Master Data Governance for Material

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Icon	Meaning
	Caution
	Example
	Note
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	Syntax

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Typographic Conventions

Type Style	Description
Example text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
`Example text`	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example text`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE TEXT`	Keys on the keyboard, for example, `F2` or `ENTER`.

Master Data Governance for Material

Master Data Governance for Material enables you to monitor and control the creation, editing, and deletion of material master data.

This documentation provides the information you require to set up Master Data Governance for Material. It supplements the information provided in Customizing as well as the information about activities that you need to execute in addition to configuring Customizing settings.

1 Configuring Master Data Governance for Material

To use SAP Master Data Governance (MDG) for material, you need to carry out the steps described below.

Prerequisites

Business Function

You have activated the following business functions:

- Master Data Governance, Generic Functions (`MDG_FOUNDATION`)

- Master Data Governance, Generic Functions 2 (`MDG_FOUNDATION_2`)

- Master Data Governance, Generic Functions 3 (`MDG_FOUNDATION_3`)

- Master Data Governance, Generic Functions 7.0 (`MDG_FOUNDATION_4`)

- Master Data Governance, Generic Functions 7.0 Feature Pack (`MDG_FOUNDATION_5`)

    > **i**
    >
    > This business function is available with support package 02 and higher of MDG 7.0.

- Master Data Governance for Material (`MDG_MATERIAL`)

- Master Data Governance for Material 2 (`MDG_MATERIAL_2`)

- Master Data Governance for Material 3 (`MDG_MATERIAL_3`)

- Master Data Governance for Material 7.0 (`MDG_MATERIAL_4`)

- Master Data Governance for Material 7.0 Feature Pack (`MDG_MATERIAL_5`)

    > **i**
    >
    > This business function is available with support package 02 and higher of MDG 7.0.

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Before you activate the business functions, ensure that you have the administration authorization for MDG. The required authorization objects are delivered with the authorization role `SAP_MDG_ADMIN`. In transaction `PFCG`, we recommend creating a copy of this role and assigning the relevant authorization values. For the authorization object `USMD_DM` *Data Model* you need to assign the values for the authorization field `USMD_MODEL` *Data Model* (for example `MM`, `BP`, or `0G`) and the values for the authorization activity `ACTVT` *Activity* (for example 01: Create or generate, or 02: Change).

If you want to use Enterprise Services to load data into the active or staging area of the hub, activate the business function `ERP_MATERIAL_SOA`. For additional BCV Content activate business function `/BCV/NWBC_SIDEPANEL`. If you want to use the MDG for Material homepage or the Business Context Viewer, activate the business functions `/BCV/MAIN` and `/BCV/MAIN_1`. For more information on the Business Context Viewer see, Business Context Viewer in Single Processing [External].

When you activate the `MDG_Material` business function the system activates the Material (`MM`) data model. Before continuing with system configuration, open transaction `SFW5` and check if the activation has been completed by choosing *Switch Framework Logs* from the *Goto* menu and selecting the corresponding entry.

Set Up Workflow

To use the rule-based workflow processes of MDG for material, you have defined general settings for SAP Business Workflow [External] in Customizing for SAP NetWeaver under ▶ *Application Server* ▶ *Business Management* ▶ *SAP Business Workflow* ◀. Remember to regenerate the authorization profile of SAP_ALL or include USMD* authorization objects into the authorization for the user WF-Batch.

To activate the workflow features, use the semi-automated configuration in transaction `SWU3`. You can also access these settings in Customizing under ▶ *SAP NetWeaver* ▶ *Application Server* ▶ *Business Management* ▶ *SAP Business Workflow* ▶ *Maintain Standard Settings* ◀

For further information see the documentation for the Configuration activity. Note the following when maintaining the settings:

- When configuring the RFC destination you need superuser authorization to create the default WF-BATCH user.

- Regenerate the authorization profile for SAP_ALL or include the USMD* authorization objects into the authorizations of the user WF-Batch.

- For the *Check Entries from HR Control Tables* section you may need to execute report RHSOBJCH in transaction `SE38` and keep the default settings.

- Maintain the prefix numbers for the standard objects.

- You do not need to maintain the Web Server node and Guided Procedures section.

Set Up Search

You must have installed and connected Enterprise Search either in embedded form or as central search engine service in order to use master data governance for material. If you don't need to search for classifications you can replace the Enterprise Search with the standard database search or another search provider.

Adjust Profile Parameters

Ensure that the profile parameter size for the *Shared Objects Memory* is the correct. To check this setting run transaction `RZ11` and verify that the value for parameter `abap/shared_objects_size_MB` is between 200 and 300 megabytes.

If you want to use the *SAP NetWeaver Business Client* with single sign on, ensure that the parameters `login/create_sso2_ticket` and `login/accept_sso2_ticket` are set correctly.

Use transaction RZ11 to check that the host name is fully qualified for parameter `icm/host_name_full`.

User Roles

In order to successfully conduct the next steps in the configuration process, you must have the following user roles assigned in the *PFCG* transaction:

- SAP_BC_TREX_ADMIN

- SAP_ESH_LOCAL_ADMIN

- SAP_MDGA_MENU – Master Data Governance: Analytics

- SAP_MDG_ADMIN – Master Data Governance: Administrator

  This role contains authorizations for basic tasks relevant to the configuration and administration of SAP Master Data Governance (MDG) for all domains. Some authorizations allow critical activities. If you have multiple users involved in the configuration and administration of MDG content, we recommend you split this role into several new roles and give each new role a subset of the authorizations for this role. Such an approach ensures users only complete tasks they are responsible for and reduces the risk of critical errors. Authorizations for the MDG transactions are not included in this role.

- SAP_MDGM_MENU_04 – Master Data Governance for Material: Menu [External]

- SAP_MDGM_DISP_04 – Master Data Governance for Material: Display [External]

- SAP_MDGM_REQ_04 – Master Data Governance for Material: Requester [External]

- SAP_MDGM_SPEC_04 – Master Data Governance for Material: Specialist [External]

- SAP_MDGM_STEW_04 – Master Data Governance for Material: Data Steward [External]

- SAP_MDGM_MENU_05 – Master Data Governance for Material: Menu [External]

- SAP_MDGM_DISP_05 – Master Data Governance for Material: Display [External]

- SAP_MDGM_REQ_05 – Master Data Governance for Material: Requester [External]

- SAP_MDGM_SPEC_05 – Master Data Governance for Material: Specialist [External]

- SAP_MDGM_STEW_05 – Master Data Governance for Material: Data Steward [External]

  The previous five roles are available with support package 02 and higher of MDG 7.0.

In addition, the authorization object `PLM_SPUSR` is needed if the *Search Object Connector* for enterprise search is created for the Enterprise Search Software Component `PLMWUI` or any Enterprise Search Software Component that includes `PLMWUI`. The role `SAP_PAGEBUILDER_DISPLAY` is required to use the *Page Builder* tool for accessing homepages created using *Page Builder*.

Web Dynpro Applications

For security reasons the services delivered for Web Dynpro applications are delivered in an inactive state. You must activate the services you want to use. Use transaction `SICF` to activate the services. For a detailed list of the relevant services, see Services to be Activated for Web Dynpro Applications [External].

Number Ranges

Use transaction `SNRO` to ensure that the objects below have the listed number range values:

Object	Interval number	From Number	To Number
MDG_BS_MAT	01	0000000000000001	9999999999999999
USMD_CREQ	01	000000000001	999999999999
DATLDLOGID (Only maintain if object exists in your system)	01	10000002	99999999

Process

This process describes the minimal set of customizing steps and recommended check activities required to do the following:

- Create materials

- Change materials

- Mark materials for deletion

- Process multiple materials

- Multiple-record processing

You run the settings for this process in Customizing under ▶ *Cross-Application Components* ▶ *Processes and Tools for Enterprise Applications* ▶ *Master Data Governance* ▶.

1. Activate the Data Model MM [Page 8]

2. Activate Business Configuration Set [Page 10]

3. Verify UI Modeling (Optional) [Page 10]

4. Set Up Search [Page 12]

5. Verify Data Quality and Search Settings [Page 14]

6. Configure Change Request Settings [Page 15]

7. Configure Workflow Tasks [Page 19]

8. Set Up the Rule-Based Workflow [Page 19]

Result

The system is configured for MDG for material. In addition, if data load has been done, mass changes and distribution to other systems can also be executed.

More Information

- For information on functional restrictions, see SAP Note 1701437.

- Master Data Governance Security Guide [External]

Impact of Material Master Customizing

Some Material Master customizing activities are relevant for Master Data Governance for Material:

- Under the *Configuring the Material Master* node, the activity *Define How Maintenance Statuses Are Determined in Data Transfer* impacts Master Data Governance for Material.

- Under the *Field Selection* node, all activities that change the field properties affect the field properties in Master Data Governance for Material. The field properties hidden, displayed, mandatory, and optional impact the Master Data Governance for Material fields.

- Under the *Basic Settings* node, all activities impact Master Data Governance for Material. Example settings include the output format of the material number and the material types.

- Under the *Settings for Key Fields* node, all activities impact Master Data Governance for Material. Example settings include the definition of material groups, and the settings for EANs.

- Under the *Data Transfer: Material Master* node, the activity *Define Required-Field Check for ALE/Direct Input* impacts Master Data Governance for Material. There you define how the material master for industry is updated if required fields not belonging to the core maintenance status lack entries.

1.1 Activate the Data Model MM

Check (or enhance) and activate the *MM* data model including temporary IDs for internal number handling.

1. Check whether you can use the data model delivered by SAP for managing your material master data with MDG for material.

   Activate the delivered data model *MM* in Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Data Modeling* ❯ *Edit Data Model* ▶.

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   You can select the governance scope at any point after you activate the Data Model. The governance scope determines which fields from the data model can be edited by the Master Data Governance application. Use this customizing activity to narrow the governance scope: ▶ *Master Data Governance* ❯ *General Settings* ❯ *Process Modeling* ❯ *Define Governance Scope* ▶

   By deactivating or reactivating an entity, a relationship, or an attribute you are not changing any dictionary or database object; you are only changing the ability of MDG to edit the chosen object. When you take a field out of governance scope it becomes read-only on the MDG UI and you may wish to remove it.

   You can use the Customizing activity *Import BC Set to Reset Governance Scope* to set the governance scope to the EHP6 model which contains only identifying and descriptive data.

   ### ⚠

   When upgrading to *MDG 7.0* check that the active and inactive versions of your data models are the same. Changes to the data models, not dependent on business function switches, may occur due to corrections made by SAP. You should check and activate all models after the upgrade to *MDG7.0* is complete. To do this navigate to ▶ *Master Data Governance* ❯ *General Settings* ❯ *Data Modeling* ❯ *Edit Data Model* ▶ and activate any data models that have the entry `Different` in the column *Active Version*.

2. Assign an internal key.

   To support internal key assignment, run the activity in Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Data Modeling* ❯ *Define Prefixes for Internal Key Assignment* ▶.

   Example: If you create new entries with the following values, all temporary IDs are prefixed with *$* and an internal sequence number.

   o   Data Model: MM

   o   Entity Type: MATERIAL

   o   Prefix: $

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   For MDG for material, authorizations cannot be defined here. Instead, the existing back-end authorizations are reused.

For more information, see Customizing under ▐ *Logistics – General* ❯ *Material Master* ❯ *Tools* ❯ *Maintain Authorizations and Authorization Profiles* ❯.

Other customizing activities in data modeling are only relevant for the material domain if your data model needs to be enhanced. For more information, see Enhancement of Master Data Governance Content [External] and Extending the Data Model for Master Data Governance for Material [Page 37].

1.2 Activate Business Configuration Set

For create materials, change materials, mark materials for deletion and process multiple materials there are example change request types available.

