



PUBLIC

How-To: Extend MDG-M by a New Reuse Entity Type

Applicable Releases:

From EhP6 for SAP ERP 6.0 and from S/4HANA 1511

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Document History

Document Version	Description
1.0	First official release of this guide (April 2012)
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9.0	Small updates (June 2023)

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1. Business Scenario

SAP Master Data Governance for Material (MDG-M) provides business processes to find, create, change, and mark material master data for deletion. It supports the governance of material master data on a central hub and the distribution of material master data to connected operational and business intelligence systems.

The processes are workflow-driven and can include several approval and revision phases, and the collaboration of all users participating in the master data maintenance.

Domain-specific content (data models, user interfaces, workflows) is provided as part of the standard for several application areas. It is a common requirement from customers to adapt the MDG data models to their specific needs.

The model MM is preconfigured with one reuse area called MATERIAL. This reuse area points to the access class CL_MDG_BS_MAT_ACCESS, which can handle most fields of the pre-delivered Material Master in ERP or S/4HANA.

This guide describes how to extend the preconfigured content of Master Data Governance for Material (using the data model MM) by adding a new entity type that already exist as database fields. The attribute values of the new entity type will be copied to the corresponding customer tables (reuse option) after activation of the change request by using BAdI MDG_BS_MAT_API_SEGMENTS_EXT.

2. Scenario

The following explanation shows you how to add the new entity type *Business Partner Details* to save Business Partner nicknames for materials as part of the MDG-M data model

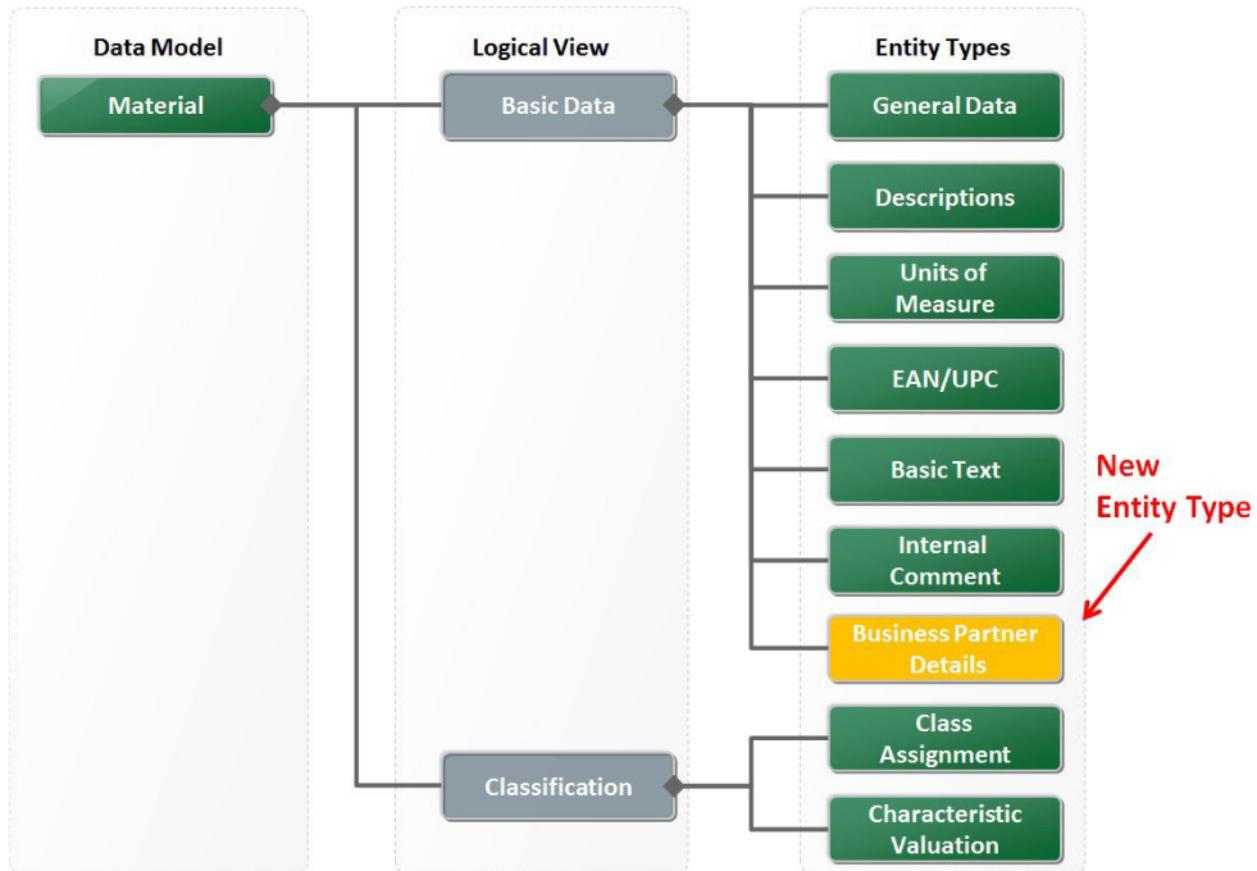


Figure: Data Model – Material (Scope of 2011 Delivery) with custom entity type “Business Partner Details”

3. Background information

In MDG, the data model is a central part of the application. SAP delivers several preconfigured data models that you can start using with little configuration.

Looking at the Material object type and its related data in an abstract way, you can distinguish the following categories of data fields:

- Identifying Material Data ~ 10 fields
- Descriptive Material Data ~ 100 fields
- Process Controlling Material Data ~ 1.000 fields

MDG for material data focuses on the main identifying, descriptive attributes and process controlling data of the Material Master.

It is important to understand that MDG not only delivers the data fields in a model, but also comes with the standard business rules to check for completeness and consistency. These checks are only enforced when necessary in the process.

The delivered standard data model is MM. (This model is linked to the material business object ID: 194. It is also linked to the change request business object type: BUS2550.). You can view the SAP delivered data model in Customizing for *Master Data Governance* under *General Settings > Data Modeling > Edit Data Model*.

The MM data model content for the different releases can be found in SAP Note [3134600](#).

Additional Information:

- A BAdl is available for data enhancement during change request activation (MDG_BS_MAT_API_ENRICH)
- Authorization Concept: Depend on the reuse of backend logic and pre-delivered roles defined in PFCG
- Field control: visibility and mandatory fields are controlled with the field control feature that re-uses the backend logic and existing settings (T130F).

3.1. Data Modeling Concepts in MDG

The meta-model below shows the basic elements making up a MDG data model. When you extend the data model by a new entity type you must also define its relationship to other data model elements and decide on a storage and use type for the new entity type. In the following sections you will find more details regarding these topics.

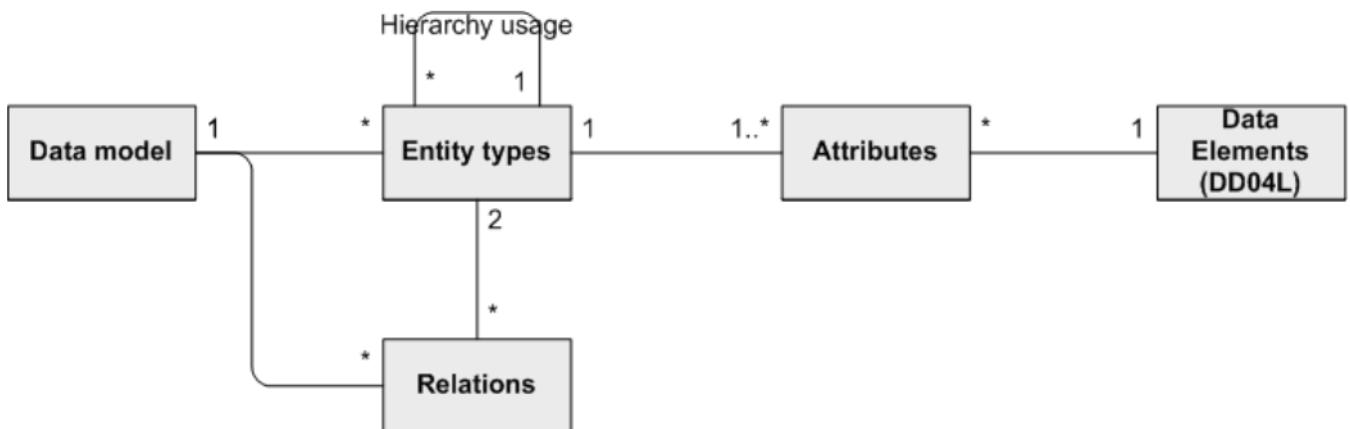


Figure: The meta model is an entity-relationship-model

3.1.1. Storage and Use Types

You assign storage and use type to specify whether and how master data can be changed in Master Data Governance. The storage and use type also indicates which database tables are generated by the system.

Changeable via Change Request; Generated Database Tables (Type 1)	<p>The master data of this storage and use type can be changed in Master Data Governance with a change request. The system generates all necessary database tables: check and text tables as well as additional tables, for example, for attachments and sets. The common key fields of these tables are:</p> <ul style="list-style-type: none"> • The entity type itself • The edition – if you previously specified in the data model that the validity of master data changes is restricted to editions • The entity types that are assigned to the entity type through leading relationships <p>Furthermore, all tables contain a checkbox that indicates whether the master data record is active. Depending on the workflow template used, it is possible that a master data record is not set to active until the change request in which the record was created or changed is released.</p> <p>The settings you make for the entity type (such as language dependency) result in additional key fields in the text table and the tables for attachments and</p>
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	<p>sets.</p> <p>The non-key fields contained in the text table are the entity texts. The non-key fields contained in the check table are the attributes of the entity type. The attachment and set tables contain predefined non-key fields. Furthermore, all database tables contain a checkbox that indicates whether the master data record was deleted. The check table also contains attributes that record which user created or changed the data records and when this was done.</p>
Changeable without Change Request; Generated Check/Text Tables (Type 2)	<p>The master data of this storage and use type can be changed in Master Data Governance without a change request. The system generates only the check and text tables with the entity type as well as with the entity types assigned to the entity type through leading relationships as fixed key fields.</p> <p>The non-key fields contained in the text table are the entity texts. The check table does not contain non-key fields.</p>
Not Changeable via MDG; No Generated Tables (Type 3)	<p>The master data of this storage and use type cannot be changed in Master Data Governance. Therefore, the system does not generate database tables. Instead, the system derives the available values from the domain that is assigned to the data element – either from the assigned value table or from the domain fixed values</p>
Changeable via Other Entity Type; Generated Database Tables (Type 4)	<p>The master data of this storage and use type can be changed in Master Data Governance only with a change request of an entity type with storage and use type 1. The entity type needs to be in a relationship with the relationship type leading and assigned as the <i>To-Entity type</i> to an entity type with storage and use type 1. The system generates the check table as described for storage and use type 1, but also generates the entity types that are assigned through qualifying relationships as key fields. The system does not generate a text table, attachments, or sets since entity texts are not allowed for entity types with this storage and use type.</p>

You can view the settings for storage and use type for existing entity types in Customizing for *Master Data Governance* under *General Settings > Data Modeling > Edit Data Model*. You select the MM data model and double click on *Entity Types* (view cluster VC_USMD001). In the list of entity types you can double click an entity type to view its details as shown below for entity type MATERIAL.

The table below gives you some criterions for the decision between storage and use type 1 and 4.

Criterion	Type1	Type4
Cross-dependencies	Need to handle dependencies between Type1 entities (include into CR, blocking, ...)	Easy to implement
Parallel CRs	Not needed	Necessary if two Type4 entities for same Type1 entity shall be maintained independently
Snapshot	Independent	Together with corresponding Type1 entity and all other Type4 entities (→ Performance)
Enqueue	This entity plus corresponding Type4 entities	This entity, corresponding parent entity and all its child entities
Authorization	Own authorization objects	Depends on authorization object of Type1 entity (plus maybe additional own ones)
Implementation effort	Own access class	BAdI MDG_BS_MAT_API_SEGMENTS_EXT (lean, no CD mapping, enqueue, Query, ...) or own access class
Mass Maintenance	OK	Not possible (exception: 1:1 Relationship)

Multi-Record Processing	No difference
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Important

For more complex requirements like search, mapping, change documents, field properties, authorization, locks or derives, you need to provide an own access class by implementing interface `if_usmd_pp_access` instead of using `MDG_BS_MAT_API_SEGMENTS_EXT` BAdI. This guide only describes the usage of the BAdI `MDG_BS_MAT_API_SEGMENTS_EXT`.

3.1.2. Relationship Type

If you have defined multiple entity types, you can determine what type of relationship should link them (leading, referencing, qualifying, or foreign key relationship). For each relationship, you specify a relationship type and cardinality.

Relationship Type	Definition
Referencing	Specifies the <i>From-Entity type</i> as an attribute of the <i>To-Entity type</i> .
Leading	Specifies the <i>From-Entity type</i> on a higher level than the <i>To-Entity type</i> . The <i>From-Entity type</i> is automatically taken as the key in the generated tables. A <i>Leading</i> relationship type is identical to a <i>Qualifying</i> relationship type, except when the <i>To-Entity type</i> has a <i>Storage and Use Type</i> of 4. Master data for <i>To-Entity types</i> in <i>Leading</i> relationships is processed in the context of the entity type that is assigned using the leading relationship.
Qualifying	Specifies the <i>From-Entity type</i> on a higher level than the <i>To-Entity type</i> . The <i>From-Entity type</i> is automatically taken as the key in the generated tables.

The following options are possible for the relationship between two entity types:

Cardinality	Definition
1:N	This cardinality represents a mandatory relationship in which one or more <i>To-Entity Types</i> can be assigned to a <i>From-Entity Type</i> . This cardinality is valid for relationships with the relationship types <i>Leading</i> , <i>Qualifying</i> , and <i>Referencing</i> . In relationships with the relationship type <i>referencing</i> , the <i>From-Entity Type</i> is a required attribute of the <i>To-Entity Type</i> .
0:N	This cardinality represents an optional relationship in which any number <i>To-Entity Types</i> can be assigned to a <i>From-Entity Type</i> .

Note

Which relationship types are permitted depends on the storage and use types of the entity types. The general design assumption is that there is a 1:N relationship between a database table and its entity types. This means one entity type does not bundle several database tables.

3.2. Reuse Area Versus the Flexible Option

When you extend the SAP delivered data model with a new entity type, you must decide where to store data after the activation of a change request. During the processing of the change request, the system stores data in the MDG staging area. After the activation of a change request, you can move the data to tables outside of MDG or keep the data in the MDG tables.

For optimal integration into SAP Business Suite, MDG provides the following two persistence modes:

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

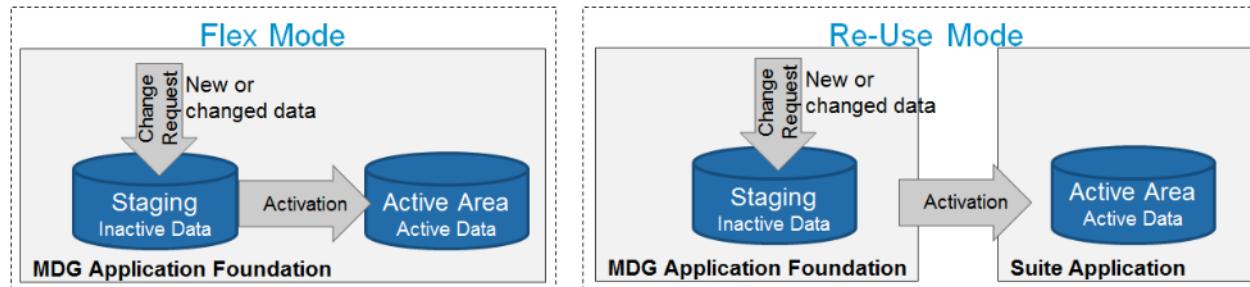


Figure: Flexibility Option (left) versus Reuse Option (right)

Where the data is stored is specified by the *Reuse Area* setting on the *Data Model* or *Entity Type* level as shown in the screenshots below.

The screenshot shows the SAP interface for managing inactive data models. The left pane displays a tree structure under "Dialog Structure" with nodes like "Inactive Data Models", "Entity Types", and "Relationships". The right pane is titled "Inactive Data Models" and contains a table:

Data Model	Description (medium text)	Reuse Area
OF	Chart of Accounts	
OG	Chart of Accounts and Org. Units	
BP	Business Partner	PARTNER
MM	Material Maintenance MM01/02	MATERIAL
ID	Flight Data Model f. Field Property Test	ID
Z1	Copy of MM for message processing	MATERIAL
Z2	Copy of MM for message processing	MATERIAL
Z9	test	

The row for "Material Maintenance MM01/02" is highlighted with a yellow background and has a red rectangular selection box around it, indicating it is selected for modification.

Figure: Assignment of Reuse Area for the Data Model MM

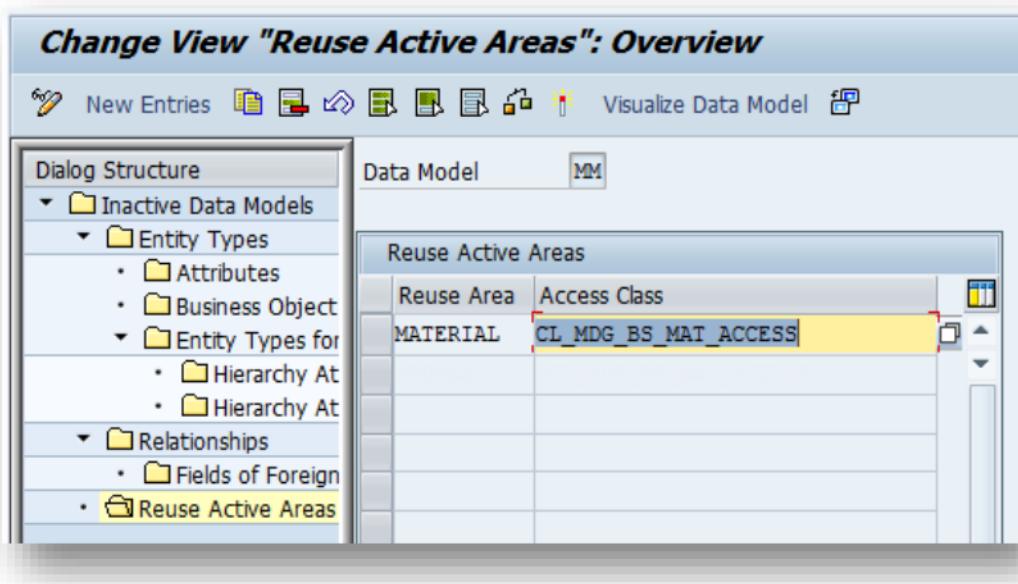


Figure: Assignment of Access Class for Reuse Area MATERIAL

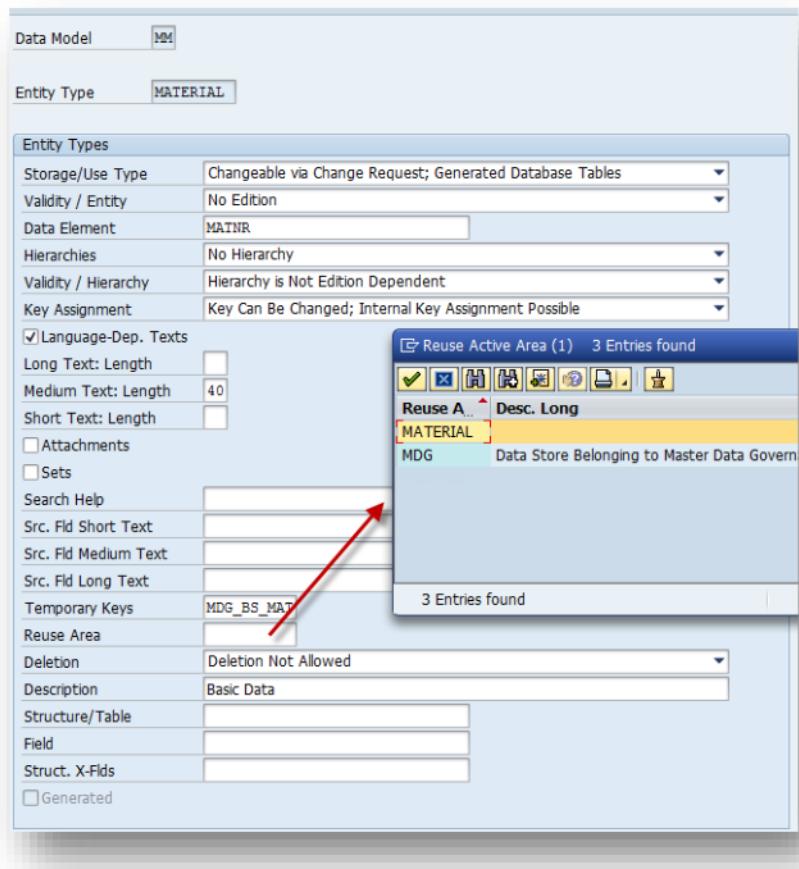


Figure: Alternative assignment of Reuse Area on Entity Type level

The MDG model MM is preconfigured with one reuse area called MATERIAL. This reuse area points to the access class CL_MDG_BS_MAT_ACCESS, which can handle all fields of the pre-delivered data model and some more.

If you extend the data model by a new entity type and want the data of that entity type to remain in the MDG tables after activation you can choose MDG as a reuse area.

The table below gives you some criterions for the decision between flex or reuse mode.

Criterion	Flex	Reuse (Z table)
Direct Update of Active Area (for migration, ...)	Not possible	Possible and used in IDoc/DIF/LSMW/API/...
DIF usage	Not recommended for MDG-M (can't write to active area)	OK
SOA	Not recommended for MDG-M (can't write to active area)	OK
Access/usage in productive applications (in co-deployment) like <ul style="list-style-type: none"> • Search • Typed read access • ... 	Dynamic tables, access only via IF_USMD_MODEL_EXT->READ_CHAR_VALUE (or complex select), no indices on DB level	Can be tuned via indices, view definition possible and transportable, ...
Performance in maintenance	<ul style="list-style-type: none"> • Flex entities need no snapshot (and snapshot comparison) • Number of records in active area has impact on performance 	<ul style="list-style-type: none"> • Reuse entities need snapshot • Number of records in reuse active area has no impact on performance
Project effort	No additional coding required (plus optional additional checks, feeder class, ...)	Coding needed – either implementation of BAdI MDG_BS_MAT_API_SEGMENTS_EXT or specific access class
Use case	Co-Deployment: Stays in MDG, no need to access data operatively	Co-Deployment: Needs to be accessed by operative processes. Both deployments: Take existing data/extensions under governance. Both deployments: Data import must be done without CR for performance reasons (or no governance for migration/import needed).
File Upload	No difference (updates only staging)	
Mass Maintenance/Multi-Record Processing	No difference	
DRF usage	No difference	

3.3. Input Help (Accessible Using the F4 Key)

The system applies the following rules of precedence when assigning input help:

1. Search help assignment in data model definition
2. Backend structure MDG_BS_MAT_S_MARA, MDG_BS_MAT_S_* (not existing for Flex Entities)
 - a. Search help assignment in the structure
 - b. Value table on domain with foreign key association

3. Search help assignment on data element (for flex entities)
4. Fixed values or value table on domain

Note

Value table on domain without foreign key assignment (for flex entities) is not supported out of the box.

3.4. Code Lists

The considered code list for the check comes from the *Fixed Values* or *Value Range* table which is assigned to the domain of the data element.

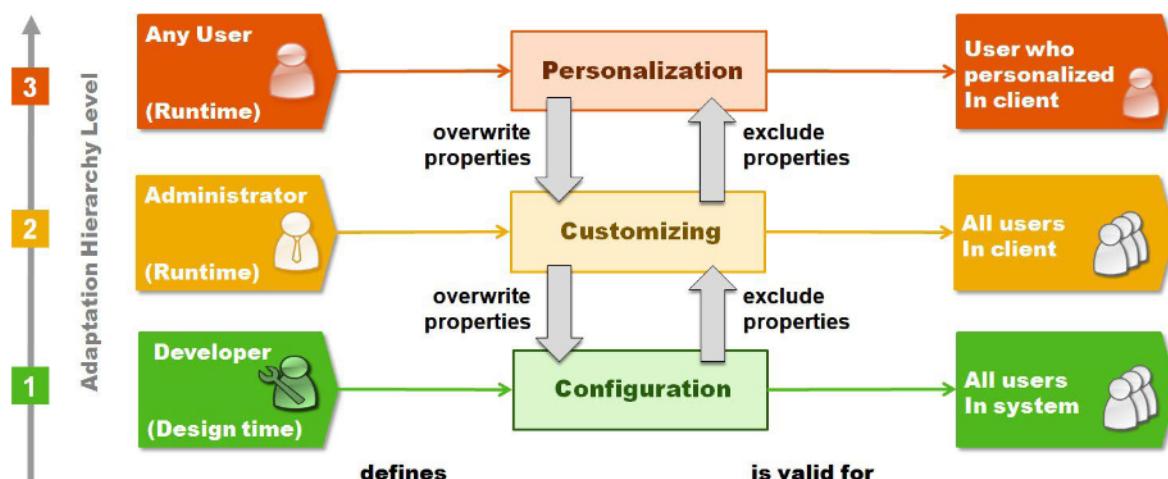
3.5. Data Modeling Considerations for List-UIBBS

If you want the Material UI to use two or more list UIBBs (User Interface Building Blocks), you must adjust the data model. You can implement independent list UIBBs or interdependent list UIBBs. For more information, see the table below.

UIBB	Desired System Behavior	Action
Independent List UIBBs	Changes to one list UIBB have no impact on the other list UIBB.	Create separate entity types and assign one to each List- UIBB.
Interdependent List UIBBs	If you create a new row for the same key in one UIBB, the system creates a new row in the other UIBB.	Either assign the same entity type for both List-UIBBS or implement a derivation.

3.6. UI: Adaptation Options in Floorplan Manager

A Floorplan Manager UI can be adapted using different techniques. The figure below shows the relationship between configuration, customizing, and personalization. Context-Based-Adaptation is another way the user interface can be customized for specific use cases.



