SAP Master Data Governance

Central Governance of Material Data

Based on SAP Master Data Governance on SAP S/4HANA 1909
April, 2020

PUBLIC
Preface

SAP Master Data Governance (MDG) is a state-of-the-art master data management solution. It provides out-of-the-box, domain-specific master data governance to centrally create, change, and distribute, or to consolidate master data across your complete enterprise system landscape.

In this context, MDG can either run as a separate master data hub or be co-deployed on an operational system. In both cases MDG can run on:

- ERP on HANA or any other DB
- S/4HANA

From a functional perspective, SAP MDG on SAP S/4HANA 1809 correlates to the SAP MDG 9.2 release based on ERP 6.0.

Note that although no correlating SAP MDG on ERP release exists for the subsequent SAP S/4HANA 1909 release, many 1909 innovations have also been downported to earlier SAP MDG releases. You can find SAP Notes relating to this in the appendix.
Agenda

Introduction

SAP Master Data Governance Capabilities

SAP Master Data Governance Principles

Function in Detail

Integration Scenarios

Solution Benefits
Typical business process challenges
Master Data Management is an integral part of the solution

Operational excellence across LoBs is always fueled by consistent master data helping to avoid process disruptions and unreliable analytics.

- **Sales Effectiveness**
  - Consolidated customer view across all channels
  - Transactions driven by full picture of the facts
  - Collaborative sales and promotion planning

- **Supply Chain Efficiency**
  - Enabled real time collaboration with partners in supply chain and product development
  - Faster throughput of higher volumes through supply chain to the end customer

- **Procurement Decisions**
  - Transparent picture of suppliers and products
  - Cost savings due to fact-based supplier selection and rationalization

- **Optimized Asset Utilization**
  - Ability to use technical assets to capacity
  - High product quality due to well maintained production systems
  - Minimized safety risks for maintenance staff and operators

- **Readiness for Change**
  - Readiness to cope with information needs from IoT and Big Data
  - Ability to exchange trusted master data with business partners
  - Ability to respond to mobile needs

- **Finance Effectiveness**
  - On-time group closes
  - Accurate IT resource planning
  - Business flexibility
All lines of business
Are impacted by master data quality issues

<table>
<thead>
<tr>
<th>Organizations and Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financials</td>
</tr>
<tr>
<td>CFO</td>
</tr>
<tr>
<td>IT</td>
</tr>
<tr>
<td>CIO</td>
</tr>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>(S)VP of Sales, (S)VP of Marketing</td>
</tr>
<tr>
<td>Supply Chain</td>
</tr>
<tr>
<td>VP of Supply Chain, VP of Planning</td>
</tr>
</tbody>
</table>

Challenges

- Inconsistent financial master data across the enterprise
- Manual efforts to update financial master data in local financial systems
- Risk of non-compliance to IFRS, SOX etc.
- Slow group closes
- Lack of transparency about changes (who, what, when, why)
- High master data maintenance costs
- Need for multiple systems to manage master data in different domains
- Lack of flexibility in dynamic business environments
- Lack of consistent consolidated view of customer data across all channels
- Customer transactions are compromised due to a limited view of the facts
- Lack of transparency relating to suppliers and products
- High costs due to insufficient supplier selection and rationalization
- Loss of potential for benefit realization (i.e. discounts, conditions, central contracts)
- Limited availability of up-to-date master data in my business network
Typical approaches to master data management
Central governance and distribution / de-central ownership and consolidation

SAP Master Data Governance – central governance
Maintain master data in line with business processes (such as integrated product development or supplier management)

SAP Master Data Governance – consolidation
Consolidate master data into a single view for accurate analytics and operational insight (continuously or on request, such as for initial load or mergers and acquisitions)

SAP Master Data Governance – data quality management*
Manage master data quality by defining, enforcing, monitoring, and improving quality

All typical approaches are supported: central governance with distribution, decentralized ownership with consolidation, data quality monitoring with remediation

*) only available with SAP MDG on S/4HANA
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Solution Benefits
Master Data Governance Capabilities
Establish Best-Quality Master Data to Optimize Business Processes

1. Deliver Out-of-the-Box
2. Integrated Object Model
3. Governance, Collaboration & Data Quality
4. Robust Data Replication
5. Reusability & Extensibility

SAP Master Data Governance
<table>
<thead>
<tr>
<th>Capability</th>
<th>Description</th>
</tr>
</thead>
</table>
| Low TCO                    | Full Integration to SAP systems as a client  
Offer integration services for non-SAP client systems |
| Flexibility                | Workflow flexibility closely integrated to a framework for defining business rules                                                        |
| Ease of Consumption        | Deliver a process-centric solution, with roles and a web-based user interface  
Deliver predefined data quality services |
| Best Practice              | Deliver a data model proven by several applications & industries                                                                             |
| Process Transparency       | Reuse of existing processing logic                                                                                                           |
| Integration                | Out-of-the-box data replication mechanisms, using stable mechanisms                                                                           |
SAP Master Data Governance
Integrated Object Model

Out-of-the-box delivery of proven data models for operational and financial master data

Financials
- GL Account* / Chart of Accounts
- Cost Element* / Hierarchies
- Financial Reporting Structures: Balance Sheet, P&L Statement
- Cost Center / Hierarchies
- Profit Center / Hierarchies
- Internal Order
- Company
- Consolidation: Item, Group & Hierarchies, Unit, Break Down Category

Material
- General Data & Descriptions
- Units of Measure
- Quality Data
- EAN, UPC
- Classification
- Document Link
- Sales Data
- Plant Data
- Storage & Warehouse Data
- Production Version
- Valuation, Costing, Material Ledger

Supplier & Customer
- Business Partner Attributes
  - Central Data
  - Bank Details
  - Tax Numbers
  - Addresses with Usage and Versions
  - Business Partner Relationships
- Supplier Attributes
  - General Data
  - Comp. Code Data
  - Purchasing Data
- Customer Attributes
  - General Data
  - Comp. Code Data
  - Sales Area Data
  - Tax Indicators
- Contract Account Attributes
  - General Data
  - Partner-specific Data

Enterprise Asset Mgmt. **
- Work Centers
- Equipment Master
- Functional Location
- Object Links and Networks
- Maintenance Plans
- Maintenance Items
- Measuring Points
- Task Lists
- Service Master
- Linear Asset Capabilities
- Asset Structures
- Maintenance Items
- Measuring Points
- Task Lists
- Service Master

Retail & Fashion Mgmt. ***
- Descriptions
- Units of Measure
- Tax
- Bill of Material
- Textile Components & Fiber Codes
- Characteristics
- Assignment & Variants
- Distribution Curve
- Purchase Info Record
- Purchasing Org / Vendor / Site
- Stores
- Distribution Cntrs.
- Listing
- Layout Module
- Point of Sales
- Sales Org. Data
- Assortment
- Season Assignmt.
- Additions
- Article Hierarchy
- Substitution
- Additional Texts
- Document Management System

