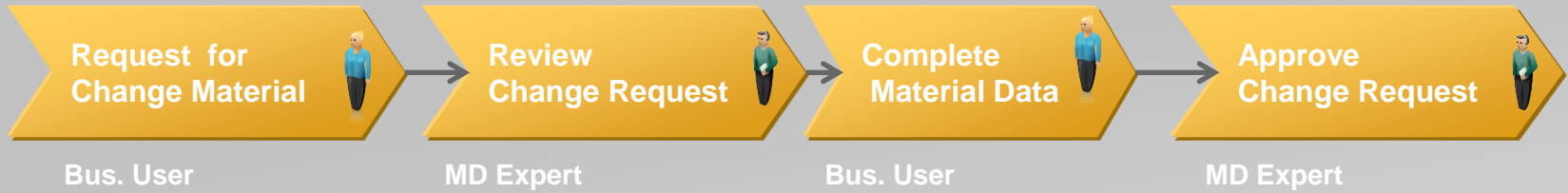
Environment

- Review Changes by showing the Change Documents
- Several actions are possible for processing a CR (Customizing)
- Workflow is controlled by the BRFplus decision tables when using the Rules based Workflow template or controlled by the Classic Workflow template
- Dedicated users or organizational units are derived for further processing
- Delivered hierarchical template configuration: BS_MAT_OVP_04H

Material Processes

Change Material Type

MDG-M: simple two-man rule



Material: P-100; Plant: 0001; Storage: 0001; Distribution Chain: 0001/01; Warehouse: 001

Save Submit Cancel Edit Expand all Collapse all Switch to Active Version Check

Change Request Edit

General Notes Attachments

General Data

Change Request ID: 82158

*Description: Change Material Type

Priority:

Due Date:

Process Data

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 06.09.2013 10:20:37 Elke

Changed On/By: 06.09.2013 10:20:38 Elke

Basic Data Edit Details

General Data

Material: P-100

*Base Unit of Measure: EA each

*Material Type: HALB Semifinished Product

Industry Sector: M Mechanical engineering

Material Group: 01 Material group 1

Old Material Number: EM-100

Authorization Group: EM

Cross-Plant Material Status: 01 Blocked for procurement/whse 20.02.2013

Batch Management: ☐ No

Approved Batch Record Required Indicator: ☐ No

Division: 01 Product Division 01

Grouping

External Material Group:

Product Hierarchy:

Generic Item Group Category:

Material Group Packaging Materials:

Design Data

Lab/Office: 001 Laboratory 1

Industry Standard Description:

Basic Material: SEA_BASIC_MAT_01

Production/Inspection Memo:

Page Format of Production Memo:

CAD Indicator: ☐ No

- With the Material Change UI it is possible to change the Material Type
- Prerequisite: Authorization M_MATE_MTA

Material Processes

Create Change Request and Mass Change

- First, create a change request and submit it (typically w/o materials assigned, yet)

Mass Change Material: Step 1 (Define Selection)

< Previous Next > Execute Changes Close

1 2 3 4
Define Selection Refine Selection Define Values Check and Execute

Selections

Material: ◇ p-1* ◇ To ◇
Authorization Group: ◇ To ◇
Old material number: ◇ To ◇

- Second, start the mass change and select your relevant materials by Define and Refine Selection (Step 1 and 2)

Mass Change Material: Step 3 (Define Values)

< Previous Next > Execute Changes Close

1 2 3 4
Define Selection Refine Selection Define Values Check and Execute

Changeable Attributes

Attribute	Replace With	Initialize
X-plant matl status	01	<input type="checkbox"/>
X-distr.chain status	01	<input type="checkbox"/>
Valid from	06.09.2013	<input type="checkbox"/>
Valid from	06.09.2013	<input type="checkbox"/>