In the context of MDG, you typically choose to *customize* the SAP delivered configuration. Only if customizing is not feasible do you copy the SAP delivered UI configuration to the

customer namespace and change the copy.

In the following cases the UI should be copied rather than customized:

- Code changes are required
- The UI needs to be changed for all users in the system and not only client-specific
- The changes to the UI are extensive

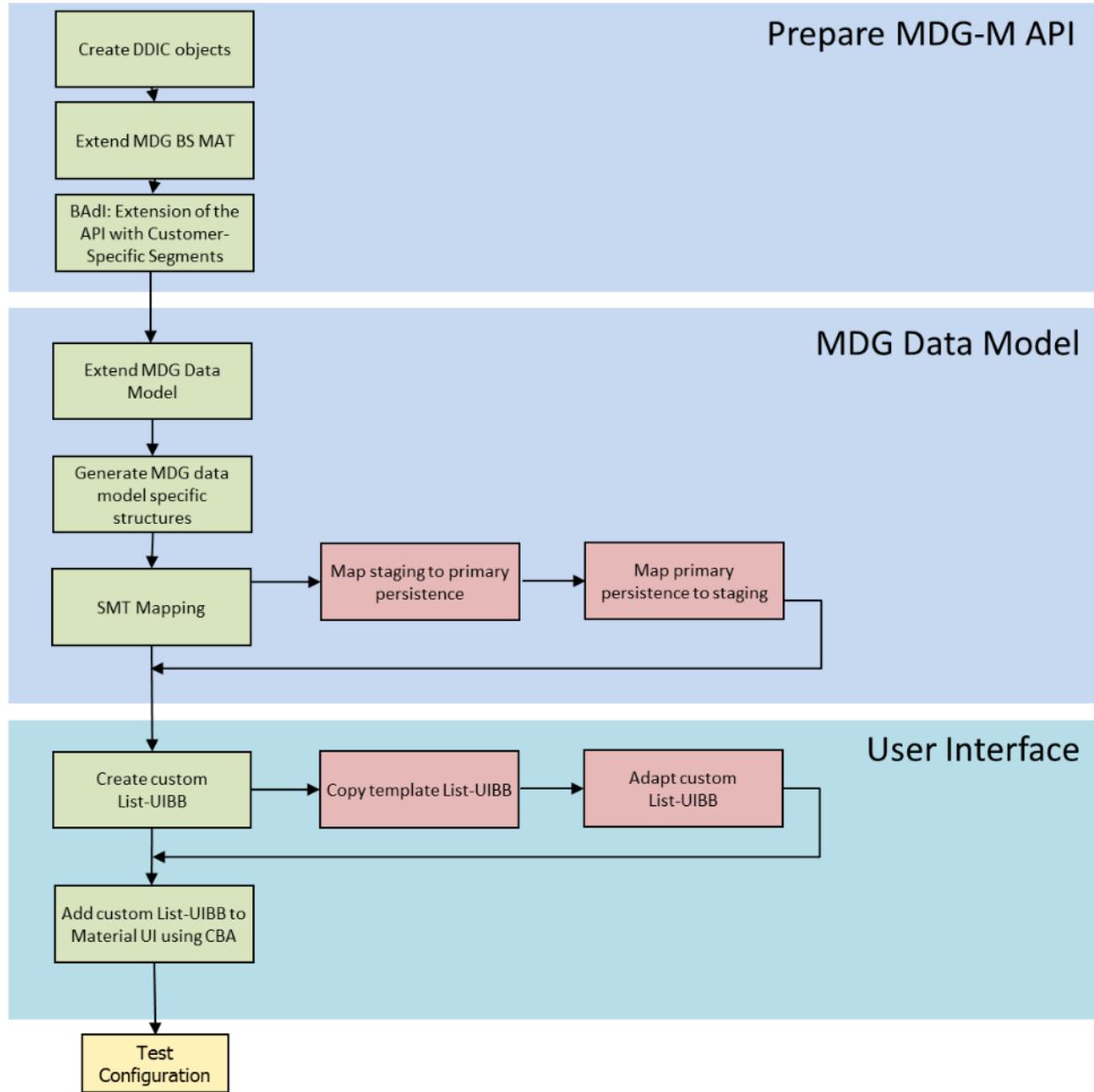
 **Note**

For more details regarding options for Floorplan manager user interface adaptation, advantages, disadvantages, and steps required please familiarize yourself with SAP Note [1619534](#). See also How To Guide for the UI [Extend MDG-M User Interface](#).

4. Step by Step Explanation

Two major building blocks make up the implementation of the entity type extension. In the first phase, you extend the data model. In the second phase, you extend the user interface to include the new entity type.

The flow diagram below shows the detailed implementation steps. We recommend you use it as an orientation. Each box in the diagram below corresponds to a section in this guide in which you find detailed



execution instructions.

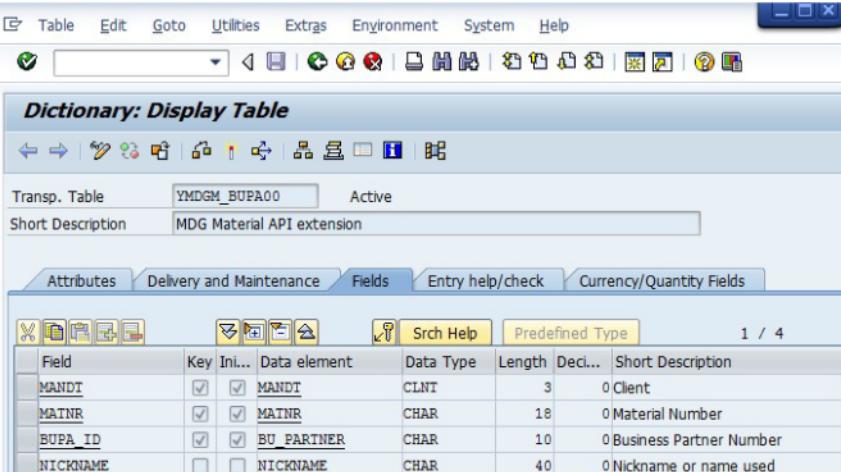
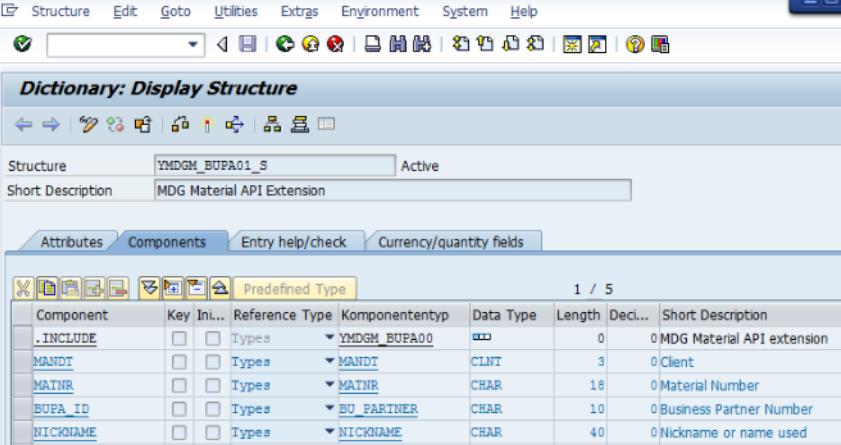
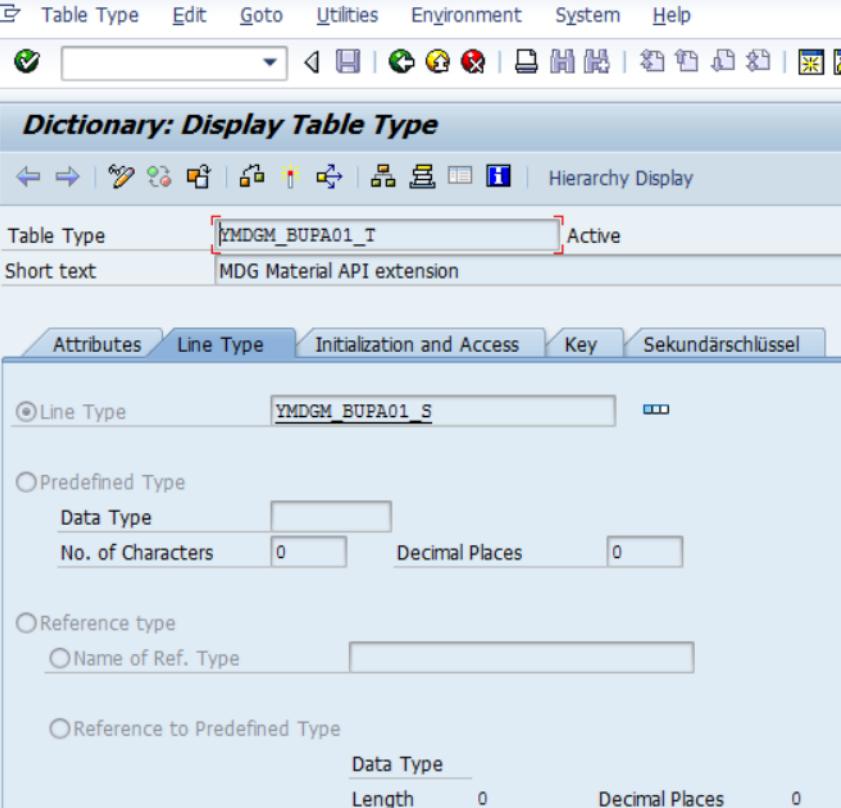
Figure: Implementation steps for re-use Entity-Type extension

4.1. Prepare MDG API

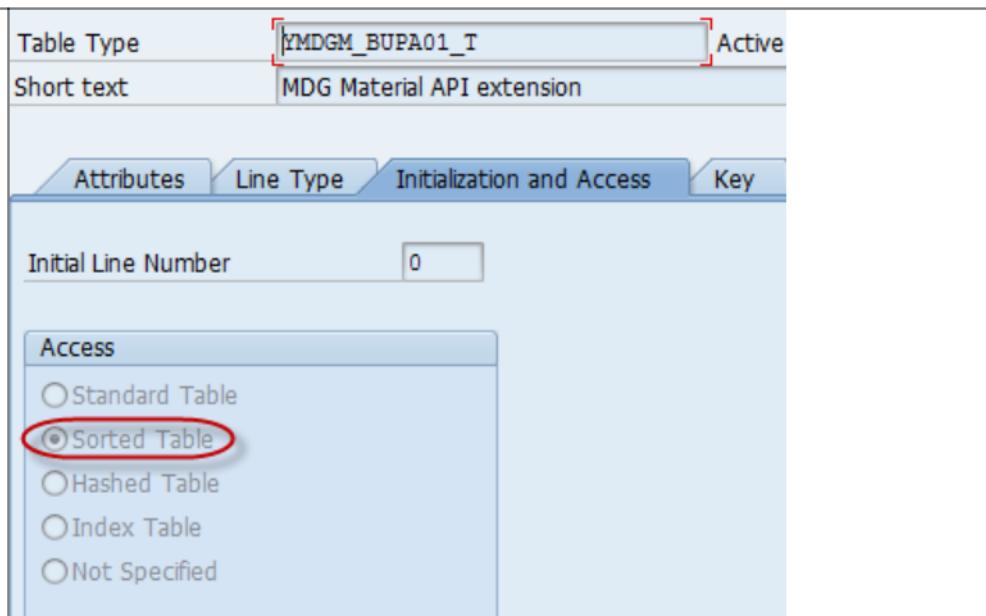
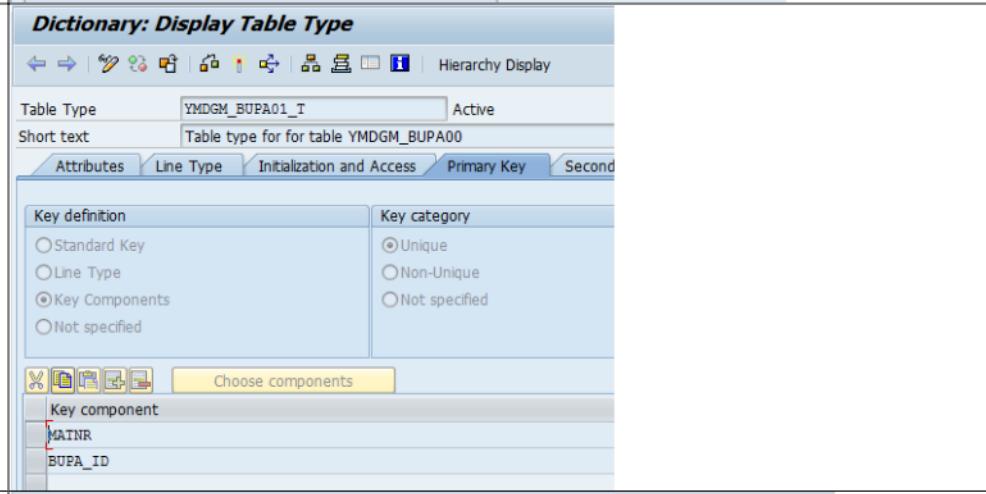
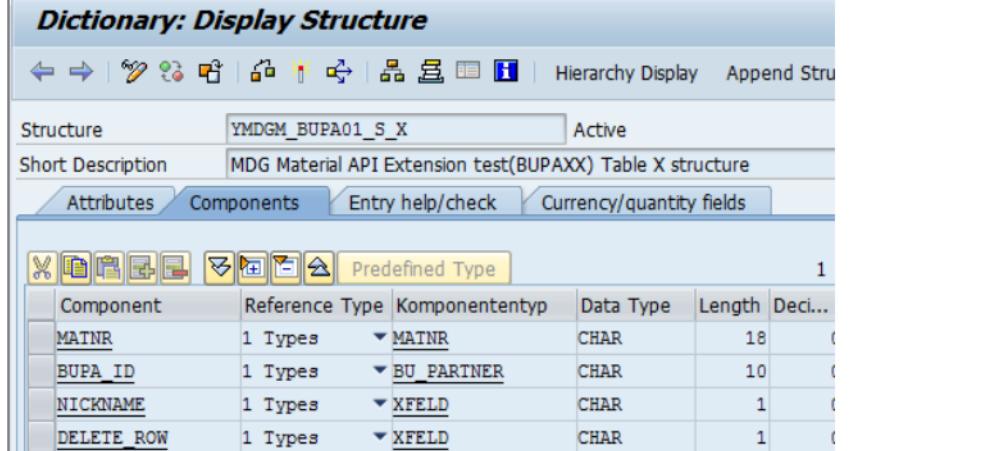
4.1.1. Create DDIC Objects

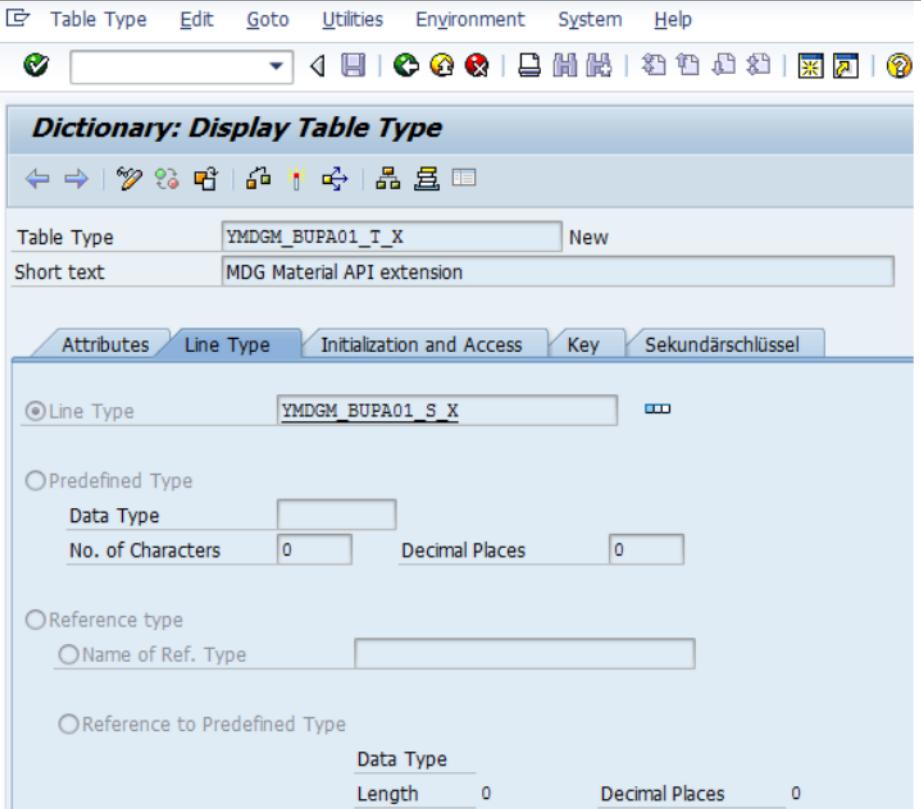
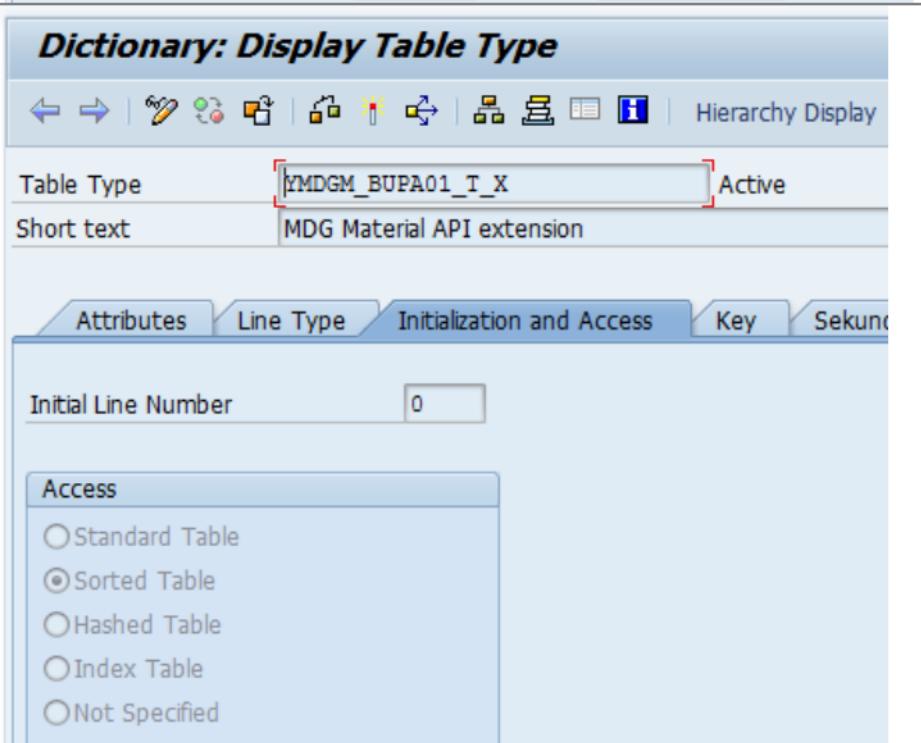
In this section you create the table and structure that you use to store master data after activation in MDG. After activation data will be transferred from the MDG staging area to the table that you define in the following steps.

How-To: Extend MDG-M by a New Reuse Entity Type

1. In transaction SE11 create table YMDGM_BUPA00 as shown.	 <table border="1"> <thead> <tr> <th>Field</th><th>Key</th><th>Ini...</th><th>Data element</th><th>Data Type</th><th>Length</th><th>Deci...</th><th>Short Description</th></tr> </thead> <tbody> <tr> <td>MANDT</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td>MANDT</td><td>CLNT</td><td>3</td><td>0</td><td>Client</td></tr> <tr> <td>MATNR</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td>MATNR</td><td>CHAR</td><td>18</td><td>0</td><td>Material Number</td></tr> <tr> <td>BUPA_ID</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td>BU_PARTNER</td><td>CHAR</td><td>10</td><td>0</td><td>Business Partner Number</td></tr> <tr> <td>NICKNAME</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>NICKNAME</td><td>CHAR</td><td>40</td><td>0</td><td>Nickname or name used</td></tr> </tbody> </table>	Field	Key	Ini...	Data element	Data Type	Length	Deci...	Short Description	MANDT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MANDT	CLNT	3	0	Client	MATNR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MATNR	CHAR	18	0	Material Number	BUPA_ID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BU_PARTNER	CHAR	10	0	Business Partner Number	NICKNAME	<input type="checkbox"/>	<input type="checkbox"/>	NICKNAME	CHAR	40	0	Nickname or name used														
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2. In transaction SE11 create structure YMDGM_BUPA01_S as shown.	 <table border="1"> <thead> <tr> <th>Component</th><th>Key</th><th>Ini...</th><th>Reference Type</th><th>Komponententyp</th><th>Data Type</th><th>Length</th><th>Deci...</th><th>Short Description</th></tr> </thead> <tbody> <tr> <td>.INCLUDE</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Types</td><td>YMDGM_BUPA00</td><td>...</td><td>0</td><td>0</td><td>MDG Material API extension</td></tr> <tr> <td>MANDT</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Types</td><td>MANDT</td><td>CLNT</td><td>3</td><td>0</td><td>Client</td></tr> <tr> <td>MATNR</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Types</td><td>MATNR</td><td>CHAR</td><td>18</td><td>0</td><td>Material Number</td></tr> <tr> <td>BUPA_ID</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Types</td><td>BU_PARTNER</td><td>CHAR</td><td>10</td><td>0</td><td>Business Partner Number</td></tr> <tr> <td>NICKNAME</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Types</td><td>NICKNAME</td><td>CHAR</td><td>40</td><td>0</td><td>Nickname or name used</td></tr> </tbody> </table>	Component	Key	Ini...	Reference Type	Komponententyp	Data Type	Length	Deci...	Short Description	.INCLUDE	<input type="checkbox"/>	<input type="checkbox"/>	Types	YMDGM_BUPA00	...	0	0	MDG Material API extension	MANDT	<input type="checkbox"/>	<input type="checkbox"/>	Types	MANDT	CLNT	3	0	Client	MATNR	<input type="checkbox"/>	<input type="checkbox"/>	Types	MATNR	CHAR	18	0	Material Number	BUPA_ID	<input type="checkbox"/>	<input type="checkbox"/>	Types	BU_PARTNER	CHAR	10	0	Business Partner Number	NICKNAME	<input type="checkbox"/>	<input type="checkbox"/>	Types	NICKNAME	CHAR	40	0	Nickname or name used
Component	Key	Ini...	Reference Type	Komponententyp	Data Type	Length	Deci...	Short Description																																															
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BUPA_ID	<input type="checkbox"/>	<input type="checkbox"/>	Types	BU_PARTNER	CHAR	10	0	Business Partner Number																																															
NICKNAME	<input type="checkbox"/>	<input type="checkbox"/>	Types	NICKNAME	CHAR	40	0	Nickname or name used																																															
3. In transaction SE11 create table type YMDGM_BUPA01_T as shown.	 <table border="1"> <thead> <tr> <th>Table Type</th><th>Active</th></tr> </thead> <tbody> <tr> <td>YMDGM_BUPA01_T</td><td>Active</td></tr> <tr> <td>Short text</td><td>MDG Material API extension</td></tr> </tbody> </table> <p>Line Type: YMDGM_BUPA01_S</p> <p>Predefined Type:</p> <ul style="list-style-type: none"> Data Type: (empty) No. of Characters: 0 Decimal Places: 0 <p>Reference type:</p> <ul style="list-style-type: none"> Name of Ref. Type: (empty) <p>Reference to Predefined Type:</p> <ul style="list-style-type: none"> Data Type: (empty) Length: 0 Decimal Places: 0 	Table Type	Active	YMDGM_BUPA01_T	Active	Short text	MDG Material API extension																																																
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Short text	MDG Material API extension																																																						

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4. Make sure table type YMDGM_BUPA01_T is a <i>Sorted Table</i> .	 <p>The screenshot shows the SAP Dictionary interface for a table named YMDGM_BUPA01_T. In the 'Access' section, the radio button for 'Sorted Table' is selected and highlighted with a red oval. Other options like 'Standard Table', 'Hashed Table', 'Index Table', and 'Not Specified' are also present.</p>																														
5. Make sure table type YMDGM_BUPA01_T uses the keys as shown.	 <p>The screenshot shows the SAP Dictionary interface for a table named YMDGM_BUPA01_T. The 'Primary Key' tab is selected. It shows two key components: 'MATNR' and 'BUPA_ID'. The 'Key definition' section includes options for 'Standard Key', 'Line Type', 'Key Components', and 'Not specified'. The 'Key category' section includes options for 'Unique', 'Non-Unique', and 'Not specified'.</p>																														
6. In transaction SE11 create structure YMDGM_BUPA01_S_X as shown. Note: <i>DELETE_ROW</i> indicates that this row shall be deleted	 <p>The screenshot shows the SAP Dictionary interface for a structure named YMDGM_BUPA01_S_X. The 'Components' tab is selected. It lists four components: 'MATNR', 'BUPA_ID', 'NICKNAME', and 'DELETE_ROW'. The 'Predefined Type' column shows '1 Types' for all components. The 'Reference Type' column shows 'XFELD' for 'NICKNAME' and 'DELETE_ROW', while 'MATNR' and 'BUPA_ID' have dropdown arrows. The 'Komponententyp' column shows 'MATNR' for 'MATNR', 'BU_PARTNER' for 'BUPA_ID', 'XFELD' for 'NICKNAME', and 'XFELD' for 'DELETE_ROW'. The 'Data Type' column shows 'CHAR' for all components. The 'Length' and 'Deci...' columns show values for each component.</p> <table border="1" data-bbox="515 1538 1341 1740"> <thead> <tr> <th>Component</th> <th>Reference Type</th> <th>Komponententyp</th> <th>Data Type</th> <th>Length</th> <th>Deci...</th> </tr> </thead> <tbody> <tr> <td>MATNR</td> <td>1 Types</td> <td>MATNR</td> <td>CHAR</td> <td>18</td> <td>0</td> </tr> <tr> <td>BUPA_ID</td> <td>1 Types</td> <td>BU_PARTNER</td> <td>CHAR</td> <td>10</td> <td>0</td> </tr> <tr> <td>NICKNAME</td> <td>1 Types</td> <td>XFELD</td> <td>CHAR</td> <td>1</td> <td>0</td> </tr> <tr> <td>DELETE_ROW</td> <td>1 Types</td> <td>XFELD</td> <td>CHAR</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	Component	Reference Type	Komponententyp	Data Type	Length	Deci...	MATNR	1 Types	MATNR	CHAR	18	0	BUPA_ID	1 Types	BU_PARTNER	CHAR	10	0	NICKNAME	1 Types	XFELD	CHAR	1	0	DELETE_ROW	1 Types	XFELD	CHAR	1	0
Component	Reference Type	Komponententyp	Data Type	Length	Deci...																										
MATNR	1 Types	MATNR	CHAR	18	0																										
BUPA_ID	1 Types	BU_PARTNER	CHAR	10	0																										
NICKNAME	1 Types	XFELD	CHAR	1	0																										
DELETE_ROW	1 Types	XFELD	CHAR	1	0																										