Open the document assigned to this activity in Customizing *Master Data Governance* under ▐ *Master Data Governance for Material* ❯ *Import Predefined Change Request Types* ❯.

Open the link in the document and check that the BC-Set `MDGM_MDG_MATERIAL_CREQUESTTYPE_4` is selected. For MDG 7.0, SP2 a new BC-Set is provided: `MDGM_MDG_MATERIAL_CREQUESTTYPE_5`.

To start, choose *Activate BC Set* and keep the default settings.

For *Multiple-Record Processing* there are example change request types available. Run the following activity under Customizing for Master Data Governance under ▐ *Master Data Governance for Material* ❯ *Import Predefined Change Request Types for Multiple-Record Processing* ❯. Check that the BC-Set `MDGM_MDG_MATERIAL_CR_MC_04` is selected. For MDG 7.0, SP2 a new BC-Set is provided: `MDGM_MDG_MATERIAL_CR_MC_05`. To import the BC-Set, open the document assigned to the configuration activity, choose *Activate BC Set*, and keep the default settings.

If you want to use the MDG for Material homepage or the Business Context Viewer (BCV) then activate the BC set `MDGAF_BCV` and `MDGMAT_BCV_70` under ▐ *SAP Menu* ❯ *Tools* ❯ *Customizing* ❯ *Business Configuration Sets* ❯ *Activation of BC Sets* ❯.

1.3 Verify UI Modeling (Optional)

UI configuration activities are only relevant if you want to change the UI or if the `MM` data model has been enhanced.

In this Customizing activity, you can specify if and where the system hides the entity types for the data model `MM`. Verify the pre-delivered field properties for the data model `MM` in Customizing under ▐ *General Settings* ❯ *UI Modeling* ❯ *Define Field Properties for UI* ❯. For data model `MM` only specific fields are disabled for some of the processes:

- Example: Material Type (`MTART`) and Material ID (`MATERIAL`) are not available as fields in mass change processes.

The Web Dynpro application and the application configuration in the PFCG role combine with settings made in Customizing to determine the UI displayed.

You need to verify the UI modeling for the following Web Dynpro application configurations:

Web Dynpro Application	Application Configuration	UI

`MDG_BS_MAT`	`BS_MAT_INIT_04`	Initial Screen
`MDG_BS_MAT_OVP`	`BS_MAT_OVP_04`	Process-oriented UI
`MDG_BS_MAT_OVP`	`BS_MAT_OVP_04H`	Hierarchical UI
`MDG_BS_MAT_SEARCH`	`MDG_BS_MAT_SEARCH_04`	Search UI
`MDG_BS_MAT_SEARCH`	`MDG_BS_MAT_SEARCH_04H`	Search UI with org-level details

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> For Master Data Governance for Material 7.0, Support Package 2 new application configurations are available: `BS_MAT_INIT_05`, `BS_MAT_OVP_05`, `BS_MAT_OVP_05H`, and `MDG_BS_MAT_SEARCH_05`. Context based adaptations (CBA) are available for the following application configurations: `BS_MAT_INIT_05`, `BS_MAT_OVP_05`, and `BS_MAT_OVP_05H`.

You can use context based adaptations (CBA) to influence the UI dynamically based on field values. CBAs are part of the component configurations. Context-based adaptations contain predefined values for dimensions. The predefined dimensions are: *Logical Action*, *Type of Change Request*, *Material Type*, and *Change Request Step*. These dimensions are defined in the schema `BS_MAT`. The predefined schema can be found in the view cluster `FPM_VC_ADAPT_SCHEMA` accessed through transaction `SE54`.

There are pre-delivered CBAs for the application configurations `BS_MAT_INIT_04`, `BS_MAT_OVP_04`, and `BS_MAT_OVP_04H`.

An adaptation is delivered for the action *Delete*. Some UIBBs are hidden and the Mark for Deletion flag is shown.

An adaptation is delivered for the change request type `MAT0A` (Load). In this case the UIBB containing the basic data contains the *Mark for Deletion* indicator to enable the user to check and adapt it. If you use another change request type for the same purpose you have to create your own adaptation.

CBA schema can be reused and enhanced with custom-defined dimensions. You can create your own schemas and UI configurations without modification. See the UI extensibility guides for more information.

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> You can view the Web Dynpro applications using transaction `SE80`. The package name is `MDG_BS_MAT_UI`.

If you want to restrict viewing and editing of the material description to the current logon language, see SAP Note [1750750](#). If you want to use *PDF* print forms you can activate the BC set `MDGM_MDG_MATERIAL_VC_USMD140_04`. This assigns the print form `MDG_BS_MAT_PDF_04` to the relevant UI configurations.

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> For Master Data Governance for Material 7.0, Support Package 2 a new BC set is available for print forms: `MDGM_MDG_MATERIAL_VC_USMD140_05`. This assigns the print form `MDG_BS_MAT_PDF_05` to the relevant UI configurations.

1.4 Set Up Search

MDG offers several options to search for the data in change requests including the active and inactive data. The search options are distinguished by their capabilities and their landscape requirements. The main difference is in their capability to include classification data in the search. These are the following options:

- SAP search engine-based search (*TREX* search) offers full search capabilities.

- As of Master Data Governance 7.0 SP2, Feature Pack you can use SAP HANA-based search to connect the MDG database to an SAP HANA-based system for search. See Configuring SAP HANA-Based Search for MDG [External] for more detail.

In MDG for material the default search provider is the SAP search engine based on TREX.

For TREX-based search are two search options available:

- Embedded Search (included in SAP NetWeaver on a local system)

- SAP NetWeaver Enterprise Search (run centrally)

Embedded Search is limited to indexing and searching within a single SAP system (single SAPSID). In production scenarios with heavy data load it is mandatory to install a separate `TREX` instance that is used exclusively by Embedded Search for performance and sizing reasons. For installation information for *TREX 7.1* see SAP note 1249465.

Embedded Search

If you want to use Embedded Search, run the following activity in Customizing for SAP NetWeaver under ▶ *Search and Operational Analytics* ▶ *Embedded Search* ◢.

If you are not familiar with TREX or TREX is not yet activated, proceed as follows to make the basic settings:

1. Connect to the TREX installation.

   During TREX installation, you created an RFC-destination for the TREX. Run transaction *SM59* in the TCP/IP connections section to verify that it exists and can be linked. Link the ABAP system to this TREX destination.

   For more information, see Customizing for SAP NetWeaver under ▶ *Search and Operational Analytics* ▶ *SAP NetWeaver Enterprise Search* ▶ *TREX* ▶ *Set TREX Destination* ◢.

   Alternatively, you can run report *ESH_ADM_SET_TREX_DESTINATION*.

2. Create and index the connectors.

   SAP delivers the following two standard templates for MDG for material. You need to activate these templates and prepare them for indexing.

   o Material (`MATERIAL`) – for the active data residing on the standard tables *MA** and related objects

   o Material Template for MDG (`MDG_MATERIAL`) – for the inactive material data linked to the MDG change requests

Open the Connector Administration Cockpit in Customizing for SAP NetWeaver under
▶ *Search and Operational Analytics* ▶ *SAP NetWeaver Enterprise Search* ▶ *Modeling, Administration, and Monitoring* ▶ *Open Administration Cockpit* ◀. Alternatively, you can run the transaction `ESH_COCKPIT`. Make the following settings:

3. To open the Modeler, select the *Modeler* link.

4. In the *Software Components* menu choose *Maintain Software Components* and choose *Create*. Enter the name for the new software component and assign a package. Choose *Create*. Enter a description for the new software component and choose *Save*. Select a workbench request.

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   >
   > The new software component is necessary to get all extensions of the template `MATERIAL`, which are made in the included software component. When creating the search connector for `MATERIAL` and you have installed both, the `MDG_APPL` software component and the `PLMWUI` software component, you have to decide in which software component the `MATERIAL` connector is created. This is because both, `MDG_APPL` and `PLMWUI` are parent software components of `SAP_APPL`. Both the `MDG_MATERIAL` template and the `MATERIAL` template are used in the MDG applications (which are related to the software component `MDG_APPL`). This requires that the related connectors are created in the software component `MDG_APPL`. However, applications related to the software component `PLMWUI` require, that the `MATERIAL` connector is created in the software component `PLMWUI`. However, as described above, each connector can only be created in one software component.
   >
   > To overcome this situation, you have to create a super component of `MDG_APPL` and `PLMWUI`. If you now create the `MATERIAL` or the `MDG_MATERIAL` connector, they are assigned to this new top level component. Related search templates can be used in all underlying software components.

5. Mark your new software component and choose in the *Software Component* menu select *Include Software Components*. Include the component `MDG_APPL`. Choose *Save* and select *Workbench Transport*. Repeat this process for the highest software component for the connector `MATERIAL`. For example, if the software layer hierarchy is `PLMWUI > EA-APPL > SAP-APPL` use the software component `PLMWUI` but if the software layer hierarchy is `EA-APPL > SAP-APPL` then use the software component `EA-APPL`.

6. Go back to the *Administration Cockpit* and select *Create*. Select the new software component and search for the template `MATERIAL`. Once you have located the template, create the connector for the *Enterprise Search*. Create the connector using the `MATERIAL` template first and wait for the job to complete before creating the connector using the `MDG_MATERIAL` template.

7. The two connectors *Material* and *Material Template for MDG* are now visible with the status preparing and or prepared. Select the *Material* connector and from the *Actions* menu select *Schedule Indexing*. On the new screen choose *Show Input Form*. Next, choose the option for immediate indexing and the recurrence period. You can also activate real-time indexing if the sizing, parameters, and performance of the system allow for this. Select all object types and choose *Copy Settings*. This copies the default settings from the

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input form to all object types. The status of the connector is changed to *Indexing*.

8. Ensure authorization indexing. Enterprise Search requires its own authorizations. Authorizations for all MDG users must be indexed on the *Enterprise Search* system. The system writes every new or changed user as an entry into the table `ESH_AU_USR_UPD` that contains the user IDs that have been changed since the last indexing of the technical object type `USER_AUTHORITY`.

The object type `USER_AUTHORITY` and other object types which do not support real-time indexing need to be regularly scheduled for indexing on the *Enterprise Search* system. The object type `USER_AUTHORITY` can be found in the connector *Material* or the connector `MDG_MATERIAL`. You cannot enable real-time indexing for `USER_AUTHORITY`.

Once indexing is complete the two connectors should have the status `Active`.

3. Use the report `ESH_TEST_SEARCH` to verify the search function. In the *Search Scope* section, enter a *Connector ID*. Next, enter `Default` in the *Request* field and execute the report.

   o The connector `MATERIAL` returns the active material master data.

   o The connector `MDG_MATERIAL` returns the inactive material master data. At least one active change request of type `MAT*` needs to exist with materials assigned to it, otherwise you will get a message that the search provider `MDG_MATERIAL` does not exist during the search and in the duplicate check of any change request where this is relevant.

For more information about TREX, see [Configuration of the TREX Security Settings](External) [External].

Search Engine Service

If you are running a central SAP NetWeaver Enterprise Search system and you connect other SAP NetWeaver systems with Embedded Search to the central system, follow the steps as described in Customizing for SAP NetWeaver under ▶ *Search* ▶ *Search Engine Service* ◢.

1.5 Verify Data Quality and Search Settings

In the delivered standard, the SAP NetWeaver Enterprise Search is used for MDG for material. In this step, you can verify the following:

* Existence of entry *ES* and that *Freeform*, and *Fuzzy* settings are activated

   This entry cannot be removed or deactivated (E-class entry delivered by SAP). You can verify these settings in Customizing for *Master Data Governance* under ▶ *General Settings* ▶ *Data Quality and Search* ▶ *Define Search Applications* ◢.