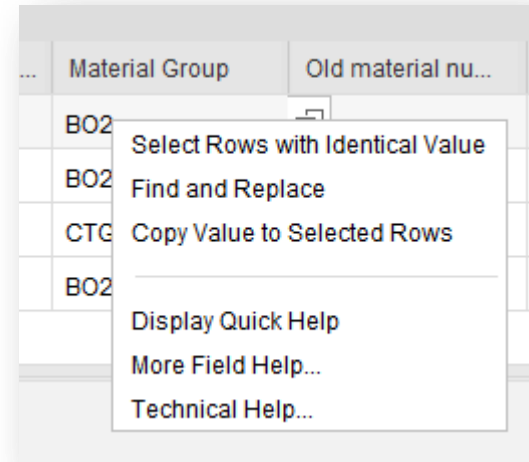
- Step 3: Replace one or more fields with one dedicated value
- Step 4: You can review the results and then execute the change.

- If not yet done, you now need to assign an open mass change request that is assigned to you

Material Processes

Multiple-Record Processing

- Example UI configurations and customizing delivered by business configuration sets
- Combined maintenance of entity types
- Several operators available in context menu (e.g. *Select Rows with Identical Value*)
- Highlighting changes with different colors
 - Saved changes
 - Current changes
 - Tooltips with changed values



Change Request

Materials

Find and Replace Highlight Changes

Staging	Material	Material Type	Industry sector	Base Unit of Me...	Material Group	Old material nu...	X-plant matl stat...	Valid from
	P-070813-01	HALB	M	EA	BO2		40	
	P-070813-02	HALB	M	EA	BO2	P-070813-02	40	
	P-070813-03	HALB	M	EA	BO1	P-070813-03	01	
	P-070813-04	HALB	M	EA	BO2		40	

Planning

Find and Replace Highlight Changes

Staging	Material	Plant	MRP Type	MRP Contro...	MRP profile	MRP group	SchedMargi...	Lot size	Fixed lot s...	Minimum ...	Maximum ...
	P-070813-01	0001	PD	001	0001		000	DY	0,000	0,000	0,000
	P-070813-02	0001	ND	001	0001		000	EX	0,000	0,000	0,000
	P-070813-03	0001	ND	001	0001		000	EX	0,000	0,000	0,000
	P-070813-04	0001	PD	001	0001		000	EX	0,000	0,000	0,000

Material Processes

Mark Material for Deletion

Delete Material

[Continue](#)

Material

*Material: P-100

Organizational Levels

Plant: 0001

Storage Location: 0001

Sales Organization: 0001

Distribution Channel: 01

Warehouse Number:

Storage Type:

View

Change Request: 0

*Change Request Type: MAT06

Delete Material: P-100; Plant: 0001; Storage: 0001; Distribution Chain: 0001/01

[Save](#) [Submit](#) [Cancel](#) [Edit](#) [Expand all](#) [Collapse all](#) [Switch to Active Version](#) [Check](#)

Change Request [Edit](#)

General **Notes** **Attachments**

General Data

Change Request ID: 82173

*Description: Deletion flag for Storage Location 0001

Priority:

Due Date:

Process Data

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 06.09.2013 10:48:52 Elke

Changed On/By: 06.09.2013 10:49:03 Elke

Basic Data

Distribution Chains

Plants

Plant: Storage Locations [Edit](#)

[Discard](#)

Staging	Marked for Deletion	Storage Location	Storage Location MRP Indicator Description
	<input type="checkbox"/>	0001	Storage location stock also planned at plant level

- Mark a single material for deletion
- Or set the flag on a organization level
- A change request is triggered and data is copied into the staging area
- Workflow is triggered and processed the same way as for the other processes
- The deletion is limited to the material entity. Currently no remote checks about reuse of the material is done.