7.	<p>In transaction SE11 create table type YMDGM_BUPA01_T_X as shown.</p> 
8.	<p>Make sure table type YMDGM_BUPA01_T_X is a sorted table.</p> 

9. Make sure table type YMDGM_BUPA01_T_X has the key fields as shown.

Key definition		Key category
<input type="radio"/> Standard key	<input checked="" type="radio"/> Line type	<input checked="" type="radio"/> Unique
<input type="radio"/> Key components	<input type="radio"/> Not specified	<input type="radio"/> Non-unique
<input type="radio"/> Not specified		<input type="radio"/> Not specified

Choose components

Key component
MATNR
BUPA_ID

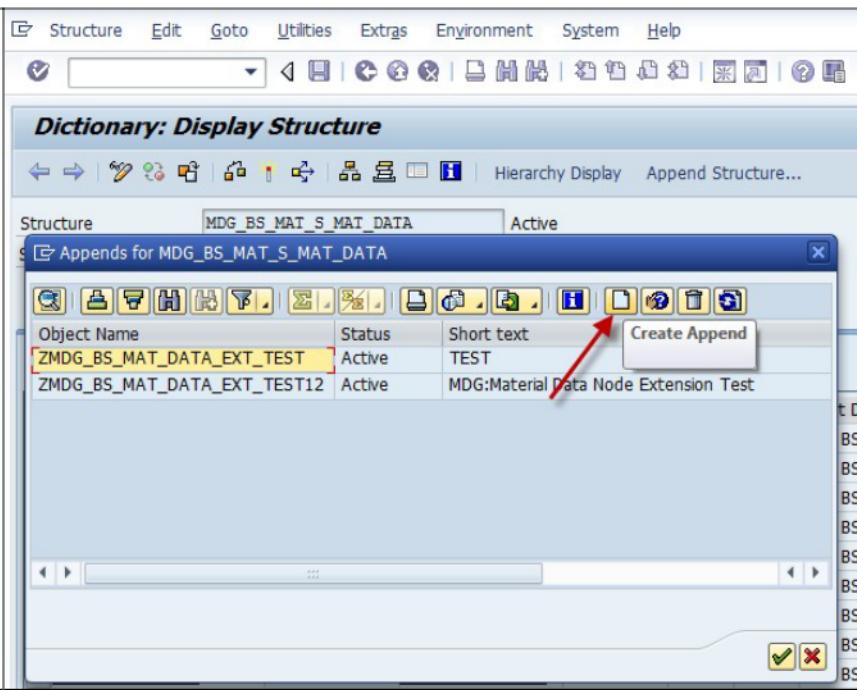
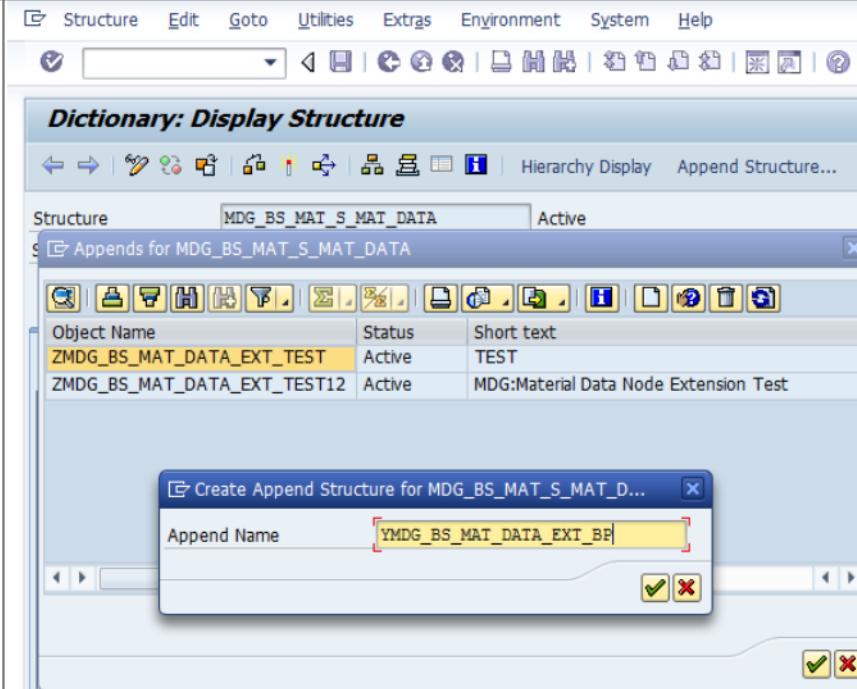
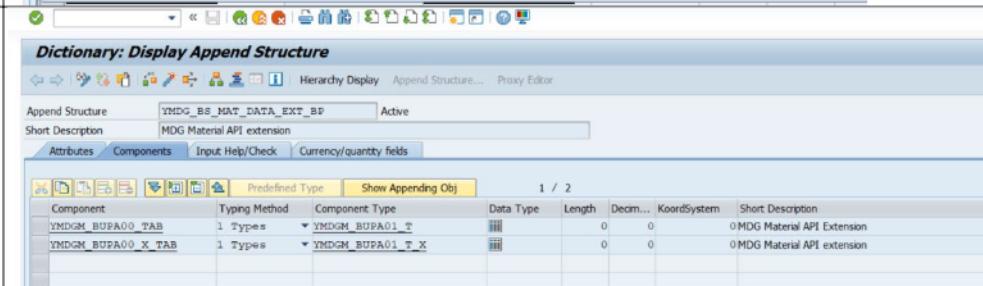
4.1.2. Extend MDG BS MAT (Material Master Data Structure)

1. Start transaction SE11.
Enter
MDG_BS_MAT_S_MA
T_DATA as shown.
Choose Display.

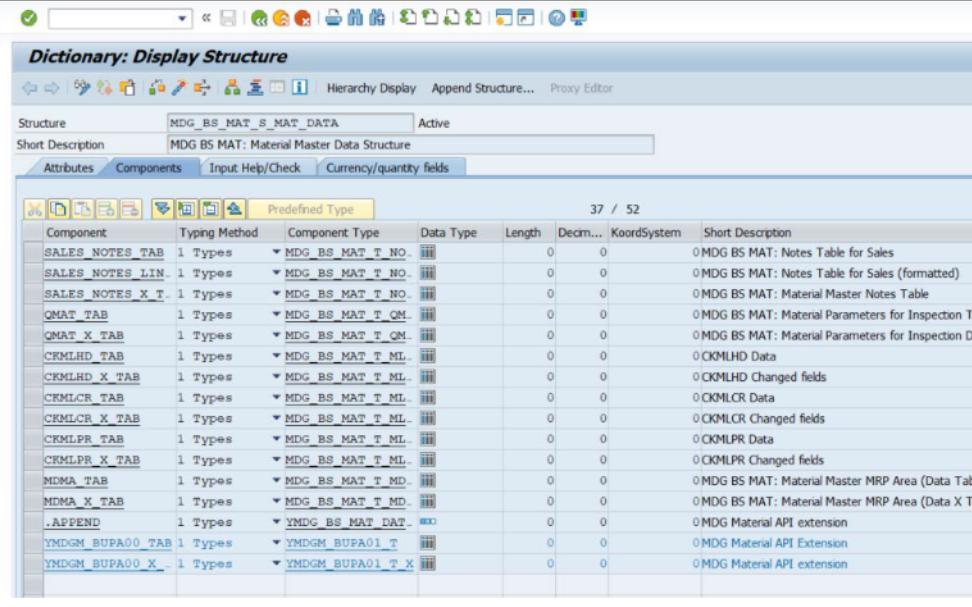
<input type="radio"/> Database table	
<input type="radio"/> View	
<input checked="" type="radio"/> Data type	MDG_BS_MAT_S_MAT_DATA
<input type="radio"/> Typgruppe	
<input type="radio"/> Domain	
<input type="radio"/> Search help	
<input type="radio"/> Lock object	

Display Change Create

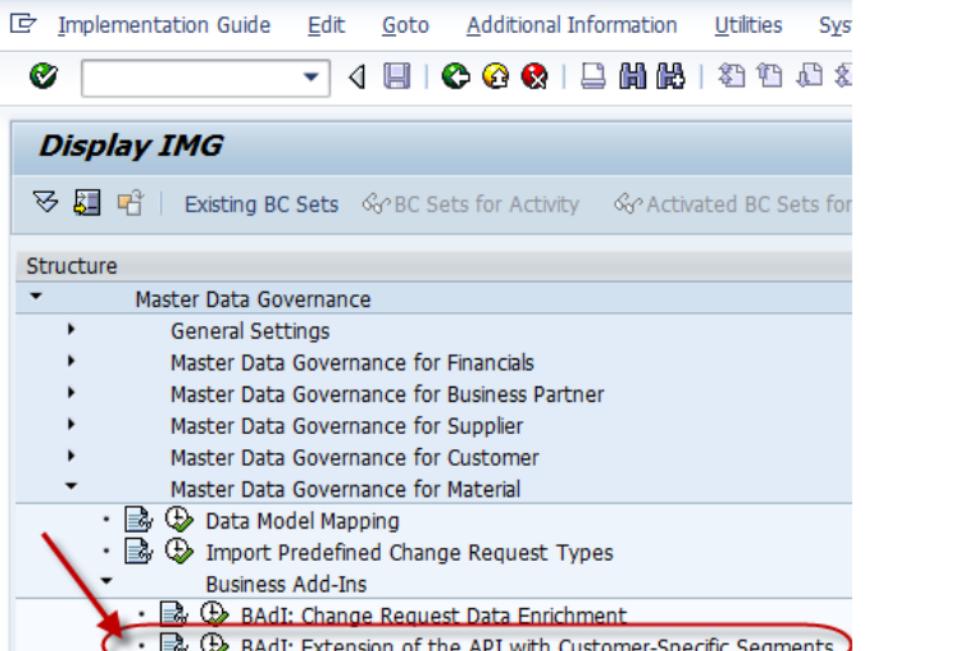
How-To: Extend MDG-M by a New Reuse Entity Type

2.	<p>Create a new Append.</p> 
3.	<p>Enter the <i>Append Name</i> as shown.</p> 
4.	<p>Enter the append component details as shown.</p> 

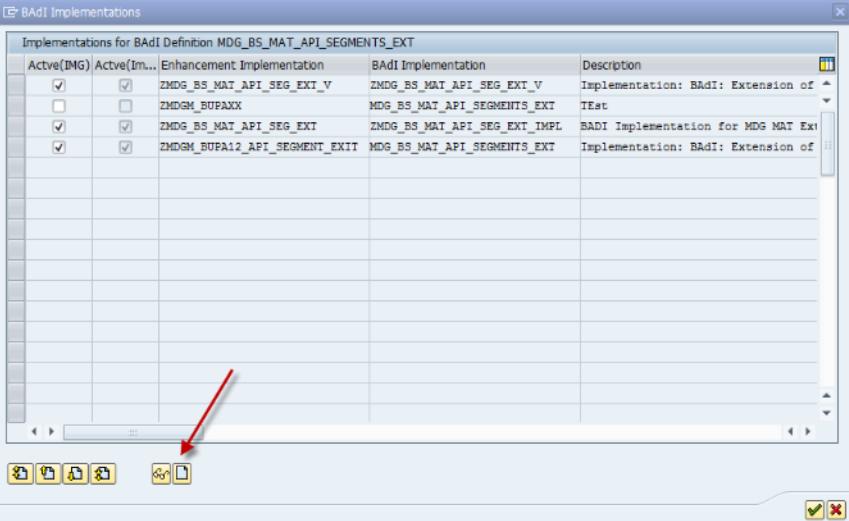
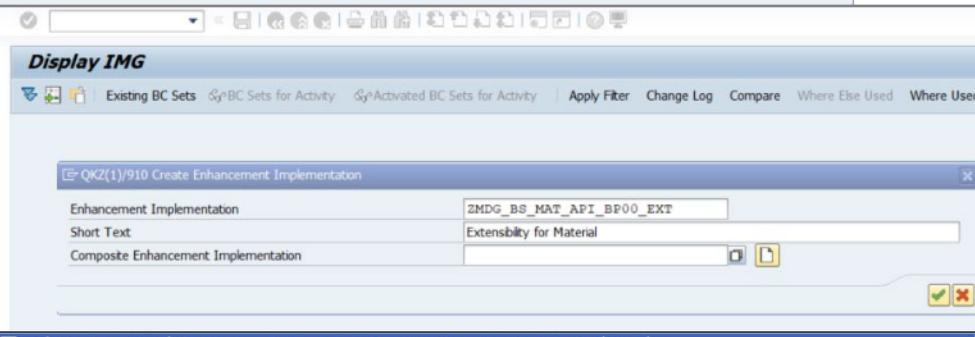
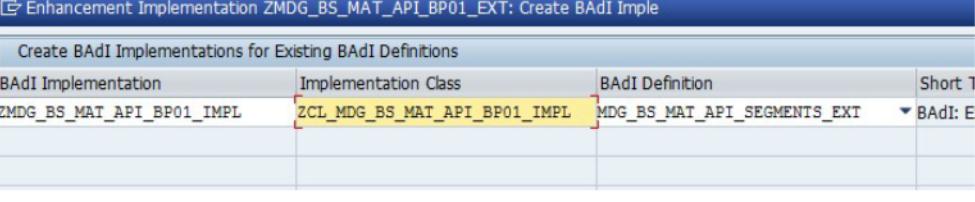
How-To: Extend MDG-M by a New Reuse Entity Type

<p>5. Save your changes and make sure that the append appears in structure <code>MDG_BS_MAT_S_MATERIAL_DATA</code> as shown.</p> <p>Important naming convention:</p> <p><code><Tablename>_TAB</code> for the data part and <code><Tablename>_X_TAB</code> for the change structure with <code><Tablename></code> being the name of the database table you want to put under governance.</p>	
<p>6. From MDG 9.0: Repeat step 1-5 for backend structure <code>CMD_BS_MAT_S_MATERIAL_DATA</code>.</p>	

4.1.3. BAdI: Extension of the API with Customer-Specific Segments

<p>1. In MDG customizing start the selected entry as shown.</p>	
---	--

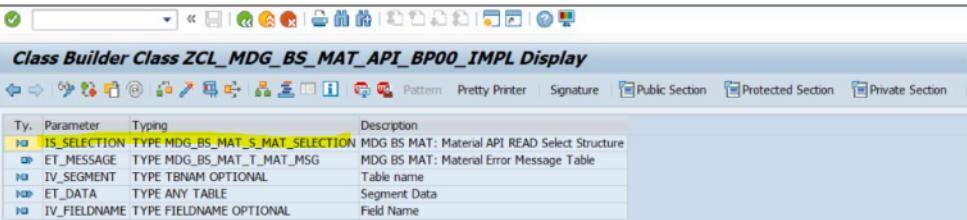
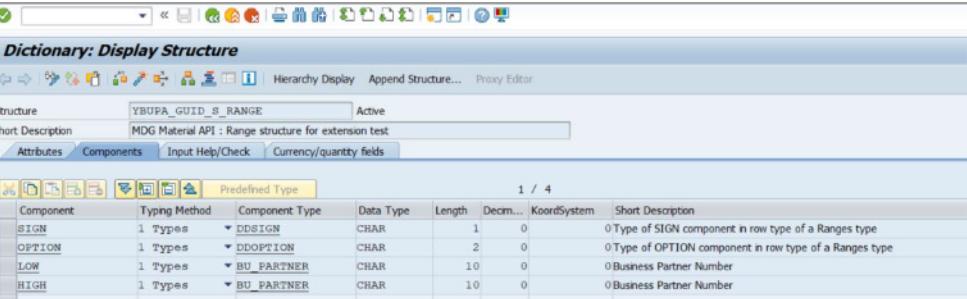
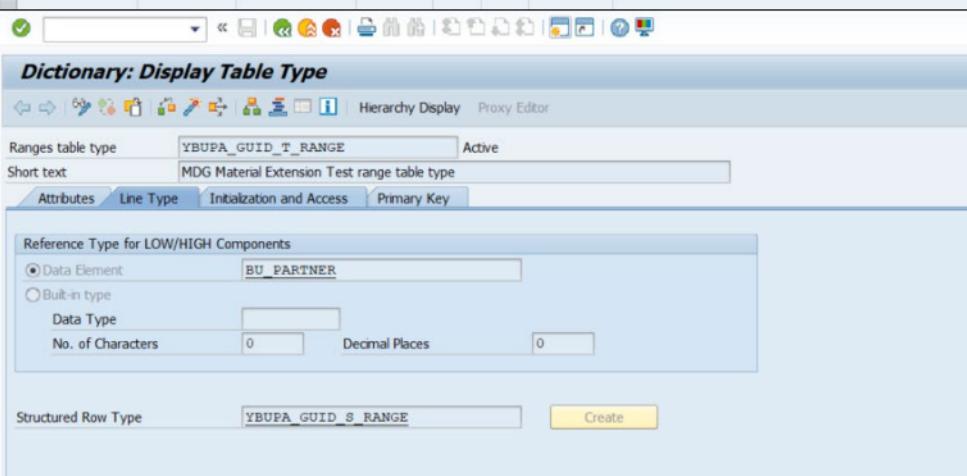
How-To: Extend MDG-M by a New Reuse Entity Type

2. Create a new BAdI implementation for MDG_BS_MAT_API_SEGMENTS_EXT	
3. Enter the name of the <i>Enhancement Implementation</i> as shown.	
4. Enter further details for the BAdI as shown in the screenshot. Remark: The screen shot shows ZMDG_BS_MAT_API_BP01_IMPL and ZCL_MDG_BS_MAT_API_BP01_IMPL. Please use ZMDG_BS_MAT_API_BP00_IMPL and ZCL_MDG_BS_MAT_API_BP0_IMPL instead to be in sync with the following screen shots.	
5. Check your <i>Enhancement Implementation</i> details look similar to the screenshot.	

6.	<p>Create a new filter entry.</p>
7.	<p>Enter the filter value YMDGM_BUPA01_S</p>

4.1.3.1 Creating a Selection-Range Table

How-To: Extend MDG-M by a New Reuse Entity Type

<p>1. The <code>IS_SELECTION</code> parameter contains the material selection criteria for which the database select must be executed. The selection criteria always contain the <code>MATNR</code> and possibly additional key fields of the customer-specific database table.</p> <p>In case you have key fields in your customer-specific table you must append <code>MDG_BS_MAT_S_MAT_SELECTION</code> by your key-fields.</p> <p>This is shown in the next step.</p>	 <p>Class Builder Class ZCL_MDG_BS_MAT_API_BP00_IMPL Display</p> <table border="1"> <thead> <tr> <th>Ty.</th> <th>Parameter</th> <th>Typing</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>PO</td> <td>IS_SELECTION</td> <td>TYPE MDG_BS_MAT_S_MAT_SELECTION</td> <td>MDG BS MAT: Material API READ Select Structure</td> </tr> <tr> <td>PO</td> <td>ET_MESSAGE</td> <td>TYPE MDG_BS_MAT_T_MAT_MSG</td> <td>MDG BS MAT: Material Error Message Table</td> </tr> <tr> <td>PO</td> <td>IV_SEGMENT</td> <td>TYPE TBNAME OPTIONAL</td> <td>Table name</td> </tr> <tr> <td>PO</td> <td>ET_DATA</td> <td>TYPE ANY TABLE</td> <td>Segment Data</td> </tr> <tr> <td>PO</td> <td>IV_FIELDNAME</td> <td>TYPE FIELDNAME OPTIONAL</td> <td>Field Name</td> </tr> </tbody> </table> <p>Method <code>IF_MDG_BS_MAT_API_SEGMENTS_EXT~READ</code> Active</p> <pre>1 METHOD if_mdg_bs_mat_api_segments_ext-read. 2 </pre>	Ty.	Parameter	Typing	Description	PO	IS_SELECTION	TYPE MDG_BS_MAT_S_MAT_SELECTION	MDG BS MAT: Material API READ Select Structure	PO	ET_MESSAGE	TYPE MDG_BS_MAT_T_MAT_MSG	MDG BS MAT: Material Error Message Table	PO	IV_SEGMENT	TYPE TBNAME OPTIONAL	Table name	PO	ET_DATA	TYPE ANY TABLE	Segment Data	PO	IV_FIELDNAME	TYPE FIELDNAME OPTIONAL	Field Name																																		
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<p>2. Start transaction SE11. Create the structure <code>YBUPA_GUID_S_RANGE</code> that looks like shown in the screen shot.</p>	 <p>Dictionary: Display Structure</p> <table border="1"> <thead> <tr> <th>Structure</th> <th>YBUPA_GUID_S_RANGE</th> <th>Active</th> </tr> </thead> <tbody> <tr> <td>Short Description</td> <td>MDG Material API : Range structure for extension test</td> <td></td> </tr> <tr> <td>Attributes</td> <td>SIGN, OPTION, LOW, HIGH</td> <td></td> </tr> <tr> <td>Components</td> <td></td> <td></td> </tr> <tr> <td>Input Help/Check</td> <td></td> <td></td> </tr> <tr> <td>Currency/quantity fields</td> <td></td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Component</th> <th>Typing Method</th> <th>Component Type</th> <th>Data Type</th> <th>Length</th> <th>Decim...</th> <th>KoordSystem</th> <th>Short Description</th> </tr> </thead> <tbody> <tr> <td>SIGN</td> <td>1 Types</td> <td>DDSIGN</td> <td>CHAR</td> <td>1</td> <td>0</td> <td></td> <td>0 Type of SIGN component in row type of a Ranges type</td> </tr> <tr> <td>OPTION</td> <td>1 Types</td> <td>DDOPITION</td> <td>CHAR</td> <td>2</td> <td>0</td> <td></td> <td>0 Type of OPTION component in row type of a Ranges type</td> </tr> <tr> <td>LOW</td> <td>1 Types</td> <td>BU_PARTNER</td> <td>CHAR</td> <td>10</td> <td>0</td> <td></td> <td>0 Business Partner Number</td> </tr> <tr> <td>HIGH</td> <td>1 Types</td> <td>BU_PARTNER</td> <td>CHAR</td> <td>10</td> <td>0</td> <td></td> <td>0 Business Partner Number</td> </tr> </tbody> </table>	Structure	YBUPA_GUID_S_RANGE	Active	Short Description	MDG Material API : Range structure for extension test		Attributes	SIGN, OPTION, LOW, HIGH		Components			Input Help/Check			Currency/quantity fields			Component	Typing Method	Component Type	Data Type	Length	Decim...	KoordSystem	Short Description	SIGN	1 Types	DDSIGN	CHAR	1	0		0 Type of SIGN component in row type of a Ranges type	OPTION	1 Types	DDOPITION	CHAR	2	0		0 Type of OPTION component in row type of a Ranges type	LOW	1 Types	BU_PARTNER	CHAR	10	0		0 Business Partner Number	HIGH	1 Types	BU_PARTNER	CHAR	10	0		0 Business Partner Number
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Short Description	MDG Material API : Range structure for extension test																																																										
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HIGH	1 Types	BU_PARTNER	CHAR	10	0		0 Business Partner Number																																																				
<p>3. Start transaction SE11. Create the range table type that looks like shown in the screen shot.</p>	 <p>Dictionary: Display Table Type</p> <table border="1"> <thead> <tr> <th>Ranges table type</th> <th>YBUPA_GUID_T_RANGE</th> <th>Active</th> </tr> </thead> <tbody> <tr> <td>Short text</td> <td>MDG Material Extension Test range table type</td> <td></td> </tr> <tr> <td>Attributes</td> <td></td> <td></td> </tr> <tr> <td>Line Type</td> <td></td> <td></td> </tr> <tr> <td>Initialization and Access</td> <td></td> <td></td> </tr> <tr> <td>Primary Key</td> <td></td> <td></td> </tr> </tbody> </table> <p>Reference Type for LOW/HIGH Components</p> <p><input checked="" type="radio"/> Data Element <code>BU_PARTNER</code></p> <p><input type="radio"/> Built-in type</p> <p>Data Type <code>CHAR</code></p> <p>No. of Characters <code>0</code> Decimal Places <code>0</code></p> <p>Structured Row Type <code>YBUPA_GUID_S_RANGE</code> Create</p>	Ranges table type	YBUPA_GUID_T_RANGE	Active	Short text	MDG Material Extension Test range table type		Attributes			Line Type			Initialization and Access			Primary Key																																										
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<p>4. Start transaction SE11.</p> <p>Open structure MDG_BS_MAT_S_MAT_SELECTION. Create an append called ZMDG_BS_MAT_RANG E which has a component called BUPA_ID_RANGE of component type YBUPDA_GUID_T_RA NGE. The APPEND structure is shown and the structure MDG_BS_S_MAT_SEL ECTION</p>	
<p>It is vital that the component name of the append adheres to the naming standard <KEY-FIELDNAME OF BACKEND TABLE>_RANGE. In our case the backend table is YMDGM_BUPA00 and the key-fieldname is BUPA_ID therefore the component name is BUPA_ID_RANGE.</p>	

4.1.4. BAdI Implementation: READ Method

```

METHOD if_mdg_bs_mat_api_segments_ext~read.
  DATA: lt_mdgm_bupa TYPE ymdgm_bupa01_t.
  CLEAR: et_data, et_message.
  SELECT * FROM ymdgm_bupa00 INTO CORRESPONDING FIELDS OF TABLE
    lt_mdgm_bupa WHERE matnr IN is_selection-matnr_range
      AND bupa_id IN is_selection-bupa_id_range.
  INSERT LINES OF lt_mdgm_bupa INTO TABLE et_data.
ENDMETHOD.

