PUBLIC

How-To: Extend Master Data Governance for Material by a New Entity Type (ERP Table, Reuse Option)

Applicable Releases:

From EHP6 for SAP ERP 6.0 and from S/4HANA 1511

Version 7.0

April 2024

Document History

Document Version	Description
1.0	First official release of this guide
4.0	Additional structure CMD_BS_MAT_S_MAT_DATA (June 2016)
6.0	Small updates (November 2020)
7.0	Layout update (April 2024)

1 Introduction

SAP Master Data Governance (MDG) provides business processes to find, create, change, and mark master data for deletion. It supports the governance of master data in a central hub and the distribution 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.

MDG offers change request (CR)-based processing of master data with integrated workflow, staging, approval, activation, and distribution.

Domain-specific content such as data models, user interfaces, and workflows is included as part of the standard offering. It is a frequent customer requirement to extend the MDG data models according to their specific needs.

This How-To Guide describes the solution to extend the MDG-M data model by a new entity type. The attribute values of the new entity type will be copied to the corresponding ERP tables (reuse option) after activation of the change request.

Note

The node extensibility (entity type), which is introduced in the following sections covers all segments and fields that are contained in data dictionary structure `MDG_BS_MAT_S_MAT_DATA`. It does not, however, address additionally accessible tables of the Material Master such as the Production Resource Tool Fields (MFHM).

Note

From MDG9 the additional structure `CMD_BS_MAT_S_MAT_DATA` has to be enhanced in the same way as `MDG_BS_MAT_S_MAT_DATA`.

2 Business Scenario

The business requires the new entity type called “Plant Data for Material” as part of the MDG Material data model.

You want to extend the (Type1) entity type `MATERIAL` to include the entity type `ZZMARC`. `ZZMARC` includes the following attributes: `LVORM`, `XCHAR`, `DISMM`, `DISPO`, `DISLS`.

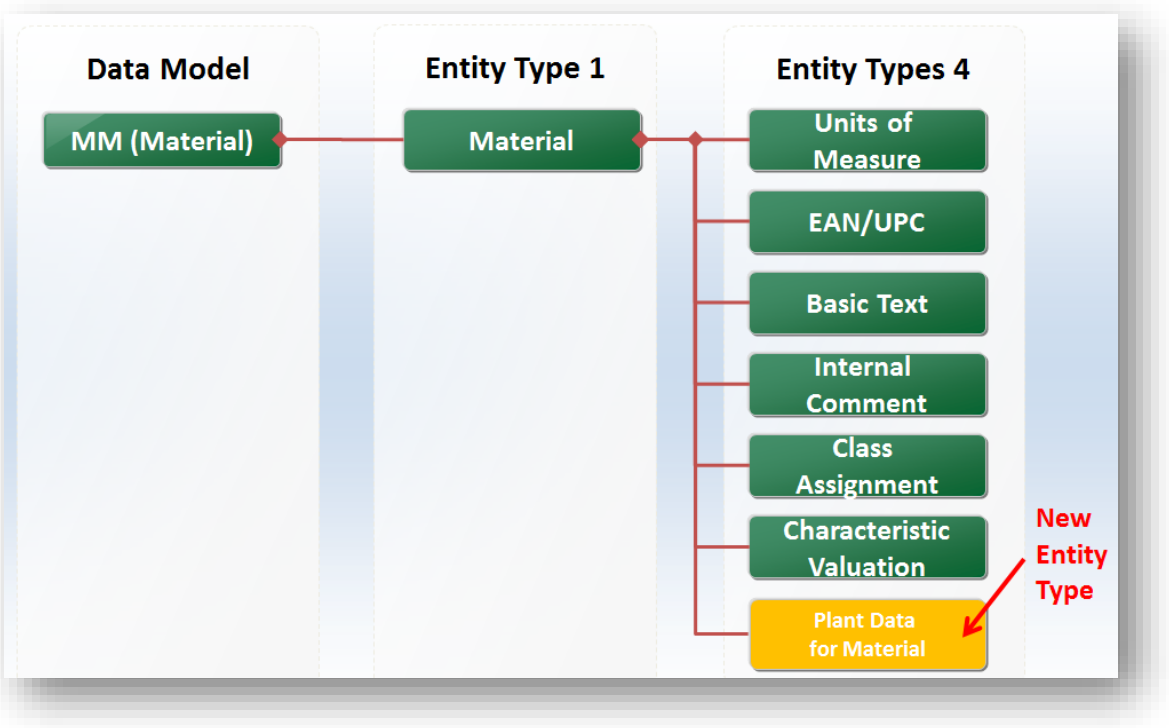


Figure: Data Model – Material (Scope of 2011 Delivery) with custom entity type “Plant Data for Material”

The default governance process delivered with MDG will be used. No changes to the governance process are necessary as part of this scenario.

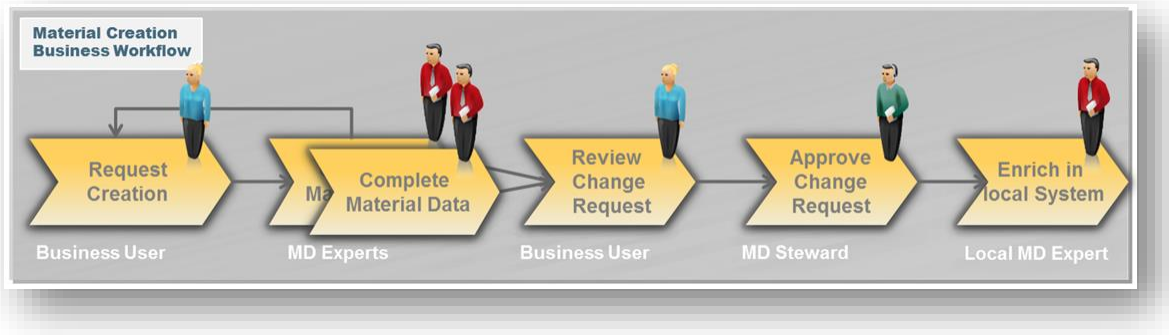


Figure: Material Processing in Master Data Governance

3 General Concepts in MDG

The implementation steps in this document are easier to understand if you are familiar with the basic concepts; in particular data modeling and user interface customization. In this introduction section, you can learn more about these concepts. Alternatively, you can skip this section and move straight to the implementation part.

3.1 Data Modeling

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.

3.1.1 Basic Data Model for Material

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

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

You can either centralize the maintenance of process controlling data on the MDG hub by using the standard backend transactions for material maintenance or you can decentralize the maintenance of process controlling data.

The delivered standard data model is "MM" (This model is linked to Business Object ID 194 "Material" / "BUS2550" Material)

You can find the delivered data model content for the different releases in SAP Note 3134600.

Additional Information:

- A BAdI is available for data enhancement during change request activation
- 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).

3.1.2 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.

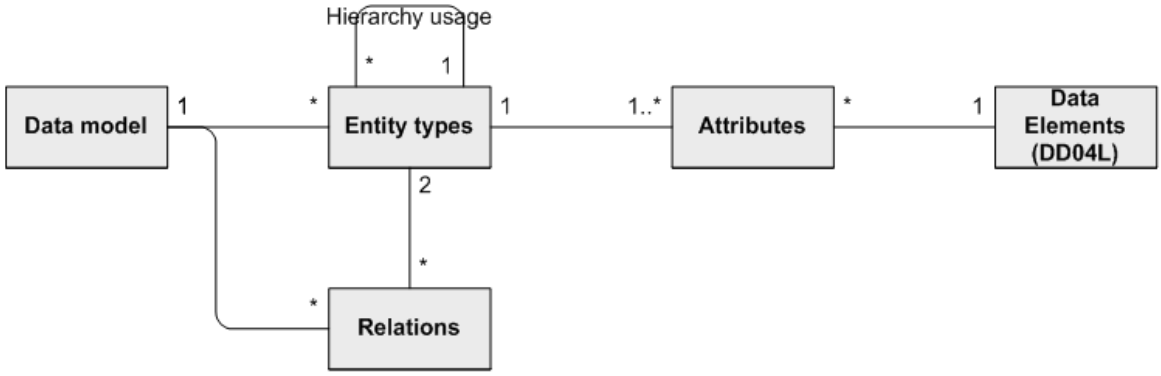
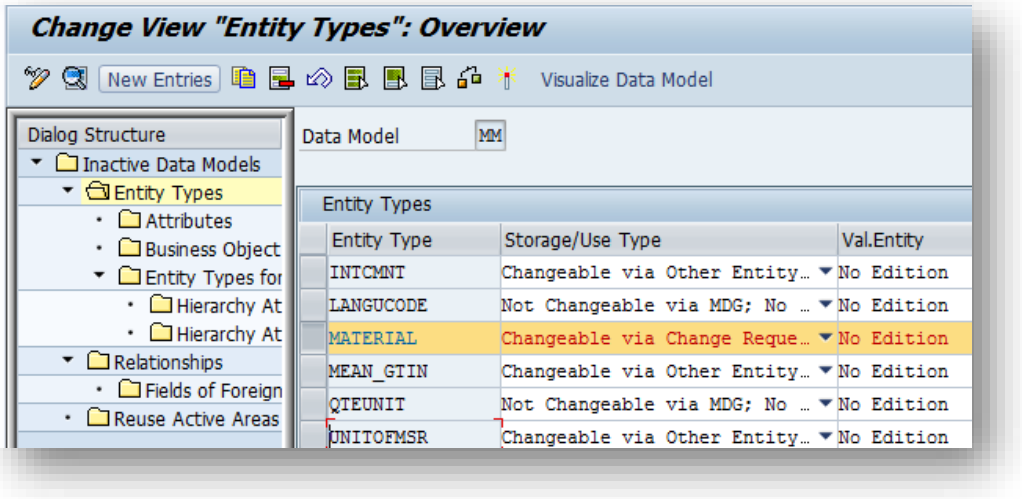


Figure: The meta model is an entity-relationship-model (ERM)

The preconfigured data model for the business object types Material is `MM`. You can view the SAP delivered data model in Customizing for *Master Data Governance* under *General Settings* > *Data Modeling* > *Edit Data Model*. Alternatively, you can enter view cluster `VC_USMD001` in transaction `SM34`.



Storage and Use Types

You assign a 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)	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: • 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

	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. 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 sets. 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.
Changeable w/o Change Request; Generated Check/Text Tables (Type 2)	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. The non-key fields contained in the text table are the entity texts. The check table does not contain non-key fields.
Not Changeable via MDG; No Generated Tables (Type 3)	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.
Changeable via Other Entity Type; Generated Database Tables (Type 4)	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 To-entity type 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.

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`.

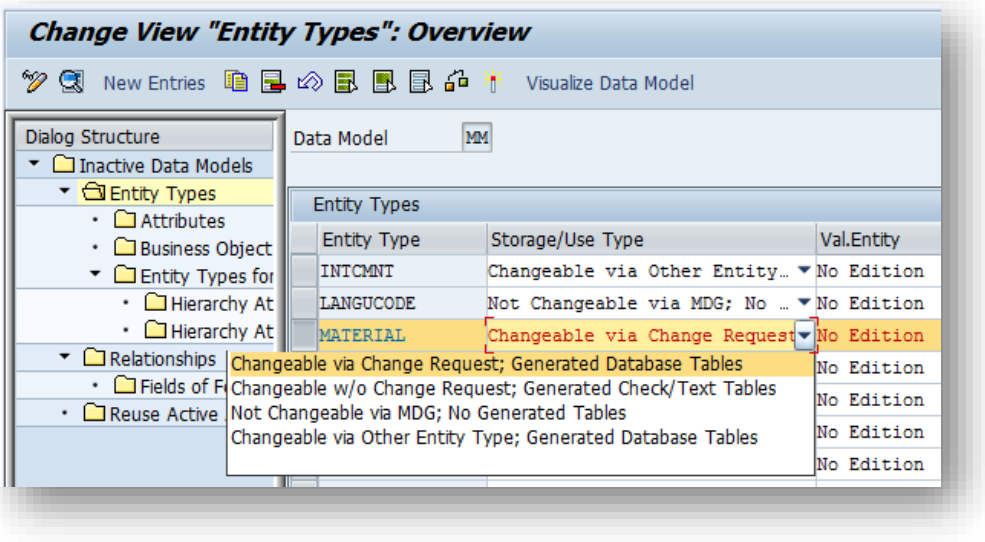


Figure: Selection box showing the different storage/use types in MDG

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 *From-Entity type* as an attribute of the *To-Entity type*.
Leading	Specifies the *From-Entity type* on a higher level than the *To-Entity type*. The *From-Entity type* is automatically taken as the key in the generated tables. A *Leading* relationship type is identical to a *Qualifying* relationship type, except when the *To-Entity type* has a *Storage and Use Type* of 4. Master data for *To-Entity type*s in *Leading* relationships is processed in the context of the entity type that is assigned using the leading relationship.
Qualifying	Specifies the *From-Entity type* on a higher level than the *To-Entity type*. The *From-Entity type* 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 *To-Entity Types* can be assigned to a *From-Entity Type*. This cardinality is valid for relationships with the relationship types *Leading*, *Qualifying*, and *Referencing*. In relationships with the relationship type *referencing*, the *From-Entity Type* is a required attribute of the *To-Entity Type*.
0:N	This cardinality represents an optional relationship in which any number *To-Entity Types* can be assigned to a *From-Entity Type*.