Support of Parallel Change Request

Multiple Change Requests per Material at the Same Time

Creation of material with initial Change Request

- One Change Request for create material

Parallel Change Requests for subsequent individual processing

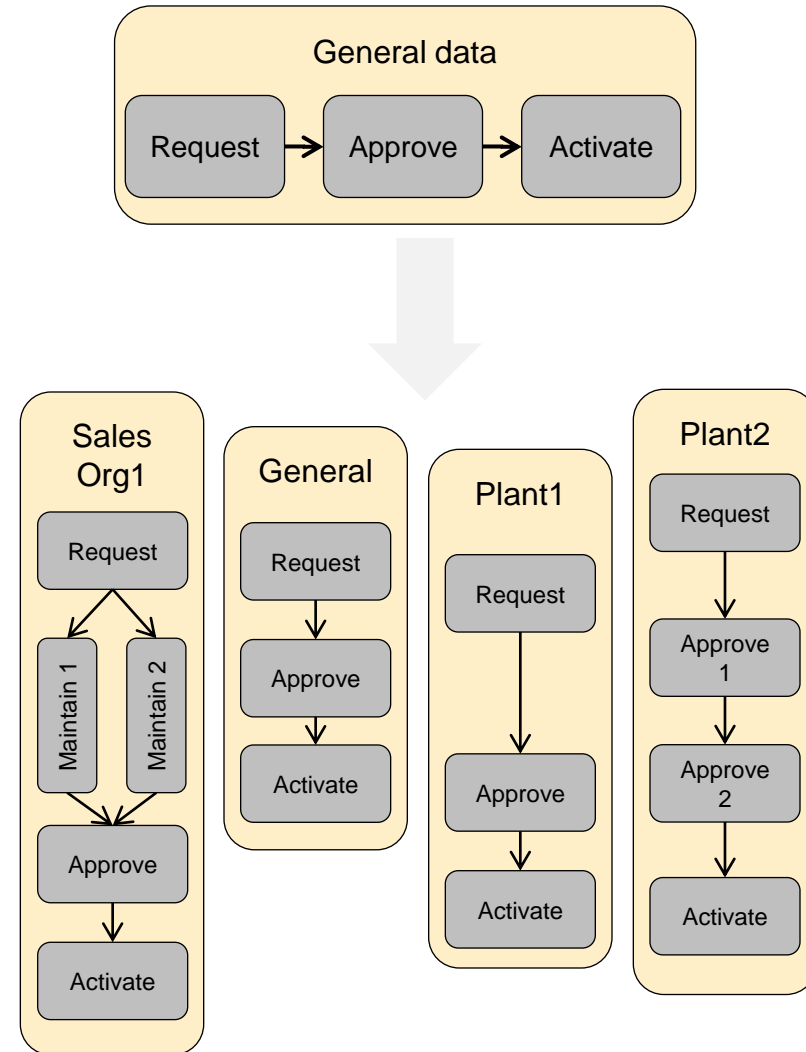
- Parallel Change Requests for extending material
- Extend material to different organizations or change existing data in parallel to extend the material

Activation for general data and per organizational unit directly after approval

- Workflow creation for each selected organizational unit, activation after approval

Lock on entity level (interlocking)

- Instead of lock on object level only
- Change request type determines the maintainable fields



MDG Framework Capabilities

Common Services of MDG for Material

Solution Strategy

- Integrated Object Model
- Deliver Out-of-the-Box
- Re-Usability & Extensibility of Data Model & User Interface
- Data Replication
- Governance, Collaboration & Data Quality
- Highlighting Changes in MDG UI

Change Requests for Material with built-in approval process

- Central Work Center for the Maintenance of Materials
- Search, Create, Display, Change, Mark for Deletion and Mass Change Material
- Staging Area: Material Data is only created when Change Request is approved

→ For all above see previous slides

Common services of change request processing:

- Import Master Data
- Key- and Value-Mapping
- Worklists (My Change Request, Display Change Requests, Change Documents)

→ These business services are explained on the next slides

Import Master Data

Common Services of MDG for Material

Material master data, Key- and Value-Mapping can be uploaded to the MDG system from an XML file using the MDG Import Master Data transaction. The imported material master data can be adjusted or modified in a change request. Only when the change request is approved is data written to the SAP ERP material master data (which is the active area).

If data quality is good, the data can also be written directly into the active area.