```

4.1.5. BAdI Implementation: CHECK_AND_SAVE Method

```

METHOD if_mdg_bs_mat_api_segments_ext~check_and_save.

DATA: ls_data      TYPE ymdgm_bupa01_s.
DATA: ls_data_x    TYPE
      ymdgm_bupa01_s_x.
DATA: ls_message   TYPE mdg_bs_mat_s_mat_msg.
DATA: lt_modify    TYPE STANDARD TABLE OF ymdgm_bupa00.
DATA: ls_modify    TYPE ymdgm_bupa00.
DATA: lt_delete    TYPE STANDARD TABLE OF ymdgm_bupa00.
DATA: ls_delete    TYPE ymdgm_bupa00.

CLEAR et_message.

■ First some checks
LOOP AT is_data-ymdgm_bupa00_tab INTO ls_data.
  " All fields must be filled, otherwise MESSAGE e000(00) WITH ls_data-
  matnr ls_data-bupa_id ls_data-nickname.
  IF ls_data-matnr IS INITIAL OR ls_data-bupa_id IS INITIAL OR ls_data-
  nickname IS INITIAL.
    ls_message-msgid = '00'.
    ls_message-msgno =
    '000'. ls_message-msgty
    = 'E'.
    ls_message-msgv1 = 'Empty value detected in:
    '. ls_message-msgv2 = ls_data-matnr.
    ls_message-msgv3 = ls_data-bupa_id.
    ls_message-msgv4 = ls_data-nickname.
    INSERT ls_message INTO TABLE
    et_message.
  ENDIF.
  " BuPa must
  exist
  " ...
ENDLOOP.

■ In test mode, we're finished now
CHECK iv_test_mode =
abap_false.

■ Determine which records to delete or to insert/update
LOOP AT is_data-ymdgm_bupa00_x_tab INTO ls_data_x.
  IF ls_data_x-delete_row = abap_true. " Keep key fields for deletion
    ls_delete-matnr = ls_data_x-matnr.
    ls_delete-bupa_id = ls_data_x-
    bupa_id. INSERT ls_delete INTO TABLE
    lt_delete.
  ELSE.
    READ TABLE is_data-ymdgm_bupa00_tab INTO
      ls_data WITH TABLE KEY matnr = ls_data_x-
      matnr
      bupa_id = ls_data_x-
      bupa_id.
    ASSERT sy-subrc = 0. " No _x record without data record
    MOVE-CORRESPONDING ls_data TO
    ls_modify. INSERT ls_modify INTO TABLE
    lt_modify.
  ENDIF.

  .
  ENDLOOP.

■ Now change the DB
■ Note: In a productive implementation, these DB changes must be done ON
  COMMIT (PERFORM xxx ON COMMIT or CALL FUNCTION xxx IN UPDATE TASK)
■ * Note: We are basically ignoring the _X structure here - if data gets
  changed, all fields get updated
  IF NOT lt_delete IS INITIAL.
    DELETE ymdgm_bupa00 FROM TABLE lt_delete.
  ENDIF.
  IF NOT lt_modify IS INITIAL.
    MODIFY ymdgm_bupa00 FROM TABLE lt_modify.
  ENDIF.

```

4.1.6. BAdI Implementation: GET_ES_NODEINFO Method

Implement `GET_ES_NODEINFO` method if you have extended the enterprise search model `MATERIAL`. See also extensibility guides for the Search:

<https://community.sap.com/topics/master-data-governance/how-to#central-governance-of-material-data>.

With this method you get the node name in the Enterprise Search template for the given customer-defined database table with parameters `ET_ES_NODENAME`.

4.2. MDG Data Model Extension

In this section you will extend the MDG data model with the entity type `YBUPA01`. The entity type has one attribute `NICKNAME` and one qualifying relationship to entity type `YBUPA`. `YBUPA01` will have two key fields `MATERIAL` and `YBUPA`. For details of the data model extension refer to the figure below.

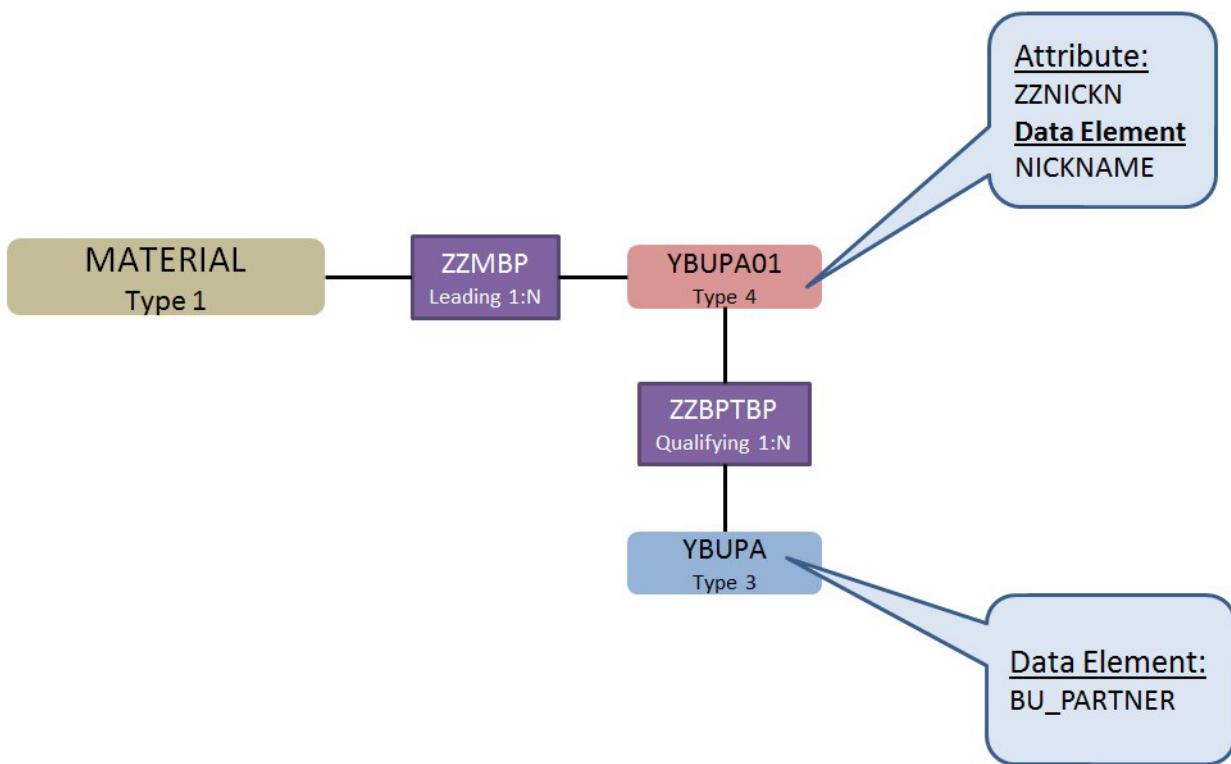
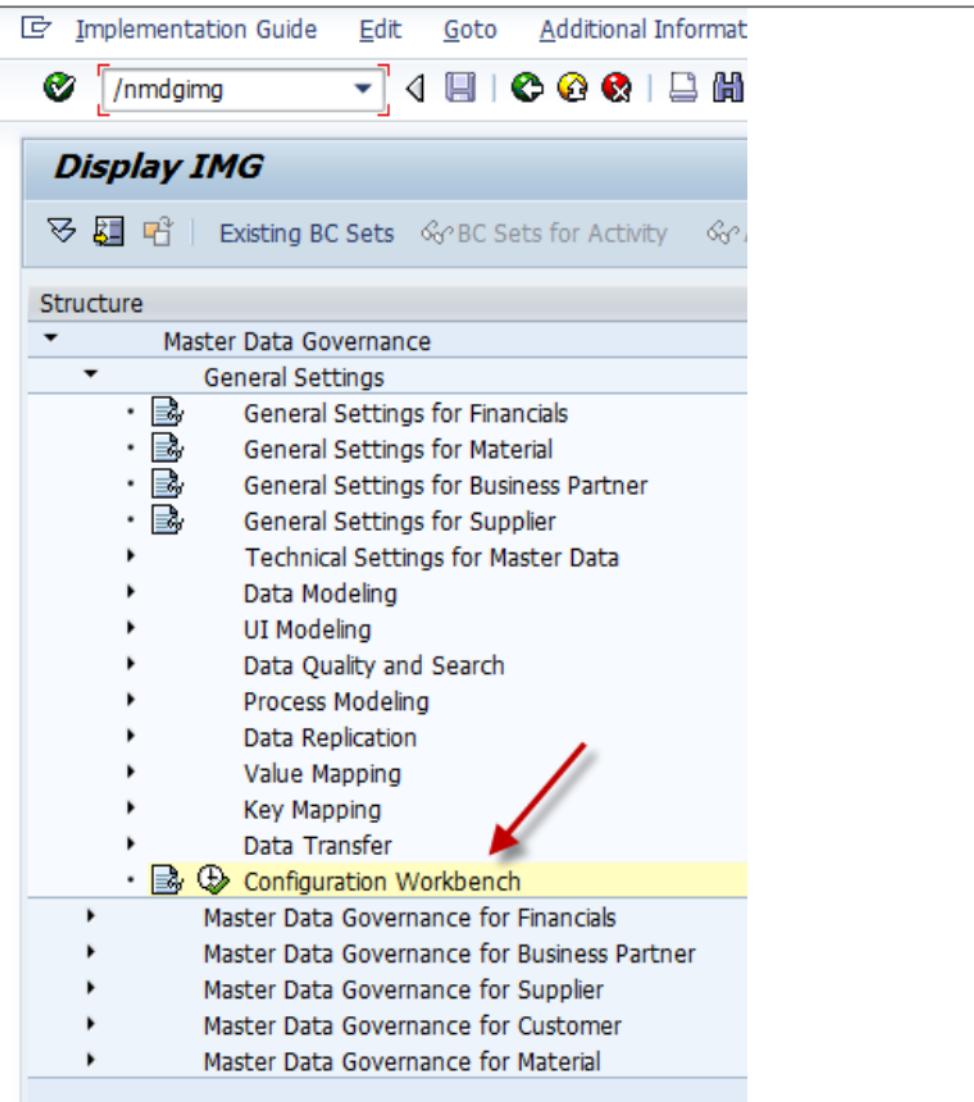
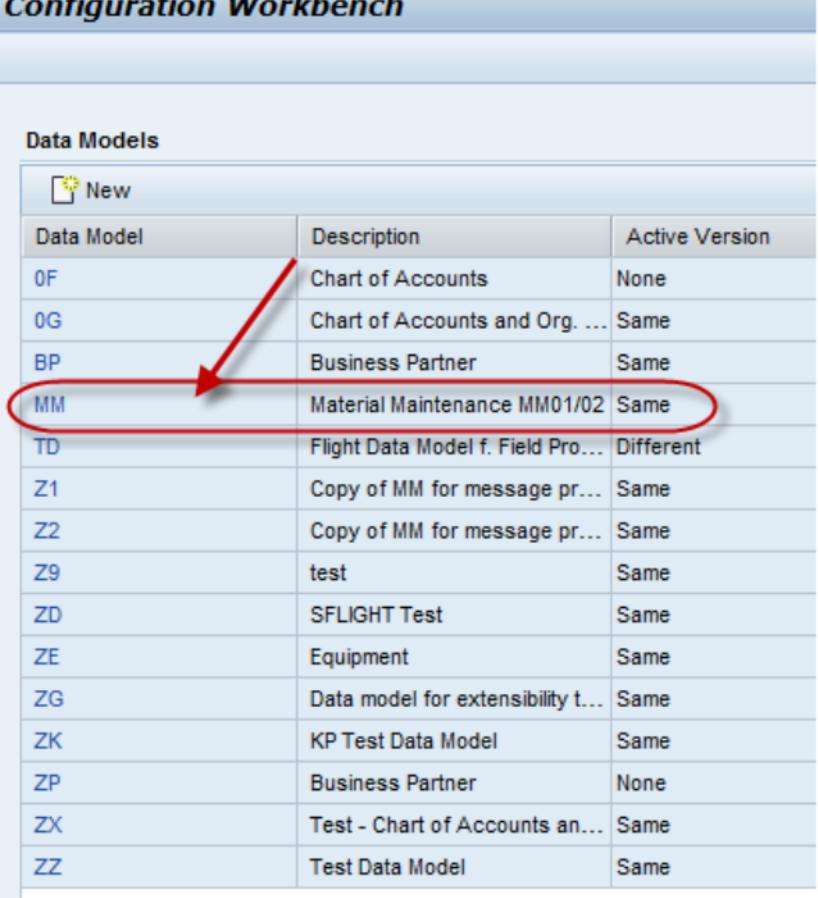
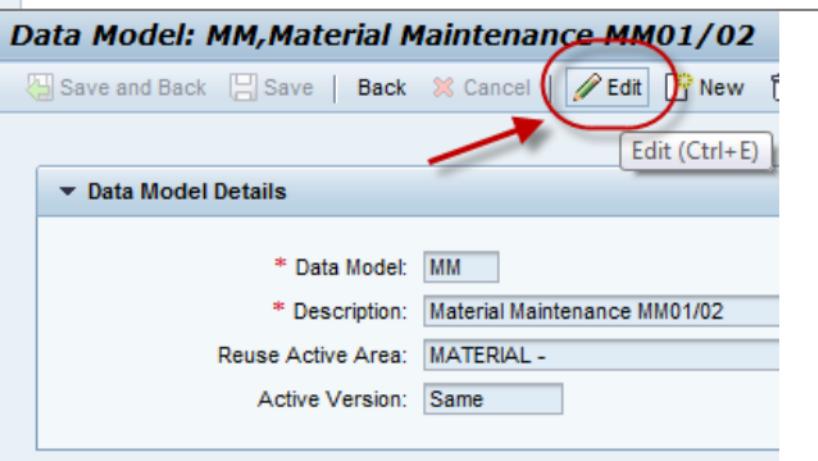


Figure: Data Model details for extension

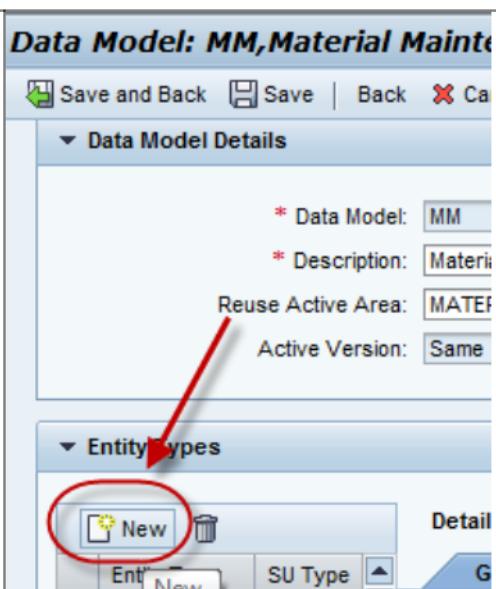
4.2.1. Extend MDG Data Model

1. Start the MDG customizing with transaction MDGIMG and start the Configuration Workbench as shown.



2. In the Configuration Workbench open the <i>MM Data Model</i> .	 <table border="1" data-bbox="515 213 1333 1111"> <thead> <tr> <th colspan="3">Data Models</th> </tr> <tr> <th><input type="checkbox"/> New</th> <th>Data Model</th> <th>Description</th> <th>Active Version</th> </tr> </thead> <tbody> <tr> <td></td> <td>0F</td> <td>Chart of Accounts</td> <td>None</td> </tr> <tr> <td></td> <td>0G</td> <td>Chart of Accounts and Org. ...</td> <td>Same</td> </tr> <tr> <td></td> <td>BP</td> <td>Business Partner</td> <td>Same</td> </tr> <tr> <td></td> <td>MM</td> <td>Material Maintenance MM01/02</td> <td>Same</td> </tr> <tr> <td></td> <td>TD</td> <td>Flight Data Model f. Field Pro...</td> <td>Different</td> </tr> <tr> <td></td> <td>Z1</td> <td>Copy of MM for message pr...</td> <td>Same</td> </tr> <tr> <td></td> <td>Z2</td> <td>Copy of MM for message pr...</td> <td>Same</td> </tr> <tr> <td></td> <td>Z9</td> <td>test</td> <td>Same</td> </tr> <tr> <td></td> <td>ZD</td> <td>SFLIGHT Test</td> <td>Same</td> </tr> <tr> <td></td> <td>ZE</td> <td>Equipment</td> <td>Same</td> </tr> <tr> <td></td> <td>ZG</td> <td>Data model for extensibility t...</td> <td>Same</td> </tr> <tr> <td></td> <td>ZK</td> <td>KP Test Data Model</td> <td>Same</td> </tr> <tr> <td></td> <td>ZP</td> <td>Business Partner</td> <td>None</td> </tr> <tr> <td></td> <td>ZX</td> <td>Test - Chart of Accounts an...</td> <td>Same</td> </tr> <tr> <td></td> <td>ZZ</td> <td>Test Data Model</td> <td>Same</td> </tr> </tbody> </table>	Data Models			<input type="checkbox"/> New	Data Model	Description	Active Version		0F	Chart of Accounts	None		0G	Chart of Accounts and Org. ...	Same		BP	Business Partner	Same		MM	Material Maintenance MM01/02	Same		TD	Flight Data Model f. Field Pro...	Different		Z1	Copy of MM for message pr...	Same		Z2	Copy of MM for message pr...	Same		Z9	test	Same		ZD	SFLIGHT Test	Same		ZE	Equipment	Same		ZG	Data model for extensibility t...	Same		ZK	KP Test Data Model	Same		ZP	Business Partner	None		ZX	Test - Chart of Accounts an...	Same		ZZ	Test Data Model	Same
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3. Choose the <i>Edit</i> pushbutton.	 <p>Data Model: MM, Material Maintenance MM01/02</p> <p>Save and Back Save Back Cancel Edit New Edit (Ctrl+E)</p> <p>Data Model Details</p> <table border="1"> <tr> <td>* Data Model:</td> <td>MM</td> </tr> <tr> <td>* Description:</td> <td>Material Maintenance MM01/02</td> </tr> <tr> <td>Reuse Active Area:</td> <td>MATERIAL -</td> </tr> <tr> <td>Active Version:</td> <td>Same</td> </tr> </table>	* Data Model:	MM	* Description:	Material Maintenance MM01/02	Reuse Active Area:	MATERIAL -	Active Version:	Same																																																											
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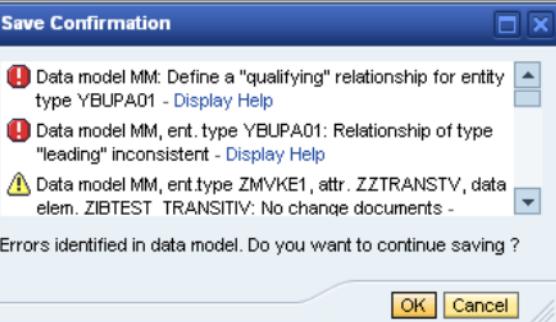
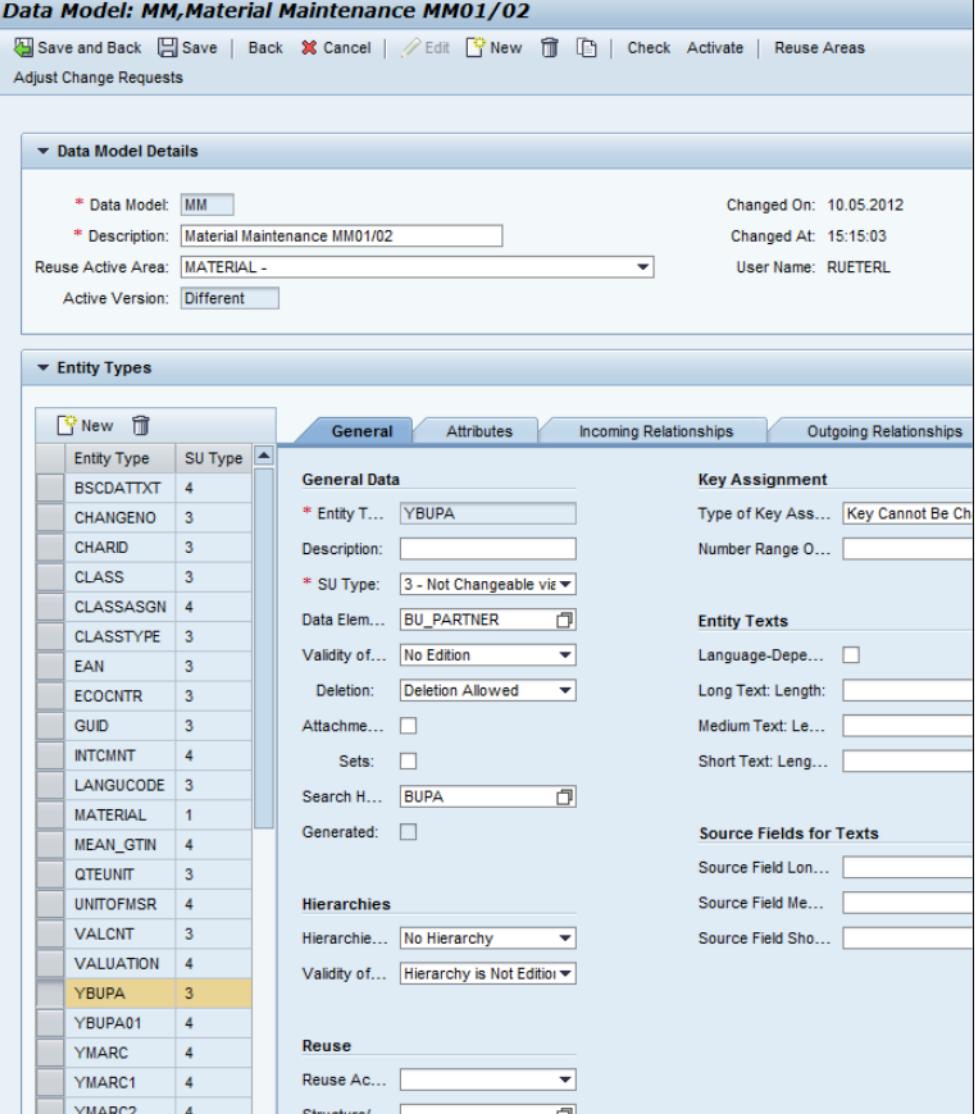
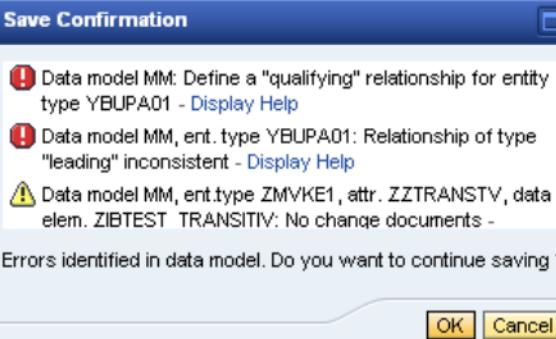
4. To create a new entity type, choose the *New* pushbutton.