Note

Which relationship types are permitted depends on the storage and use types of the entity types. For a table with detailed information refer to SAP Help Portal.

Important

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.

Reuse Area Versus the Flexible Option

When you extend the SAP delivered data model by a new entity type you have to decide where the data should be stored after activation of the change request. During processing of the change request, the data is stored in the MDG staging area. After activation the data can be moved to tables outside of MDG or it can stay 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.
- Re-Use active area (re-use mode) – Existing structures of applications are used. For example, MDG for material makes use of the `MARA` table in ECC.

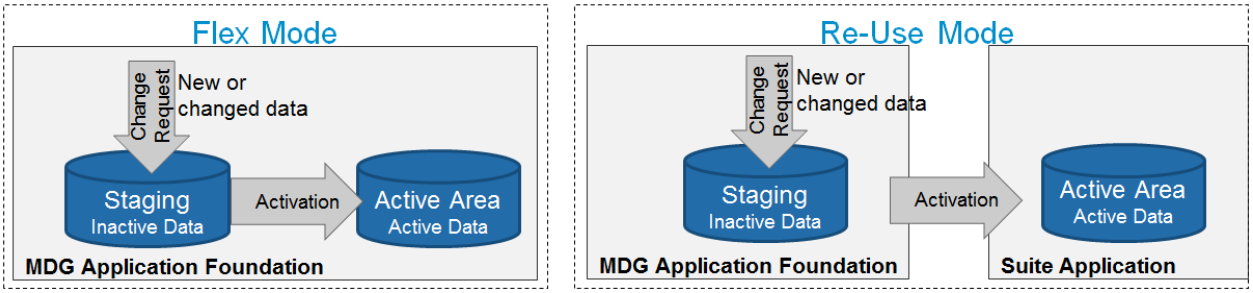


Figure: Flexibility Option (left) versus Reuse Option (right)

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.

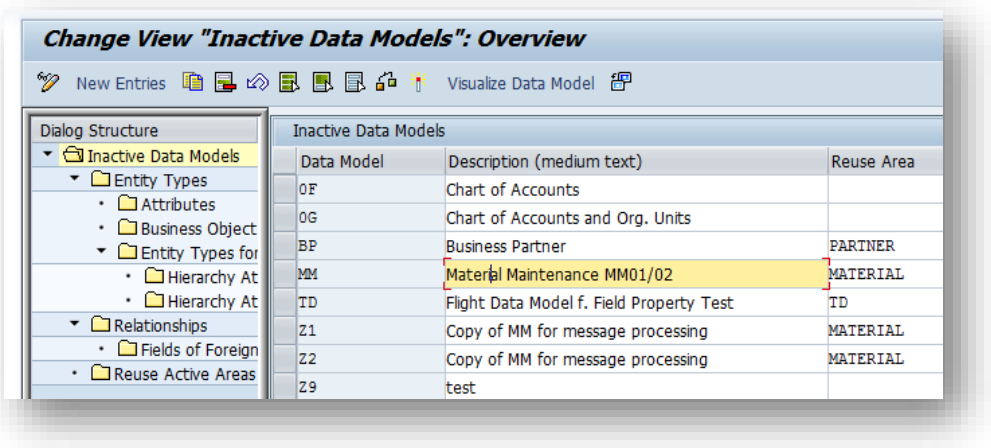


Figure: Assignment of Reuse Area for the Data Model `MM`

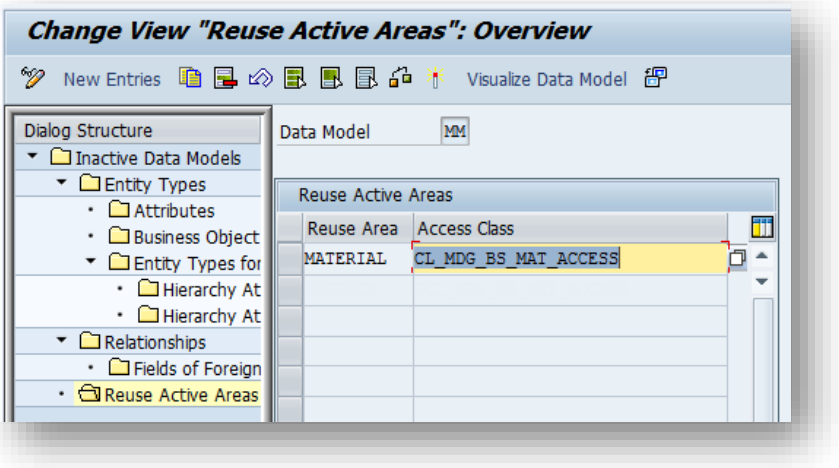


Figure: Assignment of Access Class for Reuse Area `MATERIAL`

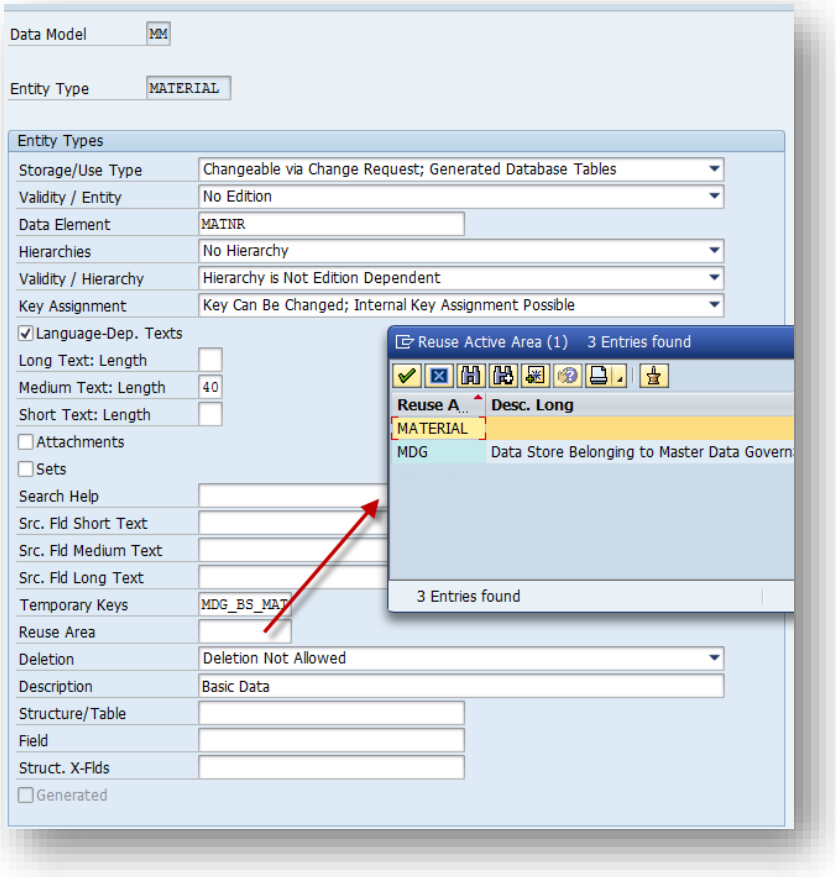


Figure: Alternative assignment of Reuse Area on Entity Type level

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.

F4-Help

Since ERP 6 EhP6 it is required to maintain a foreign-key relationship for the data element in order to get F4-Help. This should be considered during data modeling.

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

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.

Data Modeling Considerations for List-UIBBs

In case you want to add two (or more) List-UIBBs (User Interface Building Blocks) to the Material User Interface you have to consider this during data modeling. Basically, there are two cases you need to distinguish:

1. You want the two List-UIBBs to be independent. In this case you need to create separate Entity Types and assign one to each List-UIBB.

2. You want to create a new row in the second UIBB automatically after creating a row in the first UIBB (for the same key, of course). In this case we recommend you assign the same Entity Type for both List-UIBBs (or implement a derivation).

The following example illustrates the two scenarios.

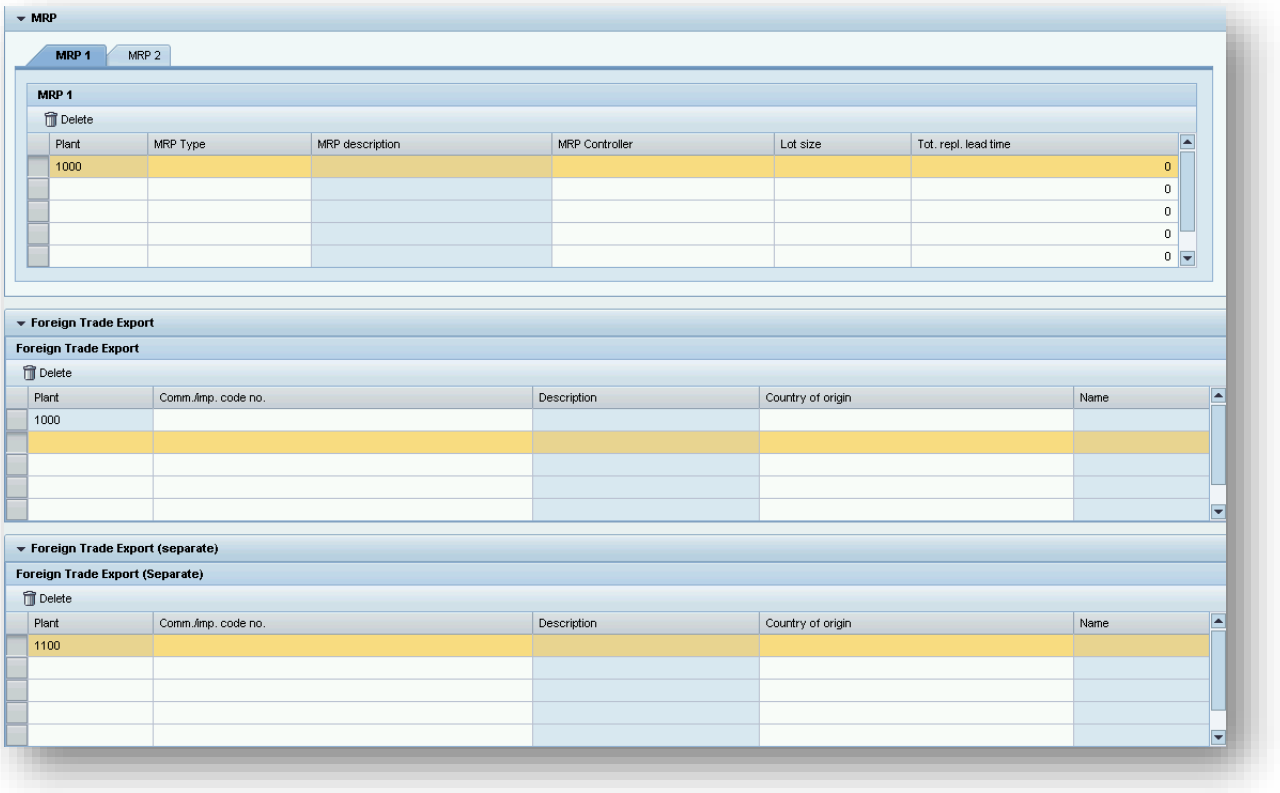
Example

You have MRP1/MRP2 and Foreign Trade Export modeled as Entity Type `ZZMARC`.

Foreign Trade Export (separate) is modeled as a separate Entity Type `ZZMARCFTE`.

In the Component Configuration for Foreign Trade Export (separate), you have maintained the Entity Type `ZZMARCFTE`. For MRP1/MRP2 and Foreign Trade Export component configuration, you have maintained entity type as `ZZMARC`.

With this Entity Type specified in the Component Configuration, when entering a new row in `ZZMARC` component configurations, it does not affect the `ZZMARCFTE` entity. Thus, this would be useful when you want to enter only Foreign Trade Export data and not MRP data.



3.2 User Interface Configuration

The User Interface in MDG is configured using the Floorplan Manager (FPM). The FPM is a Web Dynpro ABAP application that provides a framework for developing new Web Dynpro ABAP application interfaces consistent with SAP UI guidelines.