* The pre-delivered *Match Profile* for the `MM` data model is `MATCH_MM_MATERIAL`. You can find this *Match Profile* in Customizing for Master Data Governance under ▶ *General Settings* ▶ *Data Quality and Search* ▶ *Search and Duplicate Check* ▶ *Define Search Applications* ◢

   If you wish you can now define your own matching fields for calculating the potential duplicates and matching values.

- Configuration of the duplicate check

  If you want to run a duplicate check you have to assign the predelivered match profile
  MATCH_MM_MATERIAL or your own match profile to the MM data model and the
  MATERIAL entity type. Navigate to ▶ *General Settings* ❯ *Data Quality and Search* ❯
  Search and Duplicate Check ❯ *Configure Duplicate Check for Entity Types* ◀. For
  search mode ES and data model MM select the field *MPbased UI*. Thresholds are not
  considered.

  You can configure this check in Customizing for *Master Data Governance* under
  ▶ *Data Quality and Search* ❯ *Define Search Applications* ❯ *Configure Duplicate
  Check for Entity Types* ◀.

- Assignment of the delivered search object connector templates

  Ensure that for business object type *194 Material*, the delivered search object
  container *MDG_MATERIAL* and the MDG_APPL software component is assigned.

  You can check this in Customizing for *Master Data Governance* under ▶ *General
  Settings* ❯ *Data Quality and Search* ❯ *Assign Search Object Connector Templates to
  Object Types* ◀.

1.6 Configure Change Request Settings

Depending on your requirements you might want to adjust and enhance the default change
request values.

The following information describes the minimal settings for a basic governance process. For
more information about each customizing activity, see the relevant documentation for that
customizing activity.

1. Review and/or define which statuses the change requests can have, and which
   processing options are enabled for those statuses. Optionally, you can add new
   statuses to be used in the change request types.

   For more information, see Customizing for *Master Data Governance* under ▶ *General
   Settings* ❯ *Process Modeling* ❯ *Change Requests* ❯ *Edit Statuses of Change
   Requests* ◀.

   The following statuses are delivered for the SAP standard processes.

Status Value	Description	Permitted Processing
00	To Be Evaluated	Change of Object List
01	To Be Considered and Approved	Change of Object List
02	Changes to Be Executed	Execution of Changes
03	To Be Revised	Change of Object List
04	Final Check to Be Performed	No Processing
05	Final Check Approved	No Processing
06	Final Check Rejected	No Processing
07	Activation Failed	No Processing

08	Approved; to Be Replicated	No Processing
09	Dependent Data to Be Processed/Approved	Execution of Changes
10	To Revise: Perform Changes	Execution of Changes
11	Process Errors After Activation	Execution of Changes
12	Approved, Contact Person to be Processed	No Processing
99	No Status Set	No Processing

2. Check that the following business activities are in your system and that they are assigned to the default data model *MM*.

- o MAT1 Create Material

- o MAT2 Process Material

- o MAT3 Display Material

- o MAT6 Mark Material for Deletion

- o MATA Process Multiple Materials

- o MATB Import Material

- o MATM Multiple-Record Processing

For more information, see Customizing for *Master Data Governance* under ▶ *General Settings* ▶ *Process Modeling* ▶ *Business Activities* ▶ *Create Business Activity* ▶.

3. Create new change request types for data model *MM*, or validate after import using business configuration sets (BC-Sets).

For more information, see Customizing for *Master Data Governance* under ▶ *General Settings* ▶ *Process Modeling* ▶ *Change Requests* ▶ *Create Change Request Type* ▶.

The following table shows the change request types for data model *MM*. Only the relevant columns are included.

Change Request Type	Data Model	Description	Single Object	Main Entity Type	Workflow
MAT01	MM	Create Material	Yes	MATERIAL	WS60800086
MAT02	MM	Change Material	Yes	MATERIAL	WS60800086
MAT06	MM	Mark Material for Deletion	Yes	MATERIAL	WS60800086
MAT0A	MM	Process Multiple Materials	No	MATERIAL	WS60800086
MAT0B	MM	Import Material	No	MATERIAL	WS60800086
MATLMRP	MM	Multi Pro. for Planning Data (select)	No	MATERIAL	WS60800086
MATLPUR	MM	Multi Pro. for Purchasing Data	No	MATERIAL	WS60800086

		(select)			
MATLSAL	MM	Multi Pro. for Sales Data (select)	No	MATERIAL	WS60800086
MATLUOM	MM	Multi Pro. for Dimensions Data (select)	No	MATERIAL	WS60800086
MATMRP	MM	Multi Pro. for Planning Data (full)	No	MATERIAL	WS60800086
MATPUR	MM	Multi Pro. for Purchasing Data (full)	No	MATERIAL	WS60800086
MATSAL	MM	Multi Pro. for Sales Data (full)	No	MATERIAL	WS60800086
MATUOM	MM	Multi Pro. for Dimensions Data (full)	No	MATERIAL	WS60800086

The standard workflow template used by Master Data Governance for material is `WS60800086`. This template is a rule-based workflow which uses *BRF+* decision tables.

There is also a workflow template without *BRF+*, which covers the same processes. If you want to use this template, replace template `WS60800086` with template `WS46000057` in the relevant change request type.

The following settings should exist in the substructures of the change request types:

- o *MAT01*

    - Entity type: `MATERIAL, DRADBASIC, MATCHGMNG`

    - UI Config: `MDG_MM_APP_BS_MAT_GEN` (Only relevant for Enhancement Package 5)

    - Msg. Output: *W Issue Error Messages as Warnings*

    - Business Activity: Create Material (MAT1)

    - Service Level Agreement for Change Request Types: <leave empty>

- o *MAT02*

    - Same as for `MAT01`

    - Business Activity: Process Material (MAT2)

- o *MAT06*

    - Same as for `MAT01`

    - UI Config: `MDG_MM_APP_BS_DEL_GEN` (Only relevant for Enhancement Package 5)

    - Business Activity: Mark Material for Deletion (MAT6)

- o *MAT0A*

- - Same as for `MAT01`

    - UI Config: <leave empty>

    - Business Activity: MATA Process Multiple Materials

  - *MAT0B*

    - Same as for `MAT01`

    - UI Config: <leave empty>

    - Business Activity: MATB Import Material

  - *MATLMRP, MATLPUR, MATLSAL, MATLUOM, MATMRP, MATPUR, MATSAL, MATUOM*

    - Entity type: `MATERIAL`

    - UI Config: <leave empty>

    - Msg. Output: *Issue Error Messages as Warnings*

    - Business Activity: Multi-Records Processing (MATM)

    - Service Level Agreement for Change Request Types: <leave empty>

4. You can configure the properties of the change request steps. This is optional except for the Multiple-Record Processing change request types. For more information see Customizing for Master Data Governance under ▶ *General Settings* ▶ *Process Modeling* ▶ *Change Requests* ▶ *Configure Properties of Change Request Step* ▶.

   For the Multiple-Record Processing change request types you can find the link to the example UI configuration under the view *User Interface per Change Request Step.*

   For the change request types the following UI application names and configuration names are delivered for all steps using BC-sets:

Change Request Type	UI Application Name	Configuration Name
MATLMRP	MDG_BS_MAT_MC	MDG_BS_MAT_MC_MRP_DT
MATLPUR	MDG_BS_MAT_MC	MDG_BS_MAT_MC_PURCH_DT
MATLSAL	MDG_BS_MAT_MC	MDG_BS_MAT_MC_SALES_DT
MATLUOM	MDG_BS_MAT_MC	MDG_BS_MAT_MC_UOM_DT
MATMRP	MDG_BS_MAT_MC	MDG_BS_MAT_MC_MRP_IT
MATPUR	MDG_BS_MAT_MC	MDG_BS_MAT_MC_PURCH_IT
MATSAL	MDG_BS_MAT_MC	MDG_BS_MAT_MC_SALES_IT
MATUOM	MDG_BS_MAT_MC	MDG_BS_MAT_MC_UOM_IT

5. Optionally, you can define priorities, reasons, or rejection reasons for change requests. You can enter codes and a short description to tag or classify your change requests. These codes can be used later for change request analytics (process quality analysis). They also can be used to influence the workflow-driven processes. For example, depending on the priority of a change request, you can mark it for special processing.

Perform the following activity in Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Process Modeling* ❯ *Change Requests* ❯ *Define Priorities / Reasons / Rejection Reasons for Change Requests* ◢.

6. Optionally, you can define print forms for change requests. By default, the form *USMD_EDITION_CREQUEST* is used. This is relevant only if your own or multiple print forms are required.

   For more information, see Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Process Modeling* ❯ *Change Requests* ❯ *Define Print Form for Change Requests* ◢.

1.7 Configure Workflow Tasks

As a prerequisite you have made the necessary general settings for workflows and defined the organizational plan in Customizing for SAP NetWeaver under ▶ *Application Server* ❯ *Business Management* ❯ *SAP Business Workflow* ◢. Ensure that the active type linkages for Material (BUS2250) are set correctly. Follow the instructions in Customizing for MDG under ▶ *General Settings* ❯ *Process Modeling* ❯ *Workflow* ❯ *Activate Type Linkage* ◢. For object type BUS2250 check that the *Type Linkage Active* indicator is active for the events CREATED, ACTIVATED, and ROLLED_BACK. In addition, check that the *Enable Event Queue* indicator is active for the events ACTIVATED, and ROLLED_BACK, but not for the event CREATED.

The standard workflow template used by Master Data Governance for material is *WS60800086*.

In order to ensure the general assignment of processors using the rule-based workflow, run the following activity in Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Process Modeling* ❯ *Workflow* ❯ *Configure Workflow Tasks* ◢.

1. Go to application component *CA-MDG-AF* and choose *Assign Agents*.

2. Set the *Dialog Processing* (TS 60807954) task as a *General Task*, if it not already set. To do so, select the task, choose *Attributes* and change it to *General Task*.

Alternative procedure using the generic workflow maintenance transaction:

1. Run transaction SWDD

2. In the *Workflow* field, enter the workflow template WS60800086, the highest version is automatically chosen.

3. In the *Navigation* area go to step *000073 Dialog Processing* and select it.

4. In the *Task Properties* area, choose *Agent Assignment for Task*. Choose the *Agent Assignment for Task* button.

5. On the next screen select *Dialog Processing* and choose the *Attributes* button.

6. In the *Task* popup select *General Task* and choose *Transfer*.

7. Return to the *Task Properties* list and verify that the status icon beside *Agent Assignment* is green or yellow.

1.8 Set Up the Rule-Based Workflow

MDG for material uses advanced workflow capabilities by combining the SAP Business Workflow with the SAP Business Rule Framework plus (BRFplus) tool. This section describes how to activate and load the necessary settings for BRFplus.

Check that the steps for Rule-Based Workflow are imported by the BC-Set by running the following activity in Customizing: ▶ *General Settings* ❯ *Process Modeling* ❯ *Workflow* ❯ *Rule-based Workflow* ❯ *Define Change Request Steps for Rule-Based Workflow* ◢.

The following are the default steps required for all change request types:

Type of Change Request	Change Request Step	Keys	Successful Validation Required	Description
MAT01	0	Empty	Empty	Processing
MAT01	90	Empty	Checked	Final Check
MAT01	91	Empty	Empty	Activation
MAT01	92	Empty	Empty	Revision/Cancel BG
MAT01	93	Empty	Empty	Validation
MAT01	95	Empty	Empty	Revision Processing
MAT01	99	Empty	Empty	Complete

Due to technical restrictions further settings cannot be included in the BC-sets. Perform the following checks and take action as required:

1. Check for existing decisions tables and generate the decision tables and rules for each change request type either in Customizing or by running the system transaction USMD_SSW_RULE. If this step is not possible, go to step 2, otherwise go to step 3.