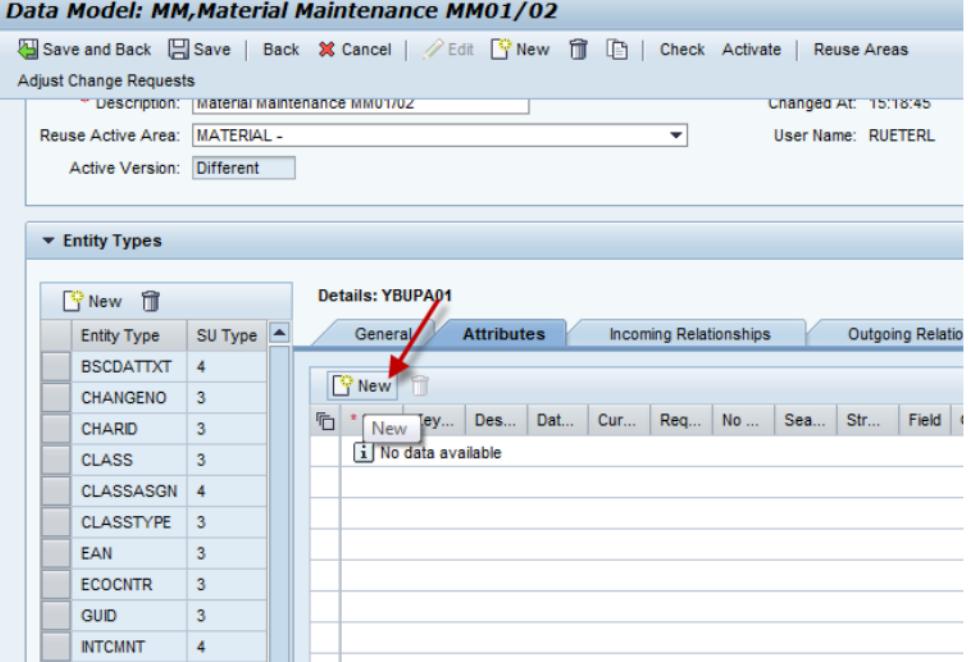
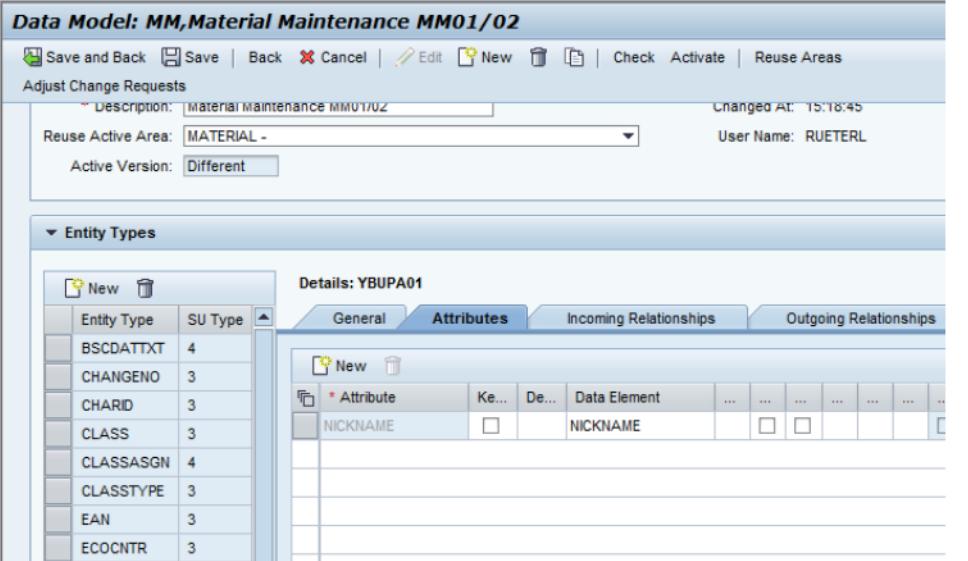
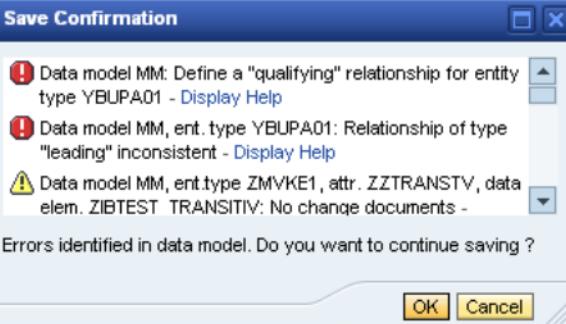
5. Create the new *Entity Type* YBUPA01 (*SU Type* 4) with the details shown in the screenshot.

The screenshot shows the SAP Data Model interface for MM, Material Maintenance MM01/02. The main title is 'Data Model: MM, Material Maintenance MM01/02'. The 'Data Model Details' section shows 'Data Model: MM', 'Description: Material Maintenance MM01/02', 'Reuse Active Area: MATERIAL', and 'Active Version: Same'. The 'Entity Types' section is expanded, showing a table with columns 'Entity Type' and 'SU Type'. The table lists various entity types. On the right, the 'General' tab of the configuration dialog is visible for the entity type YBUPA01, showing fields like Entity Type (YBUPA01), SU Type (4 - Changeable via Obj), and various assignment and hierarchy settings.

How-To: Extend MDG-M by a New Reuse Entity Type

6.	<p>Choose Save.</p> <p>Choose OK in the confirmation dialog.</p> 																																														
7.	<p>Create the new <i>Entity Type</i> YBUPA (SU Type 3) with the details shown in the screenshot.</p>  <p>Data Model Details:</p> <ul style="list-style-type: none"> * Data Model: MM * Description: Material Maintenance MM01/02 Reuse Active Area: MATERIAL - Active Version: Different <p>Entity Types:</p> <table border="1"> <thead> <tr> <th>Entity Type</th> <th>SU Type</th> </tr> </thead> <tbody> <tr><td>BSCDATTXT</td><td>4</td></tr> <tr><td>CHANGENO</td><td>3</td></tr> <tr><td>CHARID</td><td>3</td></tr> <tr><td>CLASS</td><td>3</td></tr> <tr><td>CLASSASGN</td><td>4</td></tr> <tr><td>CLASSTYPE</td><td>3</td></tr> <tr><td>EAN</td><td>3</td></tr> <tr><td>ECOCNTR</td><td>3</td></tr> <tr><td>GUID</td><td>3</td></tr> <tr><td>INTCMNT</td><td>4</td></tr> <tr><td>LANGUCODE</td><td>3</td></tr> <tr><td>MATERIAL</td><td>1</td></tr> <tr><td>MEAN_GTIN</td><td>4</td></tr> <tr><td>QTEUNIT</td><td>3</td></tr> <tr><td>UNIOTFSR</td><td>4</td></tr> <tr><td>VALCNT</td><td>3</td></tr> <tr><td>VALUATION</td><td>4</td></tr> <tr><td>YBUPA</td><td>3</td></tr> <tr><td>YBUPA01</td><td>4</td></tr> <tr><td>YMARC</td><td>4</td></tr> <tr><td>YMARC1</td><td>4</td></tr> <tr><td>YMARC2</td><td>4</td></tr> </tbody> </table> <p>General:</p> <ul style="list-style-type: none"> * Entity T...: YBUPA Description: * SU Type: 3 - Not Changeable via... Data Ele...: BU_PARTNER Validity of...: No Edition Deletion: Deletion Allowed Attachme...: Sets: Search H...: BUPA Generated: <p>Key Assignment:</p> <ul style="list-style-type: none"> Type of Key Ass...: Key Cannot Be Ch... Number Range O...: <p>Entity Texts:</p> <ul style="list-style-type: none"> Language-Depen...: Long Text: Length: Medium Text: Le...: Short Text: Leng...: <p>Source Fields for Texts:</p> <ul style="list-style-type: none"> Source Field Lon...: Source Field Me...: Source Field Sho...: <p>Hierarchies:</p> <ul style="list-style-type: none"> Hierarchie...: No Hierarchy Validity of...: Hierarchy is Not Editio... <p>Reuse:</p> <ul style="list-style-type: none"> Reuse Ac...: Structure/... 	Entity Type	SU Type	BSCDATTXT	4	CHANGENO	3	CHARID	3	CLASS	3	CLASSASGN	4	CLASSTYPE	3	EAN	3	ECOCNTR	3	GUID	3	INTCMNT	4	LANGUCODE	3	MATERIAL	1	MEAN_GTIN	4	QTEUNIT	3	UNIOTFSR	4	VALCNT	3	VALUATION	4	YBUPA	3	YBUPA01	4	YMARC	4	YMARC1	4	YMARC2	4
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8.	<p>Choose Save.</p> <p>Choose OK in the confirmation dialog.</p> 																																														

How-To: Extend MDG-M by a New Reuse Entity Type

9. Go back to entity type YBUPA01. Switch the <i>Attributes</i> tab. Choose the <i>New</i> pushbutton.	 <p>Data Model: MM, Material Maintenance MM01/02</p> <p>Save and Back Save Back Cancel Edit New Delete Check Activate Reuse Areas</p> <p>Adjust Change Requests</p> <p>Description: Material Maintenance MMU1/02 Changed At: 15:18:45</p> <p>Reuse Active Area: MATERIAL - User Name: RUETERL</p> <p>Active Version: Different</p> <p>Entity Types</p> <table border="1"> <thead> <tr> <th>Entity Type</th> <th>SU Type</th> </tr> </thead> <tbody> <tr><td>BSCDATTXT</td><td>4</td></tr> <tr><td>CHANGENO</td><td>3</td></tr> <tr><td>CHARID</td><td>3</td></tr> <tr><td>CLASS</td><td>3</td></tr> <tr><td>CLASSASGN</td><td>4</td></tr> <tr><td>CLASSTYPE</td><td>3</td></tr> <tr><td>EAN</td><td>3</td></tr> <tr><td>ECOCNTR</td><td>3</td></tr> <tr><td>GUID</td><td>3</td></tr> <tr><td>INTCMNT</td><td>4</td></tr> </tbody> </table> <p>Details: YBUPA01</p> <p>General Attributes Incoming Relationships Outgoing Relationships</p> <p>New</p> <p>No data available</p>	Entity Type	SU Type	BSCDATTXT	4	CHANGENO	3	CHARID	3	CLASS	3	CLASSASGN	4	CLASSTYPE	3	EAN	3	ECOCNTR	3	GUID	3	INTCMNT	4																
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10. Create the new attribute <i>NICKNAME</i> as shown.	 <p>Data Model: MM, Material Maintenance MM01/02</p> <p>Save and Back Save Back Cancel Edit New Delete Check Activate Reuse Areas</p> <p>Adjust Change Requests</p> <p>Description: Material Maintenance MMU1/02 Changed At: 15:18:45</p> <p>Reuse Active Area: MATERIAL - User Name: RUETERL</p> <p>Active Version: Different</p> <p>Entity Types</p> <table border="1"> <thead> <tr> <th>Entity Type</th> <th>SU Type</th> </tr> </thead> <tbody> <tr><td>BSCDATTXT</td><td>4</td></tr> <tr><td>CHANGENO</td><td>3</td></tr> <tr><td>CHARID</td><td>3</td></tr> <tr><td>CLASS</td><td>3</td></tr> <tr><td>CLASSASGN</td><td>4</td></tr> <tr><td>CLASSTYPE</td><td>3</td></tr> <tr><td>EAN</td><td>3</td></tr> <tr><td>ECOCNTR</td><td>3</td></tr> </tbody> </table> <p>Details: YBUPA01</p> <p>General Attributes Incoming Relationships Outgoing Relationships</p> <p>New</p> <table border="1"> <thead> <tr> <th>* Attribute</th> <th>Ke...</th> <th>De...</th> <th>Data Element</th> <th>...</th> <th>...</th> <th>...</th> <th>...</th> <th>...</th> <th>...</th> </tr> </thead> <tbody> <tr> <td>NICKNAME</td> <td><input type="checkbox"/></td> <td></td> <td>NICKNAME</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Entity Type	SU Type	BSCDATTXT	4	CHANGENO	3	CHARID	3	CLASS	3	CLASSASGN	4	CLASSTYPE	3	EAN	3	ECOCNTR	3	* Attribute	Ke...	De...	Data Element	NICKNAME	<input type="checkbox"/>		NICKNAME	<input type="checkbox"/>	<input type="checkbox"/>				
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NICKNAME	<input type="checkbox"/>		NICKNAME	<input type="checkbox"/>	<input type="checkbox"/>																																		
11. Choose Save. Choose OK in the confirmation dialog.	 <p>Save Confirmation</p> <ul style="list-style-type: none"> ! Data model MM: Define a "qualifying" relationship for entity type YBUPA01 - Display Help ! Data model MM, ent. type YBUPA01: Relationship of type "leading" inconsistent - Display Help ⚠ Data model MM, ent.type ZMVKE1, attr. ZZTRANSTV, data elem. ZIBTEST TRANSITIV: No change documents - Display Help <p>Errors identified in data model. Do you want to continue saving ?</p> <p>OK Cancel</p>																																						

How-To: Extend MDG-M by a New Reuse Entity Type

<p>12. For entity type YBUPA01 open the <i>Incoming Relationships</i> tab. Choose the <i>New</i> pushbutton.</p>	<p>The screenshot shows the SAP Data Modeler interface for MM01/02. On the left, a list of entity types is shown, with YBUPA01 selected. On the right, the 'Incoming Relationships' tab is active for YBUPA01. A red circle highlights the 'New' button in the toolbar above the relationship table. The table itself is empty, showing a message: 'No data available'.</p>
<p>13. Create the two relationships as shown.</p>	<p>The screenshot shows the 'Incoming Relationships' tab for YBUPA01. Two new relationships have been created: ZZMBP (From-Entity Type MATERIAL, Relationship Type Leading, Cardinality 1:N) and ZZBPTBP (From-Entity Type YBUPA, Relationship Type Qualifying, Cardinality 1:N). A red circle highlights the 'New' button in the toolbar above the relationship table.</p>
<p>14. Choose the <i>Activate</i> pushbutton to activate your data model.</p>	<p>The screenshot shows the main toolbar of the Data Modeler. The 'Activate' button is highlighted with a red circle and an arrow pointing to it. Other buttons like Save, Back, Cancel, Edit, New, and Check are also visible.</p>

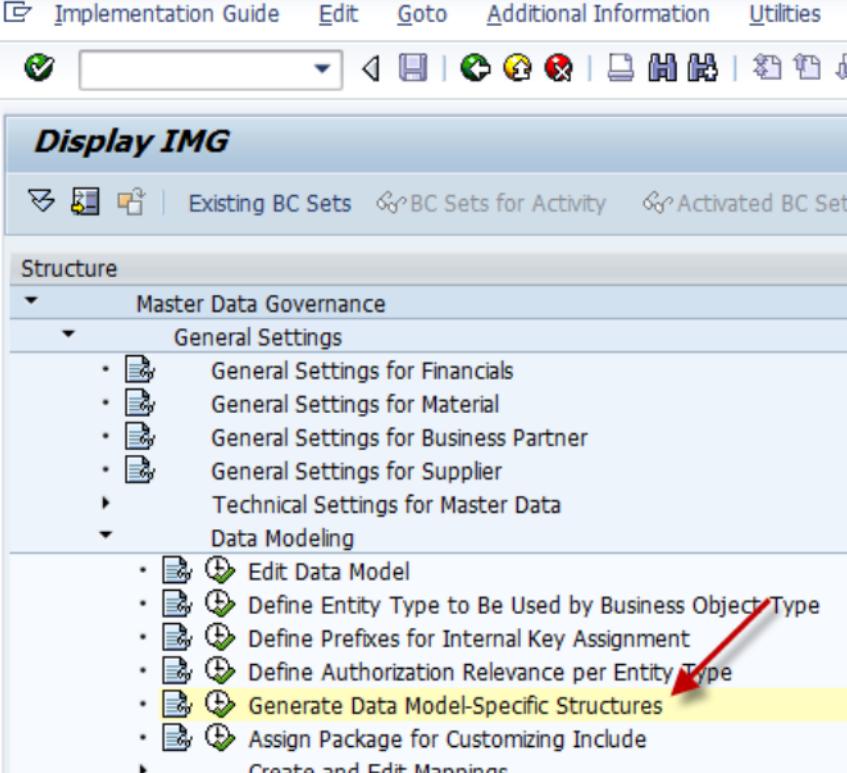
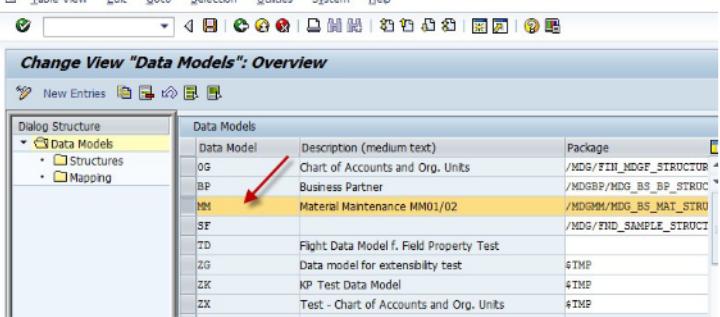
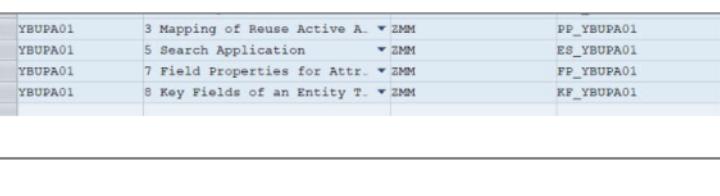
15. To check the activated data model, open the <i>Edit Data Model</i> Customizing activity as shown.	<p>The screenshot shows the SAP Fiori Launchpad with the 'Edit Data Model' activity selected. The path 'Master Data Governance > General Settings > Data Modeling' is highlighted. A red arrow points to the 'Edit Data Model' button in the list.</p>																																																																																																												
16. Choose the <i>Visualize Data Model</i> pushbutton	<p>The screenshot shows the 'Change View "Inactive Data Models": Overview' screen. It displays a list of inactive data models, including 'MM' (Material Maintenance MM01/02) which is highlighted. A red arrow points to the 'Visualize Data Model' pushbutton at the top right of the screen.</p>																																																																																																												
17. Make sure that your extension of the MDG data model looks similar to the details shown in the screenshot.	<p>The screenshot shows the 'Inactive Data Model MM' screen. It displays a table of data models with their attributes. A yellow oval highlights the 'YBUPA01' entity type and its attributes: MATERIAL, YBUPA, NICKNAME, and VALUATION. Another yellow oval highlights the 'VALUATION' characteristic value.</p> <table border="1"> <thead> <tr> <th>Data Model</th> <th>Name</th> <th>F...</th> <th>S...</th> <th>Data Element</th> <th>Referenced Entit...</th> </tr> </thead> <tbody> <tr> <td>SPART</td> <td>Division</td> <td>Attrib</td> <td></td> <td>SPART</td> <td></td> </tr> <tr> <td>TXTMI</td> <td>Description (medium text)</td> <td>Attrib</td> <td></td> <td>USMD_TXTMI</td> <td></td> </tr> <tr> <td>VOLEHMARA</td> <td>Volume unit</td> <td>Attrib</td> <td></td> <td>VOLEH</td> <td></td> </tr> <tr> <td>VOLUMMARA</td> <td>Volume</td> <td>Attrib</td> <td></td> <td>VOLUM</td> <td></td> </tr> <tr> <td>WRKST</td> <td>Basic material</td> <td>Attrib</td> <td></td> <td>WRKST</td> <td></td> </tr> <tr> <td>XCHPFMARA</td> <td>Batch Management</td> <td>Attrib</td> <td></td> <td>XCHPF</td> <td></td> </tr> <tr> <td>XGCHPMARA</td> <td>Appr.Batch Recd RecAttrib</td> <td></td> <td></td> <td>XGCHP</td> <td></td> </tr> <tr> <td>ZEIAR</td> <td>Document Type</td> <td>Attrib</td> <td></td> <td>DZEIAR</td> <td></td> </tr> <tr> <td>ZEIFO</td> <td>Page Format</td> <td>Attrib</td> <td></td> <td>DZEIFO</td> <td></td> </tr> <tr> <td>ZEINR</td> <td>Document</td> <td>Attrib</td> <td></td> <td>DZEINR</td> <td></td> </tr> <tr> <td>ZEIVR</td> <td>Document Version</td> <td>Attrib</td> <td></td> <td>DZEIVR</td> <td></td> </tr> <tr> <td>YBUPA01</td> <td>MDG Material Extens</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MATERIAL</td> <td>Material</td> <td>Leadi</td> <td></td> <td>MATNR</td> <td></td> </tr> <tr> <td>YBUPA</td> <td>Business Partner</td> <td>Quali</td> <td></td> <td>BU_PARTNER</td> <td></td> </tr> <tr> <td>NICKNAME</td> <td>Nickname/name use</td> <td>Attrib</td> <td></td> <td>NICKNAME</td> <td></td> </tr> <tr> <td>VALUATION</td> <td>Characteristic Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>UNITOFMARA</td> <td>Unit of Measure</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Data Model	Name	F...	S...	Data Element	Referenced Entit...	SPART	Division	Attrib		SPART		TXTMI	Description (medium text)	Attrib		USMD_TXTMI		VOLEHMARA	Volume unit	Attrib		VOLEH		VOLUMMARA	Volume	Attrib		VOLUM		WRKST	Basic material	Attrib		WRKST		XCHPFMARA	Batch Management	Attrib		XCHPF		XGCHPMARA	Appr.Batch Recd RecAttrib			XGCHP		ZEIAR	Document Type	Attrib		DZEIAR		ZEIFO	Page Format	Attrib		DZEIFO		ZEINR	Document	Attrib		DZEINR		ZEIVR	Document Version	Attrib		DZEIVR		YBUPA01	MDG Material Extens					MATERIAL	Material	Leadi		MATNR		YBUPA	Business Partner	Quali		BU_PARTNER		NICKNAME	Nickname/name use	Attrib		NICKNAME		VALUATION	Characteristic Value					UNITOFMARA	Unit of Measure				
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4.2.2. Generate Model-Specific Structures

Every time you change the MDG data model, you must regenerate the structures. In this Customizing activity, for each data model and entity type you generate technical structures in the ABAP Dictionary. The system uses these structures internally for implementing the staging area. To generate these data model-specific structures follow the steps below.

Note

In general, if you change a data model (for example, if you change attributes of entity types or relationships); you must regenerate the structures.

1. In MDG customizing start <i>Generate Data Model-Specific Structures</i> .																												
2. Select Data Model MM. Open the <i>Structures</i> view.	 <table border="1"> <thead> <tr> <th>Data Model</th> <th>Description (medium text)</th> <th>Package</th> </tr> </thead> <tbody> <tr> <td>OG</td> <td>Chart of Accounts and Org. Units</td> <td>/MDG/FIN_MDGF_STRUCTUR</td> </tr> <tr> <td>BP</td> <td>Business Partner</td> <td>/MDGBP/MDG_BS_BP_STRUCT</td> </tr> <tr> <td>MM</td> <td>Material Maintenance MM01/02</td> <td>/MDGMM/MDG_BS_MAT_STRUC</td> </tr> <tr> <td>SF</td> <td></td> <td>/MDG/FND_SAMPLE_STRUCT</td> </tr> <tr> <td>ZD</td> <td>Flight Data Model f. Field Property Test</td> <td></td> </tr> <tr> <td>ZG</td> <td>Data model for extensibility test</td> <td>STIMP</td> </tr> <tr> <td>ZK</td> <td>KP Test Data Model</td> <td>STIMP</td> </tr> <tr> <td>ZX</td> <td>Test - Chart of Accounts and Org. Units</td> <td>STIMP</td> </tr> </tbody> </table>	Data Model	Description (medium text)	Package	OG	Chart of Accounts and Org. Units	/MDG/FIN_MDGF_STRUCTUR	BP	Business Partner	/MDGBP/MDG_BS_BP_STRUCT	MM	Material Maintenance MM01/02	/MDGMM/MDG_BS_MAT_STRUC	SF		/MDG/FND_SAMPLE_STRUCT	ZD	Flight Data Model f. Field Property Test		ZG	Data model for extensibility test	STIMP	ZK	KP Test Data Model	STIMP	ZX	Test - Chart of Accounts and Org. Units	STIMP
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ZX	Test - Chart of Accounts and Org. Units	STIMP																										
3. Create the four entries in the structures table for entity type YBUPA01.	 <table border="1"> <tbody> <tr> <td>YBUPA01</td> <td>3 Mapping of Reuse Active A.. ▾ ZMM</td> <td>PP_YBUPA01</td> <td>STIMP</td> </tr> <tr> <td>YBUPA01</td> <td>5 Search Application ▾ ZMM</td> <td>ES_YBUPA01</td> <td>STIMP</td> </tr> <tr> <td>YBUPA01</td> <td>7 Field Properties for Attr.. ▾ ZMM</td> <td>FP_YBUPA01</td> <td>STIMP</td> </tr> <tr> <td>YBUPA01</td> <td>8 Key Fields of an Entity T.. ▾ ZMM</td> <td>KF_YBUPA01</td> <td>STIMP</td> </tr> </tbody> </table>	YBUPA01	3 Mapping of Reuse Active A.. ▾ ZMM	PP_YBUPA01	STIMP	YBUPA01	5 Search Application ▾ ZMM	ES_YBUPA01	STIMP	YBUPA01	7 Field Properties for Attr.. ▾ ZMM	FP_YBUPA01	STIMP	YBUPA01	8 Key Fields of an Entity T.. ▾ ZMM	KF_YBUPA01	STIMP											
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4. Save your changes.																												

4.2.3. Clear UI Metadata Buffers

After finishing the UI, clear the metadata buffers. You can find the report in Customizing *Master Data Governance, Central Governance-> Master Data Governance for Material-> Clear UI Metadata Buffers*.

This report clears the following buffers in this sequence:

- Text Buffer
- Search Help Buffer
- SMT-Mapping Data Buffer
- SPI Metadata Buffer

You should use this report after extending the data model to make sure that the metadata is consistent with the MDG customizing and UI configuration.

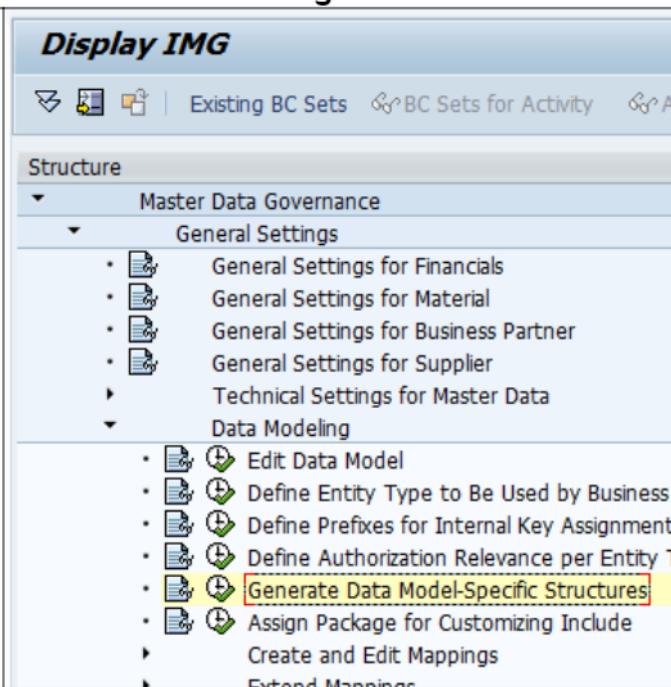
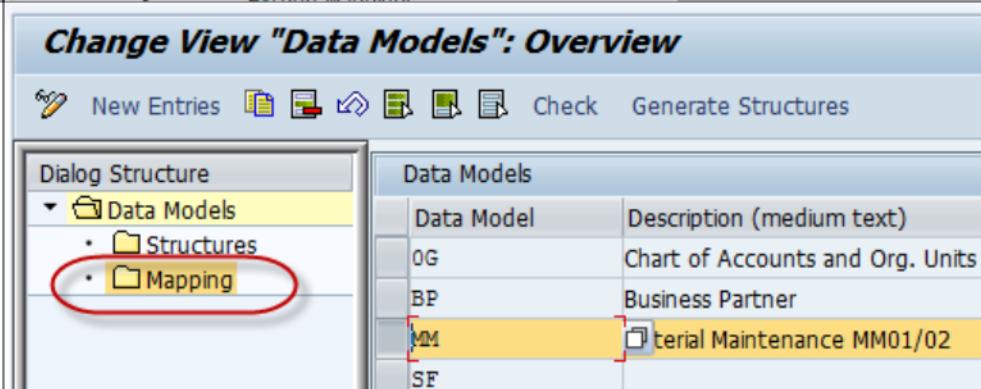
4.3. Create SMT-Mapping

You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

Important

When the mappings are saved the corresponding coding is generated. Make sure that all relevant structures are ready before you start.