The entry point you need for starting an application is the *application configuration*, which is tied to a single Web Dynpro application. The necessary information needed to start the application is divided between the following two entities:

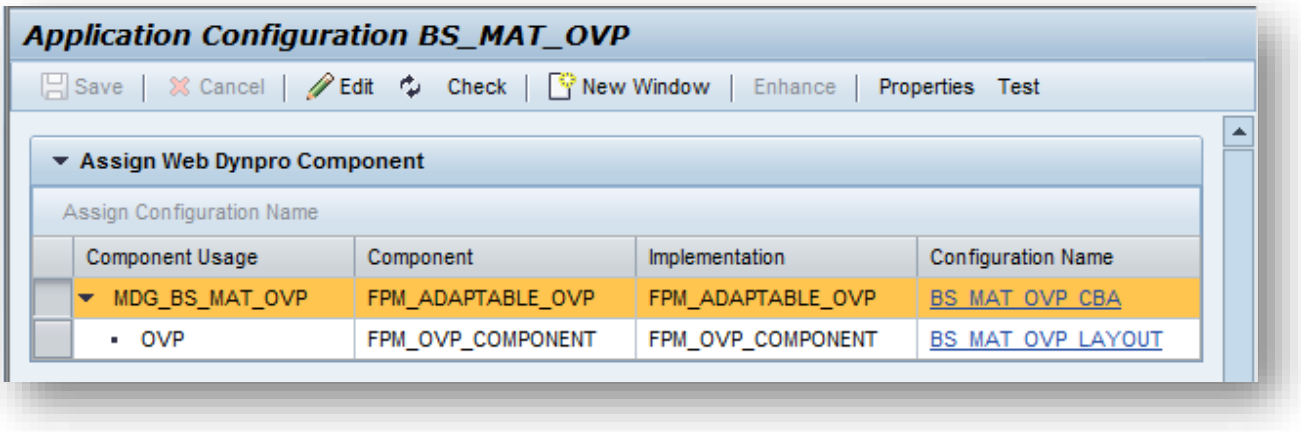
- **Web Dynpro ABAP Application:** Contains the information about the main component and window of the application
- **Web Dynpro ABAP Application Configuration:** Contains the information about the configuration used for starting the main component

There are only 3 different main components used in FPM-based applications. Each one corresponds to one of the supported floorplans:

- OIF (Object Instance Floorplan): component `FPM_OIF_COMPONENT`
- GAF (Guided Activity Floorplan): component `FPM_GAF_COMPONENT`
- OVP (Overview Page Floorplan): component `FPM_OVP_COMPONENT`

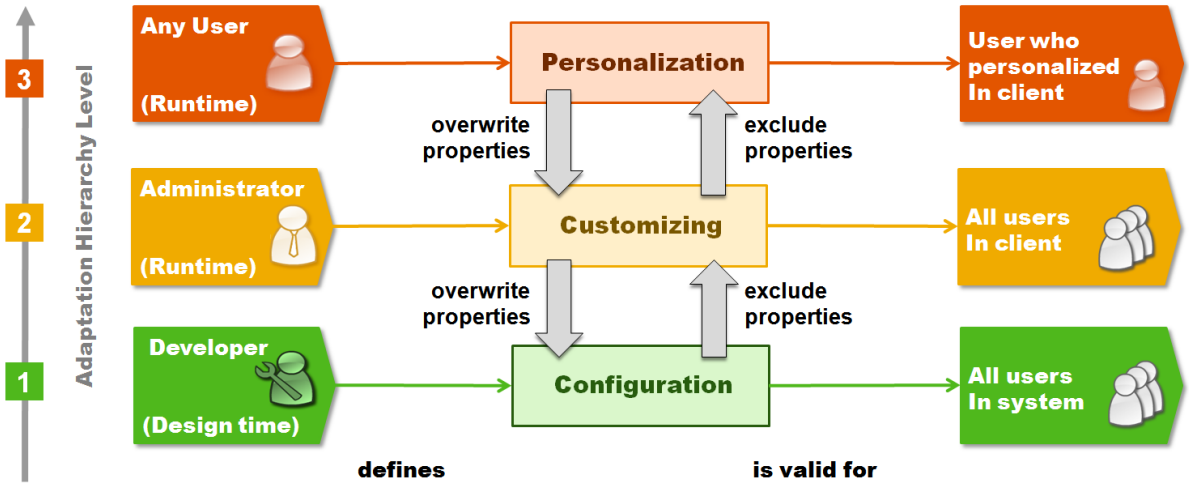
In the screenshot below application `MDG_BS_MAT_OVP` is using component `FPM_ADAPTABLE_OVP` as the start component, therefore the first line corresponds to that component. Here, it is specified that `FPM_ADAPTABLE_OVP` starts with component configuration `BS_MAT_OVP_CBA`. As component `FPM_ADAPTABLE_OVP` is the component providing the floorplan's functionality and layout, we will use the term 'floorplan component' for it and the term 'floorplan configuration' for the configuration used to start it.

In the second, subordinate, line (OVP) you find the *Configuration Name* of the Overview Page Floorplan (OVP). In the screenshot below, it is `BS_MAT_OVP_LAYOUT`.



3.2.1 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, see Web Dynpro ABAP Home .

3.2.2 Removing Customizing or Personalization

If required a system administrator can delete customizing or personalization from a central place using the following Web-Dynpro applications. These applications should be used with caution.

Web Dynpro applications:

- WD_ANALYZE_CONFIG_USER
- WD_ANALYZE_CONFIG_COMP
- WD_ANALYZE_CONFIG_APPL

4 Implementation

Two major building blocks make up the implementation of the entity type extension. In the first phase, you extend the MDG 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.

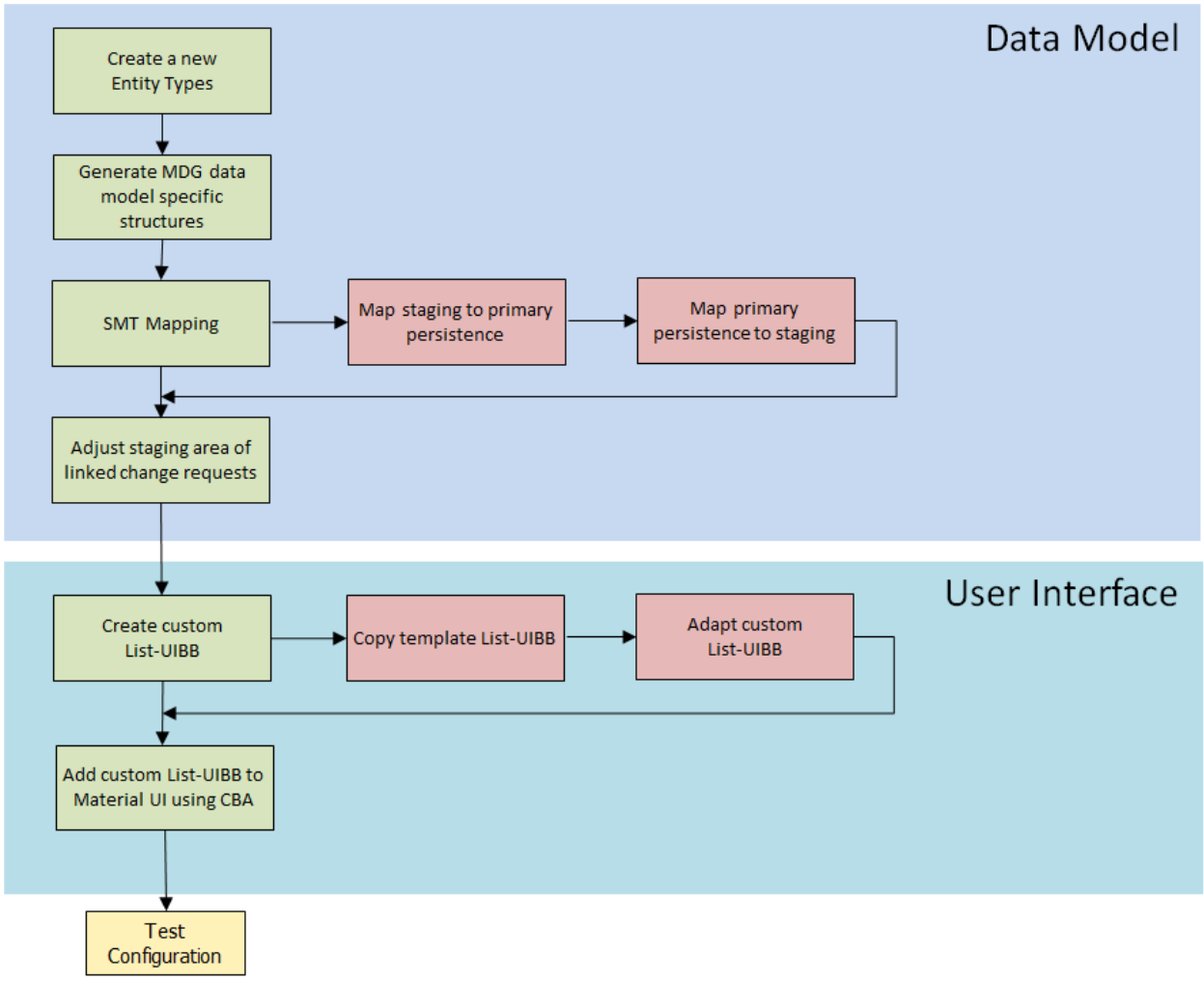


Figure: Implementation steps for re-use Entity-Type extension

4.1 Data Model Extension

You want to extend the MDG data model for Material (`MM`) by the additional Entity Type “Plant Data for Material” (`MARC`). The following fields from `MARC` should be modeled as attributes of the new Entity Type in MDG.

Transp. Table MARC Active

Short Description Plant Data for Material

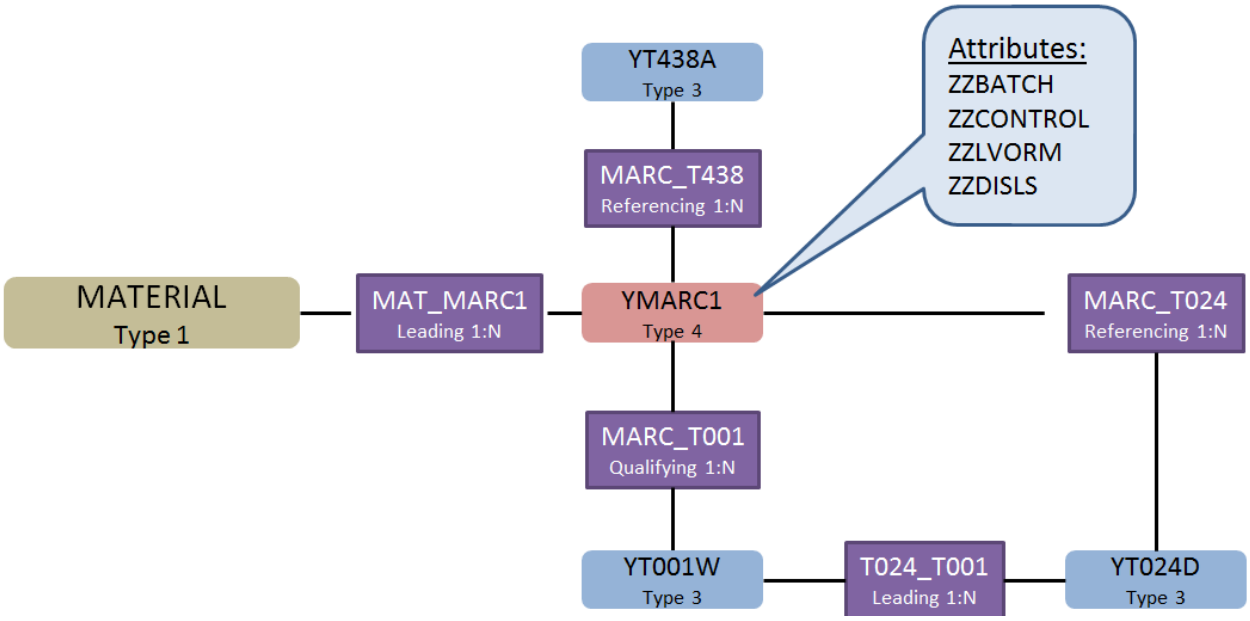
Attributes | Delivery and Maintenance | Fields | Entry help/check | Currency/Quantity Fields