* User interface integration between GL Account and Cost Element only supported in SAP MDG on SAP S/4HANA
** SAP MDG, enterprise asset mgmt extension by Utopia
*** SAP MDG, retail & fashion mgmt. extension by Utopia
Master Data Governance Capabilities

Integrated Object Model

**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

**SAP MDG Scope includes (~ 700 fields)**
- Basic Data (Purchasing, Sales, Storage, Service Parts, Warehouse Management, Shelf-Life) and Long texts / notes
- Dimensions / alternative UOMs / GTIN/EAN handling
- Classification / Lean Classification
- Sales Organization / Distribution Channel specific data / Tax Classification
- Plant specific data (with Inspection Setup, MRP Area, Production Version, Advanced Planning, Production Resource/Tool)
- Storage Location Data
- Valuation data (with Material Ledger)
- Document Assignment
- Warehouse Data

Customers can enhance the data model
# Master Data Governance Capabilities

## Integrated Object Model

<table>
<thead>
<tr>
<th>Material</th>
<th>Change Management</th>
<th>Document Link</th>
<th>Production Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Data</td>
<td>Change Number</td>
<td>Document Link Text</td>
<td>Production Version</td>
</tr>
<tr>
<td>Classification</td>
<td>Revision Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valuation Data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehouse Data</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Basic Data
- General Data
- Descriptions
- Unit of Measure
- GTIN/EAN
- Internal Comment
- Basic/Quality/Purchasing Text
- Material Sales/Purchasing
- Material Quality/Storage
- Material Service Parts

### Classification
- Class Assignment
- Characteristic Valuation

### Sales Data
- Sales Data
- Characteristic Grouping
- Tax Classification Sales/Purchasing
- Plant Data Sales
- Plant Data Foreign Trade
- Sales Text

### Plant Data
- Plant Data MRP...
- Plant Data Production Planning
- Plant Data Work Scheduling
- Plant Data Quality Management
- Plant Data Purchasing
- Plant Data Stock Planning
- MRP Text
- Quality Inspection Setup
- MRP Areas

### Valuation Data
- Valuation Data
- Costing Data
- Plant Data Costing
- Valuation Data with Material Ledger

### Storage Location
- Storage Loc General Data
- Storage Loc MRP Data
- Storage Type Data

### Warehouse Data
- WM Data

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Master Data Governance Capabilities

Integrated Object Model

Enhancements for Data Model and UI in S/4HANA 1809
- Shelf Life Advance Planning
- Extended Warehouse Management (EWM)
- Advanced Planning (SCM)
- Unique Item Identifier
- Simplification for S/4

Enhancements for Data Model and UI in S/4HANA 1909
- Production Resource/Tool (PRT)
- Advanced Planning (SCM) fields at MRP area level (MDMA)

The complete Data Model can be found here:
Master Data Governance Capabilities

Integrated Object Model

Simplification for S/4

The following fields are related to MRP data and are on the simplification list (see SAP Note 2267246):
- Unit of Measure Group (MARC-MEGRU),
- Quota arr. usage (MARC-USEQU),
- Selection Method (MARC-ALTSL),
- Action control (MARC-MDACH),
- SLoc MRP indicator (MARD-DISKZ),
- spec.proc.type SLoc (MARD-LSOBS),
- Reorder Point (MARD-LMINB),
- Replenishment qty. (MARD-LBSTF).

The following fields are related to Foreign Trade data and are on the simplification list (see 2267225):
- CAP product list no. (MARC-MOWNR),
- CAP prod. group (MARC-MOGRU),
- Preference status (MARC-PREFE),
- Vendor decl. status (MARC-PRENE),
- Exemption Certificate (MARC-PRENC),
- Exemption Cert. No. 9 (MARC-PRENO),
- Validity date of vendor declaration (MARC-PRENG),
- Iss.date of ex.cert. (MARC-PREND),
- Military goods (MARC-ITARK).

These fields are removed from the related MDG UI configurations of entities MARCMRPLS, MARCMRPSP, MARCMRPMI, MARDMRP, MARCFRGTR.
Master Data Governance Capabilities

- Linear or distributed and workflow based
- Has roles and responsibilities and also task authority (e.g. create, change, approve)
- Can be adapted and tailored based on customer needs
- Possibility to extend the process by adding business logic and thereby bringing in data quality
- Data in process stored in a separate repository, will be transferred to operational database after final approval
- Flexible enough to respect the distributed responsibilities existing in a company across various business units
Master Data Governance Capabilities

…and Data Quality

Prevent creation of duplicates for increased effectiveness and efficiency

- Checked early and embedded in the process
- High detection quality of matching using SAP HANA or Enterprise Search

Validations

- Reuse of existing validation logic
- Custom validations can be modeled and programmed (For example, code lists, simple checks, or rules using BRFplus)
- Integration of rules from MDG Data Quality Management
Master Data Governance Capabilities

...and Data Quality

Showing what was changed
- Changes by earlier processors and own (unsaved) changes in two colors
- Previous, changed, and last-saved value per attribute
- Available for all fields, including table cells, rows, navigation elements, etc.

Helps people do their tasks
- Supports the processor to decide on their next action
- Supports approvers to quickly spot what they will approve
- Supports auditors to easily see what was changed

Transparency on what has happened in the past
- Change documents provide information on who changed which attribute from what value to what other value, and by when
- Workflow logs show who was involved in the change request process and who approved which data change
Master Data Governance Capabilities

4 Robust Data Replication

Replication

- Direct, pooled or manual replication to SAP and non-SAP systems
- Peer-to-peer or mediated

Replication Techniques

- DRF controlling replication mechanisms like
  - ALE for SAP S/HANA, SAP ECC, R/3 and non-SAP systems
  - SOA service (only in S/4) for SAP and non-SAP systems
- CIF for SAP SCM and MW for SAP CRM/SRM

Replication Features

- Flexibility to replicate selected data only to a specific client system by defining filters (controlled by DRF)
- Support of different object IDs or customizing keys between hub and client systems (via mapping in MDG or PI)
- Monitoring and error handling
Master Data Governance Capabilities

5 Reusability & Extensibility

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 models
  • User interfaces
  • Processes
  • Data replication
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SAP Master Data Governance Principles

1. **User-Centricity**
   - Central Maintenance of Materials
   - Master data governance bundles together all activities for material master data maintenance
   - Central deployment and authorization ensures governance
   - Local adaptation and personalization possible

2. **Governance**
   - 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

3. **Workflow**
   - 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.