2. Export the content from client 000 and import it into your hub client.

3. Maintain your content in the decision tables, reflecting your governance process. You can use the pre-delivered SAP content as a starting point.

More detail on these steps is available below.

To activate and load the necessary settings for BRFplus proceed as follows:

1. Check for existing decisions tables and generate the decision tables and rules for each change request type in Customizing under ▶ *General Settings* ❯ *Process Modelling* ❯ *Workflow* ❯ *Rule-Based Workflow* ❯ *Configure Rule-Based Workflow* ◢

   Enter the change request types one after the other and choose the *Continue* button. After reviewing the decision tables you can leave this step without any further activities. If you get an error that the object is not available, proceed to the next step, otherwise skip to step 3. You can also makes these settings using the transaction USMD_SSW_RULE.

2. Export the content from client 000 and import it into your hub client.

   1. Call transaction BRFplus in the 000 client.

   2. Choose the *Personalise* button and then choose *Expert* from the drop-down menu in the *User Mode* field or activate the flag *Show Technical Aspects* on the *General* tab.

3. Search for the object USMD_SSW_CATA_MAT01 using the *Workbench* menu by choosing *Open Object*. Use the following values to search:

   ▪ Object Type CA: Catalog

   ▪ Name: USMD_SSW_CATA_MAT*

4. From the search result select USMD_SSW_CATA_MAT01

5. To export the content from client 000, select the application in the repository (not the catalog entry) then choose ▶ *Tools* ❯ *XML Export* ◢.

   Select the object and then select *Export XML for Entire Application* from the *Export XML* menu. Generate the XML file and download it. You can ignore the warnings on missing values not in the value list. The file size of each XML file should be approximately 101kb. The system may require you to assign the import to a transport.

6. To Import the content into your MDG main client run the BRFplus transaction, from the *Tools* menu choose *XML Import*, select your XML file, and choose *Upload File*.

7. Repeat these steps for all relevant change request types.

The structure import will also include the values in the three pre-delivered decision tables. For testing the standard workflow configuration you need to copy and activate the two entries in the DT_USR_AGT_GRP_MATXX from user ANZEIGER to one or two existing user IDs in your system.

     ⅈ

For the change request types for *Multiple-Record Processing* there are no *BRFplus* decision tables delivered. You can use the *Export To Excel* and *Import From Excel* functions in *BRFplus* to copy the decision tables from other change request types.

3. Maintain your content in the decision tables, reflecting your governance process. You can use the pre-delivered SAP content as a starting point.

     ⅈ

If you extend the BRFplus decision tables make sure that the status of the final step is set to *05 Final Check Approved* or *06 Final Check Rejected*.

The following are the minimal settings for the relevant change request types.

   o DT_SINGLE_VAL_MAT01

   o DT_NON_USER_AGT_GRP_MAT01

   o DT_USER_AGT_GRP_MAT01

DT_NON_USER_AGT_GRP_MAT01 and DT_SINGLE_VAL_MAT01 contain the automated steps and follow-up logic used by the BRFplus. The follow-up logic can either result in an automated step or in a user task that will be made visible as a workflow.

The users involved in the Master Data Governance process need to be included in table DT_USER_AGT_GRP_MAT01 so that they can receive and execute the workflow tasks. Maintain agents (for example the users or organizations in the Portal

Content and Portal Role Assignment sections of this document) for all change request types and their associated workflow steps. Each condition alias that appears in the DT_SINGLE_VAL_MAT01 table needs at least one processor, either automatic or user (group). Therefore, for all non-automated steps at least one entry needs to exist in DT_USER_AGT_GRP_MAT01.

Conduct this maintenance for all relevant change request types. Further details on the workflow concepts can be found here [Page 41]. The following change request types appear in the standard delivery: MAT01, MAT02, MAT06, MAT0A, MAT0B, MATLMRP, MATLPUR, MATLSAL, MATLUOM, MATMRP, MATPUR, MATSAL, MATUOM.

The following step types are pre-delivered by SAP:

Step Type	Short Description	Actions
1	Check Change Request	01 Agree; 02 Disagree
2	Approve Change Request	03 Approve; 04 Reject
3	Process Change Request	05 Finalize Processing; 06 Send for Revision
4	Revise Change Request	07 Resubmit; 08 Withdraw
5	Activate Change Request	09 Activate; 10 Send for Revision
6	Approve Change Request (Without Rejection)	03 Approve; 06 Send for Revision
7	Revise Change Request (Without Rejection)	05 Finalize Processing
8	Activate Change Request	09 Activate; 04 Reject

The following agent types exist:

User Agent Type	Short Description
US	User
O	Organizational Unit
C	Job
S	Position
AG	Role
SU	Special User (Value for requestor: INIT. Value for previous-step user: LAST.)

The following is the standard content pre-delivered by SAP:

DT_SINGLE_VAL_MAT01/2/6/A/B

Previous Step	Previous Action	Condition Alias	New Step	New Change Request Status
00 (Create Change	No value	1	90 (Final Check)	02 (Changes to

Request)				be executed)
90 (Final Check)	09 (Activate)	2	91 (Final Approval)	02 (Changes to be executed)
90 (Final Check)	04 (Reject)	3	95 (Revision Processing)	10 (To Revise: Perform Changes)
91 (Final Approval)	31 (Activation Successful)	4	99 (Complete)	05 (Final Check Approved)
91 (Final Approval)	<>31 (Activation Successful)	5	90 (Final Check)	11 (Process Errors After Activation)
92 (Revision/Cancel BG)	No value	6	99 (Complete)	06 (Final Check Rejected)
95 (Revision Processing)	07 (Request Again)	7	90 (Final Check)	02 (Changes to be executed)
95 (Revision Processing)	08 (Withdraw)	8	92 (Revision/Cancel BG)	02 (Changes to be executed)

DT_USER_AGT_GRP_MAT01/2/6/A/B

COND_ALIAS	AGENT_GROUP	STEP_TYPE	USER_TYPE	USER_VALUE
1;5;7	001	8 (Activate Change Request)	US	ANZEIGER
3	001	4 (Revise)	US	ANZEIGER

DT_NON_USER_AGT_GRP_MAT01/2/6/A/B

COND_ALIAS	AGENT_GROUP	PROCESS_PATTERN
2	001	06 (Activation (Bypass Snapshot))
4;6	001	99 (Complete (Sub-)Workflow)
8	001	08 (Roll back change request)

Notes

- o It is necessary to activate your new entries for each of the three decision tables.

- o The quickest way to allow users to participate in any workflow step for testing purposes is to copy the two default entries in the DT_USER_AGT_GRP_MAT01/2/6/A tables and change the entries as follows:

    - User Type: *AG* (Role)

    - User Value: *SAP_MDGM_MENU_04* (The MDGM role of PFCG/SU01)

- o If the system cannot find a processor for your change requests check the background steps of the change requests workflow log to see if a work item with the description *Set Status x for Change Request y* is in process or in error. If this is the case regenerate the authorization profile of SAP_ALL or include USMD* authorization objects into the authorization for the user WF-Batch.

- o Choosing the process pattern *06 Activation (Bypass Snapshot)* means that the material will be activated, even if the material record was changed in the backend system since the change request was created. Any backend changes are lost upon activation.

1.9 Set Up Data Transfer

Data Transfer allows you to move master data between systems. These systems can be clients or your main Master Data Governance (MDG) system. The first step of a data transfer is the export of the master data to an IDoc-XML file, which you can save locally or on your application server. In the second step, you import the data into your central MDG system. During the import step you can decide if you want the new master data to appear directly in the active area, or if you want to work with change requests and import the data to the staging area.

Data Export from Source System

To be able to export material master data, you need to configure the logical system for IDoc-XML export to the application server file system. The steps are as follows:

1. Create an XML-file port

   Use transaction *WE21* to create an XML-file port for IDoc processing. Ensure that you have network access from your local client to the directory configured in the XML-file port. Enter the port name, description, and the physical directory. Enter the function module `EDI_PATH_CREATE_CLIENT_DOCNUM`. On the Outbound Trigger tab enter the RFC destination `LOCAL_EXEC`.

2. Create Logical System

   Open transaction *SALE* and then go to ▶ *Basic Settings* ▶ *Logical Systems* ▶ to create a new logical system.

3. Maintain Distribution Model

   Open transaction *SALE* and then go to ▶ *Modeling and Implementing Business Processes* ▶ *Maintain Distribution Model and Distribute Views* ▶. You can also use transaction *BD64* for this.

   1. Switch to change mode and choose *Create Model View* to create a new entry. Enter a short text and a technical identifier.

   2. Choose *Add Message Type* for the newly created model. Enter a logical source system name and a destination system name and choose the message types `MATMAS` and `CLFMAS`.

4. Create Partner Profile

   Run transaction *SALE* and then go to ▶ *Partner Profiles* ▶ *Generate Partner Profiles* ▶. Alternatively you can use transaction *BD82*.

1. Select the newly created model using the input help for the technical name and then select the logical destination system.

2. Enter the authorized user and the following values:

   - *Version*: 3

   - *Pack.Size*: 100

   - *Output Mode*: Immediate Transfer

   - *Inbound. Processing*: Immediately

3. Choose Execute. You can ignore the port error that appears.

5. Call transaction *WE20* and make the following settings:

   1. Open the *Partner Type LS* folder and select the partner profile you created above.

   2. Update the message types *MATMAS* and *CLFMAS* in the *Outbound Parameters* section. The *Receiver Port* is the XML-file port from the first step above. In the *Basic Type* field enter MATMAS05 for *MATMAS* and CLFMAS02 for *CLFMAS*.

6. Test creation of IDOC XML

   1. Generate the IDoc-XML for material using the transaction *BD10*.

   2. Check the newly generated IDocs using transaction *WE02* or *BD87*. You can use the receiver port as the filter criteria in the *Partner Port* field.

   3. Use transaction *AL11* to find the XML files on the directory of your XML-file port.

   4. To download the file for analysis purposes to local directory use transaction *CG3Y*.

Data Import into Target System (MDG Hub)

If you want to use parallel processing for data import it is recommended that you register your queue name prefixes in the *QIN Scheduler* so that they are executed automatically and do not have to be manually activated each time. To register the queue name follow these instructions:

1. Run transaction SMQ2

2. Choose the *Execute* button. This shows the list of current queues.

3. From the *Goto* menu, select *QIN Scheduler*.

4. Choose the *Registration* button.

5. In the *Queue Name* field, enter a prefix for your queues. Add an asterisk after the name to allow you to add additional text to the prefix when scheduling the export or import. Enter additional details as required. For more information, see Registering the Inbound Queue [External].

6. Choose *OK*.

Your new queue has been registered and will execute automatically. You should inform those working with the *Import Master Data* service of the new queue name so that they can use it when creating new imports.

The IDoc-XML files contain the following fields in the header section:

Field Name	Field Description	Value
SNDPRT	Partnertyp	LS
SNDPRN	Sender Partner Number	Defined in step 3 below.
SNDPOR	Sender Port	Defined in step 1 below.
RCVPRT	Partnertyp	LS
RCVPRN	Receiver Partner Number	Defined in step 3 below.
RCVPOR	Receiver Port	Defined in step 1 below.

To be able to import IDoc-XML files the following set up activities need to be carried out:

1. Use transaction *IDX1* to create two ports in the IDoc adapter, one for sending and the other for receiving. Enter the port, client, description, and RFC destination for each port. Both ports should have the RFC destination of the MDG hub. Check that the port names match the names in your IDoc-XML file for the SNDPOR and RCVPOR, see table above for details.