Srch Help | Predefined Type | 1 / 239

Field	Key	Initi	Data element	Data Type	Length	Decim	Short Description	Group
MANDT	☑	☑	MANDT	CLNT	3	0	Client	
MATNR	☑	☑	MATNR	CHAR	18	0	Material Number	
WERKS	☑	☑	WERKS_D	CHAR	4	0	Plant	
.INCLUDE	☐	☑	EMARC	STRU	0	0	Data Division MARC	
.INCLUDE	☐	☐	EMARC1	STRU	0	0	Data Division MARC: Division 1	
PSTAT	☐	☐	PSTAT_D	CHAR	15	0	Maintenance status	
LVORM	☐	☐	LVOWK	CHAR	1	0	Flag Material for Deletion at Plant Level	
BWTTY	☐	☐	BWTTY_D	CHAR	1	0	Valuation Category	
XCHAR	☐	☐	XCHAR	CHAR	1	0	Batch management indicator (internal)	
MMSTA	☐	☐	MMSTA	CHAR	2	0	Plant-Specific Material Status	
MMSTD	☐	☐	MMSTD	DATS	8	0	Date from which the plant-specific material status is valid	
MAABC	☐	☐	MAABC	CHAR	1	0	ABC Indicator	
KZKRI	☐	☐	KZKRI	CHAR	1	0	Indicator: Critical part	
EKGRP	☐	☐	EKGRP	CHAR	3	0	Purchasing group	
AUSME	☐	☐	AUSME	UNIT	3	0	Unit of issue	
DISPR	☐	☐	DISPR	CHAR	4	0	Material: MRP profile	
DISMM	☐	☐	DISMM	CHAR	2	0	MRP Type	
DISPO	☐	☐	DISPO	CHAR	3	0	MRP controller	
KZDIE	☐	☐	KZDIE	CHAR	1	0	Indicator: MRP controller is buyer (deactivated)	
PLIFZ	☐	☐	PLIFZ	DEC	3	0	Planned delivery time in days	
WEBAZ	☐	☐	WEBAZ	DEC	3	0	Goods receipt processing time in days	
PERKZ	☐	☐	PERKZ	CHAR	1	0	Period Indicator	
AUSSS	☐	☐	AUSSS	DEC	5	2	Assembly scrap in percent	
DISLS	☐	☐	DISLS	CHAR	2	0	MRP Lot Size	
BESKZ	☐	☐	BESKZ	CHAR	1	0	Procurement Type	
SOBSL	☐	☐	SOBSL	CHAR	2	0	Special Procurement Type	
MINBE	☐	☐	MINBE	QUAN	13	3	Reorder Point	
EISBE	☐	☐	EISBE	QUAN	13	3	Safety stock	
BSTMI	☐	☐	BSTMI	QUAN	13	3	Minimum Lot Size	
BSTMA	☐	☐	BSTMA	QUAN	13	3	Maximum Lot Size	

You first create a new entity type `YMARC1` and assign it a *Storage and Use Type* 4. The entity type has the attributes `LVORM`, `XCHAR`, `DISMM`, `DISPO`, `and DISLS`. The relationship between `MATERIAL` and `MARC` is `1:N` of type `Leading`.

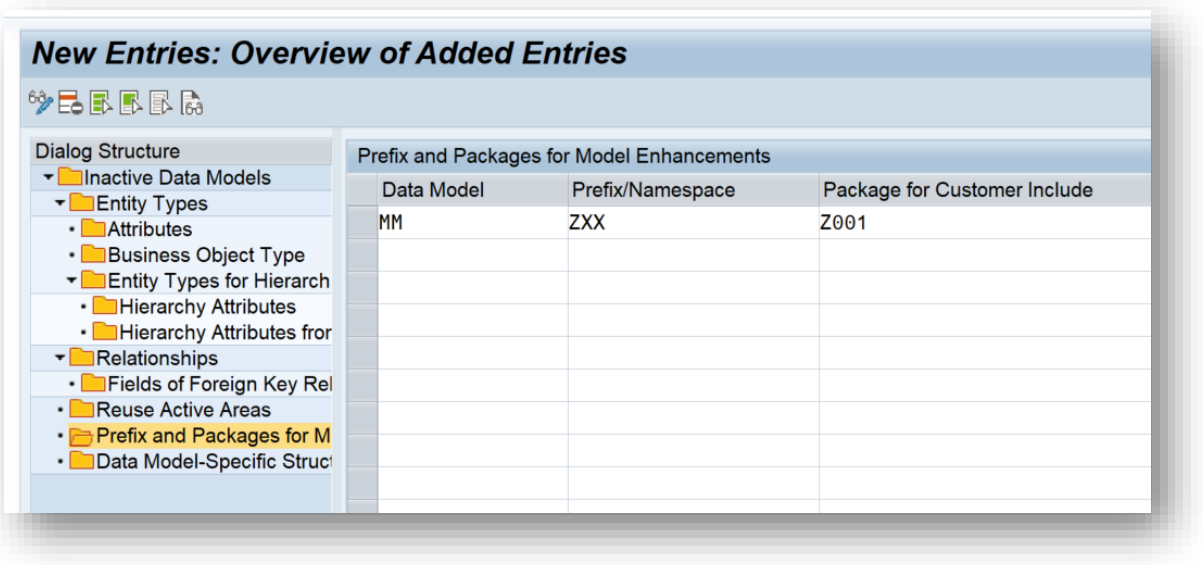
You also create additional entity types with *Storage and Use Type* 3, and relationships as shown in the diagram below.



4.1.1 MDG Data Model-Specific Structures

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

From MDG8 you can assign a prefix and a package directly in the data model. Then the structures will be generated automatically with activation of the data model.



Note

The prefix or the namespace represents the first part of the names used for the generated structures on data model level. In customer systems, you can use the letters Y or Z as a prefix, or you can specify a valid existing customer namespace. Existing customer namespaces are stored in the tables `TRNSPACET` and `TRNSPACEL` or you can check it with transaction SE03.

Note

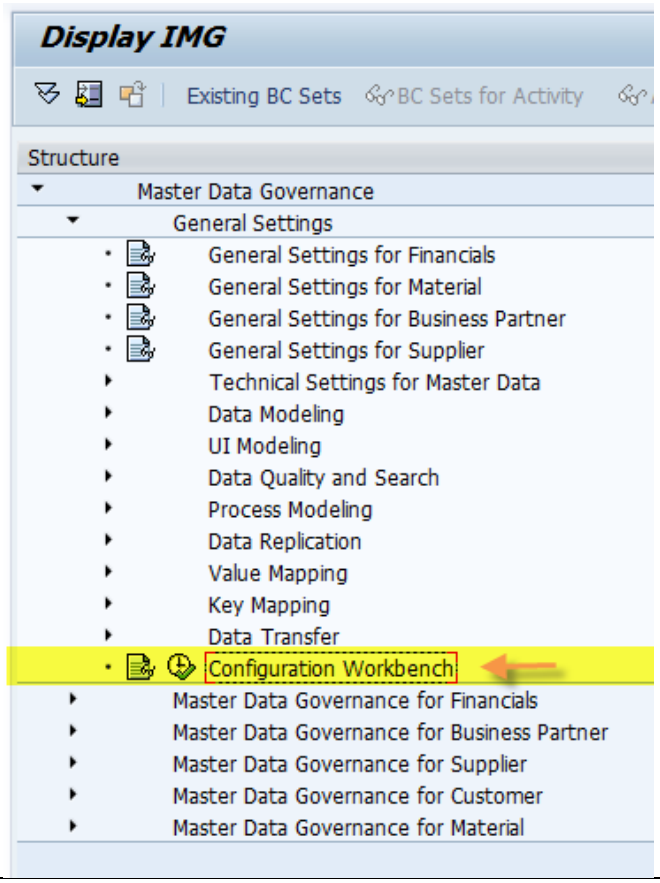
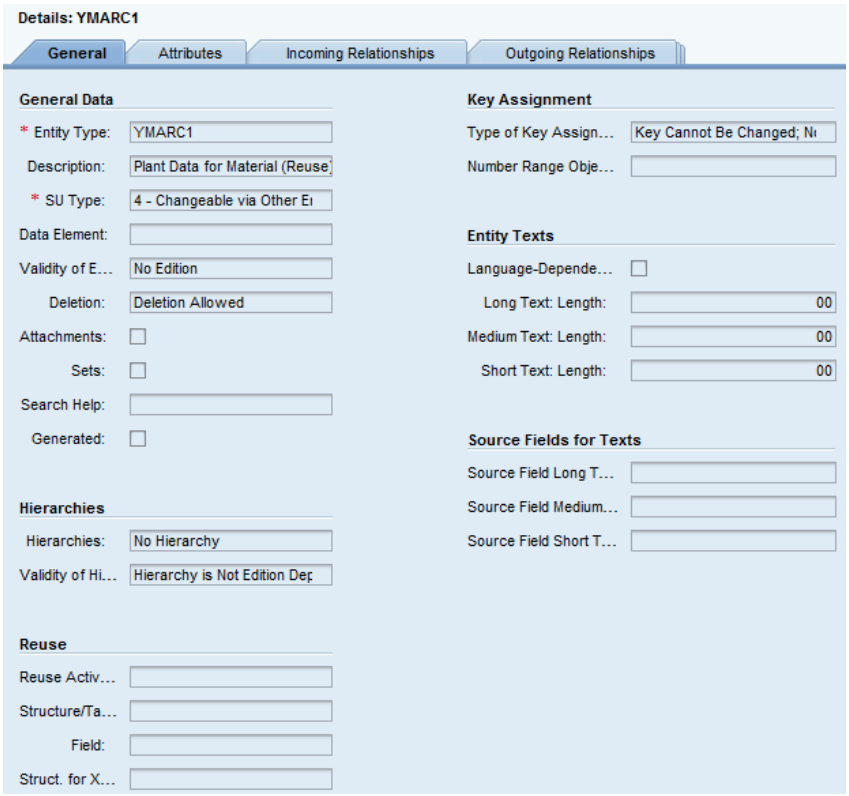
In general, if you change a data model (for example, if you change attributes of entity types or relationships); you need to regenerate the structures.

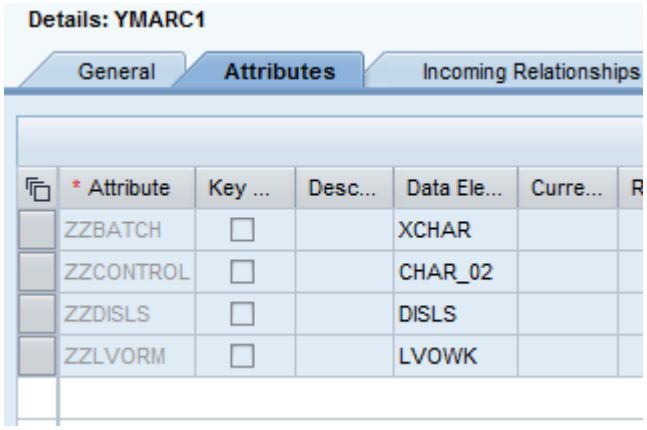
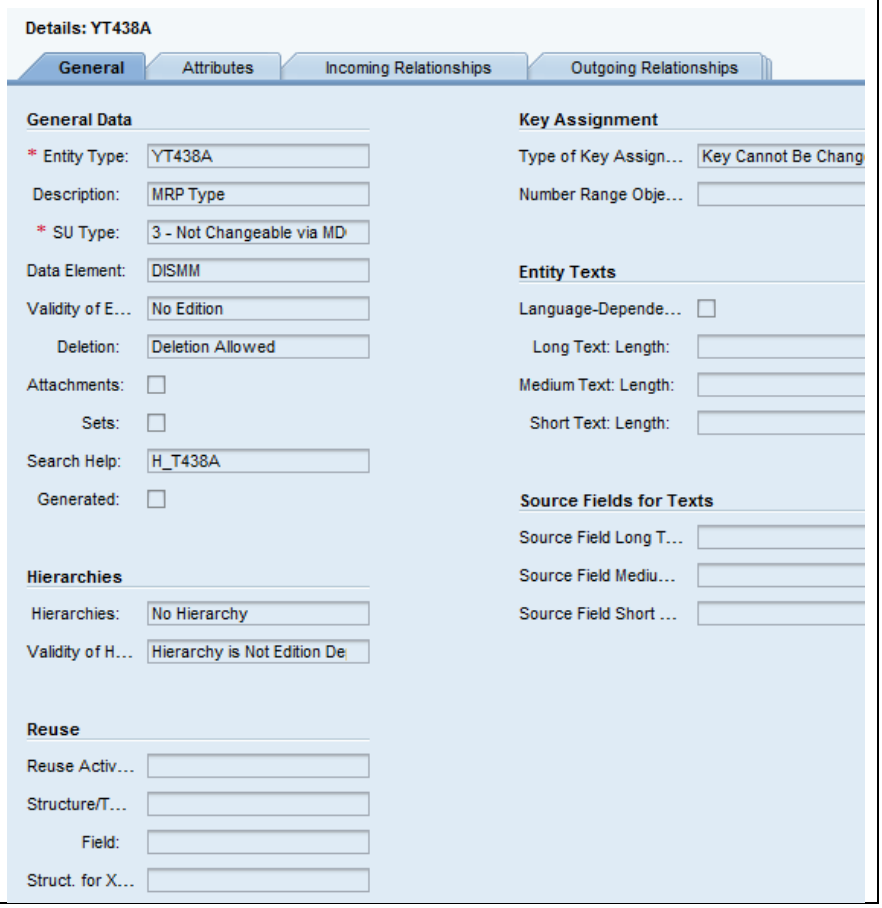
4.1.2 Create a New Entity Type