4. **Architecture**
   - 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 Maintenance of Materials

All activities around the creation and maintenance of materials are together in one place. Companies can establish it as the standard hub for creating and changing materials. Customers can use the SAP Enterprise Portal, SAP Business Client or Fiori Launchpad (only S/4HANA)

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

- 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
Material Governance Homepage

- All relevant tasks reachable with just one click
- Easy to configure and personalize
- PFCG Role SAP_MDGM_MENU_09
- Start a Change Request with for example ‘Search Material’ or ‘Create Material’
User-Centric Principle
Fiori Launchpad in S/4HANA

- All relevant tasks reachable with just one click
- Easy to configure and personalize
- Catalog SAP_MDG_BC_MATERIAL_DATA
- Start a Change Request with for example ‘Manage Material’ or ‘Create Material’
Workflow inbox shows Change Requests for which you are the processor.

- You can personalize this list to your needs.
- Multiple options are available, for example you can open the Change Request or you can forward it.
- A preview of the Change Request is available.
User-Centric Principle

Workflow-Step-Dependent Configuration Enables Flexible UI / Process Design

UI Configuration
Provide different User Interfaces per WF step based on the task or knowhow of the user

Validations
Enable or disable checks / enrichments
Example: Switch off required field check in Request UI

Field properties
Set some data to read-only
Example: Expert can only maintain dimensions and the basic data is read-only
User-Centric Principle

Out-of-the-Box Configurations

The delivered configurations can be used as a template or adapted in different ways.

Application MDG_BS_MAT_OVP for Single Object Maintenance

FPM Application Configurations:
- BS_MAT_INIT_09 (Initial Page)
- BS_MAT_OVP_09 (Material create)
- BS_MAT_OVP_09H (Material change)

Application MDG_BS_MAT_SEARCH for Search

FPM Application Configurations:
- MDG_BS_MAT_SEARCH_09
- MDG_BS_MAT_SEARCH_04H
Governance Principle 2
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-person 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
Notes and attachments can be assigned to the change request header.

Requester has to enter a description. Priority, due date and reason are optional.

The change request tracker can be called up via the new What’s Next link, which is displayed in the change request UIBB next to the entry for the current work item. Any processor assigned to a change request can now view the current workflow step, all previously executed dialog workflow steps, as well as all future steps needed until the change request is successfully approved.

Last user can approve or reject the change request.
Workflow Principle 3
Standardized but Flexible Processes Incl. Rules Management

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 (Workflow template WS60800086); therefore changes in responsibilities and in processes can be reflected immediately and with ease. There is also a workflow template WS46000057 without BRF+, which covers the same processes.

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
Rule-Based Workflow Template

- The generic workflow template (WS60800086) is the foundation of the RBWF. The different processes are reflected by BRFplus decision tables, which are maintained in the Customizing for each change request type.
- The combination of this workflow template with the BRFplus decision tables allows you to easily set up many different processes that can be flexibly changed through Customizing.
Workflow Principle 3
Rule-Based Workflow Components

Customizing

<table>
<thead>
<tr>
<th>Type of Change Request</th>
<th>Data Model</th>
<th>Description (medium text)</th>
<th>Objects Re.</th>
<th>Single</th>
<th>Main Entity Type</th>
<th>Workflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT01</td>
<td>NN</td>
<td>Create Material</td>
<td></td>
<td></td>
<td>MATERIAL</td>
<td>WSB00000086</td>
</tr>
<tr>
<td>MAT02</td>
<td>NN</td>
<td>Process Material</td>
<td></td>
<td></td>
<td>MATERIAL</td>
<td>WSB00000086</td>
</tr>
<tr>
<td>MAT03</td>
<td>NN</td>
<td>Mark Material for Deletion</td>
<td></td>
<td></td>
<td>MATERIAL</td>
<td>WSB00000086</td>
</tr>
<tr>
<td>MAT04</td>
<td>NN</td>
<td>Process Multiple Materials</td>
<td></td>
<td></td>
<td>MATERIAL</td>
<td>WSB00000086</td>
</tr>
</tbody>
</table>

BRFplus Decision Tables

**Decision Table: DT_SINGLE.VAL_MAT01**

<table>
<thead>
<tr>
<th>Condition</th>
<th>User Agent</th>
<th>Step Type</th>
<th>User Agent Type</th>
<th>User Agent Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3</td>
<td>001</td>
<td>5 (Activate Change Request)</td>
<td>US (User)</td>
<td>ANZERER</td>
</tr>
<tr>
<td>2</td>
<td>001</td>
<td>4 (Reverse Change Request)</td>
<td>US (User)</td>
<td>ANZERER</td>
</tr>
</tbody>
</table>

**Decision Table: DT_USER_AGRT_GRP_MAT01**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Agent Group</th>
<th>Process Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>001</td>
<td>65 (Activation (Do Not Bypass Snapshots))</td>
</tr>
<tr>
<td>4, 5</td>
<td>001</td>
<td>60 (Composition of Snapshots)</td>
</tr>
<tr>
<td>6</td>
<td>001</td>
<td>60 (Roll Back Change Request)</td>
</tr>
</tbody>
</table>

Workflow Template
Architecture Principle 4
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, the data is then 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 users

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 (better data quality)
- Planned changes are visible to the concerned user groups (better transparency)
Architecture Principle

Handling of Active and Inactive Data

To enable the master data governance process, MDG separates data as follows:

- **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, MDG allows two modes:

- **Reuse active area (reuse mode):** Existing application structures are used. E.g. MDG for material use of the MARA table
- **Generated active area (flex mode):** Tables as defined in the MDG data model are used to store active data.
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Function in Detail

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Solution Benefits
Function in Detail

- Process Flow
- Material Processes: Search, Create Material, Duplicate Check, Display, Change Material, Side Panel, Copy, DMS and Classification Integration, Mark for Deletion
- MDG Fiori Apps: Request new material and Approve new or changed material
- Processing multiple materials: Multiple Record Processing, MDG Mass Processing and MDG Consolidation
- MDG Data Quality Management
- MDG Framework Capabilities: Highlighting, Mass change, Parallel CR, Additional Steps After Activation and Follow-Up Change Request, Enrichment Spot, Governance Scope, Import Master Data, Key Mapping and Value Mapping, Worklists, Data Replication, Process Reporting
- Process Overview and Change Request Analysis for Products
Function in Detail: Process Flow

External Providers

SAP Master Data Governance

1. Maintain: Central maintenance of master data in staging area
2. Validate: Reuse existing business logic, integrate external services for data enrichment, address cleansing, duplicate detection, …
3. Approve: Collaboration, Adaptable workflow, Auditable change process
4. Replicate: Automatic replication to non-SAP and SAP systems

Business Processes

5. Adapt: Adaptation / enrichment in local systems
Function in Detail: Material Processes
Search Functionality

- Users can search for materials that are stored in the active or in the staging area.
- Search criteria combine material attributes and classification.
- Search uses SAP HANA-based Search, Enterprise Search or alternative search providers.
- The user can start a change request for single or multi-record processing directly from the results list.