Master Data Administrator



Master Data Specialist



Business User



Master Data Specialist



File Import into
Change Request

Review
Change Request

Complete Material
Data

Approve
Change Request

Customer business challenges

- No direct upload functionality was available within SAP ERP
- No governance process existed for the upload of mass data

Business value

- Upload to MDG system (Material, Key- and Value-Mapping)
- Built-in upload functionality for MDG increases the speed of updates and streamlines integration between systems
- Governance functionality avoids creation of duplicates and ensures completeness and accuracy of data

Key- and Value Mapping

Common Services of MDG for Material

This feature supports the replication of data into systems with non-harmonized customizing or with heterogeneous keys for material. For example, in cases where the same material has a different material number on the master data governance (MDG) hub than on a client (key mapping), or similar material groups have a different code in hub and clients (value mapping).

Master Data Specialist



Maintain Key Mappings for
Material Data

Master Data Steward / Automated step



Trigger Data Distribution

Automated Step

Process Key- and Value
Mappings

Customer business challenges

- Customers built their own solutions to map the values to distribute the data correctly to different systems

Business value

- Heterogeneous system landscapes can be supplied using the key- and value-mapping functionality offered with MDG

Worklists

Common Services of MDG for Material

■ My Change Requests

My Change Requests Side Panel

Close | Print Preview |

Name: Elke

Change Requests

Show: Created by Me | From: 30.07.2013 | To: 06.09.2013 | Go | View: [Standard View]

Print Version | Export | Workflow Log

Change Request	Description	Status	Changed On	Changed By	Draft
633	P-070813-12 EIS	Final Check Approved	15.08.2013	Andrea Becker	<input type="checkbox"/>
577	P-070813-03	Final Check Approved	12.08.2013	Rita Mayer	<input type="checkbox"/>
574	Change	Final Check Approved	12.08.2013	Andrea Becker	<input type="checkbox"/>

■ Change Documents

Display Change Documents

Close |

Entity Type: Material

Display: Attribute Changes | View: EM | Print Version | Export | Descriptions

Value	User Name	Date	Time	Change	Attribute	Old Value	New Value
RB0.601.909.314	Andreas Buch	08.07.2013	13:14:17	New	Material Group		DUMMY
		09.07.2013	12:53:52		X-distr.chain status		01
		10.07.2013	11:15:21	Deleted	Material Group	DUMMY	
	Andrea Becker		16:01:50	New	Old material number		601909314
					Material Group		DUMMY

■ Display Change Requests

Display Change Requests

☒ Continue | Close

Change Request: To

Type of Change Request: To

Status of Change Request: To

Edition: To

Due Date: To

Priority: To

Reason: To

Reason for Rejection: To

Created By: To

Created On: To

Changed By: To

Changed On: To

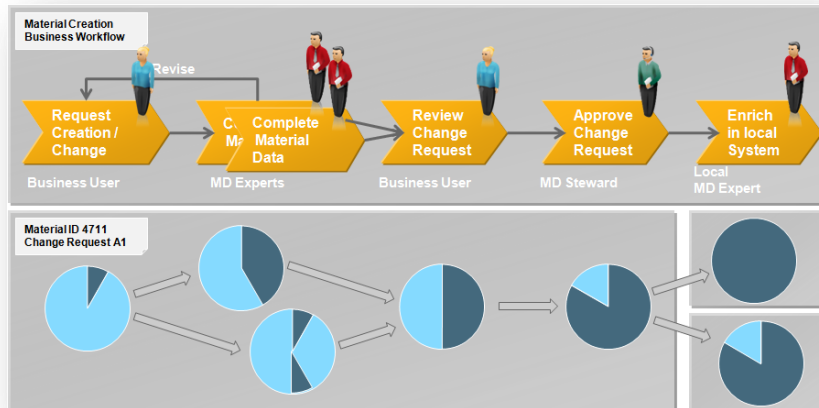
Finalized By: To

Finalized On: To

No Finalized Change Requests: ☒

SAP Master Data Governance for Material Data

Integrated, Centralized Product/Material Data for Process Excellence



The screenshot displays the SAP Master Data Governance interface for a Change Request. The header shows the material details: Material: P-100; Plant: 0003; Storage: 0001; Distribution Chain: 0002/02; Warehouse: 001.