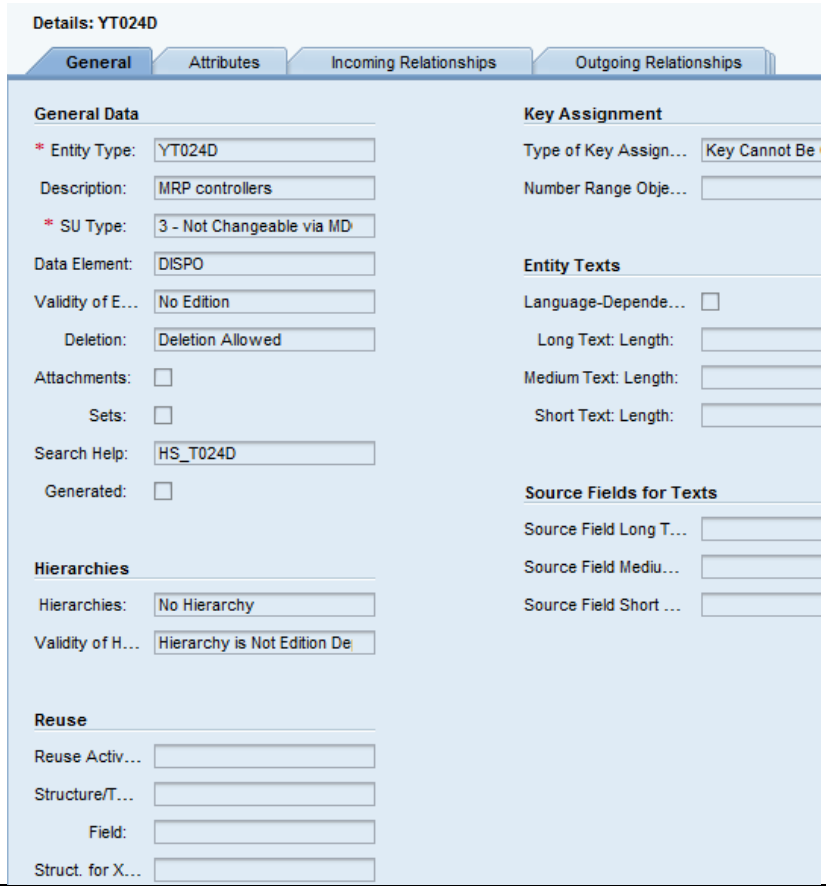
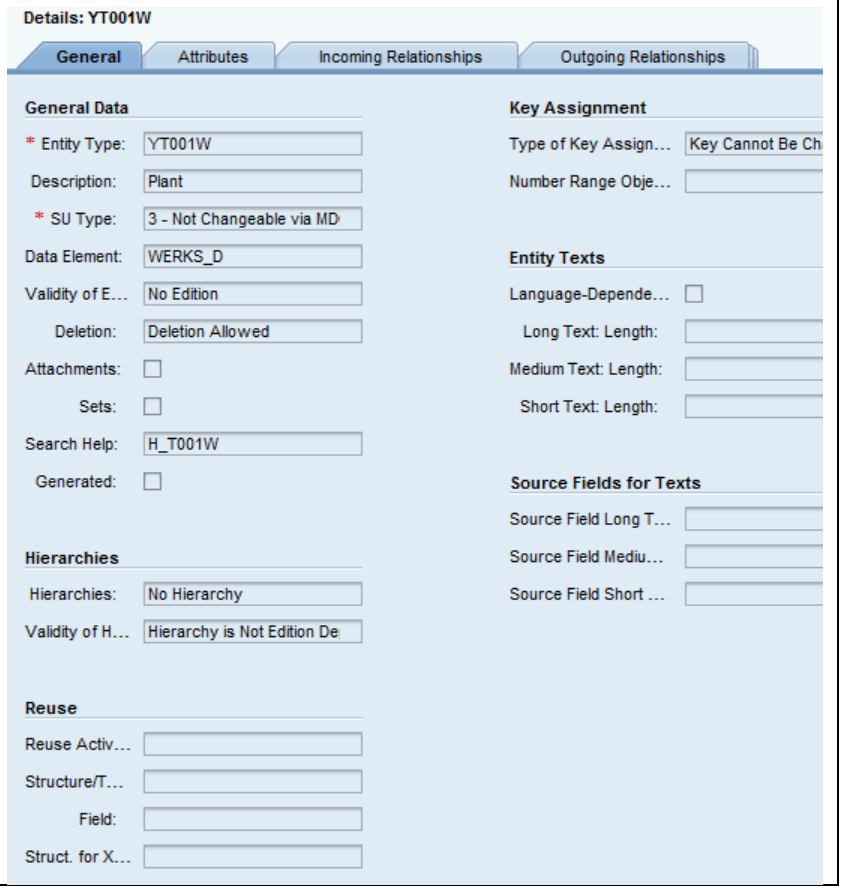
Note

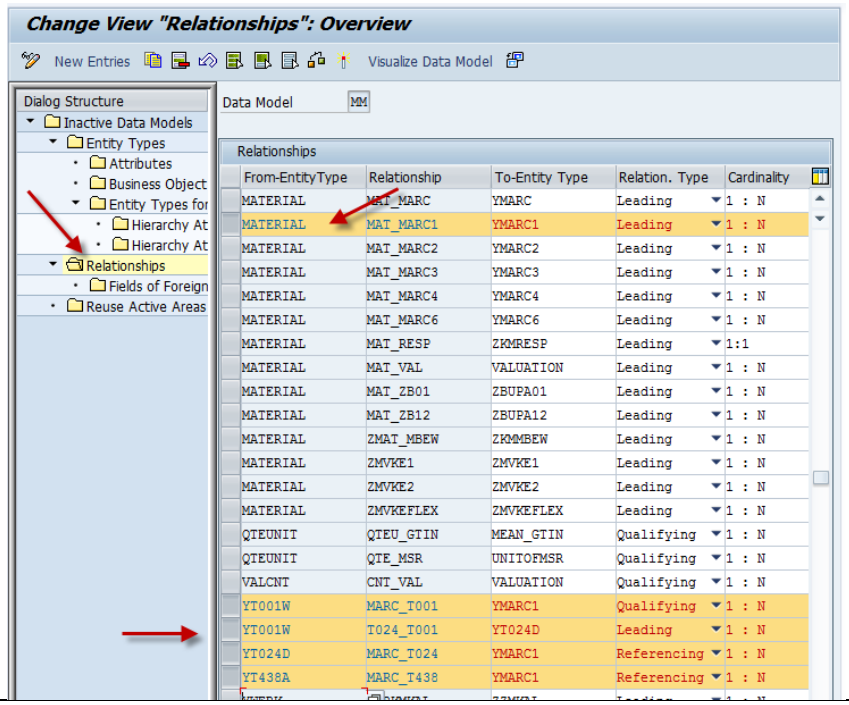
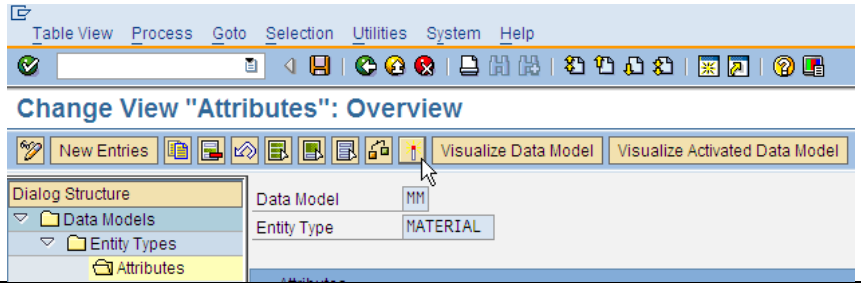
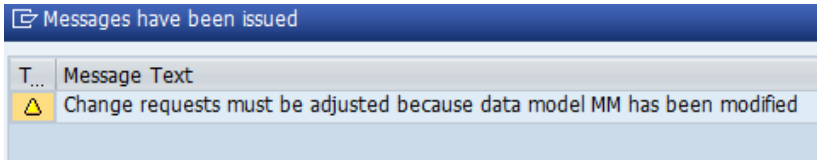
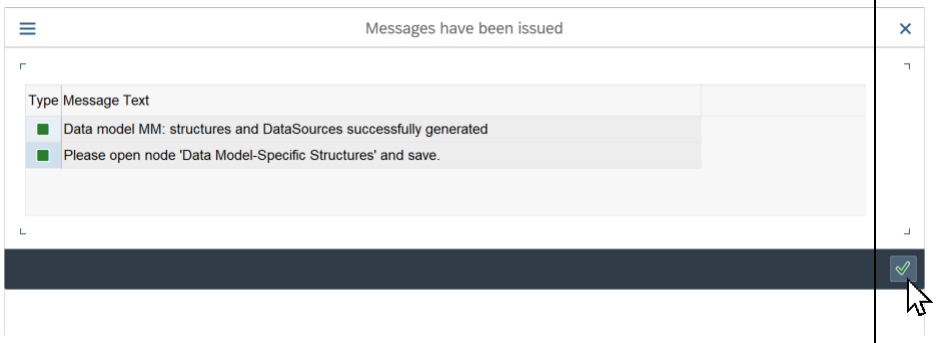
If a field in a new reuse entity type or in an existing reuse entity type is relevant for selection in the download application, the customer must add this field to the template for the MDG-M enterprise search. Doing this prevents a performance bottleneck. For more information, see How To Page with Sub-Category Search. The template that the customer must enhance is the enterprise search template for a search of the staging is `MDG_MATERIAL`. You only need to enhance the `MATERIAL` template if the field is not already contained within that template.

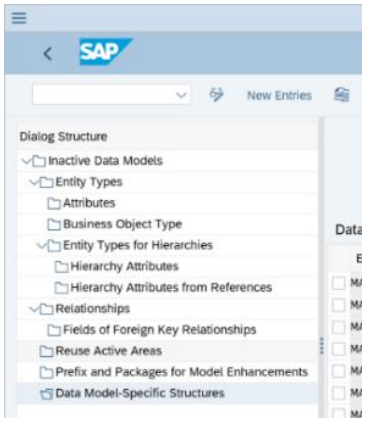
1.	Log into system for cross-client maintenance.	
2.	Start Customizing for ***Master Data Governance*** (transaction `MDGIMG`). Go to ***General Settings -> Configuration Workbench.***	

	Select data model `MM`. Click the ***Edit*** pushbutton. In the left hand table with the list of Entity Types click the ***New*** pushbutton.	
3.	Create New Entity Type **Entity Type:** `YMARC1` **Storage/Use Type:** Changeable via Other Entity Type; Generated Database Table **Reuse Area:** empty (this means the entity type uses the reuse area configured for the data model) Save your settings.	

4.	Add the attributes of Entity Type `YMARC1` as shown in the screenshot below. Save your settings. We recommend you only assign a ***Search Help*** to a ***Data Element*** in exceptional circumstances. If you do this, the input help executes the search help instead of reading the data in the check table or the fixed values of data element's domain. In the following steps you define new entity types that are needed to define the key fields using relationships.	
5.	Details for ***Entity Type*** `YT438A` are shown in the screenshot below. Ensure that the customer extension attributes consider the customer namespace for data dictionary fields. The customer namespaces for **attributes** are YY* and ZZ*. The customer namespaces for **Entity Types** are Y* and Z*. The customer namespaces for **Data Models** are X*, Y* and Z*.	

6.	Details for *Entity Type* `YT024D` are shown in the screenshot.	
7.	Details for *Entity Type* `YT001W` are shown in the screenshot.	

8.	Start Customizing for ***Master Data Governance*** (transaction `MDGIMG`). Go to ***General Settings -> Data Modeling -> Edit Data Model.*** Select data model `MM`. Select *Relationships*.	
9.	Activate the extended data model.	
10.	Make change request adjustments after creating the SMT mapping. Link to chapter: *Adjust Staging area of Linked Change Requests*	
11.	After activation information messages are displayed.	