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.
Function in Detail: Material Processes
Search Functionality

Consistent search UI containing all search capabilities

• Search methods easy to configure, more search methods can be added (SAP HANA-based search is the default search method)
• Search criteria combine material attributes and classification
• Drop-down lists of available fields and operators
• Add and remove search criteria (AND combination of multiple parameters)
• Search criteria can be saved using a descriptive name for quick and easy reuse (as a global or private variant)
• Search for hits within active and inactive data
• Preferred Language Sequence for Material Description if description is not available in logon language
• Result can be downloaded to Excel
• Result list can be personalized
• One or more materials can be selected to find related change requests
Function in Detail: Material Processes
Search Functionality: Copy search criteria to Change Request
Function in Detail: Material Processes
Search Options in SAP Master Data Governance

The following options are delivered:

You can use **SAP HANA-based search**.

- You can use it in a side-by-side approach or fully embedded if MDG itself runs on an SAP HANA database.
- Follow the Configuration Guide which is available on [SAP Help](https://help.sap.com).
- With SAP HANA-based search for MDG, the federated search is not supported. If you require search capabilities across systems and beyond the MDG system, Enterprise Search can still be used.

You can use **Enterprise Search**.

- You have installed and connected Enterprise Search either in embedded or federated form.

The following option is not delivered:

You can use **Database Search** in exceptional cases if the two delivered options are not feasible.

- Database Search is not released to be used in the context of master data governance for material for live systems – it is only intended to be used as a temporary workaround for POC/Test purposes.
- Please follow the extension guide [Replace Enterprise Search by DB or alternative search provider](https://help.sap.com) which also lists the limited capabilities.
# Capabilities of the Search Options of MDG for Material

## Main Features

<table>
<thead>
<tr>
<th>Topic</th>
<th>Enterprise Search</th>
<th>SAP HANA-based search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuzzy Search</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support of Search Ranking (Score)</td>
<td>No (SAP Note 2284745)</td>
<td>Yes</td>
</tr>
<tr>
<td>Duplicate Check</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Duplicate Check with Fuzziness</td>
<td>Yes, can't be switched off</td>
<td>Yes, configurable (defined by search view)</td>
</tr>
<tr>
<td>Long texts (multi languages)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Free-text</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Classification</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time-Dependent Classification</td>
<td>Yes</td>
<td>No (SAP Note 2284745)</td>
</tr>
<tr>
<td>Extensibility with fields</td>
<td>Yes (higher effort)</td>
<td>Yes (lower effort)</td>
</tr>
<tr>
<td>TCO</td>
<td>High (additional TREX hardware)</td>
<td>Low (embedded), High (side-by-side)</td>
</tr>
<tr>
<td>Multiple Search Views (UI)</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Function in Detail: Material Processes
Create Material with Template, Initial Screen

- 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 a template, inactive data of the material is then copied
- Only specified organizational levels of a template are copied. Otherwise no organizational level is copied.
Function in Detail: Material Processes
Create Material Overview Page

• 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_09
Function in Detail: Material Processes
Duplicate Check

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

- 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.

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.
Function in Detail: Material Processes
Display Material

- Display material via WebDynpro Application *Change Material*
- Or display material via WebDynpro Application *Search Material* and click on the Material Number link
- Delivered template configuration: BS_MAT_OVP_09H
- Switch to edit mode to create a new change request or go to an existing change request
Function in Detail: Material Processes
Change Material with Template, Initial Screen

- 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 a template, inactive data of the material is then copied
- Only specified organizational levels of a template are copied. Otherwise no organizational level is copied.
Function in Detail: Material Processes

Change Material

- Review Changes by showing the Change Documents, also in the Side Panel
- 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_09H
Function in Detail: Material Processes
BCV Side Panel Content for MDG Material

- Sales Overview: Sales orders created for the current material master.
- Production Overview: Production orders created for the current material master.
- Purchasing Overview: Purchase orders created for the current material master.
- Changes Overview: Changes raised by the current MDG change request.
Function in Detail: Material Processes
Copy Organizational Data

Copy organizational data
1. Mark already available organization
2. Select ‘Copy’ button
3. Select target organization(s) not yet being maintained
4. Data is copied and can be reworked

Copy organizational data is available for:
- Distribution Chains
- Plants
- Valuation Area Plant
- Warehouses
- Production Versions
- MRP Areas
Function in Detail: Material Processes
Change Material Type

- The Material Change UI enables you to change the Material Type
- Prerequisite: Authorization M_MATE_MTA
Function in Detail: Material Processes
Document Management System (DMS) Integration

- Display, edit and delete links to document info records
- Maintain long text information for material link
- Easy creation of new documents (and material link)
- Display document info record dependent on user/system environment
  - Using PLM Web UI
  - Using SAP GUI HTML
  - Using SAP GUI (NWBC for desktop only)
Function in Detail: Material Processes
Motivation for New Lean Classification

Feedback for MDG-M Classification (up to MDG 9.0 and S/4HANA 1610):

- UI-related feedback:
  - Classes and characteristics are not on same page
  - User should not see a difference between normal attributes and classification
  - More usable UI, possibility to adapt the UI

- Function-related feedback:
  - Integration of derivations missing
  - Simultaneous display and change of classification is not supported (authorizations for display not possible)
  - Simultaneous processing of different class types or classes using a parallel change request is not possible

Missing support in other MDG applications (up to MDG 9.0 and S/4HANA 1610)

- No support for classification in MDG Consolidation
- No support for classification for supplier and customer in MDG Central Governance
## Function in Detail: Material Processes

### Capabilities of Classification and Lean Classification

<table>
<thead>
<tr>
<th>Topic</th>
<th>Classification available since EhP5</th>
<th>Lean Classification since MDG 9.1 / S/4HANA1709</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI</td>
<td>UI reused from PLM</td>
<td>Simplified UIs; Class assignment and characteristics valuation work like normal entities in data model</td>
</tr>
<tr>
<td>Mass</td>
<td>Not mass-enabled</td>
<td>Mass-enabled API</td>
</tr>
<tr>
<td>Functions</td>
<td>Restrictions (see SAP Note 2461516)</td>
<td>Simplified back-end features to reduce complexity; detailed information about included/excluded features in SAP Note <a href="#">2479869</a></td>
</tr>
<tr>
<td>CR Types</td>
<td>Predelivered CR Types: MAT01, MAT02, MAT06, MAT0A, MAT0B</td>
<td>Predelivered CR Types: MATL01, MATL02, MATL0A, MATL0B, MATLCLF</td>
</tr>
</tbody>
</table>
Function in Detail: Material Processes
Lean Classification

Usage of lean classification in MDG-M can be configured using change request type:

**Assign Classes**
List UIBB to assign multiple classes.

**Enter Characteristic Values**
Characteristics assigned to selected classes are visible in one row and can be filled with a value. You can use the icon to clear the value.