Change Request Summary:

- Change Request ID:** 81888
- Description:** Change P-100: new Plant 0003 and DC 0002
- Priority:** [Dropdown]
- Due Date:** [Calendar]
- Status:** Changes to be Executed
- Current Work Item:** New Change Request
- Created On/By:** 05.09.2013 17:26:34 Elke
- Changed On/By:** 05.09.2013 17:26:36 Elke

Basic Data:

- General Data:**
 - Material:** P-100
 - Base Unit of Measure:** EA each
 - Material Type:** HALB Semifinished Product
 - Industry Sector:** M Mechanical engineering
 - Material Group:** 01 Material group 1
 - Old Material Number:** EM-100
 - Authorization Group:** EM
 - Cross-Plant Material Status:** 01 Blocked for procurement 20.02.2013
 - Batch Management:** No
 - Approved Batch Record Required Indicator:** No
 - Division:** 01 Product Division 01
- Dimension:**
 - Net Weight:** 10,000 KG Kilogram
 - Gross Weight:** 10,000 KG
 - Length:** 10,000 MM Millimeter
- Grouping:**
 - External Material Group:** [Dropdown]
 - Product Hierarchy:** [Dropdown]
 - Generic Item Group Category:** [Dropdown]
 - Material Group Packaging Materials:** [Dropdown]
- Design Data:**
 - Lab/Office:** 001 Laboratory 1
 - Industry Standard Description:** [Dropdown]
 - Basic Material:** SEA_BASIC_MAT_01
 - Production/Inspection Memo:** [Dropdown]
 - Page Format of Production Memo:** [Dropdown]
 - CAD Indicator:** No
- Configuration:**
 - Cross-Plant Configurable Material:** [Dropdown]
 - Material Configurable:** No
- Environment:** [Dropdown]

Material Processing

- Workflow-driven creation and change process for Materials
- Change requests steer the maintenance & approval process of new or changed data
- Document changes for audits
- Work lists organize due changes
- Adaptable user interfaces and validations can be different per workflow step if needed

Distribution

- Changes are kept inactive until approval
- They can then be distributed to operational group or local systems via DRF using ALE

Scope of Master Data

- Search, Display, Change, Creation of single Material Master Data
- Mass processing of changes
- File upload for initial load, system consolidation
- Broad out-of-the-box coverage of material attributes – incl. central and classification data as well as organizational unit data (can even be extended by customers as needed)



Agenda

1. Current Reality
2. Need for the Future
3. Solution Strategy
4. Architecture
5. Current Solution
- 6. Benefit from the Solution**

SAP's Understanding of a State-of-the-Art Master Data Governance Solution

**Ensure
Master Data
Governance**



Solution Strategy

- Deliver process-centric solution
- Workflow closely integrated to a framework for defining business rules
- Full Integration to SAP Systems and integration services for non-SAP
- Deliver roles on a web based UI
- Deliver a Data Model proven by several applications & industries
- Reuse of existing processing logic
- Out-of-the box data replication mechanisms

Basic Principles

- User-centricity: Central work center for the maintenance of materials
- Governance: Change requests with built-in approval process
- Workflow: standardized but flexible processes incl. rules management and tracking
- Architecture: Staging area to maintain inactive versions of material data

Common Services

- Search & Display
- Create, Change, Multi-Record Processing, Mass Change, Parallel Change Requests, Mark for Deletion
- Work lists (My Change Request, Display Change Requests, Change Documents)
- Duplicate Check
- Key- and Value-Mapping
- Data Replication
- File Upload / Initial Load
- Extensibility of Data Model & User Interface
- Deployment on top of operational ERP or as standalone hub

Benefits From SAP Master Data Governance



Up-front, central creation of master data enables high data quality and leads to significant business improvements.

Out-of-the-box, process-centric applications provide centralized governance for master data domains such as financial data, supplier data, customer data, material data.

Native integration with SAP Business Suite using existing business logic and infrastructure leads to low TCO.

SAP Master Data Governance provides flexibility, from configurable workflows and extensible data models, up to custom built applications.

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