12.	Following the instruction given in the pop-up navigate to *Data Model-Specific Structures* and press *Save*.	

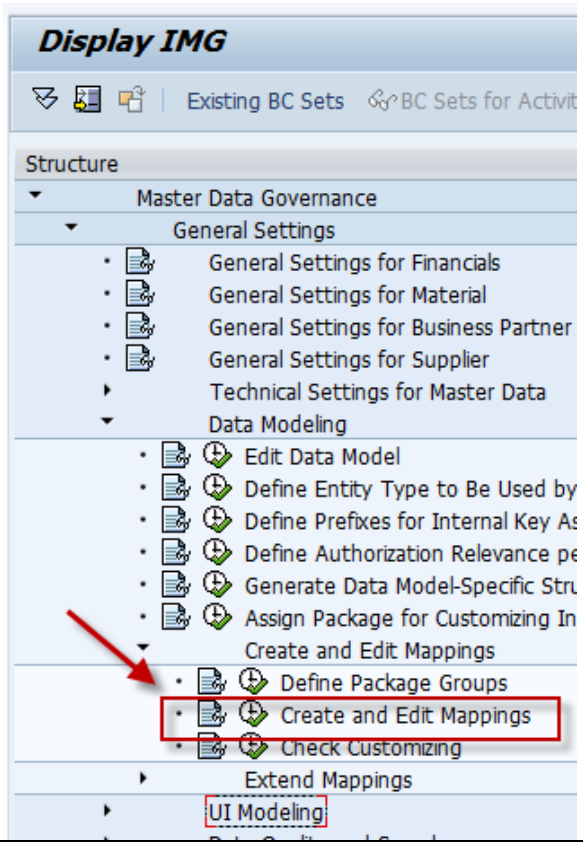
5 SMT Mapping

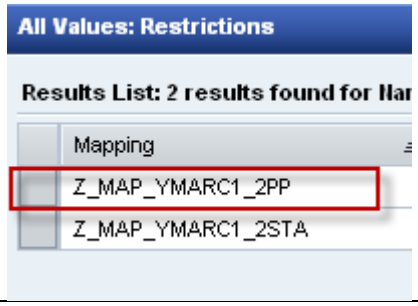
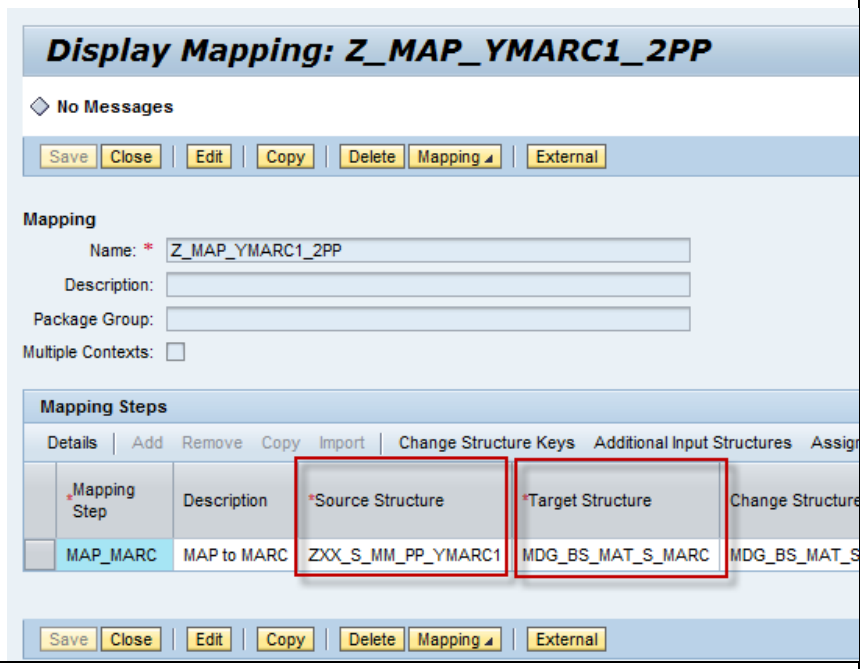
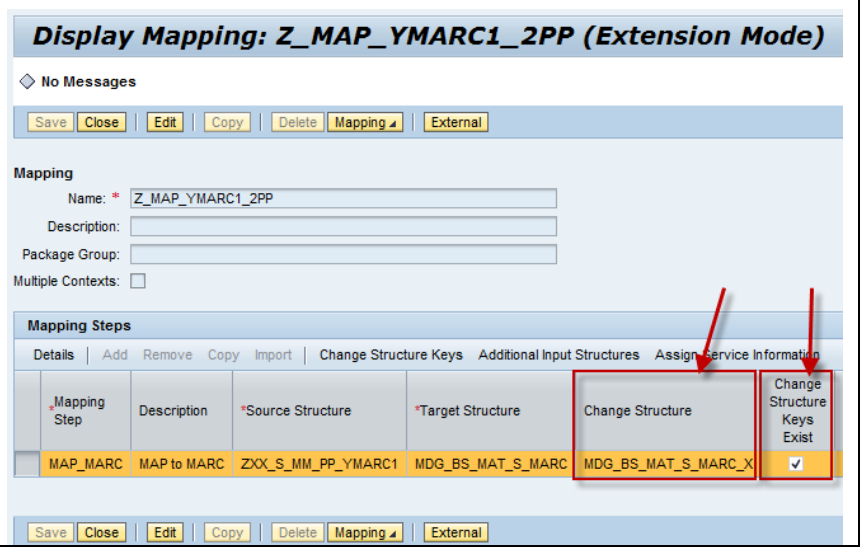
You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

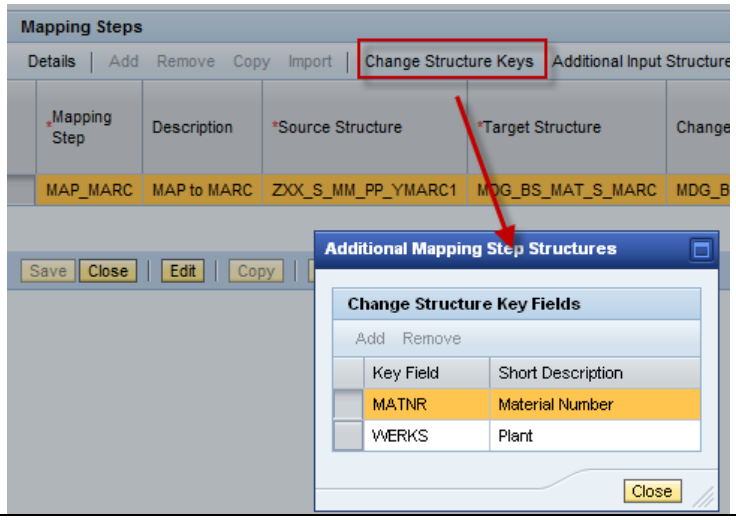
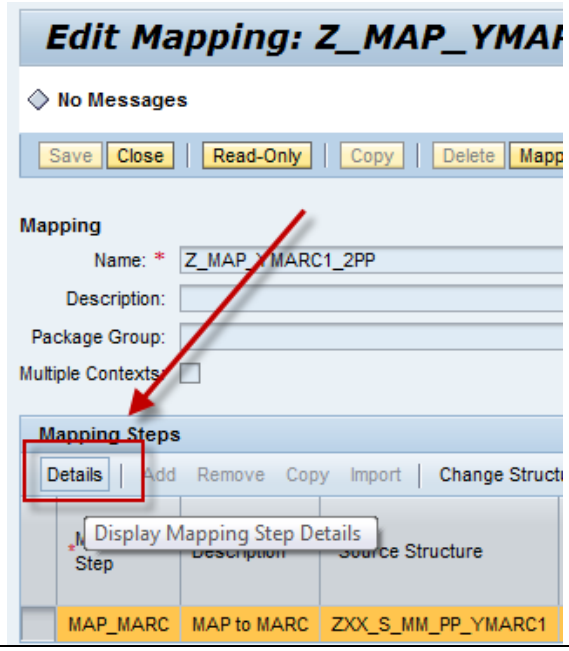
Important

When the mappings are saved, the system generates the corresponding coding. Make sure that all relevant structures are ready before you start.

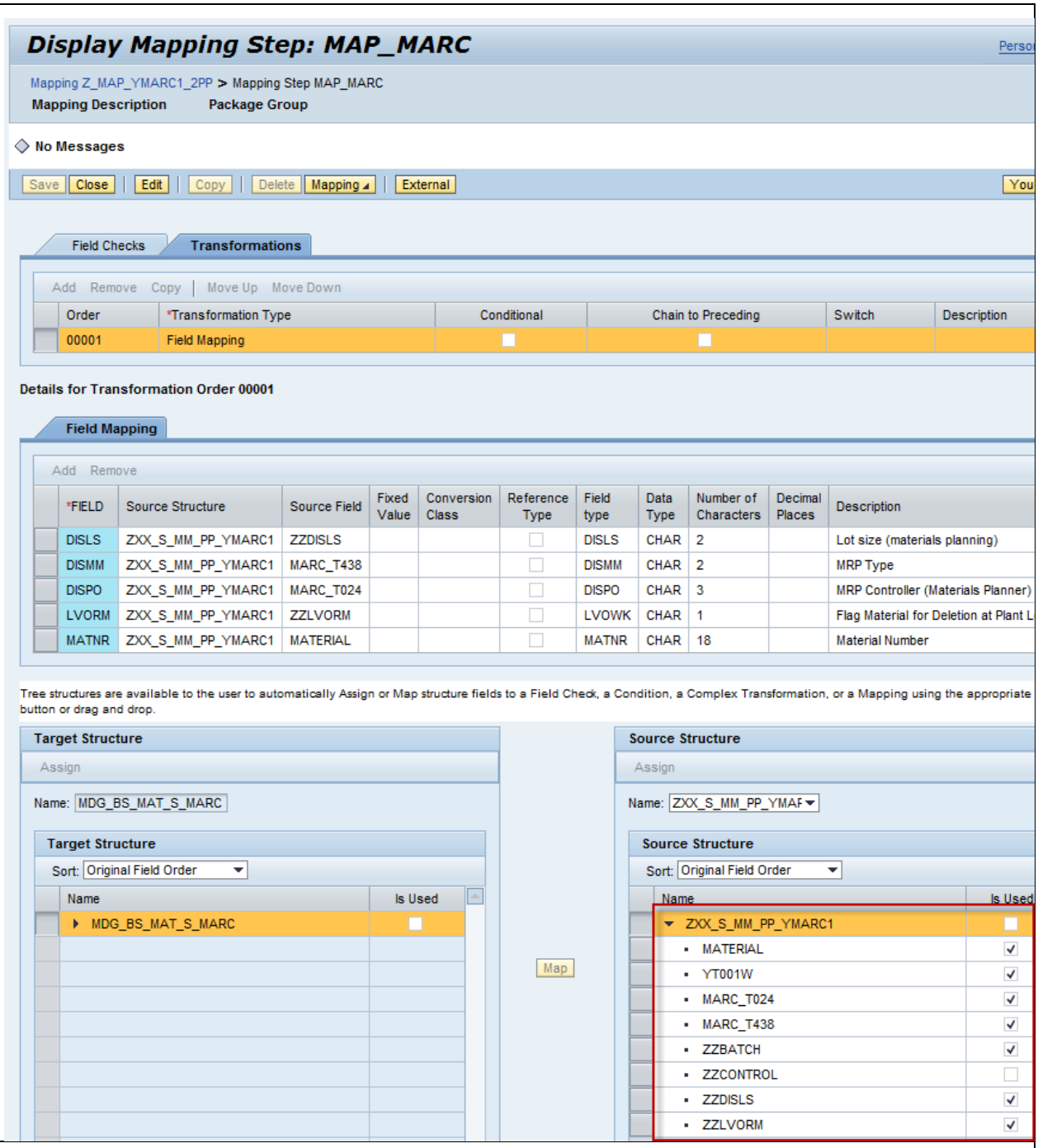
5.1 SMT Mapping – Staging to Primary Persistence

1.	Log into system for cross-client maintenance. Start Customizing for ***Master Data Governance*** (transaction `MDGIMG`). Go to ***General Settings -> Data Modeling -> Create and Edit Mappings -> Create and Edit Mappings*** **Note:** For new Entity Types it is recommended to create a new mapping. When extending existing Entity Types it is recommended to extend the existing mapping.	

2.	Create a new mapping for transferring data from the MDG staging area to the active area. Call the new mapping `Z_MAP_YMARC1_2PP`.	
3.	Add a mapping step `MAP_MARC`. Assign Source Structure `ZXX_S_MM_PP_YMARC1`. Assign Target Structure `MDG_BS_MAT_S_MARC`.	
4.	Assign Change Structure `MDG_BS_MAT_S_MARC_X`. Select ***Change Structure Keys Exist***.	