**Multiple Values Characteristics**
Multiple value characteristics are also visible in one row and can be recognized by ‘+’ and ‘-’ icons. You can use these icons to insert or delete rows.
Function in Detail: Material Processes
Lean Classification Features and Restrictions

Supported Features
- Derivations using BAdI CROSS_ENTITY_BADI (incl. defaulting for class types and classes)
- Checks using BRFplus
- Authorizations (incl. display authorization)
- Change Documents
- Multiple class types and class assignments
- Characteristic values: Single or multiple values, additional values, intervals, mandatory checks (required entry)

Restrictions (not supported)
- Object dependencies (preconditions, actions, selection condition, procedures)
- Overwriting of characteristic values and overwriting of inherited values
- Engineering Change Number

You can find detailed information about included/excluded features in SAP Note 2479869.
Function in Detail: Material Processes
Mark Material for Deletion

- Mark a single material for deletion
- Or set the flag on an org 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 are made.
## Function in Detail: Fiori Apps for MDG Material

The following SAP Fiori Applications are part of SAP MDG 9.0 and SAP S/4HANA 1610

<table>
<thead>
<tr>
<th>MDG Fiori Applications</th>
<th>Back End</th>
<th>Front End (UI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDG Fiori Request Applications</td>
<td>Lean Request for MDG Material</td>
<td>MDG7.0 SP07 Onwards OR MDG8.0 SP01 Onwards OR MDG 9.0 Onwards</td>
</tr>
<tr>
<td></td>
<td>Track status of My Requests</td>
<td></td>
</tr>
<tr>
<td>MDG Fiori Approve Applications</td>
<td>Approve Material</td>
<td>MG8.0 SP02 Onwards OR MDG 9.0 Onwards</td>
</tr>
</tbody>
</table>
Function in Detail: Fiori Apps for MDG Material
Request New Material

New Material

Reason for Request: New pump request
Material Number: T-CP.01
*Material Description: Centrifugal Pump 3 m3/hr
*Unit of Measure: EA (each)
Additional Information: Pump Class 1, Full product capacity 3 cubic meters/hour discharge
Function in Detail: Fiori Apps for MDG Material

Approve Material

Approve New Material

Approve Changed Material
Function in Detail: Processing Multiple Materials
When to Use What

Multi-Record Processing
• Well-defined governance process with multiple workflow steps
• Typically, a collaboration of multiple processors
• Governance processes exist for single and multiple objects
  Examples:
  • New global contract leads to changes in multiple materials, supervisor checks and approves changes
  • MRP controller checks his materials and changes stock-relevant data, production supervisor needs to agree

Mass Processing
• Interactive master data change process
• Typically ad-hoc/on-request/project-based processing by one data specialist
  Examples
  • Set distribution chain status of all materials of a closed sales organization
  • Exchange MRP controllers
Function in Detail: Processing Multiple Materials

Multiple-Record Processing

- Change selected materials when navigating from the search UI to the multiple-record processing application
- Copy multiple materials with sub-objects when navigating from the search UI to the multiple-record processing application
- Combined maintenance of different entity types
- List and Form UIBBs are supported
- Example UI configurations and Customizing delivered by business configuration sets
Function in Detail: Processing Multiple Materials

Multiple-Record Processing Features

- Add, copy and change materials, language-dependent texts and organizational data in a change request
- Delete, remove and discard changes possible, with highlighting
- Copy with reference
- Create MuRP Change Request without selecting objects
- Add existing objects with New Button
- Several operators available in context menu (e.g. select rows with identical value)
- Highlighting changes with different colors
  - Saved changes
  - Current changes
Function in Detail: Processing Multiple Materials

Multiple-Record Processing Features: Button for Highlight Changes

The button Highlight Changes (delivered in some template UI configurations) allows the user to toggle the highlight changes function in Multi-Record Processing.

At startup, the highlighting of changes is always switched off.

This may enhance UI performance in certain cases.

For more information, see SAP note 2547067 - MR Processing: Switch "Highlight Changes" and How-To Guide Create User Interface for Multiple-Record Processing.
Describe the scope of your change by choosing the fields that you want to change.

Enter search criteria to select the master data objects that you want to change. The system copies the data to a staging area for processing.

Edit the data using a tabular UI by changing single or multiple fields at a time. Verify your changes based on statistical information provided by the system.

The system checks the validity of the data in the background. Verify the validation results and correct the data if necessary.

The activation releases your changes from the staging area, so that the updated data is used in business processes.
Mass Processing
Effective process to execute mass changes for attributes

In a nutshell…
Highly effective mass change process enabling master data stewards to perform bulk changes in business partner, customer, supplier, and product data.

Business value
- Highly effective data processing option for master data specialists
- Efficiently edit individual fields or make bulk changes by using a tabular UI with the ability to filter and sort data
- Confidence and transparency when changing large volumes of data through statistics, change indicators and ability to validate prior to activating changes
- Packaging, queuing, and parallelization contribute to enhanced performance even when processing large volumes of data
- Upload changed records from CSV or Excel® file to incorporate offline processing and other information sources
- Background execution enables users to close the application while processing continues. Users can check the status or proceed with their work later.
SAP Master Data Governance, **Consolidation**

**Process flow**

- **Data Load**
  - Open to SAP HANA smart data integration, non-HANA based SAP ETL mechanisms, non-SAP ETL options, or data import from file
- **Initial Check**
  - View loaded data and check data quality based on back-end Customizing
- **Standardize**
  - Validate and enrich address data
  - Possibility to connect to 3rd party tools for standardization and enrichment
  - Usage of BRF+ for standardization and enrichment
- **Match**
  - Find duplicates based on customer-specific matching rules
  - Review match result
- **Calculate Best Record**
  - Create “Best Records” based on approved match groups
  - BRF+ can be used for customer-specific Best Record Calculation
  - Review Best Record Calculation result
- **Validate**
  - Validate best records against back-end Customizing to verify whether records can be activated
  - Validate against ctrl. governance checks (BAdI, BRF+)
- **Activate**
  - Provide consolidated master data for analytical or operational use
  - Option to activate directly, or indirectly trigger post-processing using central governance

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See separate slide deck for details.
**Master Data Consolidation**

Create a single source of truth of your customer, supplier, and product data

**In a nutshell …**

**Highly effective data consolidation option for master data specialists seeking a single source of truth for customer, supplier, and product data.**

**Business value**

Enable consolidation for customer, supplier, and product data based on intuitive and flexible process with consumer-grade user experience through SAP FIORI user interface