2. In transaction *WE21* enter the receiver XML port using the same name as in step 1 above. Enter the port name under the folder XML File, and enter a description and a physical directory. In the function module field enter EDI_PATH_CREATE_CLIENT_DOCNUM. On the *Outbound:Trigger* tab, in the RFC destination field, enter LOCAL_EXEC.

3. In transaction *BD54* enter the sender and receiver partner numbers as logical system names.

4. In transaction *FILE* create the logical file path name. Enter a *Logical File* and a *Name*. In the Physical File field enter <PARAM_1>. In the data format field enter BIN. In the *Application Area* field enter CA. In the *Logical Path* field enter the logical file path.

5. Open the Configuration activity ▶ *General Settings* 〉 *Data Transfer* 〉 *Define File Source and Archive Directories for Data Transfer* ◢ and assign your new logical file path name as a directory for data transfer.

6. In transaction *AL11* make sure that the IDoc-XML files are stored under the logical path and that there are no other files stored in that directory. Double-click on the path to view the existing IDoc-XML file. You can use transaction *CG3Z* to copy a local IDoc-XML file to the path.

7. To test the data import, open the *Data Import* service from the *Material Governance* work center in the *SAP NetWeaver Portal* or *SAP NetWeaver Business Client*. For more information, see Data Import [External].

You can use the Monitor Data Transfer [External] application to get an overview of your data transfer processes.

1.10 Set Up Data Replication

For Master Data Governance for Material you have two options for replicating data from the MDG hub to the connected systems and clients:

- Data replication using Application Link Enabling (ALE)

- Data replication using Application Link Enabling (ALE) with the Data Replication Framework

For more information, see in Customizing under ▶ *Application Server* 〉 *IDoc Interface / Application Link Enabling (ALE)* 〉 *SAP Business Workflow* ◢.

Set Up Data Replication Using ALE

The following process describes briefly the minimal settings required for the two main message types *MATMAS* and *CLFMAS*.

1. Verify logical systems

   Run transaction *SALE* and choose ▶ *Basic Settings* 〉 *Logical Systems* ◢. Both clients (source and target) need to be defined as logical systems and need to be assigned to the relevant clients.

2. Check communication

   Run transaction *SALE* and choose ▶ *Communication* 〉 *Created RFC Connections* ◢. The target partner system has to be defined here as an ABAP connection with a connection type of 3 and with same name as the target logical system. Perform a connection test.

3. Maintain distribution model

   1. Run transaction *SALE* (Display ALE Customizing) and choose ▶ *Modeling and Implementing Business Processes* 〉 *Maintain Distribution Model and Distribute Views* ◢. Alternatively, run transaction *BD64* (Maintenance of Distribution Model).

   2. In change mode, create a new model.

      Choose the *Create Model View* pushbutton. Enter a short text and a technical name.

   3. Choose the *Add Message Type* pushbutton for the newly created model.

   4. Enter names for the logical source and destination systems and choose message type *MATMAS*.

   5. Repeat points 3 and 4 for message type CLFMAS

4. Create partner profile.

   1. Run transaction *SALE* and choose ▶ *Partner Profiles* 〉 *Generate Partner Profiles* ◢. Alternatively, run transaction *BD82* (Generate Partner Profiles).

   2. Select the newly created model and in the *Partner System* field, enter the logical destination system.

   3. Enter the ALE-User (the default value is ALEREMOTE) and the following values, and execute.

Field	Value
Version	3
PackSize	100

Output Mode	Transfer IDoc immediately
Inb. Parameters: Processing	Trigger Immediately

4.   To verify your settings, run transaction *WE20* and from the *Partner Profiles* menu, choose *Partner Type LS*. Verify that *Partner type LS* is the logical destination system.

5.   In the detail screen, the chosen message type *MATMAS/CLFMAS* should appear.

5.   Distribute model view to receiving system.

1.   Run transaction *SALE* and choose ▶ *Modeling and Implementing Business Processes* ❯ *Maintain Distribution Model and Distribute Views* ◢. Alternatively, run transaction *BD64*.

2.   Select the new model and choose ▶ *Edit* ❯ *Model view* ❯ *Distribute* ◢.

3.   Verify that the correct receiving system is marked and choose Enter.

4.   Verify within the receiving system that the model view was created.

6.   Create partner profile (in receiving client).

1.   Run transaction *SALE* and choose ▶ *Modeling and Implementing Business Processes* ❯ *Partner Profiles* ❯ *Generate Partner Profiles* ◢. Alternatively, run transaction *BD82*.

2.   Select the distributed model.

3.   Enter the ALE-User, and the following values, and execute.

Field	Value
Version	3
PackSize	100
Output Mode	Transfer IDoc immediately
Inb. Parameters: Processing	Trigger Immediately

4.   ⓘ

5.   If the protocol contains the error *Port could not be created* this can be ignored.

6.

7.   Check that the correct process code is being used. To do this go to the details for the inbound parameter message types and in *Inbound Options* check that the parameter *Process Code* is MATM for message type MATMS and is CLFM for message type CLFMAS.

You can test the distribution using transaction *BD10*. Verify the results in the receiving client using transaction BD87.

ⓘ

In the Configuration activity *Define Technical Settings for Business Systems* SAP recommends that you select the checkbox *Status System Filter* for the

Material business object. This ensures that if an object instance was previously sent to a target system, it continues to be sent in the future, independent of filter settings.

Set Up Data Replication Using ALE with DRF

In Master Data Governance for Material the replication of material master data from MDG Hub to connected client systems can be scheduled, triggered, and monitored using the Data Replication Framework (DRF) in concert with the ALE.

> **i**
>
> If you are using ALE and DRF together to replicate materials you can improve performance by deselecting the change pointers for the MATMAS message type. You can do this in the *Activate Change Pointers for Message Types* configuration activity. You should only do this if all your MDG systems are integrated using ALE and DRF together. If you use ALE without DRF in one or more connected systems do *not* disable the change pointers.

The following customizing is relevant for data replication:

- ALE (See *Set Up Data Replication Using ALE* above)

- Enterprise Search (See *Set Up Search* above)

- Key Mapping (See *Key Mapping* below)

- ALE Audit (See *Customizing for ALE Audit* below)

- Data Replication Framework (DRF)

The following process outlines the steps required to perform the customizing for the last three points above.

Customizing for Data Replication Framework (DRF)

1. Run transaction `DRFIMG` and navigate to ▶ *Enhance Default Settings for Outbound Implementation* ▶ *Define Parameters* ◢ to check if the outbound parameter `PACK_SIZE_BULK` is available.

   The following information should be available for this parameter:

Outbound Parameter	Description	Data Type	Value Length
PACK_SIZE_BULK	Package Size for Bulk Messages	Integer	10

2. Use transaction `DRFIMG` to check if the filter objects below have been defined. Select ▶ *Enhance Default Settings for Outbound Implementation* ▶ *Define Filter Objects* ◢ to view the filter object definitions. Check that the main filter object, `MDG_BS_MAT` is available.

3. Use transaction `DRFIMG` to check if the outbound implementation `I_MAT` has been defined. Select ▶ *Enhance Default Settings for Outbound Implementation* ▶ *Define Outbound Implementations* ◢.

   Choose *Assign Segment Filter Objects* and confirm that the following settings are made.

Type	Technical Name	Description

Segment Filter Object	F_MAT1	Plant segment of material
Segment Filter Object	F_MAT2	Sales segment of material
Segment Filter Object	F_MAT3	Storage segment of Material
Segment Filter Object	F_MAT4	Tax class segment of material
Segment Filter Object	F_MAT5	Valuation segment of material
Segment Filter Object	F_MAT6	Class segment of material

4. Define the technical settings for the business system.

    1. Enter transaction DRFIMG and navigate to ▶ *Define Custom Settings for Data Replication* ❯ *Define Technical Settings* ❯ *Define Technical Settings for Business Systems* ◢.

    2. In the *Business System* field specify the receiver system. In the *Logical System* field enter the Logical System used for IDoc communication. In the *RFC Destination* field enter the RFC destination to be used for RFC communication with the receiver system.

    3. Select the entry and click on *Define Bus. Systems, BOs*.

    4. In the *BO Type* field enter the business object type 194. In the *Description* field, enter a descriptive text.

    5. Select the entry and double-click on *Define Bus. Systems, BOs, Communication Channel*. In the *Communication Channel* field enter the means you want to use to transmit data to the applications. In the *Key Harm.* field specify if you want your keys harmonized between the hub and the client systems.

5. Create the replication model and assign it to the outbound implementation as follows:

    1. Enter transaction DRFIMG.

    2. Navigate to ▶ *Data Replication* ❯ *Define Custom Settings for Data Replication* ❯ *Define Replication Models* ◢.

    3. Select *Define Replication Model* and then select *New Entries*.

    4. Enter a replication model and a description. In the *Log Days* field, you may enter the number of days after which you want an Application Log to expire. In the *Data Model* field, enter MM.

    5. Select the newly defined replication model and choose *Assign Outbound Implementation*.

    6. Choose *New Entries*.

    7. Assign the outbound implementation I_MAT.

    8. Assign a target system for the outbound implementation I_MAT.

    9. Assign the outbound parameter PACK_SIZE_BULK to the outbound implementation I_MAT with the *Outbound Parameter Value* 5.

6. Save and activate the replication model.

1.11 Define Value Mapping

The elements for possible value mapping [External] are predelivered.

If required, you can define value mapping for elements such as, UoM, industry sector, material type, and others in Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Value Mapping* ▶. Material-specific key and value mapping Customizing activities can be found in Customizing for *Master Data Governance* under ▶ *Master Data Governance for Material* ▶

1.12 Define Key Mapping for Material Numbers

If you are working with multiple connected systems and did not consolidate the material keys during the initial load phase, key mapping [External] may be required.

You can define the system-specific mappings for the key value of the supplier in Customizing for *Master Data Governance* under ▶ *General Settings* ❯ *Key Mapping* ▶. Material-specific key and value mapping Customizing activities can be found in Customizing for *Master Data Governance* under ▶ *Master Data Governance for Material* ▶

The mapping definitions of the key mappings are conducted by any authorized user using the business transaction from the portal or the corresponding back-end transaction.

Customizing for Key Mapping

If you are working with multiple connected systems you may want to define or configure the key mapping between the MDG Hub and the client systems. Use the following steps to determine if the client system and hub system need to be key mapped or harmonized:

1. Enter transaction `DRFIMG` and navigate to ▶ *Define Technical Settings* ❯ *Define Technical Settings for Business Systems* ▶.

2. Select a business system and choose *Define Bus. Systems. BOs*.

3. Select *BO Type 194*.

4. Choose *Define Bus. Systems. BOs, Communication Channel*.

5. In the *Key Harm* column, check if the channel uses harmonized IDs or key mapping. If nothing is selected you may choose to set up key mapping if required.

ℹ

Key and value mapping must be performed once for each connected system where data is being replicated from MDG Hub system.

1.13 Define Key Mapping for Other IDs

The elements for key mapping are pre-delivered. If required, you can maintain key mapping for elements such as *Plant*, *Sales Organization*, and others in the *Material Governance* work center. To maintain the mapping in the *Material Governance* work center, in the *Data*

Exchange section open the *Data Replication* workset, and select *Create and Edit Key Mapping*.

1.14 Customizing for ALE Audit (Optional)

You can configure your client and hub systems so that your client systems send confirmation of replicated materials back to the MDG hub. Use the following steps to set up this confirmation process.

In the client system make the following settings:

1. Select Distribution Model

    1. Run transaction `BD64` and choose *Change/Display*.

    2. Select the distribution model you created above and choose *Add Message Type*.

    3. In the *Add Message Type* screen enter the following:

        ▪ In the *Sender* field, enter the logical system from which the acknowledgement is sent (The client system).