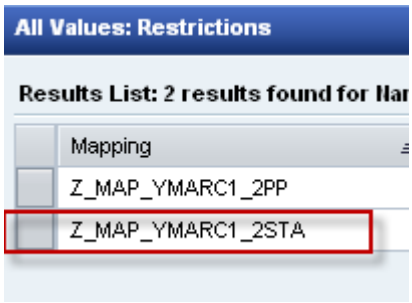
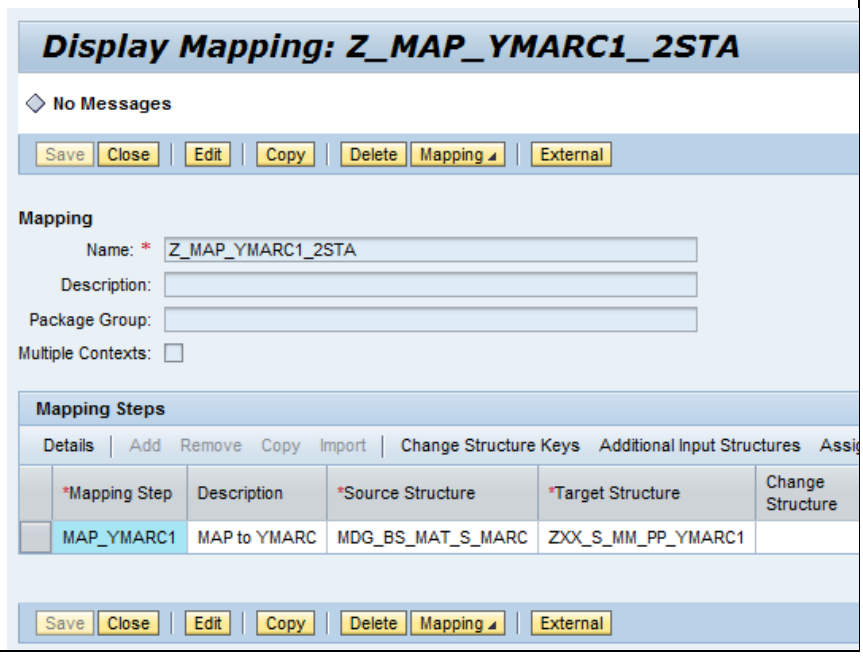
5.	Assign change structure key `MATNR`.	
6.	Select mapping step `MAP_MARC` and choose the ***Details*** pushbutton. Map the fields as shown in the next screenshot.	

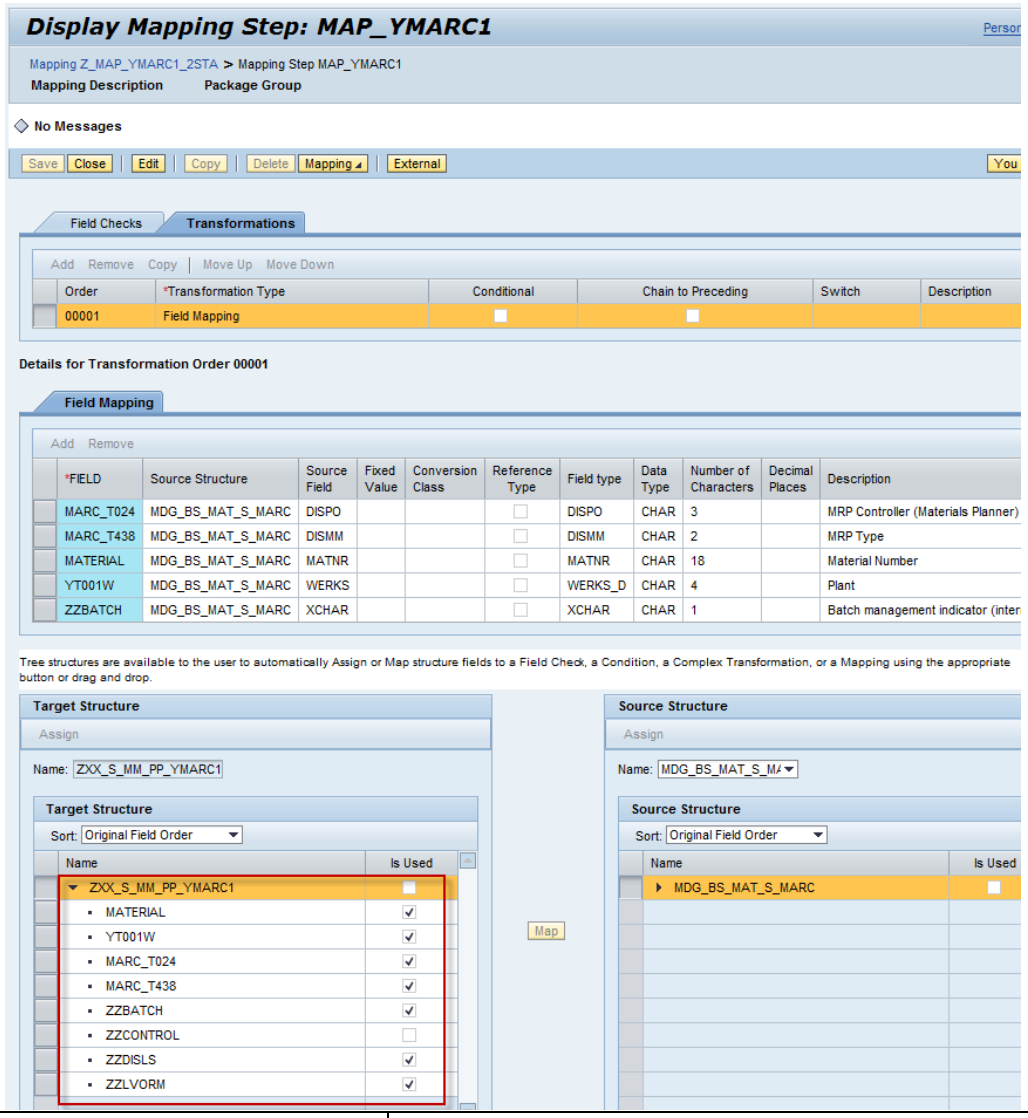
7.



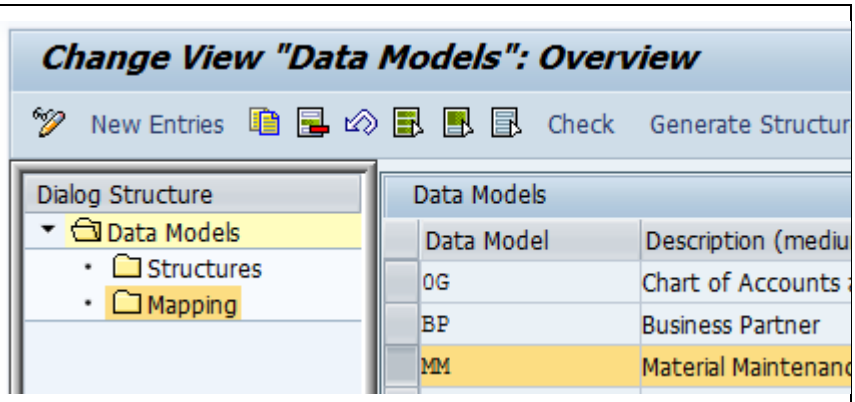
8. Save your changes

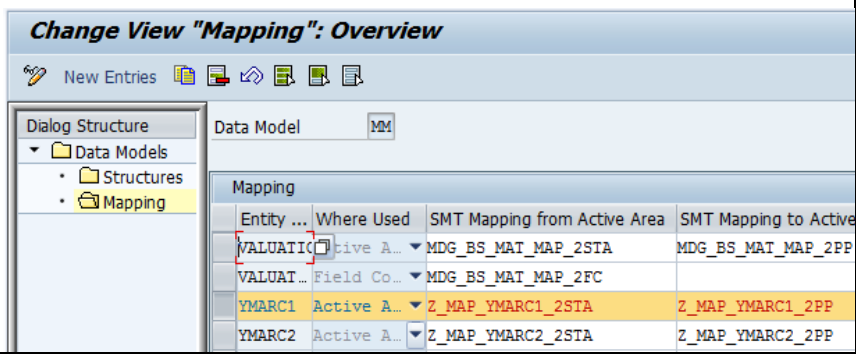
5.2 SMT Mapping – Primary Persistence to Staging

9.	Log into system for cross-client maintenance. Start Customizing for ***Master Data Governance*** (transaction `MDGIMG`). Go to ***General Settings -> Data Modeling -> Create and Edit Mappings -> Create and Edit Mappings*** Create a new mapping for transferring data from the MDG staging to the active area. Call the new mapping `Z_MAP_YMARC1_2STA`.	
10.	Add a mapping step `MAP_YMARC1`. Assign Source Structure `MDG_BS_MAT_S_MARC`. Assign Target Structure `ZXX_S_MM_PP_YMARC1`. Select mapping step `MAP_MARC` and press the Details button. Map the fields as shown in the next screenshot	

11.		
12.	Save your changes	

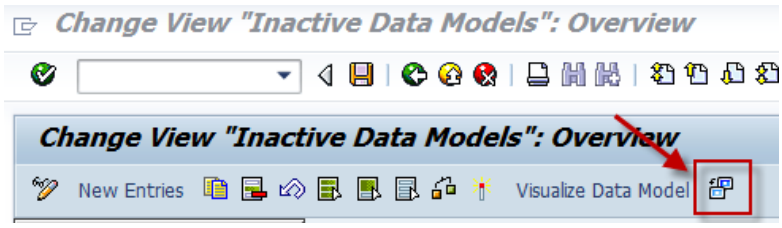
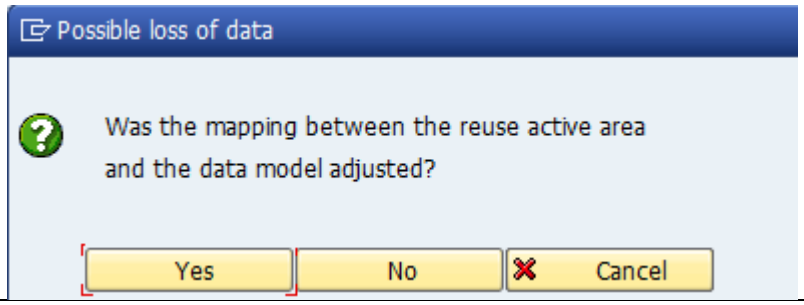
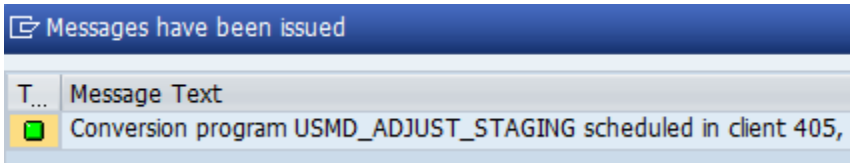
5.3 SMT Mapping – Assign Mapping to Data Model MM

13.	Log into system for cross-client maintenance. Start Customizing for ***Master Data Governance*** (transaction MDGIMG). Go to ***General Settings -> Data Modeling -> Generate Data Model Specific Structures*** Select Data Model MM. Double click on ***Mapping***.	

14.	Enter the two SMT mappings for ***Entity Type*** `YMARC1` as shown.	

6 Adjust Staging area of Linked Change Requests

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

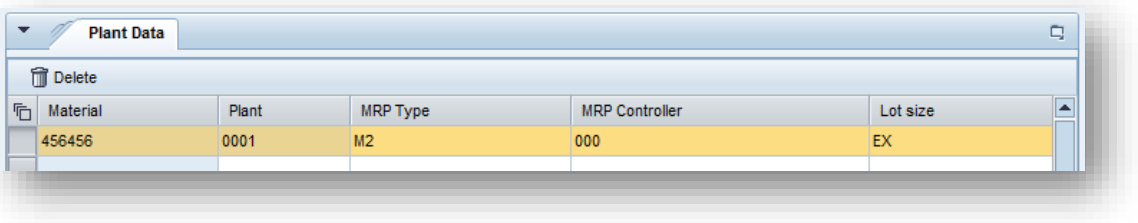
15.	Start Customizing for ***Master Data Governance*** (transaction `MDGIMG`). Go to ***General Settings -> Data Modeling -> Edit Data Model.*** Select data model `MM`. Double click on ***Entity Types***. Choose the pushbutton ***Adjust staging area of linked change requests***	
16.	Choose the ***Yes***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

7 Extending the UI configuration

See also How To Guide: [Extend Master Data Governance Material User Interface.]