4.3.1. Create Mapping Entries in Customizing

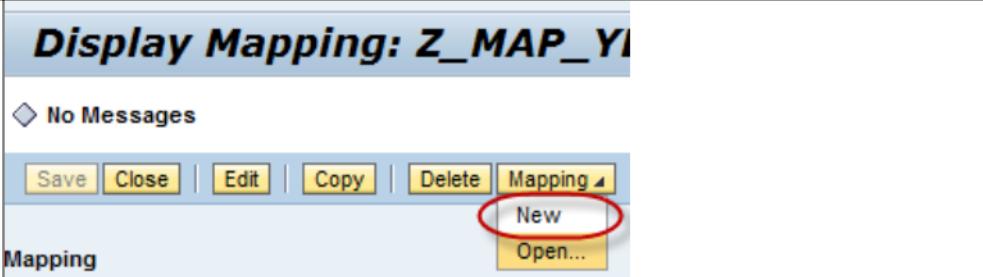
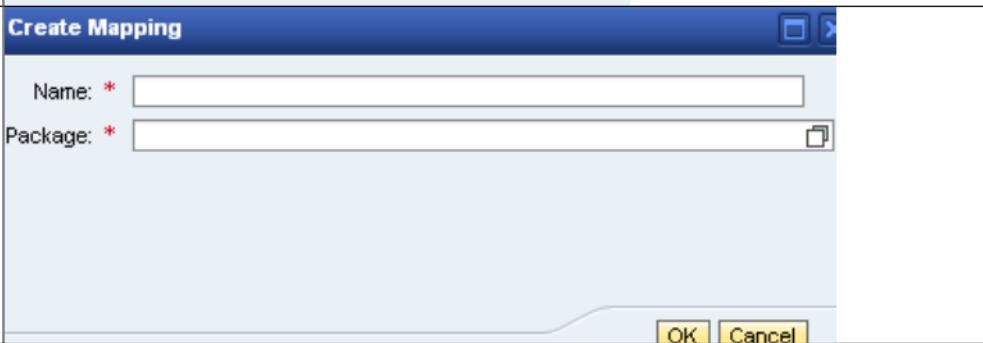
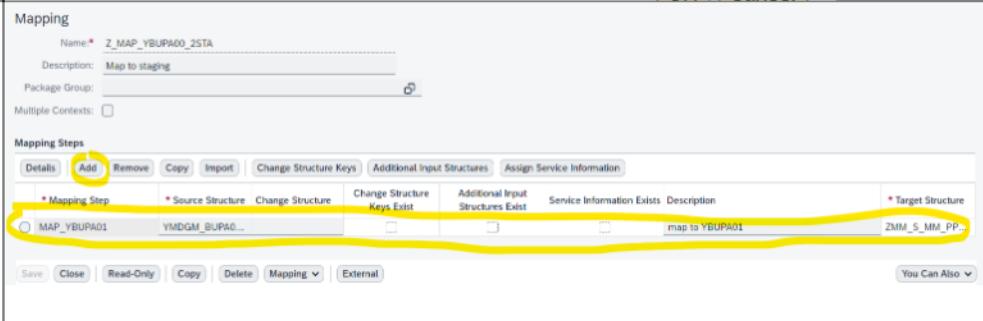
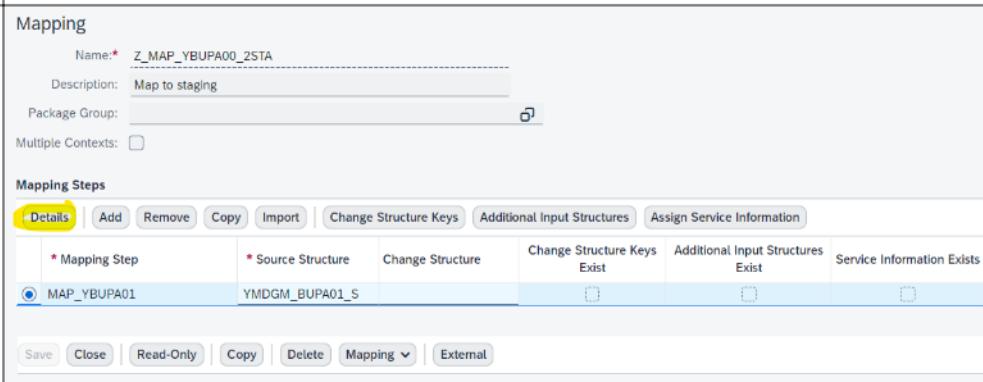
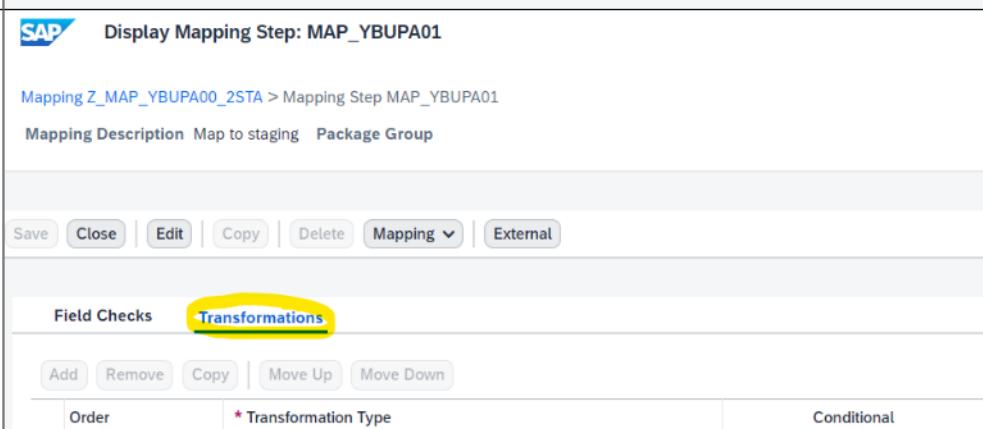
1. In MDG customizing start <i>Generate Data Model-Specific Structures</i> .											
2. Select the MM data model. Open the <i>Mapping</i> view.	 <table border="1" data-bbox="869 1462 1485 1702"><thead><tr><th>Data Model</th><th>Description (medium text)</th></tr></thead><tbody><tr><td>OG</td><td>Chart of Accounts and Org. Units</td></tr><tr><td>BP</td><td>Business Partner</td></tr><tr><td>MM</td><td>Material Maintenance MM01/02</td></tr><tr><td>SF</td><td></td></tr></tbody></table>	Data Model	Description (medium text)	OG	Chart of Accounts and Org. Units	BP	Business Partner	MM	Material Maintenance MM01/02	SF	
Data Model	Description (medium text)										
OG	Chart of Accounts and Org. Units										
BP	Business Partner										
MM	Material Maintenance MM01/02										
SF											

<p>3. Create a new entry for entity type YBUPA01 / Active Area Mapping.</p> <p>Mapping from the active area to the staging area: Z_MAP_YBUPA00_2 STA.</p> <p>Mapping from the staging area to the active area: Z_MAP_YBUPA00_2 PP</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">Mapping</th> </tr> <tr> <th>Entity Type</th> <th>Where Used</th> <th>SMT Mapping from Active Area</th> <th>SMT Mapping to Active Area</th> </tr> </thead> <tbody> <tr> <td>VALUATION</td> <td>3 Mapping of Reuse Active A.</td> <td>▼ MDG_BS_MAT_MAP_2STA</td> <td>MDG_BS_MAT_MAP_2PP</td> </tr> <tr> <td>VALUATION</td> <td>6 Field Control for Attribu.</td> <td>▼ MDG_BS_MAT_MAP_2FC</td> <td></td> </tr> <tr> <td>YBUPA01</td> <td>3 Mapping of Reuse Active A.</td> <td>▼ Z_MAP_YBUPA00_2STA</td> <td>Z_MAP_YBUPA00_2PP</td> </tr> </tbody> </table>	Mapping				Entity Type	Where Used	SMT Mapping from Active Area	SMT Mapping to Active Area	VALUATION	3 Mapping of Reuse Active A.	▼ MDG_BS_MAT_MAP_2STA	MDG_BS_MAT_MAP_2PP	VALUATION	6 Field Control for Attribu.	▼ MDG_BS_MAT_MAP_2FC		YBUPA01	3 Mapping of Reuse Active A.	▼ Z_MAP_YBUPA00_2STA	Z_MAP_YBUPA00_2PP
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4.3.2. Map the Active Area to the Staging Area

<p>4. In MDG customizing start <i>Create and Edit Mappings</i>.</p>	<p>The screenshot shows the 'Display IMG' dialog with the 'Structure' tree expanded. Under 'Data Modeling', the 'Create and Edit Mappings' section is visible, containing three items: 'Define Package Groups', 'Create and Edit Mappings', and 'Check Customizing'. The 'Create and Edit Mappings' item is circled in red.</p>
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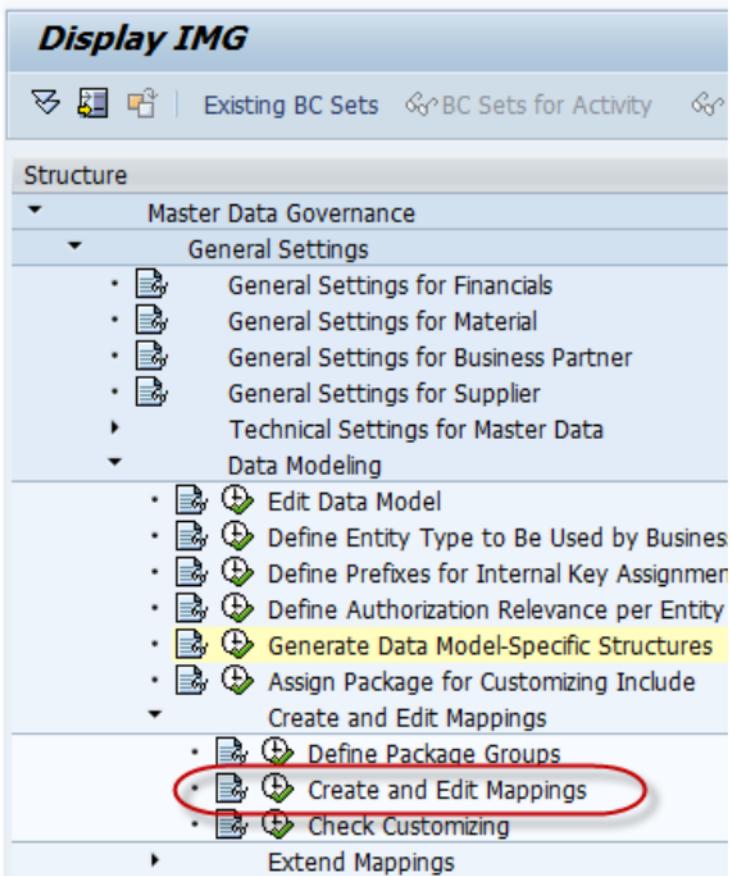
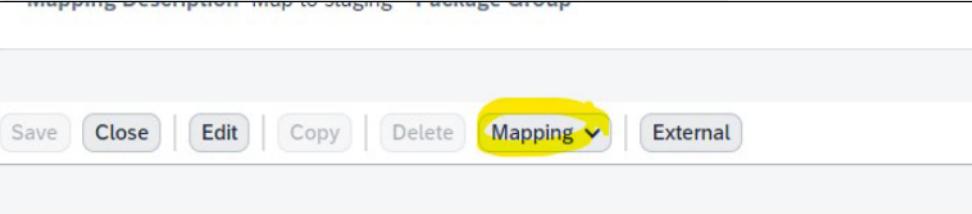
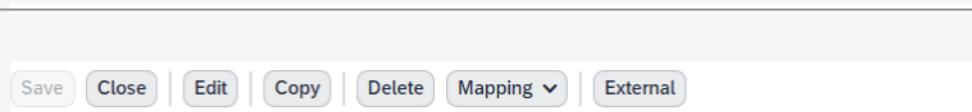
How-To: Extend MDG-M by a New Reuse Entity Type

5. Select <i>Mapping</i> -> <i>New</i> .	 <p>Display Mapping: Z_MAP_YBUPA00_2STA</p> <p>No Messages</p> <p>Save Close Edit Copy Delete Mapping ▾</p> <p>New (highlighted)</p> <p>Open...</p>																
6. Enter the name of the mapping: Z_MAP_YBUPA00_2STA	 <p>Create Mapping</p> <p>Name: * <input type="text"/></p> <p>Package: * <input type="text"/></p> <p>OK Cancel</p>																
7. Create a new mapping step MAP_YBUPA01 as shown. Source structure is YMDGM_BUPA01_S, Target structure ZMM_S_MM_PP_YBUPA01.	 <p>Mapping</p> <p>Name: * Z_MAP_YBUPA00_2STA Description: Map to staging Package Group: <input type="text"/> Multiple Contexts: <input type="checkbox"/></p> <p>Mapping Steps</p> <table border="1"> <thead> <tr> <th>* Mapping Step</th> <th>* Source Structure</th> <th>Change Structure</th> <th>Change Structure Keys Exist</th> <th>Additional Input Structures Exist</th> <th>Service Information Exists</th> <th>Description</th> <th>* Target Structure</th> </tr> </thead> <tbody> <tr> <td>MAP_YBUPA01</td> <td>YMDGM_BUPA01_S</td> <td></td> <td></td> <td></td> <td></td> <td>map to YBUPA01</td> <td>ZMM_S_MM_PP_YBUPA01</td> </tr> </tbody> </table> <p>Save Close Read-Only Copy Delete Mapping ▾ External</p>	* Mapping Step	* Source Structure	Change Structure	Change Structure Keys Exist	Additional Input Structures Exist	Service Information Exists	Description	* Target Structure	MAP_YBUPA01	YMDGM_BUPA01_S					map to YBUPA01	ZMM_S_MM_PP_YBUPA01
* Mapping Step	* Source Structure	Change Structure	Change Structure Keys Exist	Additional Input Structures Exist	Service Information Exists	Description	* Target Structure										
MAP_YBUPA01	YMDGM_BUPA01_S					map to YBUPA01	ZMM_S_MM_PP_YBUPA01										
8. Select your mapping step and choose the <i>Details</i> pushbutton.	 <p>Mapping</p> <p>Name: * Z_MAP_YBUPA00_2STA Description: Map to staging Package Group: <input type="text"/> Multiple Contexts: <input type="checkbox"/></p> <p>Mapping Steps</p> <table border="1"> <thead> <tr> <th>* Mapping Step</th> <th>* Source Structure</th> <th>Change Structure</th> <th>Change Structure Keys Exist</th> <th>Additional Input Structures Exist</th> <th>Service Information Exists</th> </tr> </thead> <tbody> <tr> <td>MAP_YBUPA01</td> <td>YMDGM_BUPA01_S</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Save Close Read-Only Copy Delete Mapping ▾ External</p>	* Mapping Step	* Source Structure	Change Structure	Change Structure Keys Exist	Additional Input Structures Exist	Service Information Exists	MAP_YBUPA01	YMDGM_BUPA01_S								
* Mapping Step	* Source Structure	Change Structure	Change Structure Keys Exist	Additional Input Structures Exist	Service Information Exists												
MAP_YBUPA01	YMDGM_BUPA01_S																
9. Open the <i>Transformations</i> tab.	 <p>SAP Display Mapping Step: MAP_YBUPA01</p> <p>Mapping Z_MAP_YBUPA00_2STA > Mapping Step MAP_YBUPA01</p> <p>Mapping Description Map to staging Package Group</p> <p>Save Close Edit Copy Delete Mapping ▾ External</p> <p>Field Checks Transformations (highlighted)</p> <p>Add Remove Copy Move Up Move Down</p> <table border="1"> <thead> <tr> <th>Order</th> <th>* Transformation Type</th> <th>Conditional</th> </tr> </thead> </table>	Order	* Transformation Type	Conditional													
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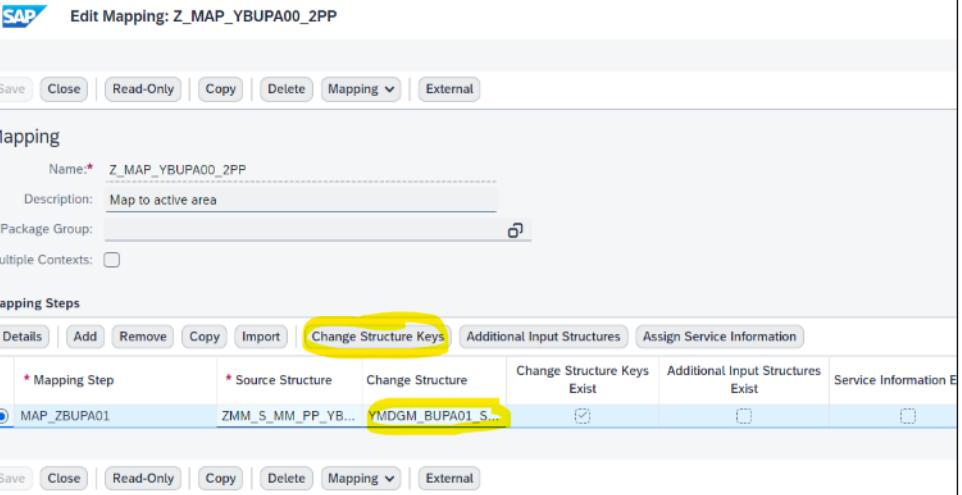
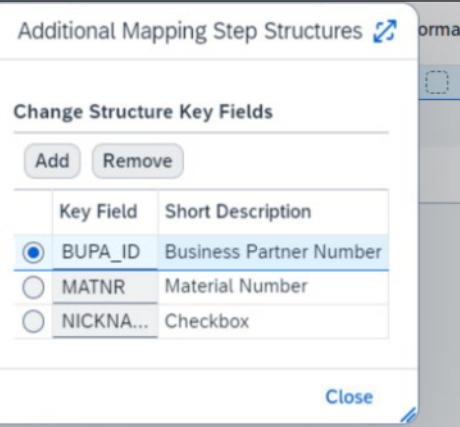
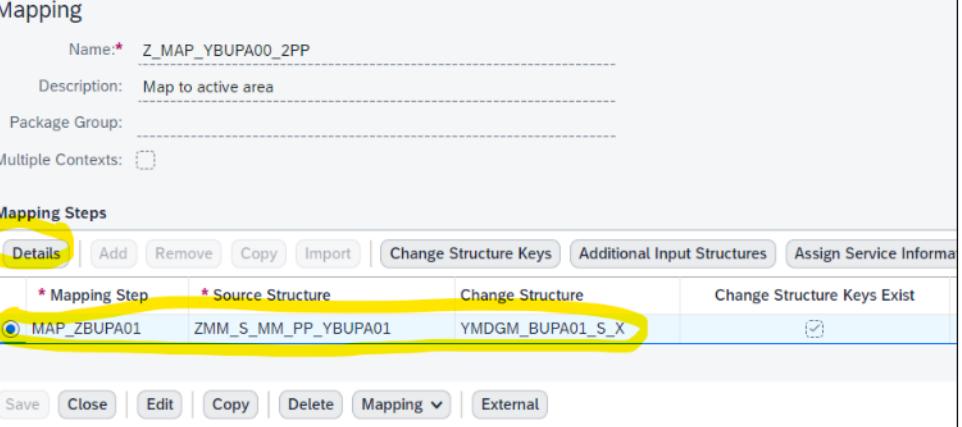
How-To: Extend MDG-M by a New Reuse Entity Type

10. Add a new Field Mapping.	<p>SAP Edit Mapping Step: MAP_YBUPA01</p> <p>Mapping Z_MAP_YBUPA00_2STA > Mapping Step MAP_YBUPA01</p> <p>Mapping Description Map to staging Package Group</p> <p>Save Close Read-Only Copy Delete Mapping External</p> <p>Field Checks Transformations</p> <p>Add Remove Copy Move Up Move Down</p> <table border="1"><thead><tr><th>Order</th><th>* Transformation Type</th><th>Conditional</th><th>Chain to Preceding</th><th>Switch</th></tr></thead><tbody><tr><td>00001</td><td>Field Mapping</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td></tr></tbody></table>	Order	* Transformation Type	Conditional	Chain to Preceding	Switch	00001	Field Mapping	<input type="checkbox"/>	<input type="checkbox"/>											
Order	* Transformation Type	Conditional	Chain to Preceding	Switch																	
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11. Enter the field mappings as shown. Source structure is YMDGM_BUPA01_S Save your changes.	<p>Details for Transformation Order 00001</p> <p>Field Mapping</p> <p>Add Remove</p> <table border="1"><thead><tr><th></th><th>* FIELD</th><th>Source Structure</th><th>Source Field</th><th>Fixed Value</th></tr></thead><tbody><tr><td><input type="radio"/></td><td>MATERIAL</td><td>YMDGM_B...</td><td>MATNR</td><td></td></tr><tr><td><input type="radio"/></td><td>NICKNAME</td><td>YMDGM_B...</td><td>NICKNAME</td><td></td></tr><tr><td><input type="radio"/></td><td>YBUPA</td><td>YMDGM_B...</td><td>BUPA_ID</td><td></td></tr></tbody></table>		* FIELD	Source Structure	Source Field	Fixed Value	<input type="radio"/>	MATERIAL	YMDGM_B...	MATNR		<input type="radio"/>	NICKNAME	YMDGM_B...	NICKNAME		<input type="radio"/>	YBUPA	YMDGM_B...	BUPA_ID	
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<input type="radio"/>	NICKNAME	YMDGM_B...	NICKNAME																		
<input type="radio"/>	YBUPA	YMDGM_B...	BUPA_ID																		

4.3.3. Map the Staging Area to the Active Area

1. In MDG customizing start <i>Create and Edit Mappings</i> .																	
2. Select <i>Mapping</i> -> <i>New</i> to create the next mapping.																	
3. Enter the following mapping name: Z_MAP_YBUPA00_2PP	 Mapping Name: * Z_MAP_YBUPA00_2PP Description: Map to active area Package Group: _____ Multiple Contexts: <input type="checkbox"/>																
4. Choose Add to create new mapping step using the details shown in the screenshot. Source structure is ZMM_S_MM_PP_YBU PA01, change structure is	 Edit Mapping: Z_MAP_YBUPA00_2PP Save Close Read-Only Copy Delete Mapping External Mapping Name: * Z_MAP_YBUPA00_2PP Description: Map to active area Package Group: _____ Multiple Contexts: <input type="checkbox"/> Mapping Steps Details Add Remove Copy Import Change Structure Keys Additional Input Structures Assign Service Information <table border="1"> <thead> <tr> <th>Mapping Step</th> <th>Source Structure</th> <th>Change Structure</th> <th>Change Structure Keys</th> <th>Additional Input Structures</th> <th>Service Information</th> <th>Description</th> <th>Target Structure</th> </tr> </thead> <tbody> <tr> <td>MAP_ZBUPA01</td> <td>ZMM_S_MM_PP_YBU PA01</td> <td>YMDGM_BUPA01_S...</td> <td>Exit</td> <td>Exit</td> <td>Map YBUPA01</td> <td></td> <td>YMDGM_BUPA01_S...</td> </tr> </tbody> </table>	Mapping Step	Source Structure	Change Structure	Change Structure Keys	Additional Input Structures	Service Information	Description	Target Structure	MAP_ZBUPA01	ZMM_S_MM_PP_YBU PA01	YMDGM_BUPA01_S...	Exit	Exit	Map YBUPA01		YMDGM_BUPA01_S...
Mapping Step	Source Structure	Change Structure	Change Structure Keys	Additional Input Structures	Service Information	Description	Target Structure										
MAP_ZBUPA01	ZMM_S_MM_PP_YBU PA01	YMDGM_BUPA01_S...	Exit	Exit	Map YBUPA01		YMDGM_BUPA01_S...										

How-To: Extend MDG-M by a New Reuse Entity Type

	YMDGM_BUPA01_S_X, target structure is YMDGM_BUPA01_S.	
5.	Choose the <i>Change Structure Keys</i> pushbutton. Then add the key fields of the change structure, as shown.	
6.	Add the key field BUPA_ID, MATNR and NICKNAME as shown.	
7.	Select your mapping step and choose the <i>Details</i> pushbutton.	

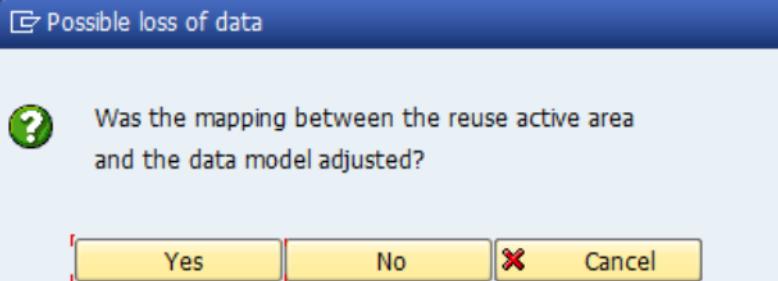
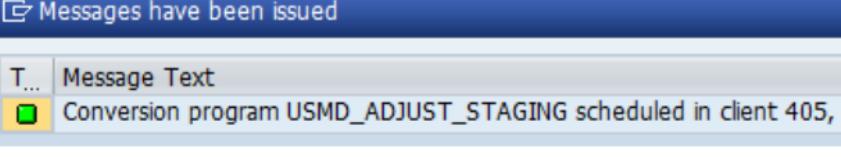
How-To: Extend MDG-M by a New Reuse Entity Type

8. Open the <i>Transformations</i> tab.	
9. Choose the <i>Add</i> pushbutton to create a new <i>Field Mapping</i> entry.	
10. Create the field mapping as shown. Source structure is ZMM_S_MM_PP_YBU PA01. Save your changes.	