        ▪ In the *Receiver* field, enter the logical system to which the acknowledgement is sent (The hub system).

        ▪ In the *Message Type* field, enter `ALEAUD`.

    4. Choose *Ok*.

2. Select Partner Profile

    1. Run transaction `SALE` and choose ▌ *Partner Profiles* ❯ *Generate Partner Profiles* ▙. Alternatively, run transaction `BD82` (Generate Partner Profiles).

    2. Select the distribution model and in the *Partner System* field, enter the hub logical system name.

    3. Enter the *ALE-User* (the default value is `ALEREMOTE`) and the following values.

Field	Value
Version	3
PackSize	100
Output Mode	Transfer IDoc Immediately
Inb. Parameters: Processing	Trigger Immediately

    4. Click on the *Execute* button. The log for partner profile generation appears showing the new sender and receiver systems

    5. To verify your settings, run transaction `WE20` and from the *Partner Profiles* menu, choose *Partner Type LS*. Verify that *Partner type LS* is the logical destination system.

    6. In the detail screen, the message type, `ALEAUD` must appear.

---

7. In the *Inbound Options* tab, in the *Process Code* field enter `AUD2`.

8. Select the *Cancel Processing After Syntax Error* checkbox.

9. In the *Processing by Function Module* section, select the *Trigger Immediately* radio button.

10. Choose *Save.*

11. Run transaction `BD64`. Select the model view and select ▶ *Edit* ❯ *Model View* ❯ *Distribute* ◗. Select the Hub system and click *OK.*

In the hub system make the following settings:

1. Distribution Model

   1. Run transaction `BD64` and check that the same *Distribution Model View* with partner profile was created.

2. Partner Profile

   1. Run transaction `WE20` and check that the partner profile with logical name of the receiver system (Hub system) exists below the *Partner Type LS* folder.

   2. Select *Receiver Logical System* (Hub system) and choose *Change.*

   3. Choose *Create Outbound Parameter.*

   4. In the *Message Type* field enter `ALEAUD`.

   5. In the *Outbound Options* tab, in *Receiver Port* field, enter the logical system name for the client from which the status information is to be received.

   6. In the *Output Mode* list, select *Transfer IDoc Immediately.*

   7. In the *Basic Type* field enter `ALEAUD01`.

   8. Select the *Cancel Processing After Syntax Error* checkbox.

   9. Choose *Save.*

3. Configure DRF Customizing

   1. Run transaction `DRFIMG`.

   2. Navigate to ▶ *Data Replication* ❯ *Define Custom Settings for Data Replication* ❯ *Define Technical Settings for Business Systems* ◗.

   3. Select the receiver system (Hub system) and double-click on *Define Bus. Systems, BOs, Communication Channel.*

   4. Enter the business object type `194` and choose *OK.*

   5. Select the checkbox *Upd.KM.*

   6. Choose *Save.*

   ⓘ

   The inbound IDoc in the target system always accepts the material number sent in the IDoc, independent of the number range settings for the material type. Without additional coding it is not possible to force the target systems to create new material

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numbers. You can do this coding in enhancement spot `ES_SAPLMV02` in function module `IDOC_INPUT_MATMAS01`.

1.15 Choose where you want to run SAP Master Data Governance

You can run SAP Master Data Governance in either of the following environments:

- SAP NetWeaver Portal

- SAP NetWeaver Business Client

SAP NetWeaver Portal

The SAP NetWeaver Portal content for MDG for material is derived directly from the system `PFCG` roles. To create SAP NetWeaver Portal roles for your users you must log on to your portal and upload the content information from your back-end system `PFCG` roles.

To upload your portal content to the portal do the following:

1. Set up your SAP NetWeaver Portal for MDG.

2. In the *Content Administration* work center choose ❯ *Portal Content Managment* ❯ *Portal Content* ❯ and select a portal content folder to upload the portal content to.

3. Right-click on the folder and choose ❯ *New* ❯ *Role* ❯ *Role from Back End* ❯

4. Select the system and client (or the connected system alias) you want to upload the role information from. This should be your MDG system.

5. From the list displayed select the `PFCG` roles you want to upload the content from and begin the upload.

Once uploaded you must assign and personalize the MDG portal roles as follows:

1. Log on to the portal.

2. Choose *Delegated User Administration*.

3. Enter your User ID and choose *Go*.

4. Mark the line of your user and choose *Modify*.

5. Select the *Assigned Roles* tab.

6. Enter `MDG` as the search criteria.

7. Select the portal role you want to add.

8. Choose *Add* and save.

After assigning the user role you need to log off and log on again to the portal. For more information on uploading role information see SAP Note 1685257.

SAP NetWeaver Business Client

If you are running SAP Master Data Governance on the SAP NetWeaver Business Client (and not on the SAP NetWeaver Portal), you need to create, define, and configure the roles

for the Business Client in the SAP ERP system. There are four roles containing authorization and navigation information and one role (`SAP_MDGM_MENU_04`) containing only navigation information.

> **i**
>
> For Master Data Governance 7.0 Support Package 2, a new role exists for navigation: `SAP_MDGM_MENU_05`. Use this role below in place of the `SAP_MDGM_MENU_04` role if you have installed this support package.

To assign and personalize the role Master Data Governance for Material: Menu (`SAP_MDGM_MENU_04`) proceed as follows:

1. On the SAP Easy Access screen, choose ⧐ *Tools* ⧐ *Administration* ⧐ *User Maintenance* ⧐ *Role Administration* ⧐ *Roles* ⧐ or alternatively, run transaction `PFCG` (Role Maintenance). Choose role `SAP_MDGM_MENU_04`.

   This role ensures that the necessary steps can be started without using the SAP NetWeaver Portal. This can be used for testing or if the portal is inactive.

2. Assign and personalize the role `SAP_MDGM_MENU_04` to your users. In the role `SAP_MDGM_MENU_04` on the *Personalization* tab, edit the *Personalization Key* SAP Master Data Governance (`R_FMDM_MODEL`): Define the standard model MM and the related UI configuration.

3. Verify the setting of the authorization objects within the roles and restrict them if required.

4. On the SAP Easy Access screen, choose ⧐ *Tools* ⧐ *Administration* ⧐ *User Maintenance* ⧐ *Users* ⧐. Run transaction `SU01` (User Maintenance) and assign the Master Data Governance for Material: Menu role (`SAP_MDGM_MENU_04`) for application to the MDG user.

Repeat these steps to assign additional authorization roles to your users.

1.16 Final Steps

Before you can run Master Data Governance services like *Display Material*, you need to assign the data model *MM* to your user. Alternatively, the user administrator can update the following *Personalization Object* for your user profile: `R_FMDM_MODEL` and add the `MM` data model as your standard data model.

2 Data Model for Master Data Governance for Material

The data model for Master Data Governance for Material (MDG-M) is based on the SAP ERP material master. MDG-M supports the entire scope of material classification and many of the material master attributes. The MM model is ERP-specific and resides in the software layer `MDG-APPL`.

The MM data model contains three type 1 entities: MATERIAL (basic data), DRADBASIC (basic data for document link), and MATCHGMNG. MATERIAL and DRADBASIC each have one or more type 4 entities that describe it. See below for more detail.

Structure

Type 4 Entities for MATERIAL

The following are the type 4 entities describing the MATERIAL entity:

Entity	Description
BSCDATTXT	*Basic Data Text*
CLASSASGN	*Class Assignment*
INTCMNT	*Internal Comment*
MARASALES	*Material Sales Data*
MARAPURCH	*Material Purchasing Data*
MARAQTMNG	*Material Quality Data*
MARCWRKSD	*Plant Data Work Scheduling*
MARCSTORE	*Plant Data Storage*
MARCSALES	*Plant Data Sales*
MARCQTMNG	*Plant Data Quality Management*
MARCPURCH	*Plant Data Purchasing*
MARCMRPSP	*Plant Data MRP Stock Planning (View Procurement)*
MARCMRPPP	*Plant Data MRP Production Planning (View Material)*
MARCMRPMI	*Plant Data MRP Misc (View Manufacturing)*
MARCMRPLS	*Plant Data MRP Lot Size (View Lot Size)*
MARCMRPFC	*Plant Data MRP Forecast (View Planning)*
MARCFRGTR	*Plant Data Foreign Trade*
MARCFRCST	*Plant Data Forecasting*
MARCCSTNG	*Plant Data Costing*
MARCBASIC	*Plant Data Basic Data*
MARCATP	*Plant Data ATP*
MARDMRP	*Storage Location MRP Data for Material*
MARDSTOR	*Storage Location General Data for Material*
MBEWACTNG	*Material Accounting Data*
MBEWVALUA	*Material Valuation Data*

MBEWCSTNG	*Material Costing Data*
MEAN_GTIN	*International Article Numbers (EANs) for Material*
MLANSALES	*Tax Classification for Sales*
MLANPURCH	*Tax Classification for Purchasing*
MLGNSTOR	*Material Warehouse Management Data*
MLGTSTOR	*Material Storage Type Data*
MRPTXT	*Material MRP Text*
MPGDPRODG	*Material Data for Product Group*
MVKESALES	*Sales Data*
MVKEGRPNG	*Sales Grouping*
PURCHTXT	*Material Purchasing Text*
QINSPTXT	*Material Quality Inspection Text*
SALESTXT	*Material Sales Text*
UNITOFMSR	*Units of Measure for Material*
VALUATION	*Characteristic Valuation*

Type 4 entities for DRADBASIC

The following are the type 4 entities describing the DRADBASIC entity:

Entity	Description
DRADTXT	*Document Link Text*

Constraints

The MDG-M data model does not include further process controlling objects like routing, pricing conditions, or sources list. Forecasting and other process controlling data is not included in the MM data model.

3 Extending the Data Model for Master Data Governance for Material

You can extend the data model (MM) for Master Data Governance for Material (MDGM) with new entity types and attributes. You should extend the ERP material master data model before you extend the MM data model. This document contains information specific to enhancing the data model for MDGM; for more detailed information on the process, see the overall document on extending *Master Data Governance* content.

> **i**
>
> There is no need to create a customer access class for the data model MM. The MDGM data model, MM, is preconfigured with one reuse area: MATERIAL. This reuse

area points to the access class `CL_MDG_BS_MAT_ACCESS`, which can handle most fields of the pre-delivered SAP ERP Material Master.

The following scenarios for enhancing the MDGM data model are possible:

- Extend the MDGM data model by adding attributes that already exist as database fields in the pre-delivered or extended SAP ERP material master.

- Extend the MDGM data model by adding a reuse entity type that already exists as a database table in the pre-delivered SAP ERP material master.

- Extend the MDGM data model by adding a reuse entity type that exists as a database table that has been added to the pre-delivered SAP ERP material master.

- Extend the MDGM data model by adding a flexible entity type that only exists in the database tables in MDG.

Scenarios

Scenario: Adding an Attribute to the MDGM Data Model

You can extend the MDGM data model by adding an SAP ERP material master database field to an MDGM entity as an attribute. You can only add database fields that are part of the SAP ERP database tables (including customer-created fields); you cannot add customer-created tables that you added to the SAP ERP database. Use the following process to add an attribute to the MDGM data model:

1. Enhance the MDGM data model with additional attributes. The MDGM data model is called MM.

2. Generate the model-specific structures.

3. Maintain the mapping in the Service Mapping Tool (SMT).

4. Specify field properties.

5. Configure the UI. The MDGM application configuration begins with `BS_MAT_OVP`. It is located in the development package `MDG_BS_MAT_UI`.