- Highly effective data processing option for master data specialists
- Easy-to-use UI to visualize all data during a consolidation process (drill-down, show changes, match review, best record review)
- Confidence and transparency when loading large volumes of data through statistics, change indicators and ability to validate prior to activating the data
- Configurable matching capability to identify duplicates inside loaded records and against existing records
- Wizard-like UI to upload source data into the system
- Background execution enables users to close the application while processing continues. Users can check the status or proceed with their work later. Integration with MDG, central governance possible
SAP Master Data Governance, Data Quality Management*

**Process flow**

**Define Quality**
- Requirements are defined based on your company’s business processes
- Priorities are set according to value, impact, and quality evolution
  - Experts collaborate to define needed quality level and required checks
  - The system helps to identify additional meaningful rules

**Enter Quality**
- Ensure quality at point of entry
- Consider all entry-points: single changes, mass changes, load scenarios, in daily business, projects, …
  - Rule-based checks in all processes of SAP MDG

**Monitor Quality**
- Operational motivation: detect issues before processes fail
- Tactical: ensure progress and performance of current activities
- Strategic: enable achievements, define new initiatives
  - Easy to consume monitoring and trend reporting

**Improve Quality**
- Correct data and drive the correction process
- Fix data entry processes
- Evolve the definition of quality
  - Tools to fix data and to improve checks at point of entry

*) only available with SAP MDG on S/4HANA
Master data quality management*
Improve the quality of your business partner and product data

In a nutshell …
Business user application to define master data quality rules, striving for consistent usage across all points of entry and enabling data quality monitoring and remediation.

Business value

Central place for master data quality rules. Providing transparency on business aspects, usages and technical implementations, consistent quality definition, and continuous evaluation and monitoring

- Business partner and product master data covered as packaged applications, and platform for custom-defined objects
- Collaboratively describe, catalog, and implement rules for data quality evaluation
- Schedule quality evaluations, analyze evaluation results and initiate correction of erroneous data
- Get an overview on current data quality status and KPIs
- Allow for drill down analysis of data quality scores along multiple dimensions

\*) only available with SAP MDG on S/4HANA
MDG-M and MDQ Rule Adapter in Central Governance

As a master data steward, I want to use existing data quality rules for quality evaluation in change request processing as well.

Solution: Integration of Master Data Quality rules in Central Governance Change Request Processing

• Enable additional usage of rule for check in change request
• Reuse of the same rule implementation
• Flexibility to independently enable rules for evaluation and check
• Open for custom implementation in the access class of MDG, central governance for custom objects

With the initial shipment of SAP S/4HANA 1909 only available for business partner master data (MDG-C, MDG-S, MDG-BP). With SP01 it is also available for MDG-M.
Function in Detail: MDG Framework Capabilities
Common Services of MDG for Material

Common services of change request processing

• Highlighting
• Mass change
• Support of parallel Change Request
• Additional Steps After Activation and Follow-Up Change Request
• Enrichment Spot
• Governance Scope
• Import Master Data
• Key Mapping and Value Mapping
• Worklists (My Change Request, Display Change Requests, Change Documents)
• Data Replication
• Process Reporting
Function in Detail: MDG Framework Capabilities
Highlight Changes: Field Changes

Highlight Saved Changes: Supports processor when deciding about next action.
Highlight Unsaved Changes: Provides information about what can be “undone”.
Saved changes and unsaved changes in two different colors.

Highlighting of Table Rows
Highlighted table rows refer to changes that you can only see when navigating from a table row to the details of a dependent entity.

Tooltip Information
Field tooltip shows previous value.
Function in Detail: MDG Framework Capabilities
Mass Change

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

• Now start the mass change and select your relevant materials by choosing Define Selection (Step 1) and Refine Selection (Step 2)

• Step 3: Replace one or more fields with one dedicated value

• Step 4: You can review the results and execute the change. If not yet done, you now need to assign an open mass change request that is assigned to you, or you can create a new change request
Function in Detail: MDG Framework Capabilities
Support of Parallel Change Requests (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
Function in Detail: MDG Framework Capabilities
Additional Steps After Activation

As a master data steward, I want to trigger additional workflow steps after the activation. This may include additional steps related to the object of the change request itself, and could also result in a follow-up change request as well (see IR 213267).

Solution: A user can now define additional steps after the activation step, if necessary. In other words, the workflow no longer has to end after a change request has been activated successfully.

Instead, after a change request has been activated, further actions can be performed to trigger additional dialog workflow steps. A workflow item for these additional steps can then be found in the workflow inbox of the user who has been assigned accordingly.

Note that this new feature is included in the single maintenance UI, however it is not available if you are using a CR for multiple objects involving the MASS, LOAD or HIERARCHY business activities, as these use a generic UI instead (USMD_CREQUEST_PROCESS).
Function in Detail: MDG Framework Capabilities

Follow-Up Change Request

As a master data steward, I want to define additional follow-up processes for object changes which are not part of the original change request (for technical or organizational reasons). Those follow-up change requests should be triggered automatically with reference to the existing change request.

As a master data steward, I want to be able to find the related change requests and to have transparency about the related master data changes.

Solution: Master data stewards can define additional follow-up processes that are not part of the original change request due to technical or organizational reasons using the existing How-To Guide. New links on the Change Request UI and in the My Change Requests screen allow them to call up previous change requests and follow-up change requests directly.
Function in Detail: MDG Framework Capabilities
Data Quality Framework for Data Enrichment Spots

Data Enrichment Spots

• Flexible framework to define enrichment spots
• Used by SAP, for example for Address Validation
• Can be used by customers to define further enhancement spots
Function in Detail: MDG Framework Capabilities

Governance Scope - Deactivate Entity Types / Fields

**Governance Scope**

- Only parts of the data model shall be put under governance
- Entity types / attributes can be excluded from governance
- Excluded entity types / attributes
  - Cannot be changed within a Change Request
  - Are displayed only within the UI; can be suppressed by changing the UI configuration
  - Can still be loaded to active area but not via CR / staging
  - Can easily be re-added to the governance scope afterwards
Function in Detail: MDG Framework Capabilities

Import Master Data

Material master data, Key Mapping 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 S/4HANA material master data (which is the active area). If data quality is good, the data can also be written directly into the active area.

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 Mapping 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
Function in Detail: MDG Framework Capabilities
Key Mapping and Value Mapping

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).

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 mapping and value mapping functionality offered with MDG
Function in Detail: MDG Framework Capabilities

Worklists

- **My Change Requests**

  ![SAP My Change Requests Page](image1.png)

- **Change Documents**

  ![SAP Change Documents Page](image2.png)

- **Display Change Requests**

  ![SAP Display Change Requests Page](image3.png)
Function in Detail: MDG Framework Capabilities
Data Replication for MDG Material, Outbound implementations

You can decide which outbound implementation you want to use in the replication models.

- **DRF outbound implementation I_MAT**
  The IDocs MATMAS (material) and CLFMAS (classification) are sent.