4.4. Adjust Staging Area of Linked Change Requests

This step is necessary to adjust any open change requests after you have changed the data model.

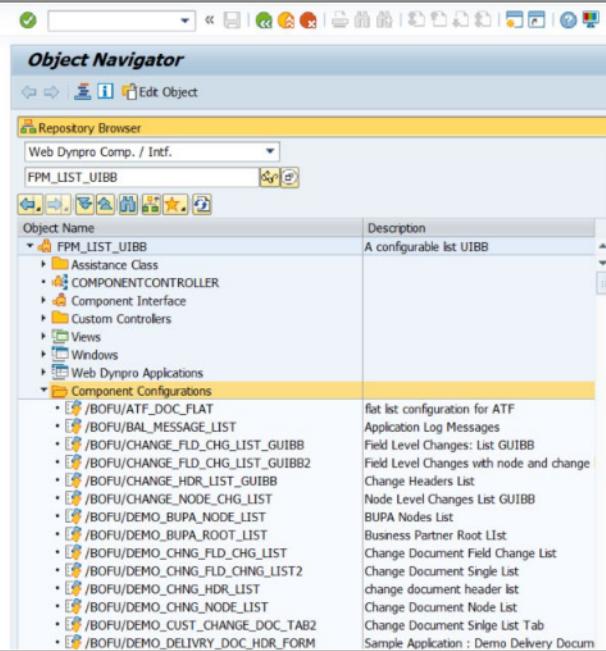
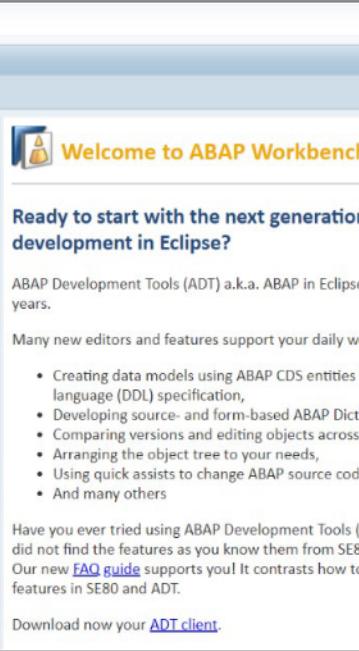
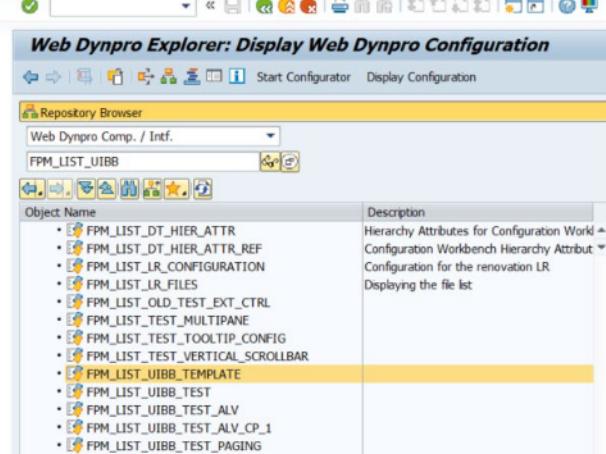
1. Start Customizing for <i>Master Data Governance</i> (transaction MDGIMG). Go to <i>General Settings -> Data Modeling -> Edit Data Model</i> . Select data model MM.	
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	Double click on <i>Entity Types</i> . Choose the pushbutton <i>Adjust staging area of linked change requests</i>	
2.	Choose the <i>Yes</i> pushbutton.	
3.	The following message appears. Note: Make sure that user DDIC exist in all relevant clients.	

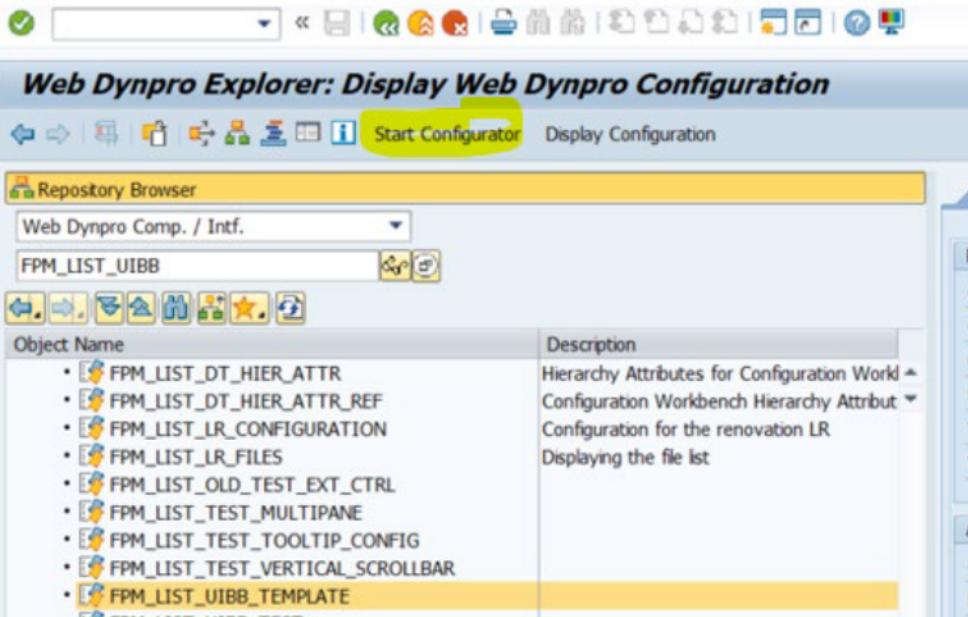
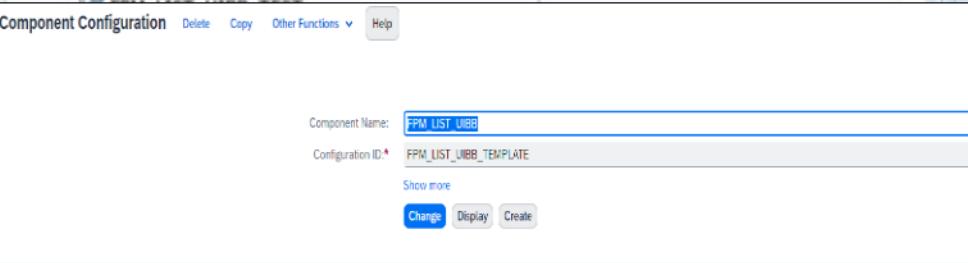
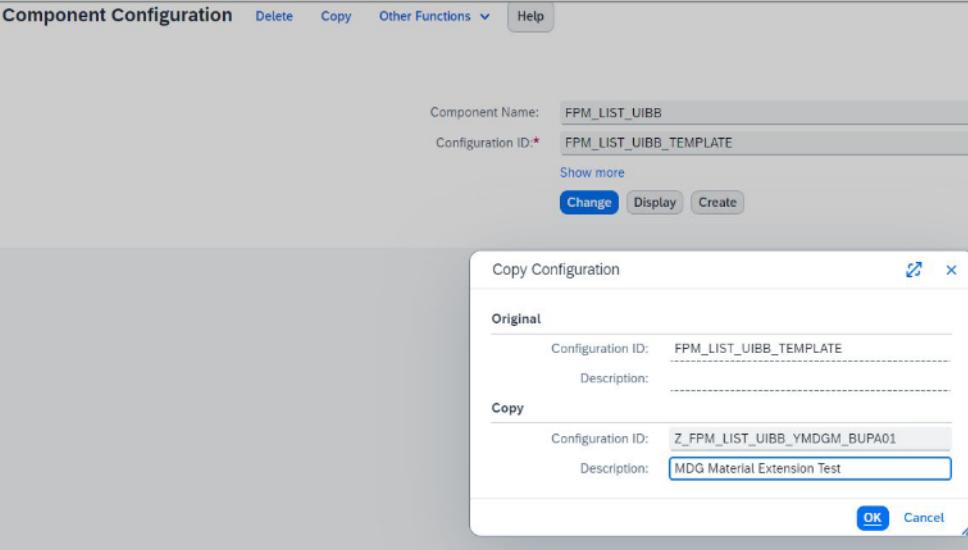
4.5. Extend User Interface

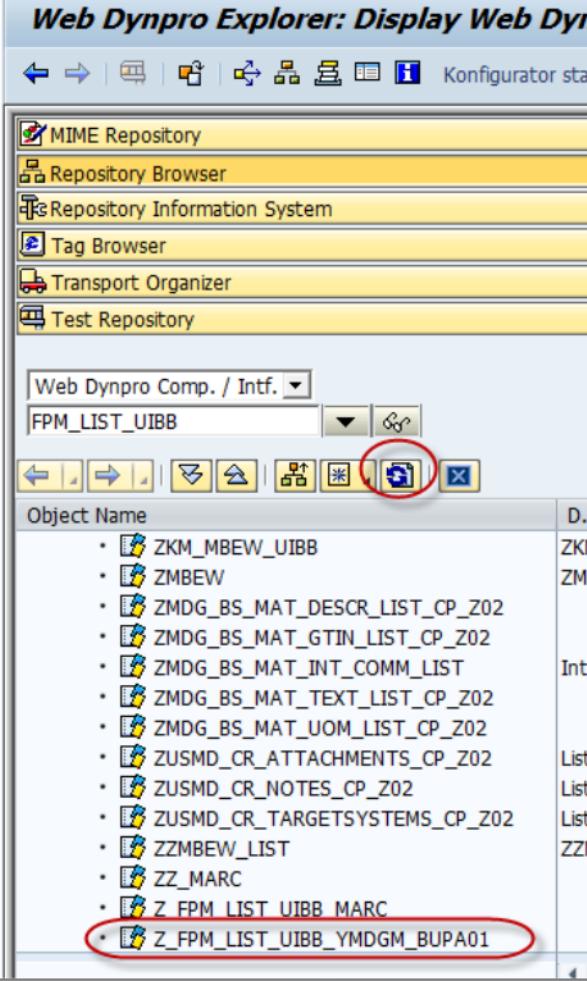
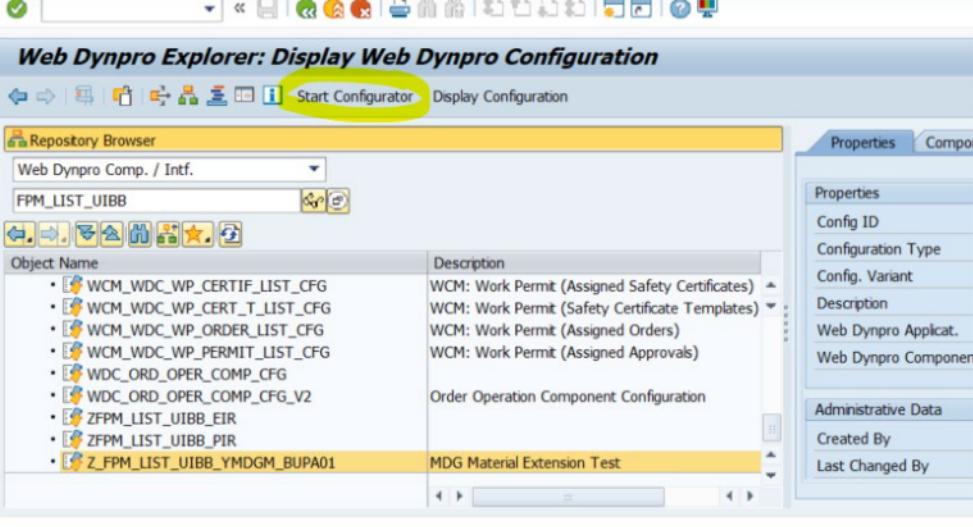
You can follow the described example or you can create an ATS list UIBB instead without a template. For more information, see extensibility guide for UI: [How-To Extend MDG-M User Interface](#).

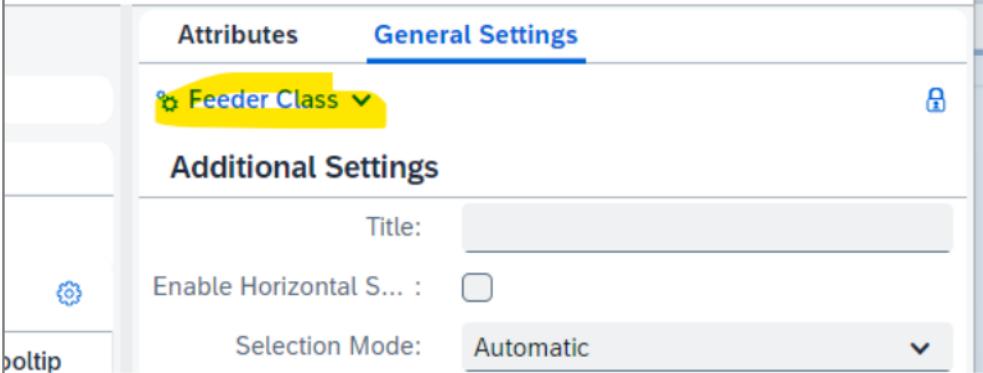
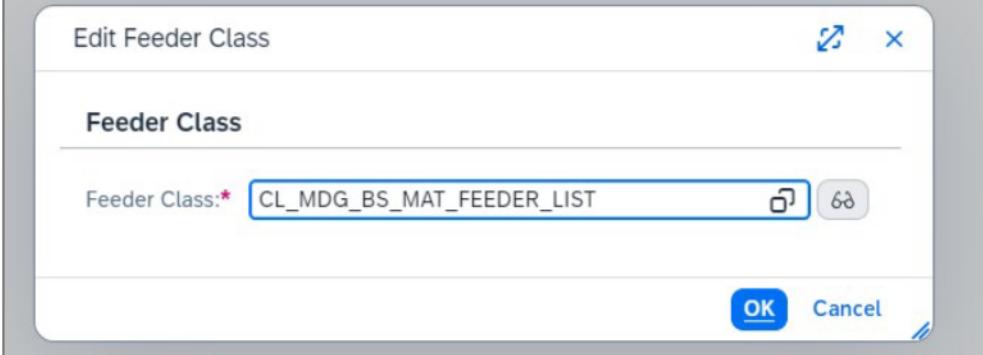
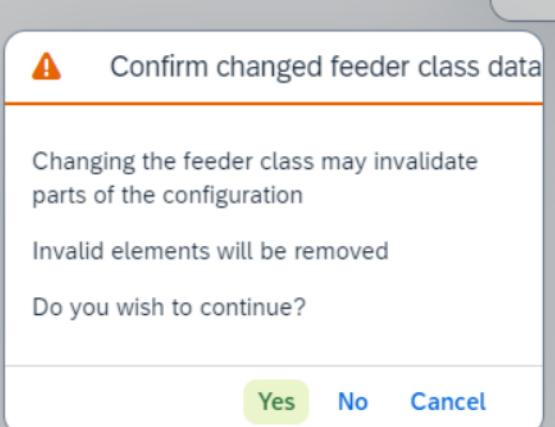
4.5.1. Create FPM List UIBB

1. Navigate to the <i>Component Configuration</i> as shown in the screenshot.	 <p>The screenshot shows the ABAP Workbench Object Navigator. The left pane displays a tree structure under 'Object Name' for 'FPM_LIST_UIBB'. The 'Component Configurations' node is expanded, showing various sub-items such as '/BOFU/ATF_DOC_FLAT', '/BOFU/BAL_MESSAGE_LIST', and '/BOFU/CHANGE_FLD_CHG_LIST_GUILBB'. The right pane shows the 'Description' for each item, such as 'flat list configuration for ATF' and 'Application Log Messages'.</p>	 <p>Welcome to ABAP Workbench! Ready to start with the next generation development in Eclipse? ABAP Development Tools (ADT) a.k.a. ABAP in Eclipse years. Many new editors and features support your daily work.</p> <ul style="list-style-type: none"> Creating data models using ABAP CDS entities language (DDL) specification, Developing source- and form-based ABAP Dictionary objects, Comparing versions and editing objects across multiple versions, Arranging the object tree to your needs, Using quick assists to change ABAP source code and many others <p>Have you ever tried using ABAP Development Tools (ADT) but did not find the features as you know them from SE80? Our new FAQ guide supports you! It contrasts how to use features in SE80 and ADT.</p> <p>Download now your ADT client.</p>																																	
2. Open configuration FPM_LIST_UIBB_TEMPLATE.	 <p>The screenshot shows the Web Dynpro Explorer: Display Web Dynpro Configuration. The left pane displays a tree structure under 'Object Name' for 'FPM_LIST_UIBB'. The 'Template' node is selected, showing its properties in the right pane. The properties include:</p> <table border="1"> <tr> <td>Properties</td> <td>Component-Defined</td> <td>Web Dynpro Built-In</td> </tr> <tr> <td>Config ID</td> <td>FPM_LIST_UIBB_TEMPLATE</td> <td></td> </tr> <tr> <td>Configuration Type</td> <td>0 General</td> <td></td> </tr> <tr> <td>Config. Variant</td> <td></td> <td></td> </tr> <tr> <td>Description</td> <td></td> <td></td> </tr> <tr> <td>Web Dynpro Applicat.</td> <td></td> <td></td> </tr> <tr> <td>Web Dynpro Component</td> <td>FPM_LIST_UIBB</td> <td></td> </tr> </table> <p>Administrative Data:</p> <table border="1"> <tr> <td>Created By</td> <td>SAP</td> <td>Created</td> </tr> <tr> <td>Last Changed By</td> <td>SAP</td> <td>Changed</td> </tr> <tr> <td>Package</td> <td>ABP_FPM_GUILBB</td> <td></td> </tr> <tr> <td>Original language</td> <td>EN</td> <td></td> </tr> </table>	Properties	Component-Defined	Web Dynpro Built-In	Config ID	FPM_LIST_UIBB_TEMPLATE		Configuration Type	0 General		Config. Variant			Description			Web Dynpro Applicat.			Web Dynpro Component	FPM_LIST_UIBB		Created By	SAP	Created	Last Changed By	SAP	Changed	Package	ABP_FPM_GUILBB		Original language	EN		
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How-To: Extend MDG-M by a New Reuse Entity Type

3. Choose the <i>Start Configuration</i> pushbutton.	 <p>The screenshot shows the SAP Web Dynpro Explorer interface. The title bar reads "Web Dynpro Explorer: Display Web Dynpro Configuration". Below the title bar is a toolbar with various icons. A yellow box highlights the "Start Configurator" button. The main area is titled "Repository Browser" and shows a list of objects under "Web Dynpro Comp. / Intf.". One object, "FPM_LIST_UIBB", is selected. A yellow box highlights the "FPM_LIST_UIBB_TEMPLATE" entry in the list, which has a detailed description: "Hierarchy Attributes for Configuration Work", "Configuration Workbench Hierarchy Attrib", "Configuration for the renovation LR", and "Displaying the file lst".</p>
4. Choose the <i>Copy</i> icon.	 <p>The screenshot shows the "Component Configuration" dialog box. It displays the original configuration details: Component Name: "FPM_LIST_UIBB" and Configuration ID: "FPM_LIST_UIBB_TEMPLATE". Below the dialog is a "Change" button.</p>
5. Enter a name for the copy as shown.	 <p>The screenshot shows the "Component Configuration" dialog box. It displays the original configuration details: Component Name: "FPM_LIST_UIBB" and Configuration ID: "FPM_LIST_UIBB_TEMPLATE". Below the dialog is a "Change" button. A "Copy Configuration" dialog box is open over the main window. The "Original" section shows the configuration details. The "Copy" section has fields: Configuration ID: "Z_FPM_LIST_UIBB_YMDGM_BUPA01" and Description: "MDG Material Extension Test". At the bottom right of the "Copy Configuration" dialog are "OK" and "Cancel" buttons.</p>

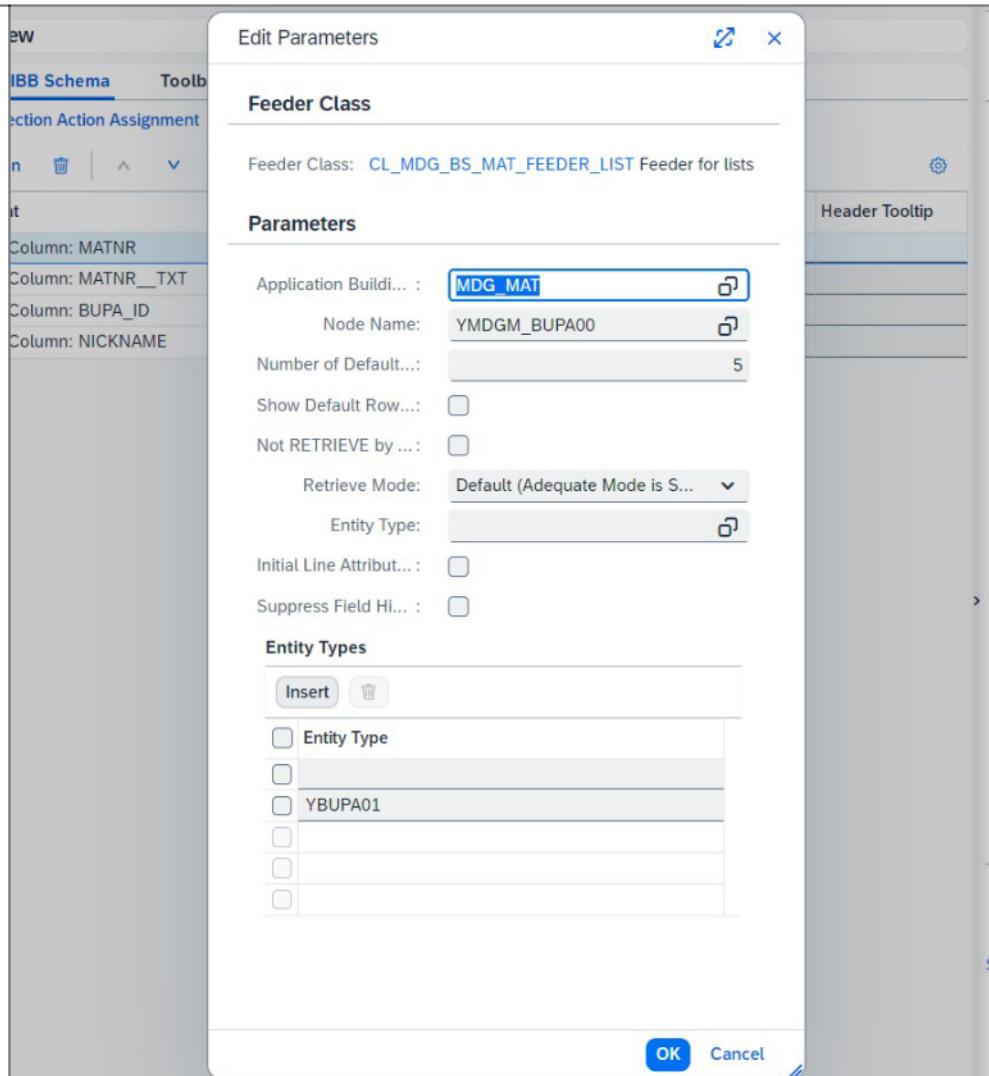
6. Refresh the navigation tree and open the new configuration.	
7. Choose the Start Configuration pushbutton.	
8. Choose to continue in change mode.	

9. Under <i>General Settings</i> choose the <i>Feeder Class</i> pushbutton.	
10. Enter the name of the feeder class.	
11. To confirm, choose Yes.	