6. Optional step: Create a new print form. You can use the existing print form (`MDG_BS_MAT_PDF_05`) as a template.

7. Optional step: Enhance the search. Generate the business template `MDG_MATERIAL` again.

ⓘ

This scenario covers the pre-delivered fields belonging to the SAP Material Master database tables and also any customer-defined fields you have added to those tables.

Scenario: Adding a Reuse Entity Type to the MDGM Data Model

You can extend the MDGM data model by adding a pre-delivered SAP ERP material master database table to the MDGM data model as an entity type. Use the following process to add a reuse entity type to the MDGM data model:

1. Enhance the MDGM data model with additional entity types. You can choose the attributes belonging to this entity type that you wish to add to the MDGM data model. The MDGM data model is called MM.

2. Generate the model-specific structures.

3. Create the mapping in the SMT and assign it to the model specific structures.

4. Specify the field properties.

5. You can extend the existing MDGM application configuration (`BS_MAT_OVP`). It is located in the development package `MDG_BS_MAT_UI`. If necessary you can also create a new application configuration. You can use the existing MDGM application configuration (`BS_MAT_OVP`) as a template.

> **i**
>
> You cannot add fields from a new entity type to an existing UIBB. The new fields must be added to a new UIBB. Multiple UIBBs can be added to a single assignment block.

6. Optional step: Create a new print form. You can use the existing print form (`MDG_BS_MAT_PDF_05`) as a template.

7. Optional step: Enhance the search. Generate the business template `MDG_MATERIAL` again.

i

If you have extended the material master tables with customer-defined fields (using the procedure outlined in SAP Note 44410), which you want to include into the MDGM Data Model, you need to enhance the following data structures (corresponding to the extended material master table) manually:

- The structures of the tables in `MDG_BS_MAT_S_MAT_DATA` having the suffix `_X_TAB`

- The structures in `MDG_BS_MAT_S_MATERIAL_UI_PROP`

This is valid for both scenarios above.

Scenario: Adding a Customer Owned Reuse Entity Type to the MDGM Data Model

You can extend the MDGM data model by adding a customer-owned material master database table (Z table) to the MDGM data model as an entity type. Use the following process to add a reuse entity type to the MDGM data model:

1. Enhance the following data structures (corresponding to the new, customer-owned material master table) manually:

    o Add table types for the data and `_X` structure to `MDG_BS_MAT_S_MAT_DATA`. Use the same design pattern as used in existing table types.

    o Add a table type to the structure `MDG_BS_MAT_S_MATERIAL_UI_PROP`. Use the same design pattern as used in existing table types.

2. Implement the BAdI `MDG_BS_MAT_API_SEGMENTS_EXT`

3. Enhance the MDGM data model with additional entity types. You can choose the attributes belonging to this entity type that you wish to add to the MDGM data model. The MDGM data model is called `MM`.

4. Generate the model-specific structures.

5. Create the mapping in the SMT and assign it to the model specific structures.

6. Specify the field properties.

7. You can extend the existing MDGM application configuration (`BS_MAT_OVP`). It is located in the development package `MDG_BS_MAT_UI`. If necessary you can also create a new application configuration. You can use the existing MDGM application configuration (`BS_MAT_OVP`) as a template.

> **i**
>
> You cannot add fields from a new entity type to an existing UIBB. The new fields must be added to a new UIBB. Multiple UIBBs can be added to a single assignment block.

8. Optional step: Create a new print form. You can use the existing print form (`MDG_BS_MAT_PDF_05`) as a template.

9. Optional step: Enhance the search. Enhance the ERP material master search template in `SAP_APPL`. Generate the business template `MDG_MATERIAL` again and if required, implement the BAdI `BADI_SDQ_PP_SEARCH`.

Scenario: Adding a Flexible Entity Type to the MDGM Data Model

You can extend the MDGM data model by adding a flexible entity type to the MDGM data model. Note that flexible entity types are not supported in Enterprise Search and so attributes from these entities cannot be used as search criteria. Use the following process to add a flexible entity type to the MDGM data model:

1. Enhance the MDGM data model with additional entity types using the *Edit Data Model* configuration activity. Choose the attributes that you wish to add to the MDGM data model. The MDGM data model is called MM. Assign the reuse area *MDG* to your entity types to declare them as flexible entity types.

2. Optional step: Generate the model-specific structures.

3. Specify the field properties. You can do this in the *Define Field Properties for UI* configuration activity.

4. In order to see the new fields on the UI you should extend the existing MDGM application configuration (`BS_MAT_OVP`). It is located in the package `MDG_BS_MAT_UI`. If necessary you can also create a new application configuration. You can use the existing print form (`MDG_BS_MAT_PDF_05`) as a template.

> **i**
>
> You cannot add fields from a new entity type to an existing UIBB. The new fields must be added to a new UIBB. Multiple UIBBs can be added to a single assignment block.

5. Optional step: Create a new print form. You can use the existing print form (`MDG_BS_MAT_PDF_05`) as a template.

> **i**

> You cannot import flexible entities using IDocs, `ALE`, or the Master Data Import framework.

4 Rule-Based Workflows for Material

You can use the *Business Rule Framework plus* (BRFplus) tool to create your own rule-based workflows for material master data governance. The *BRFplus* tool is accessed through the Customizing activity *Configure Rule-Based Workflows*.

SAP delivers a number of preconfigured workflows that you can use for your governance process. You can adapt these preconfigured workflows or choose to create your own with the BRFplus tool.

The following text outlines the fields and settings for the preconfigured workflow *Create Material*. The other workflows use similar process patterns and steps and therefore are not explained here.

Structure

Decision Tables

The *Create Material* workflow uses the following decision tables to direct the creation process:

- Single Value Decision Table (DT_SINGLE_VAL_MAT01)

  This is the master workflow table for material creation. This table lists the workflow steps and references the other two tables when necessary.

- Non-User Agent Decision Table (DT_NON_USER_AGT_GRP_MAT01)

  This decision table contains a list of system tasks. The tasks can be referenced by the DT_SINGLE_VAL_MAT01 decision table when it requires a system action.

- User Agent Decision Table (DT_USER_AGT_GRP_MAT01)

  This decision table contains a list of user assignments to workflow tasks. This information here is also referenced by the DT_SINGLE_VAL_MAT01 decision table when it requires user action.

Fields in Decision Table DT_SINGLE_VAL_MAT01

The table has two areas: the first area lists the expected start values leading into each step and the second area lists the actions to be taken if those values are set. The table below explains the fields:

Field	Field Type	Description
CR Previous Step	Start Value	This field links this line with a workflow step above it. The system takes the information from the *New Chng. Req. Step* field below and searches for values matching that in the *CR Previous Step* fields of workflow steps below it.
Previous Action	Start Value	Contains the code for the system or user action if there was an action. The actions are maintained in customizing.
Chng. Req. Priority	Start Value	Contains the current priority of the change request

Chng. Req. Reason	Start Value	Contains the reason for the change request. The reasons are maintained in customizing.
CR Rejection Reason	Start Value	Contains the reason for rejection of a change request. The reasons for rejection are defined in customizing.
CR Parent Step	Start Value	Parent step number (Only used in parallel processing).
Parallel Agt Grp No.	Start Value	Parallel agent group number (Only used in parallel processing)
Condition Alias	Action	References the other two tables. An entry here specifies an action for the system or a user. Every Condition Alias needs to be handled at least once by either a User Agent or a Non-User Agent activity
New Chng. Req. Step	Action	Contains the next step in the workflow
New CR Status	Action	Displays the new status for the change request. The statuses are defined in customizing.
Hours to Completion	Action	Expected completion time in hours
Merge Type	Action	Parallel merge type (used in parallel processing)
Merge Parameters	Action	Parallel merge parameter (used in parallel processing)
Dyn Agt Sel Service	Action	Dynamic agent selection service

Fields in Decision Table DT_NON_USER_AGT_GRP_MAT01

This table contains a list of system tasks that is referenced by the DT_SINGLE_VAL_MAT01 workflow table when one of the workflow steps requires a system action. The table defines the action to be taken by the system. For a list of the predefined values see Configuring Master Data Governance for Material [Page 4].

Field	Description
Condition Alias	This is a reference for the main workflow table. If this condition alias is set as a value in the *DT_SINGLE_VAL_MAT01* table then the system will read this line to see what actions are to be taken.
Agent Group	User agent group number
Process Pattern	This line displays the background task the system performs. These tasks are preset and cannot be changed
Service Name	This is a filter for BAdI execution. The BAdI *Rule-Based Workflow - Call System Method* must be implemented for process pattern 2 to work.

Fields in Decision Table DT_USER_AGT_GRP_MAT01

This table contains a list of agents (usually users) that is referenced by the DT_SINGLE_VAL_MAT01 workflow table when one of the workflow steps requires user participation. For a list of the predefined values see Configuring Master Data Governance for

Material [Page 4]. You can use the following Configuration activities to define your own actions and step types:

- ▶ *Master Data Governance* ▶ *General Settings* ▶ *Process Modeling* ▶ *Workflow* ▶ *Define Actions for Change Request UIs* ▶

- ▶ *Master Data Governance* ▶ *General Settings* ▶ *Process Modeling* ▶ *Workflow* ▶ *Define Step Types and Assign Actions* ▶

Field	Description
Condition Alias	This is a reference for the main workflow table. If this condition alias is set as a value in the *DT_SINGLE_VAL_MAT01* table then the system will read this line to see what actions are to be taken.
User Agt Grp No.	Non-user agent group number
Step Type	Defines the user interface and buttons that appear for the user when they click on the workflow task they receive.
User Agent Type	Indicates the agent type, defining if it is a user, organizational unit, role, job, position, or special user.
User Agent Value	Defines the name of the agent to be sent this workflow task

Example

Steps in the *Create Material* Rule-Based Workflow

The following steps make up the pre-delivered rule-based workflow for creating a new material. The workflow involves two users, a business user who creates the change request, and a Master Data Steward who is tasked with reviewing and approving the change request. If a field is not mentioned in the tables below it is not relevant for the workflow step. The order of the steps below is not important as the order in which they occur is based on the field values.

The intention of this workflow is to provide a simple workflow for change requests for material creation. The change request is sent for review, reviewed, then is either rejected, or is accepted and sent for a technical check. If the technical check is successful the material is created and the workflow ends, if the technical check is not successful then the change request is sent back for rework.

Change Request Step: The system puts the new change request into the worklist of the Master Data Steward.

This is the first step in the create material workflow. The change request has been created and the step tells the system to place it in the worklist for the Master Data Steward. The settings in the user table determine the user interface to be displayed when opening the worklist item. The Master Data Steward has the choice to either approve or reject the change request.

Field	Field Value	Explanation of Field Value
CR Previous Step	00	This is the first step and no previous values exist.
Condition Alias	1	This value points to condition alias 1 from user table DT_USER_AGT_GRP_MAT01. This line tells the system to put the

		workflow task to the Master Data Steward.
New Chng. Req. Step	90	This tells the system to check the lines with step 90 as the value for *CR Previous Step* next.
New CR Status	02	This sets the change request status to value 02: *Changes to be Executed.*

Change Request Step: The Master Data Steward opens the change request and activates it. The change request is sent for technical validation.

This step is triggered when the Master Data Steward reviews the change request and approves it. The step tells the system to send the change request for technical validation where the data will be checked for validity and completeness.

Field	Field Value	Explanation of Field Value
CR Previous Step	90	Identifies this step and links it to the previous step.
Previous Action	9	Indicates that the user action was `Final Check Approved` (The user chose the *Activate* button) and that the change request is to be activated.
Condition Alias	2	Instructs the system to check the other workflow tables for condition alias 2. In this case the Master Data Steward choose the *Activate* button and the workflow chooses the activation pattern.
New Chng. Req. Step	91	This tells the system to check the line with step 91 as the value for *CR Previous Step* next.
New CR Status	02	The status remains unchanged.