- **DRF outbound implementation I_MAT_V2**
  With the new outbound implementation, the IDocs DOLMAS (document assignment), ECMREV (change number and revision level) and MATQM (inspection lot) are sent in addition to MATMAS (material) and CLFMAS (classification).

- **DRF outbound implementation 194_3 (only S/4 HANA)**
  The ProductMDMBulkReplicateRequest_Out SOAP service enables you to replicate product master records from the SAP S/4HANA system to client systems.
You can decide if you want to enable direct replication or pooled replication for each combination of business object and target system. With direct replication the IDocs are sent with the activation of the change request, with pooled replication the IDocs are sent periodically using the DRF change pointer.

- **Direct Output**: Changes are directly transferred to a target system.
- **Pooled Output**: Changes are collected and transferred in a mass process at a later point in time.

You can trigger the mass process for pooled output by starting or scheduling the report Execute Data Replication (RDRF_MESSAGE_OUT) for the relevant replication models.
Function in Detail: MDG Framework Capabilities

DRF Replication Status Information

Replication Status Information

- Overview of replication status per material to all relevant target systems
- Status per target system
  - Green: OK
  - Yellow: OK, but answer from target system still pending
  - Red: Error occurred
- Detailed log per target systems available
Function in Detail: MDG Framework Capabilities

Process Reporting

- Definition of SLA: Maximum processing time per change request type and priority
- Reporting on change request duration and SLA compliance
Function in Detail: Master Data Process Overview for Products

Summary dashboard displaying relevant process information for Products
Function in Detail: Master Data Process Overview for Products

The cards on an Overview Page provide you with one-stop information on work due and the work done for the individual user as well as a set of processes:

- Users will be able to hide and unhide cards in the OVP depending on their needs
- Change-Request-related information as a trigger to work on change requests requiring my attention (open CRs, long-running CRs, rejected CRs)
- Average processing times of change requests to improve processing times
- Completed CRs and upcoming workload (i.e. open CRs)
- Consolidation processes and the status of these processes / which require my attention
- Quality of Mass Processing (number of objects per process, no. of changed objects, runtime per process and no. of objects, validation status and threshold)
Function in Detail: Change Request Analysis for Products
SAP Fiori Analytical List Page floorplan (ALP)
Function in Detail: Change Request Analysis for Products

Change Request Analysis apps offer one-stop information and a highly flexible analysis tool for change request root cause analysis, monitoring process quality issues related to change requests using various drill-down dimensions.

Change Request Analysis allows you to:

- Analyze change request processes using different drill-downs on dimensions, such as status, priority, and business object type.
- Use graphical or compact filters for selecting your change requests, time-frame, status … to analyze the process data
- Keep track of the average change request processing time
- Navigate to the selected change request
Agenda

Introduction

SAP Master Data Governance Capabilities

SAP Master Data Governance Principles

Function in Detail

Integration Scenarios

Solution Benefits
Integration Scenarios

Integration with Inbound Product SOAP
Integration with SAP Product Content Hub
Integration with SAP Product Lifecycle Management
As a master data steward I want to follow up on the CR which was created using SOA Service (ProductMDMBulkReplicateRequest).

Solution: According to a specific DRF Customizing, a Change Request is automatically created if an SOA service is received. It is also possible to trigger a Consolidation process or directly posting to the active area.

- If the material doesn't exist yet, the default Change Request Type for the new Business Activity MATI with logical action CREATE_DX is used.
- If the material exists already, the default Change Request Type for the new Business Activity MATU with logical action CHANGE_DX is used.
- If multiple materials are sent, the default Change Request Type for the new Business Activity MATB with logical action LOAD is used.

The new Business Activities MATI and MATU and new the Change Request Types MATL0I (SOAP Product Inbound: Create Material) and MATL0U (SOAP Product Inbound: Change Material) are delivered with BC set MDGM_MDG_MATERIAL_CR_SOAP_09.
SAP MDG-M and SAP Product Content Hub

Joint Value Proposition

SAP MDG provides central governance of master data across the product, supplier, customer, financial and custom domains.
SAP Product Content Hub is a PIM (Product Information Management) product.
For many customers looking for a complete EIM solution in the product space, both solutions are needed.

- MDG provides detailed governance, control and data quality over the creation and update of data used in transactional, analytical and reporting systems.
- SAP Product Content Hub provides product catalogs and other PIM functionality.

A joint positioning of these products in a customer’s landscape will provide complementary benefit to our customers and a complete product data management solution.

- MDG will govern and control core data in a landscape. For data needed in a product catalog, MDG will feed SAP Product Content Hub for further enrichment and for catalog management.
- External data can (optionally) feed SAP Product Content Hub directly if it is not needed in transactional, analytical and reporting systems.

SAP’s other EIM tools will provide support from an overall landscape perspective.
## SAP MDG-M and SAP Product Content Hub

### Decision Indicators for Product Data Management

<table>
<thead>
<tr>
<th>Situation</th>
<th>Initial Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Most typical scenario:</em> Company runs Business Suite, has e.g. own production or goods logistics, maintains product data (partly) themselves, and needs PIM capabilities, e.g. catalogs</td>
<td><strong>MDG-M and Product Content Hub</strong></td>
</tr>
<tr>
<td><em>Special ERP focus scenario:</em> Company runs Business Suite, has no need for rich product information handling, is not going into eCommerce</td>
<td><strong>MDG-M</strong></td>
</tr>
<tr>
<td><em>Special eCommerce focus scenario:</em> Company resells goods from other suppliers, acquires product data from suppliers and uses catalogs or multi-channel eCommerce tools, without need to manually maintain product data, without running own warehouse logistics or production</td>
<td><strong>Product Content Hub</strong></td>
</tr>
</tbody>
</table>
SAP Product Lifecycle Management and SAP MDG-M

Joint Value Proposition

SAP PLM allows customers to manage their product data along the entire product lifecycle from idea through portfolio management, engineering, release processes and costing, to handover to manufacturing and service.

SAP MDG provides central governance of master data across the material, supplier, customer, financial and custom domains.

For many customers looking for a complete solution in the product space, both solutions are needed.

- SAP PLM orchestrates the processes of managing product data
- MDG provides detailed governance, control and data quality over the creation and update of material data used in transactional, analytical and reporting systems.

A joint positioning of these products in a customer’s landscape will provide complementary benefit to our customers and a complete product data management solution.
SAP PLM and SAP MDG-M
Process Integration Scenarios

- Enablement for PLM integration scenarios:
  - PLM Engineering Record
  - Create New Material
  - Change Existing Material
  - Check Status Change Request

- CAD Desktop
  - Create New Material
  - Change Existing Material

- Available as SAP Consulting solution
- Concept reusable for integration into other objects
Agenda

Introduction

SAP Master Data Governance Capabilities

SAP Master Data Governance Principles

Function in Detail

Integration Scenarios

Solution Benefits
SAP Master Data Governance
Consistent high-quality master data for your entire organization

SAP Master Data Governance is a state-of-the-art master data management application, providing preconfigured, domain-specific master data governance to monitor and remediate eventual data quality issues, to centrally create, change, and distribute, or to consolidate master data across your complete enterprise system landscape.