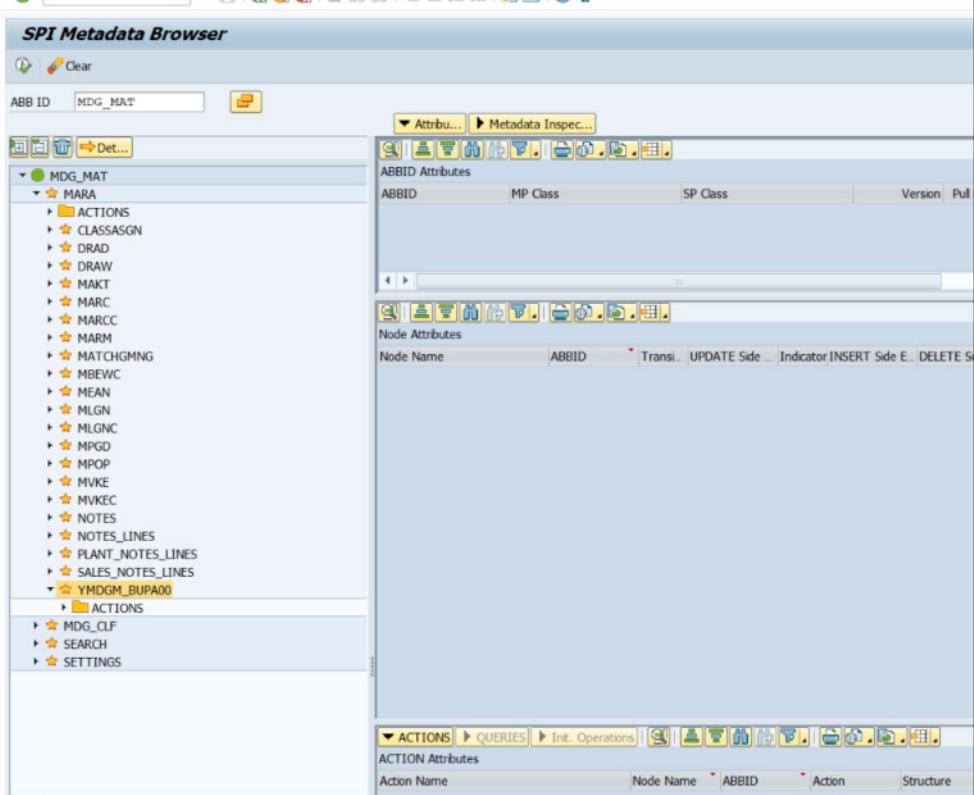
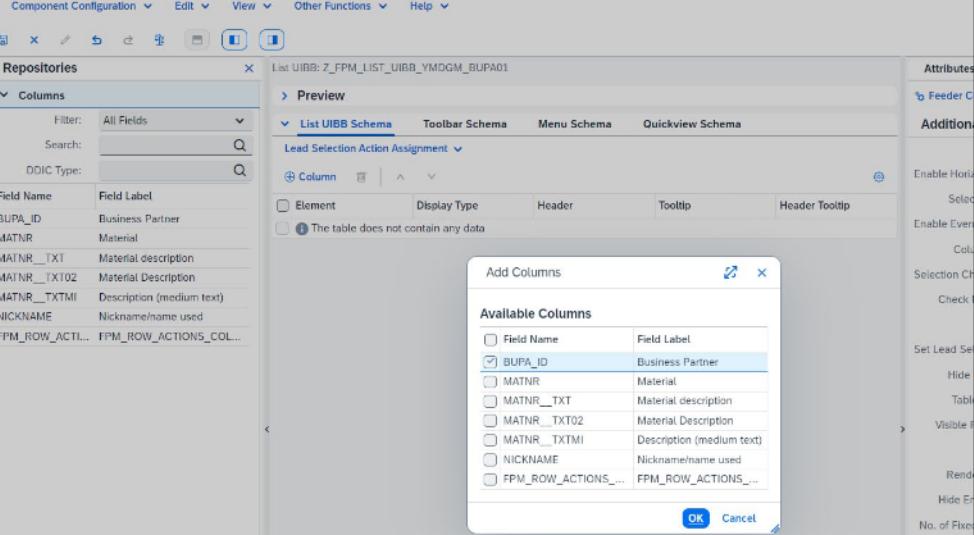
How-To: Extend MDG-M by a New Reuse Entity Type

12. Enter the feeder parameters as shown.

Make sure you enter a value for the number of default rows.



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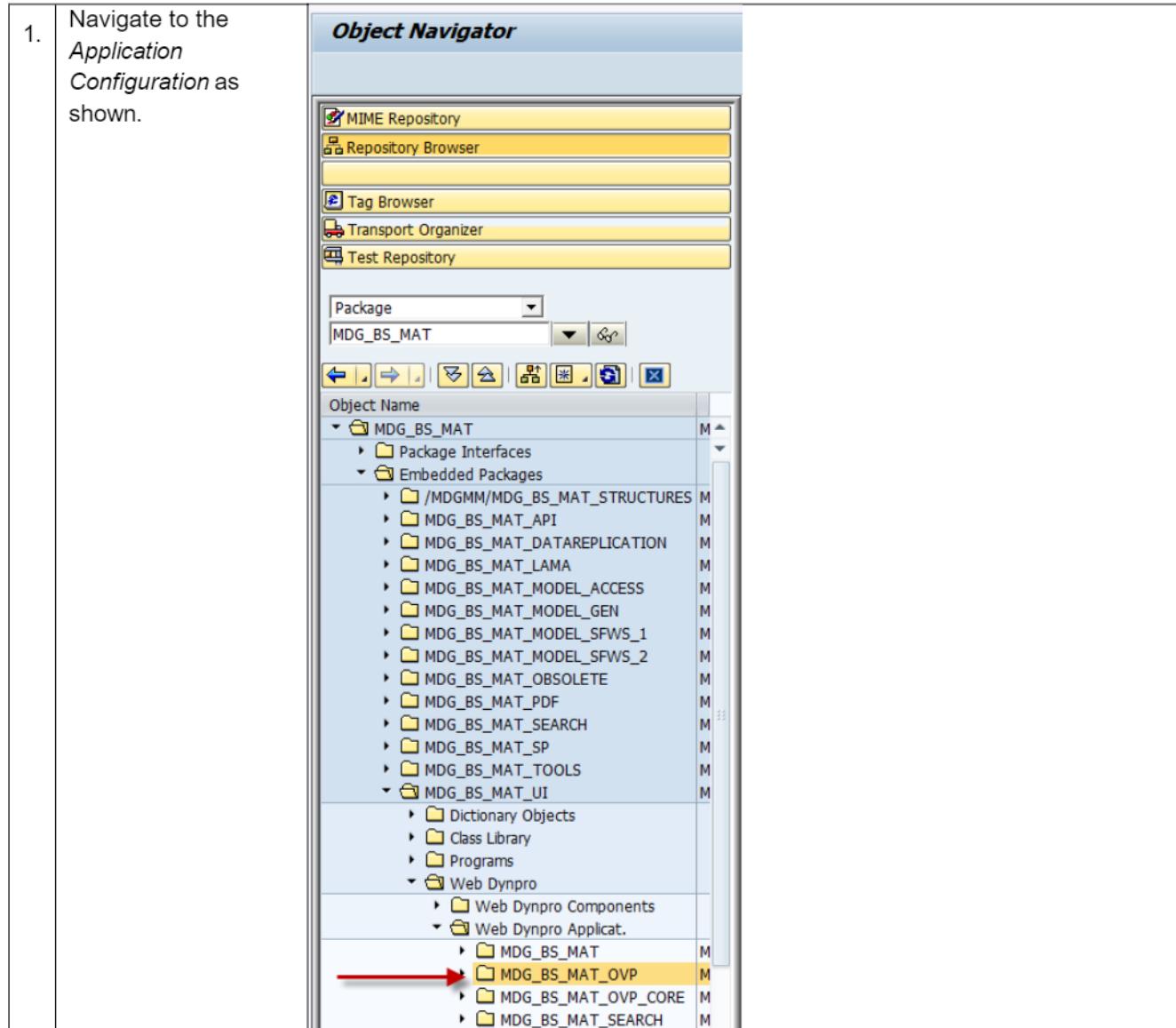
13. Node name verification: if you're unsure about the node name, run transaction MDB, enter <i>ABB ID</i> MDG_MAT and you will get the available nodes	
14. Choose the <i>Column</i> pushbutton to see the list of available columns.	

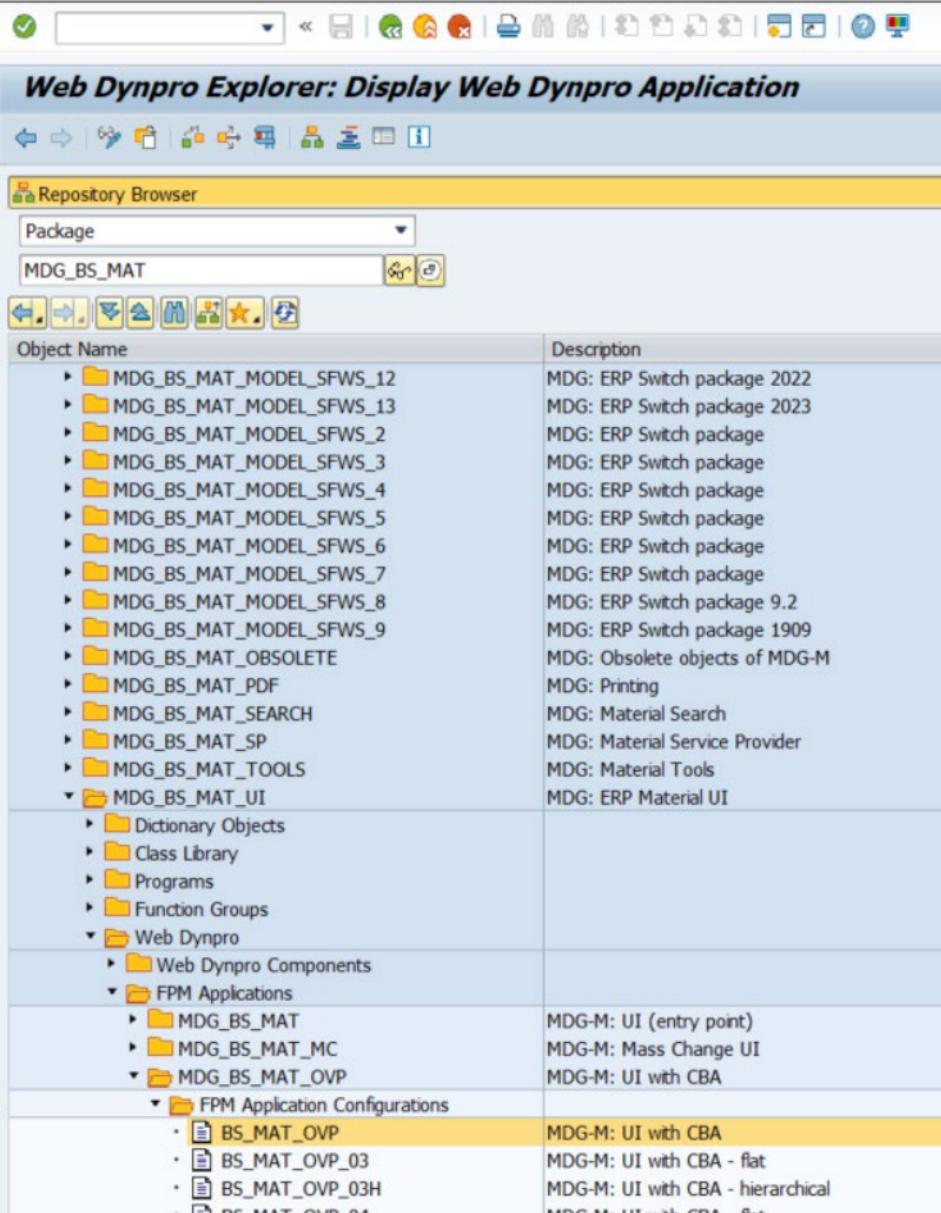
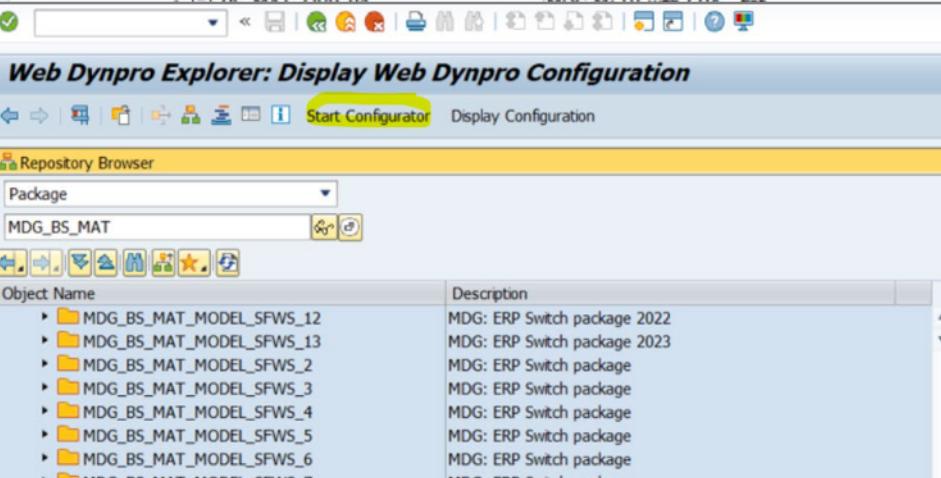
How-To: Extend MDG-M by a New Reuse Entity Type

15. Select the columns from the list of available columns as shown.	<p>List UIBB: Z_FPM_LIST_UIBB_YMDGM_BUPA01</p> <p>> Preview</p> <p>>List UIBB Schema Toolbar Schema Menu Schema Quickview Schema</p> <p>Lead Selection Action Assignment ▾</p> <p><input type="button" value="⊕ Column"/> <input type="button" value="Delete"/> <input type="button" value="^"/> <input type="button" value="▼"/></p> <table border="1"><thead><tr><th>Element</th><th>Display Type</th><th>Header</th><th>Tooltip</th><th>Header Tooltip</th></tr></thead><tbody><tr><td><input checked="" type="checkbox"/> Column: MATNR</td><td>Input Field</td><td>Material</td><td></td><td></td></tr><tr><td><input type="checkbox"/> Column: MATNR__TXT</td><td>Input Field</td><td>Material description</td><td></td><td></td></tr><tr><td><input type="checkbox"/> Column: BUPA_ID</td><td>Input Field</td><td>Business Partner</td><td></td><td></td></tr><tr><td><input type="checkbox"/> Column: NICKNAME</td><td>Input Field</td><td>Nickname/name used</td><td></td><td></td></tr></tbody></table>	Element	Display Type	Header	Tooltip	Header Tooltip	<input checked="" type="checkbox"/> Column: MATNR	Input Field	Material			<input type="checkbox"/> Column: MATNR__TXT	Input Field	Material description			<input type="checkbox"/> Column: BUPA_ID	Input Field	Business Partner			<input type="checkbox"/> Column: NICKNAME	Input Field	Nickname/name used		
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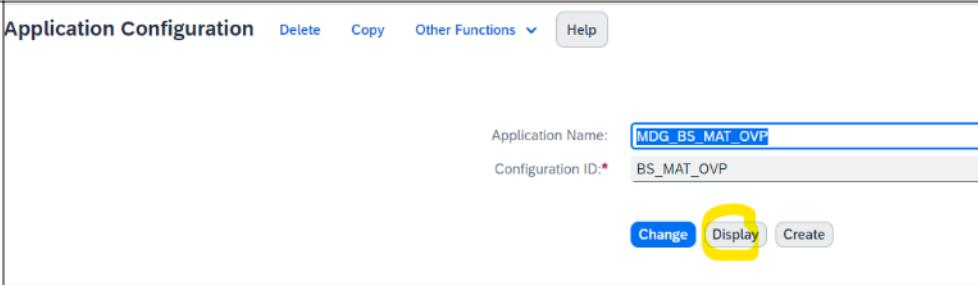
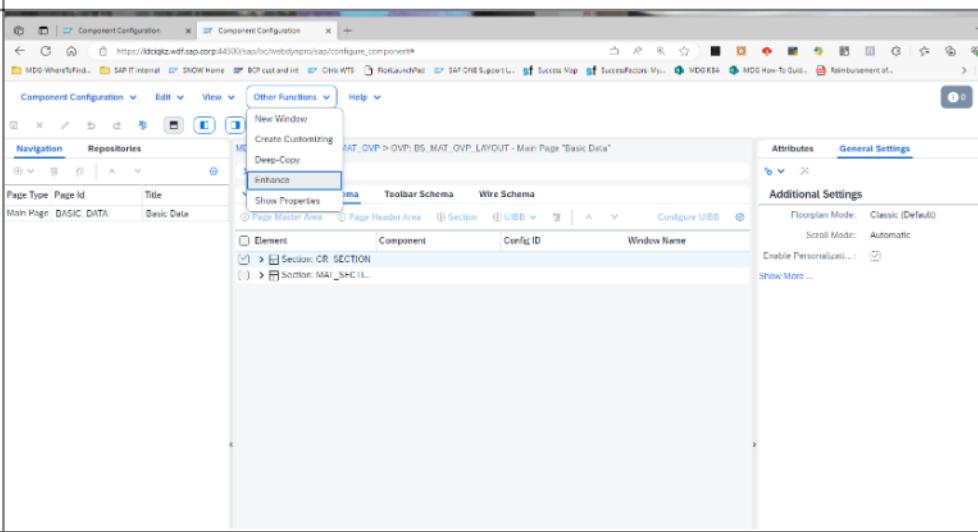
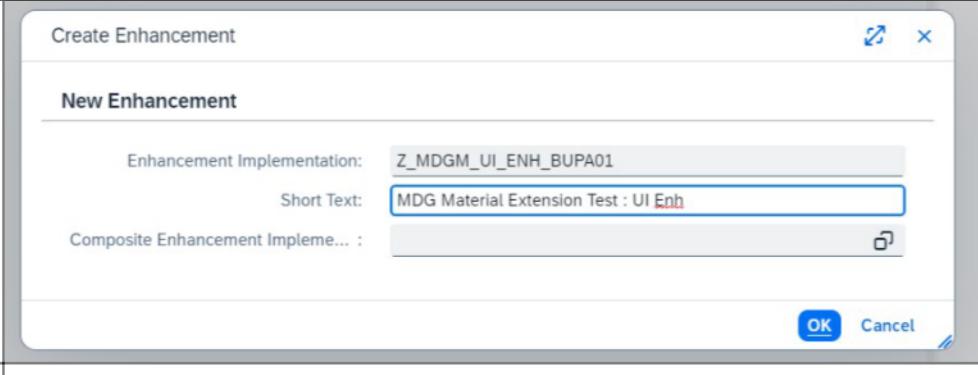
4.5.2. Add List UIBB to Material UI

1. Navigate to the *Application Configuration* as shown.



<p>2. Open the configuration BS_MAT_OVP.</p>	 <table border="1"> <thead> <tr> <th>Object Name</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>MDG_BS_MAT_MODEL_SFWS_12</td><td>MDG: ERP Switch package 2022</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_13</td><td>MDG: ERP Switch package 2023</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_2</td><td>MDG: ERP Switch package</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_3</td><td>MDG: ERP Switch package</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_4</td><td>MDG: ERP Switch package</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_5</td><td>MDG: ERP Switch package</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_6</td><td>MDG: ERP Switch package</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_7</td><td>MDG: ERP Switch package</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_8</td><td>MDG: ERP Switch package 9.2</td></tr> <tr><td>MDG_BS_MAT_MODEL_SFWS_9</td><td>MDG: ERP Switch package 1909</td></tr> <tr><td>MDG_BS_MAT_OBsolete</td><td>MDG: Obsolete objects of MDG-M</td></tr> <tr><td>MDG_BS_MAT_PDF</td><td>MDG: Printing</td></tr> <tr><td>MDG_BS_MAT_SEARCH</td><td>MDG: Material Search</td></tr> <tr><td>MDG_BS_MAT_SP</td><td>MDG: Material Service Provider</td></tr> <tr><td>MDG_BS_MAT_TOOLS</td><td>MDG: Material Tools</td></tr> <tr><td>MDG_BS_MAT_UI</td><td>MDG: ERP Material UI</td></tr> <tr><td>Dictionary Objects</td><td></td></tr> <tr><td>Class Library</td><td></td></tr> <tr><td>Programs</td><td></td></tr> <tr><td>Function Groups</td><td></td></tr> <tr><td>Web Dynpro</td><td></td></tr> <tr><td>Web Dynpro Components</td><td></td></tr> <tr><td>FPM Applications</td><td></td></tr> <tr><td>MDG_BS_MAT</td><td>MDG-M: UI (entry point)</td></tr> <tr><td>MDG_BS_MAT_MC</td><td>MDG-M: Mass Change UI</td></tr> <tr><td>MDG_BS_MAT_OVP</td><td>MDG-M: UI with CBA</td></tr> <tr><td>BS_MAT_OVP</td><td>MDG-M: UI with CBA</td></tr> <tr><td>BS_MAT_OVP_03</td><td>MDG-M: UI with CBA - flat</td></tr> <tr><td>BS_MAT_OVP_03H</td><td>MDG-M: UI with CBA - hierarchical</td></tr> <tr><td>BS_MAT_OVP_04</td><td>MDG-M: UI with CBA - flat</td></tr> </tbody> </table>	Object Name	Description	MDG_BS_MAT_MODEL_SFWS_12	MDG: ERP Switch package 2022	MDG_BS_MAT_MODEL_SFWS_13	MDG: ERP Switch package 2023	MDG_BS_MAT_MODEL_SFWS_2	MDG: ERP Switch package	MDG_BS_MAT_MODEL_SFWS_3	MDG: ERP Switch package	MDG_BS_MAT_MODEL_SFWS_4	MDG: ERP Switch package	MDG_BS_MAT_MODEL_SFWS_5	MDG: ERP Switch package	MDG_BS_MAT_MODEL_SFWS_6	MDG: ERP Switch package	MDG_BS_MAT_MODEL_SFWS_7	MDG: ERP Switch package	MDG_BS_MAT_MODEL_SFWS_8	MDG: ERP Switch package 9.2	MDG_BS_MAT_MODEL_SFWS_9	MDG: ERP Switch package 1909	MDG_BS_MAT_OBsolete	MDG: Obsolete objects of MDG-M	MDG_BS_MAT_PDF	MDG: Printing	MDG_BS_MAT_SEARCH	MDG: Material Search	MDG_BS_MAT_SP	MDG: Material Service Provider	MDG_BS_MAT_TOOLS	MDG: Material Tools	MDG_BS_MAT_UI	MDG: ERP Material UI	Dictionary Objects		Class Library		Programs		Function Groups		Web Dynpro		Web Dynpro Components		FPM Applications		MDG_BS_MAT	MDG-M: UI (entry point)	MDG_BS_MAT_MC	MDG-M: Mass Change UI	MDG_BS_MAT_OVP	MDG-M: UI with CBA	BS_MAT_OVP	MDG-M: UI with CBA	BS_MAT_OVP_03	MDG-M: UI with CBA - flat	BS_MAT_OVP_03H	MDG-M: UI with CBA - hierarchical	BS_MAT_OVP_04	MDG-M: UI with CBA - flat
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4. Choose to continue in display mode.	
5. Navigate to the configuration BS_MAT_OVP_LA YO UT.	
6. Select Other Functions -> Enhance. Or you can create a new CBA or you can use customizing mode.	
7. Provide a name for your enhancement.	
8. Add a new List Component to the Section: MAT_SECTION element as shown.	

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9.	<p>Enter the details for the new list component.</p>
10.	<p>Create a new wire entry with the details shown in the screenshot. Use connector class PLMU/CL_FRW_W_CONN_DEFAULT.</p>
11.	<p>Save your changes.</p>

4.5.3. Clear UI Metadata Buffers

After finishing the UI, clear the metadata buffers. You can find the report in Customizing *Master Data Governance, Central Governance-> Master Data Governance for Material-> Clear UI Metadata Buffers*.

This report clears the following buffers in this sequence:

- Text Buffer
- Search Help Buffer
- SMT-Mapping Data Buffer
- SPI Metadata Buffer

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You should use this report after extending the data model to make sure that the metadata is consistent with the MDG customizing and UI configuration.

5. Testing Your Data Model Extension

To test your configuration, start the MDG Material UI using the following URL (replace the parameters host, port, and client-id to match your landscape):

`https://<host>:<port>/sap/bc/webdynpro/sap/mdg_bs_mat?ACTION=CREATE&WDCONFIGURATIONID=BS_MAT_INIT&sap-client=<client-id>`

Alternatively, start transaction PFCG, enter role name SAP_MDG_MENU* and click the *Display* pushbutton. Select the *Menu* tab. In the hierarchy window, navigate to *Role Menu -> Material Governance -> Material Processing*. Right click on *Create Material* and select *Execute* from the drop-down

The screenshot shows the SAP MDG Material UI interface. At the top, there's a header with the SAP logo and the title 'Basic Data'. Below the header are buttons for 'Edit', 'Refresh', 'Check', 'Print / Print Preview', and a help icon.

The main area is divided into sections:

- General Data:** This section contains fields for 'Material*', 'Base Unit of Measure*', 'Material Type*', 'Industry Sector*', 'Material Group', 'Old material number', and 'Authorization Group'. The 'Material' field is highlighted with a red box.
- Grouping:** This section contains fields for 'Ext. Material Group', 'Product hierarchy', and 'Cross-Plant CM'.
- Configuration:** This section contains a single field for 'Configuration'.
- Design Data:** A collapsed section.
- Descriptions:** A collapsed section.
- Classification:** A collapsed section.
- Dimensions:** A collapsed section.
- GTIN/EAN:** A collapsed section.
- Basic Text:** A collapsed section.
- Internal Comment:** A collapsed section.
- Business Partner Addition:** A table section with columns: Material, Material description, Business Partner, and Nickname/name used. It contains two rows: one with checked checkboxes and another with uncheckable checkboxes.

At the bottom right are 'Save', 'Submit', and 'Cancel' buttons.

6. Additional Information

6.1. Further Reading

Information on SAP MDG on SAP S/4HANA

- Exchange knowledge: [SAP Community](#) | [Q&A](#) | [Blog](#)
- Try SAP Master Data Governance on S/4HANA for free: [Trial Version](#)
- Learn more: [Latest Release](#) | [Webinars](#) | [Help Portal](#) | [How-to Information](#) | [Key Presentations](#)

SAP Roadmap Explorer

- Please see the [roadmap for SAP Master Data Governance](#)

Related Information

- Learn more: [Floorplan Manager for Web Dynpro ABAP](#) | [How to Adapt FPM](#) | [FPM Blog](#) | [How-to Information](#) | [Service Mapping Tool](#) |

6.2. SAP Notes

In addition to the detailed explanations written in this document, please see the following SAP Notes for further important information.

Note Number	Note Description
3194967	MDG Customer Connection 2021 for S/4HANA 2022
3043582	MDG Customer Connection 2020
1806108	Functional restrictions in MDG-M in MDG7 (incl. SP02)
2129261	Functional restrictions in MDG-M in MDG8
2284745	Functional Restrictions in MDG for Material with SAP Master Data Governance 9.0
2461516	Functional Restrictions in MDG for Material with SAP Master Data Governance 9.1
2656693	Functional Restrictions in MDG for Material in SAP Master Data Governance 9.2 and on SAP S/4HANA 1809
2816571	Functional Restrictions in MDG for Material on SAP S/4HANA 1909
2948873	Functional Restrictions in MDG for Material on SAP S/4HANA 2020
3070012	Functional Restrictions in MDG for Material on SAP S/4HANA 2021
3219945	Functional Restrictions in MDG for Material on SAP S/4HANA 2022
2479869	Usage of Lean Classification with SAP Master Data Governance
1619534	How to Create, Enhance and Adapt FPM Applications