Change Request Step: The Master Data Steward opens the change request and rejects it. This step triggers the roll back for the change request and sends it back to the business user for revision.

This step is triggered if the Master Data Steward chooses to reject the change request. The step instructs the system to roll back the change request and send the change request back to the business user for revision.

Field	Field Value	Explanation of Field Value
CR Previous Step	90	Identifies this step and links it to the previous step.
Previous Action	04	Indicates that the user previous action was *Reject* (The Master Data Steward choose the *Reject* button) and that the Master Data Steward sent the change request back to be revised.
Condition Alias	3	This value tells the system to refer to table DT_USER_AGT_GRP_MAT01.
New Chng. Req. Step	95	This tells the system to check the line with step 95 as the value for *CR Previous Step* next.

| New CR Status | 10 | This sets the change request status to value *10*: *To Revise: Perform Changes* |

Change Request Step: The activation was successful and the workflow is completed.

This step is triggered following reviewer approval of the change request and a successful technical check. This step completes the workflow.

Field	Field Value	Explanation of Field Value
CR Previous Step	91	Identifies this step and links it to the previous step
Previous Action	31	The background action was `Activation Successful`
Condition Alias	4	This value tells the system to refer to table DT_NON_USER_AGT_GRP_MAT01. The task the value points to completes the workflow.
New Chng. Req. Step	99	This field value indicates the end of the process.
New CR Status	05	This sets the change request status to value 5: *Final Check Approved*.

Change Request Step: The activation failed due to data errors. The change request is sent back to the Master Data Steward.

This step is triggered following the Master Data Steward's approval of the change request and a failed activation. The activation failed for technical reasons and the change request is sent back to the Master Data Steward to resolve the issues.

Field	Field Value	Explanation of Field Value
CR Previous Step	91	Identifies this step and links it to the previous step
Previous Action	< > 31	Indicates that the action was not `Activation Successful`
Condition Alias	5	This value tells the system to refer to table DT_USER_AGT_GRP_MAT01. The change request is sent back to Master Data Steward to deal with the technical errors.
New Chng. Req. Step	90	This tells the system to check the line with step 90 as the value for *CR Previous Step* next.
New CR Status	11	Sets the status to value 11: *Process Errors After Activation*.

Change Request Step: The business user canceled the change request and triggered the roll back of the data and the completion of the workflow.

This step is triggered if the Master Data Steward rejected the change request and the business user decided to cancel the change request rather than make updates to it. This step completes the workflow.

Field	Field Value	Explanation of Field Value
CR Previous Step	92	Identifies this step and links it to the previous step.
Previous Action	Blank	
Condition Alias	6	This value tells the system to refer to table DT_NON_USER_AGT_GRP_MAT01. The task it points to completes the workflow.
New Chng. Req. Step	99	This field value indicates the end of the process.
New CR Status	06	This sets the change request status to value 06: *Final Check Rejected*.

Change Request Step: The business user opens the change request and chooses the *Request* button. The system performs a technical check of the change request.

This step is triggered when the business user revises the change request and sends it again for approval. This step instructs the system to perform a technical check on the data contained within the change request.

Field	Field Value	Explanation of Field Value
CR Previous Step	95	Identifies this step and links it to the previous step.
Previous Action	07	Indicates that the user action was 07 *Resubmit*
Condition Alias	7	Instructs the system to check the other workflow tables for condition alias 7. This line tells the system to put the workflow task back to the Master Data Steward.
New Chng. Req. Step	90	This tells the system to check the line with step 90 as the value for *CR Previous Step* next.
New CR Status	02	This sets the change request status to value 02: *Changes to be Executed*.

Change Request Step: The business user reviews the change request and decides to cancel it.

The Master Data Steward has sent back the change request for revision and the business user decides to cancel the change request rather than make changes to it.

Field	Field Value	Explanation of Field Value
CR Previous Step	95	Identifies this step and links it to the previous step.
Previous Action	08	Indicates that the user action was 08 *Withdraw*

Condition Alias	08	Instructs the system to check the other workflow tables for condition alias 8. In this case this is a system task to roll back the change request.
New Chng. Req. Step	92	This tells the system to check the line with step 92 as the value for *CR Previous Step* next.
New CR Status	02	This sets the change request status to value 02: *Changes to be Executed*.

5 Configuring Web Dynpro Page and Panel Titles

You can adapt the page and panel titles in the material Web Dynpro applications to include extra information about a displayed material. Specifically, you can change the information shown in the titles of the component configurations `S_MAT_OVP_LAYOUT_03` and `S_MAT_OVP_LAYOUT_03_H`. The extra information is accessed using placeholders that you insert when configuring the titles. This way, descriptive texts, such as *Plant ID*, and value texts based on screen selections such as `PLT002` can be included. The value texts change dynamically based on user selections.

Changing Page Titles

To change the page titles of the component configurations BS_MAT_OVP_LAYOUT_03 and BS_MAT_OVP_LAYOUT_03_H, open the component configuration you want to edit in the Component Configuration Editor, and then enter one or more of the placeholders below into the *Page Title* field.

The following placeholders can be used as part of the page title:

Placeholder	Description
&TITLE_MATNR&	Material Number
&TITLE_MAT_DESCR&	Material Description
&TITLE_MATNR_DESCR&	Material Number or Material Description if available
&TITLE_PLANT&	Plant ID
&TITLE_VALAREA&	Valuation Area ID
&TITLE_VALAREA_TYPE&	Valuation Area ID and Valuation Type are not initial value
&TITLE_DCHAIN&	Distribution Chain

At runtime, the title is constructed from these placeholders in a two-step approach:

1. The placeholders are replaced by the descriptive texts, which may contain additional placeholders for value texts. For some placeholders, this replacement may depend on the action assigned to an application and on the value of business data. A translatable separator and a space are attached automatically. For language code `EN`, this separator is a semicolon.

    Example 1

Placeholder: &TITLE_MAT_DESCR&

Action: Create

Material Number: 12345678

Result of Replacement:`Material: New &MAT_DESCR&;`

Example 2

Placeholder: &TITLE_MAT_DESCR&

Action: Create

Material Number: Initial

Result of Replacement:`Material: New;`

2. The value text placeholders are replaced by current values of related key fields. For `&TITLE_MAT_DESCR&` this replacement depends on the existence of the material description in the logon language. For `&VALUATION&` this replacement depends on the valuation area type.

Example 1

Descriptive Text: `Material: New &MAT_DESCR&`

Material Number: 12345678

Material Description: Not maintained in logon language

Result of Replacement: `Material: New 12345678`

Example 2

Descriptive Text: `Material: New &MAT_DESCR&`

Material Number: 12345678

Material Description: Mountain bike

Result of Replacement: `Material: New Mountain bike`

Example of Changing Page Titles

You have maintained the following page title:

`&TITLE_MAT_DESCR&&TITLE_PLANT&&TITLE_VALAREA_TYPE&&TITLE_DCHAIN&`

The following is the information available for the material and screen:

Action:	Change
Material Number:	12345678
Material Description:	Mountain bike
Plant ID:	`ZAPF`

Distribution Channel:	01
Sales Organization:	0001
Valuation Area Type:	Plant
Valuation Area ID:	ZAPF
Valuation Type:	Initial (header data set)

The page title at runtime displays as follows:

```
Material: Mountain bike; Plant: ZAPF; Valuation Area (Plant): ZAPF;
Distribution Chain: 0001/01
```

Changing Panel Titles

You can adjust the panel titles of the Web Dynpro component configurations
`BS_MAT_OVP_LAYOUT_03` and `BS_MAT_OVP_LAYOUT_03_H` so that the current key
information is included in these texts. To do this, open the UIBB in the *Component
Configuration Editor* and edit the *Title* field in the UIBB to include one of the following
placeholders:

Placeholder	Placeholder Description
&MATNR&	Material Number
&MAT_DESCR&	Material Description
&MATNR_DESCR&	Material Number or Material Description if available
&WERKS&	Plant ID
&VKORK&	Sales Organization
&VTWEG&	Distribution Channel
&BWKEY&	Valuation Area ID
&BWTTY&	Valuation Type
&VALUATION&	Valuation Area Type (Company Code or Plant)

At runtime, the panel titles are constructed from these placeholders. The system replaces
these placeholders with the current values of the related key fields. For
`&TITLE_MAT_DESCR&`, this replacement depends on the existence of the material description
in the logon language. For `&VALUATION&` this replacement depends on the type of valuation
area.

Panel Title as Configured:	Valuation Area (&VALUATION&) &BWKEY&
Valuation Area Type:	Plant
Valuation Area ID:	ZAPF
Result of Replacement:	Valuation Area (Plant) ZAPF

🔳 6 Process-Oriented and Hierarchical Overview Pages

You can use the overview page to view and enter change request data. You can choose between two overview pages in MDG-M: the process-oriented view and the hierarchical view. The application configurations for these pages are `BS_MAT_OVP_03` (process-oriented) and `BS_MAT_OVP_03H` (hierarchical). You can find these application configurations in the Web Dynpro application `MDG_BS_MAT_OVP`. These pages represent the entire `MM` data model. If you reduce the governance scope, the fields removed from the data model become read-only on the UI and should be removed if they are not required for reference purposes.

You can access the same information in both pages but the process-orientated view displays all material data whereas the hierarchical view compartmentalizes the data so that you see the high-level data initially and can drill down for further detail.

The process-oriented overview page is set as the default *Create Material* UI where you are more likely to need to access all data at once. The hierarchical page is set as the default *Change Material* UI since changes are usually made to specific parts of the material record. To change the assignment of an overview page see the configuration section.

Configuration

You can determine which overview page to display for a given logical action using the following Customizing activities:

- *Link Log. Actions with UI Application and Bus. Act.: Standard Definition*

- *Link Log. Actions with UI Application and Bus. Activity: Custom Definition*

The activities can be found in Customizing under ▶ *Cross-Application Components* ❯ *Processes and Tools for Enterprise Applications* ❯ *Master Data Governance* ❯ *General Settings* ❯ *Process Modeling* ❯ *Business Activities* ❯.

🔳 7 Configuring Business Context Viewer for MDG Material

You can use this function to view context-related information for your material master data in a side panel. You must activate the Business Context Viewer (BCV) to access the side panels for the Web Dynpro applications *Create Material* and *Change Material*.

Prerequisites

1. To enable BCV, you must activate the following business functions:

   - *FND, Business Context Viewer Main Application* (`/BCV/MAIN`)

   - *FND, Business Context Viewer Main Application 2* (`/BCV/MAIN_1`)

   - *FND, Business Context Viewer NWBC Side Panel* (`/BCV/NWBC_SIDEPANEL`)

2. The business content for MDG Material is delivered in the BC sets *BCV Content for MDG Framework* (`MDGAF_BCV`) and *BCV Content for MDG Material Release 7.0* (`MDGMAT_BCV_70`). You must activate them in transaction `SCPR20`.

Process

To view this content, open the BCV side panel by choosing the *Side Panel* link in the upper right corner of your MDG Material user interface. From the side panel, select the following overviews you require from the dropdown list:

Sales Overview

This BCV content provides you with a list of all sales orders created for the current material master data.

Production Overview

This BCV content provides you with a list of all production orders created for the current material master data.

Purchasing Overview

This BCV content provides you with a list of all purchase orders created for the current material master data.

Changes Overview

This BCV content provides you with a list of changes raised by the current MDG change request.

Thumbnail Overview

This BCV content provides you with a picture preview in the side panel if you have linked to documents with picture files for your material master data.

More Information

For more information about BCV, see Business Context Viewer (BCV) [External]