There are two versions: SAP Master Data Governance on SAP S/4HANA and SAP Master Data Governance (technically on SAP ERP 6.0).

Central governance or consolidation for consistent master data
- Enables centralized governance, compliance, and transparency of master data during creation and change through integrated staging, approval, and central audit trail
- Delivers consistent definition, authorization, and replication of key master data entities
- Eliminates error-prone manual maintenance processes for master data in multiple systems
- Supports consolidation of decentralized master data in any enterprise system landscape to create best records and key mapping between duplicates
- Optionally combines consolidation with central governance for sustained master data quality

Data quality
- Analyze process quality, manage and monitor data quality, and optionally integrate with SAP HANA smart data quality, SAP Cloud Platform Data Enrichment, or SAP Data Services for quality, enrichment, and remediation

Integration and reuse
- Native integration and openness to integrate 3rd-party services
- Reuse of SAP data model, existing business logic, and configuration for data validation
- Open application to manage your own master data flexibly also for non-SAP environments
SAP MDG, Central Governance for Material Data
Integrated, Centralized Product/Material Data for Process Excellence

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
- Worklists 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 and multi-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
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 into a framework for defining business rules
- Full integration to SAP systems and integration services for non-SAP systems
- Deliver roles on a web-based UI
- Deliver a Data Model proven by several applications & industries
- Reuse of existing processing logic and 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
- Worklists (My Change Request, Display Change Requests, Change Documents)
- Duplicate Check
- Data Replication with Key Mapping and Value Mapping
- File Upload / Initial Load
- Extensibility of Data Model & User Interface
- Deployment on top of operational SAP system or as standalone hub
Appendix: Customer Connection and Downport
Customer Influence Site – The Collaboration Platform
Customer Connection

Global co-operation of customers for Master Data Governance via projects using the Customer Influence site:

- **Search** and **Vote** for improvement requests
- **Submit** your own improvement request(s)
- Comment on improvement requests
- Follow improvement requests (get notified)
- Choose your areas of interest to be notified about any projects that might interest you in the future.
- Collaboration language is English
- Current running project:

http://influence.sap.com/mdg2019

http://influence.sap.com/mdg
## Details and Demos for MDG Improvements

<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Note/SP/Release</th>
<th>Lowest Releases</th>
</tr>
</thead>
<tbody>
<tr>
<td>213153</td>
<td>Google like search in MDG</td>
<td></td>
<td>How-To Guide <a href="#">Enterprise Search in MDG</a></td>
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<tr>
<td>213216</td>
<td>Auto-resizing of columns in the MDG Duplicate pop-up screen</td>
<td>SAP Note 2667744</td>
<td>From S/4HANA 1511 and from MDG 6.1</td>
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<tr>
<td>212427</td>
<td>Workflow Tracker</td>
<td>SAP Note 2765664</td>
<td>From S/4HANA 1511 and from MDG 8.0</td>
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<tr>
<td>213090</td>
<td>End of Workflow</td>
<td>SAP Note 2765664</td>
<td>From S/4HANA 1511 and from MDG 8.0</td>
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<td>212952</td>
<td>MDG: Out of the box application to search CRs by business data</td>
<td>SAP Note 2765664</td>
<td>From S/4HANA 1511 and from MDG 8.0</td>
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<td>Preferred Language for Material Description in Search Result List</td>
<td>SAP Notes 2769462 and 2645144</td>
<td>From S/4HANA 1511 and from MDG 8.0</td>
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<tr>
<td>212940</td>
<td>MDG-M: Price Unit should be editable via MDG-M</td>
<td>SAP Note 2765664</td>
<td>From S/4HANA 1511 and from MDG 8.0</td>
</tr>
</tbody>
</table>

**Demo for**
- Google-Like Search in MDG
- Autoresize Duplicate Popup
- Additional Steps After Activation
- Change Request Tracker
- Follow-Up Change Request

**Demo for**
- Out-of-the-Box CR Search
- Improved Error Message Handling for MDG-BP/C/S
- Change Request Tracker

**Demo for**
- Preferred Language Order
- Production Resource/Tool (PRT)
- Price Unit Editable
The new functions are listed below. The corresponding SAP Notes will be published in this list once they are released, so please check for updates of this SAP Note. For related documentation, please see the attached PDF file (will be updated on an ongoing basis).

<table>
<thead>
<tr>
<th>Function</th>
<th>SAP Note</th>
<th>Switch</th>
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<tr>
<td>Change request tracker</td>
<td>2765574</td>
<td>MDG_CC_1909_212427</td>
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<tr>
<td>Additional steps after activation / end of workflow</td>
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<td>MDG_CC_1909_213090</td>
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<tr>
<td>Search CRs by business data</td>
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<td>MDG_CC_1909_212952</td>
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<tr>
<td>Pre-set data model in role menu</td>
<td>2768697</td>
<td>MDG_CC_1909_213554</td>
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<tr>
<td>Price unit editable</td>
<td>2790069</td>
<td>MDG_CC_1909_212940</td>
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<tr>
<td>Improve error handling in the UI</td>
<td>2804605</td>
<td>MDG_CC_1909_212430</td>
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https://launchpad.support.sap.com/#/notes/2765664
## More information

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<td>Key Presentations</td>
<td><a href="https://blogs.sap.com/2012/03/14/find-the-up-to-date-presentations-on-sap-master-data-governance/">https://blogs.sap.com/2012/03/14/find-the-up-to-date-presentations-on-sap-master-data-governance/</a></td>
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<td>Online Help SAP MDG in S/4HANA</td>
<td><a href="https://help.sap.com/viewer/6d52de87aa0d4f6a90924720a5b0549/latest/en-US/56a57357f2b1aa6be10000000a4450e5.html">https://help.sap.com/viewer/6d52de87aa0d4f6a90924720a5b0549/latest/en-US/56a57357f2b1aa6be10000000a4450e5.html</a></td>
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<td><a href="https://help.sap.com/MDG">https://help.sap.com/MDG</a></td>
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<tr>
<td>Innovation Discovery</td>
<td>[<a href="https://go.support.sap.com/innovationdiscovery/#/innovations">https://go.support.sap.com/innovationdiscovery/#/innovations</a> with product SAP Master Data Governance in Data Management](<a href="https://go.support.sap.com/innovationdiscovery/#/innovations">https://go.support.sap.com/innovationdiscovery/#/innovations</a> with product SAP Master Data Governance in Data Management)</td>
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Thank you.

Contact information:

Master Data Strategy, SAP Product Management

Join online:
MDG Community Network:  https://www.sap.com/community/topics/master-data-governance.html