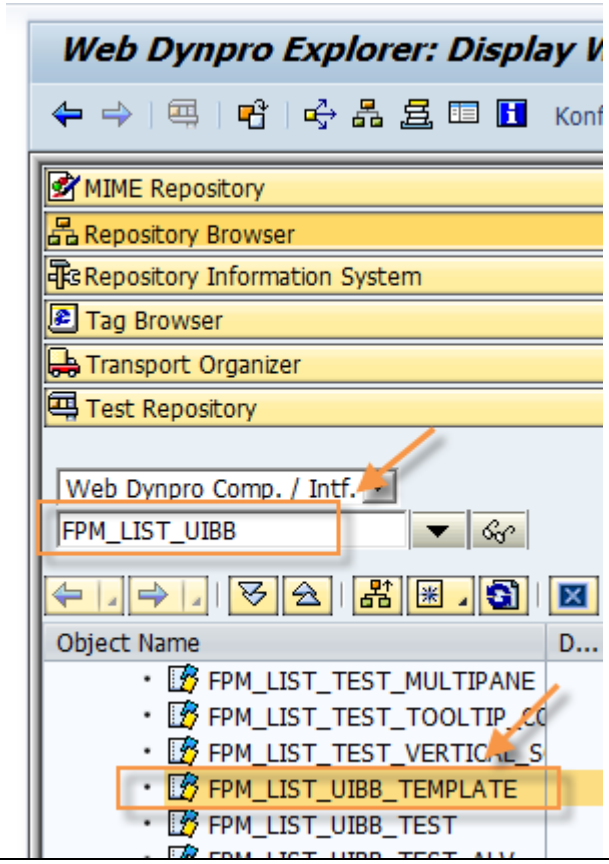
7.1 Create Custom List-UIBB

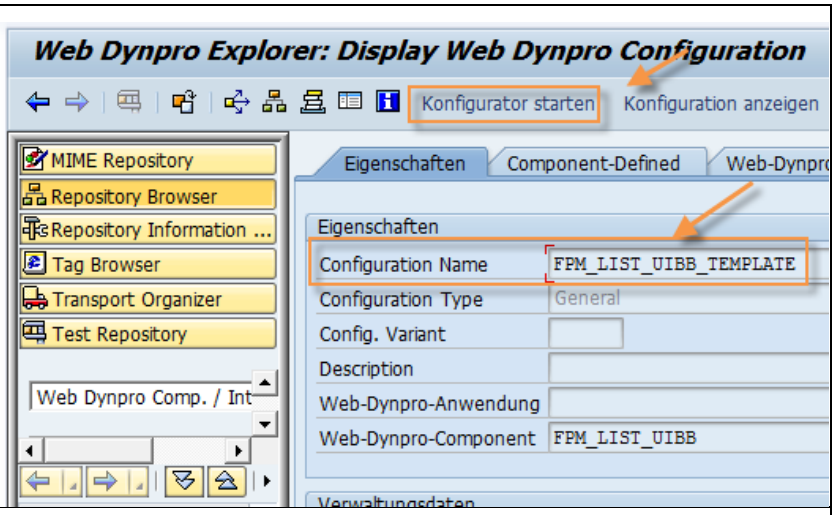
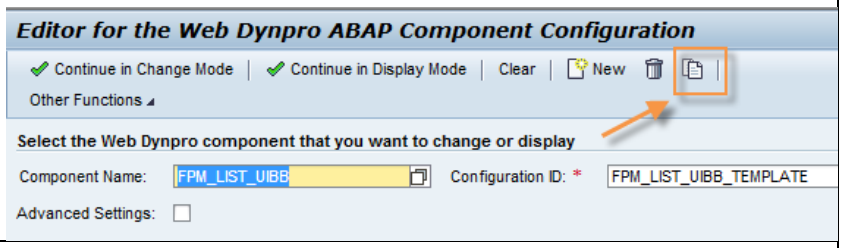
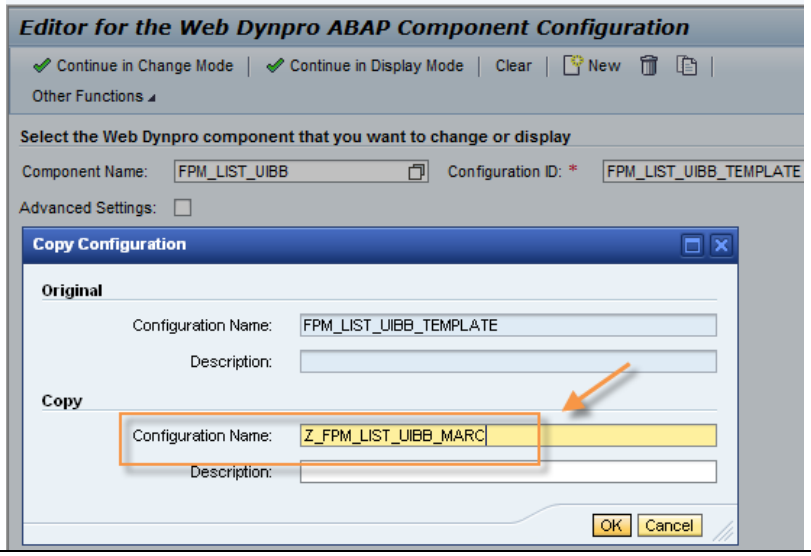
This section describes how you create a List-UIBB to display the `MARC` attributes in a table. The end result looks similar to the screenshot below.

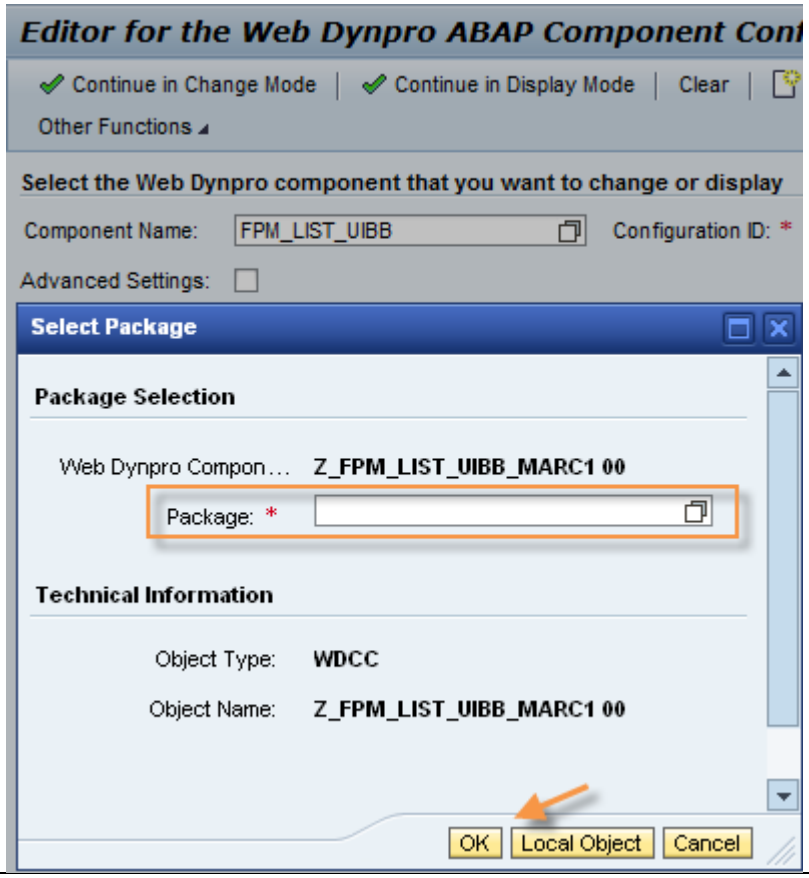
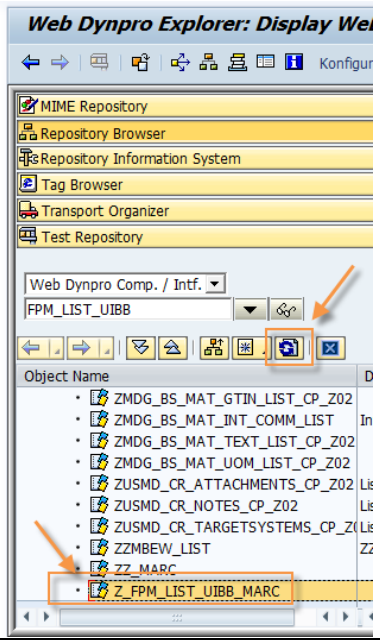


You create the List-UIBB in two steps. First you create a copy of the List-UIBB template, next you enhance the copy to display your `MARC` attributes.

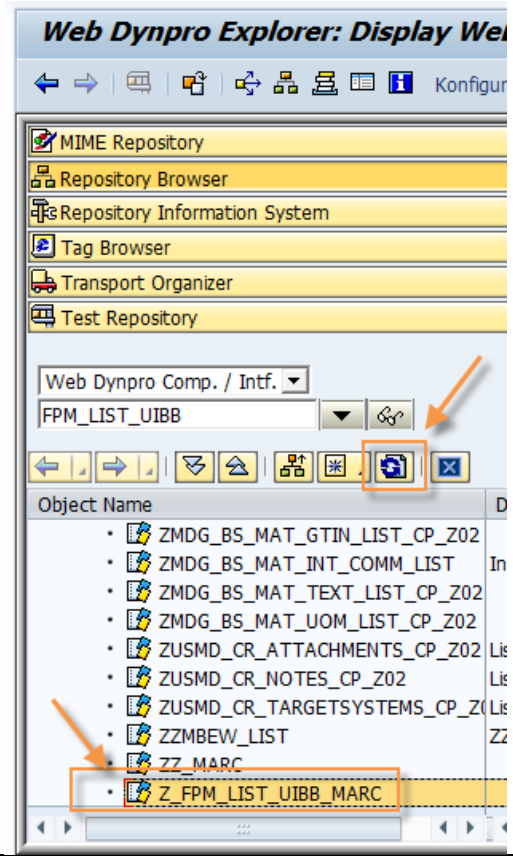
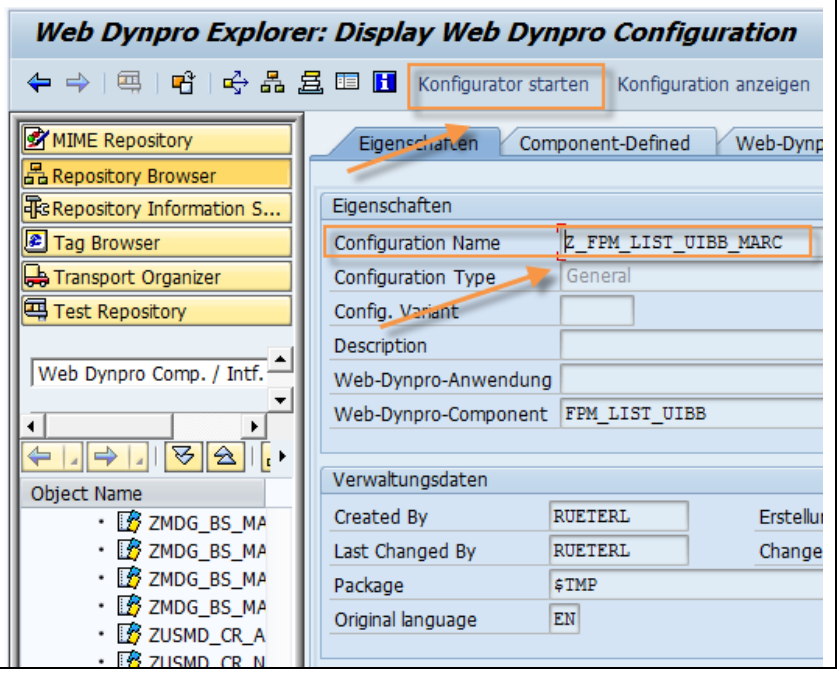
7.1.1 Copy Template List-UIBB

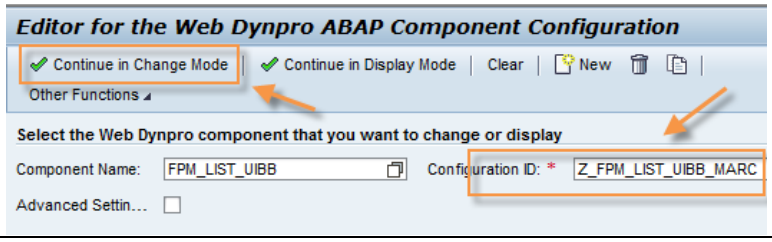
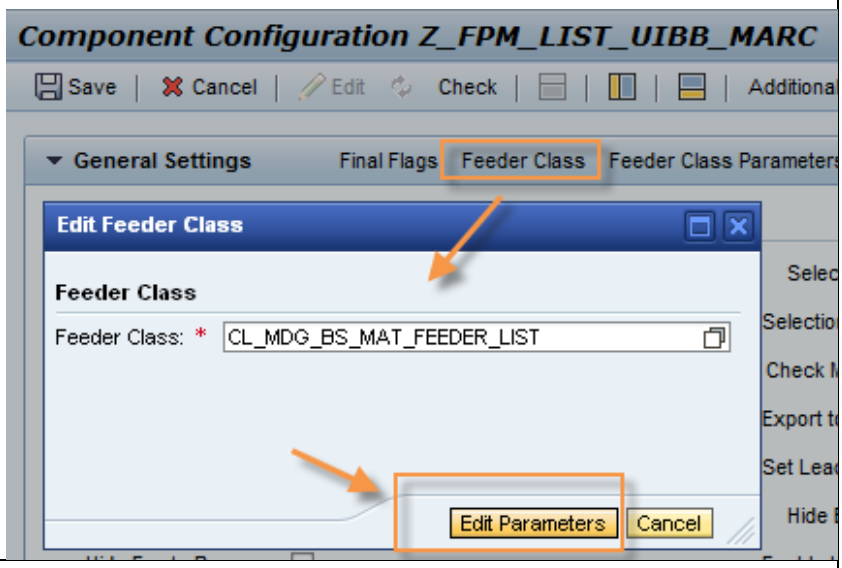
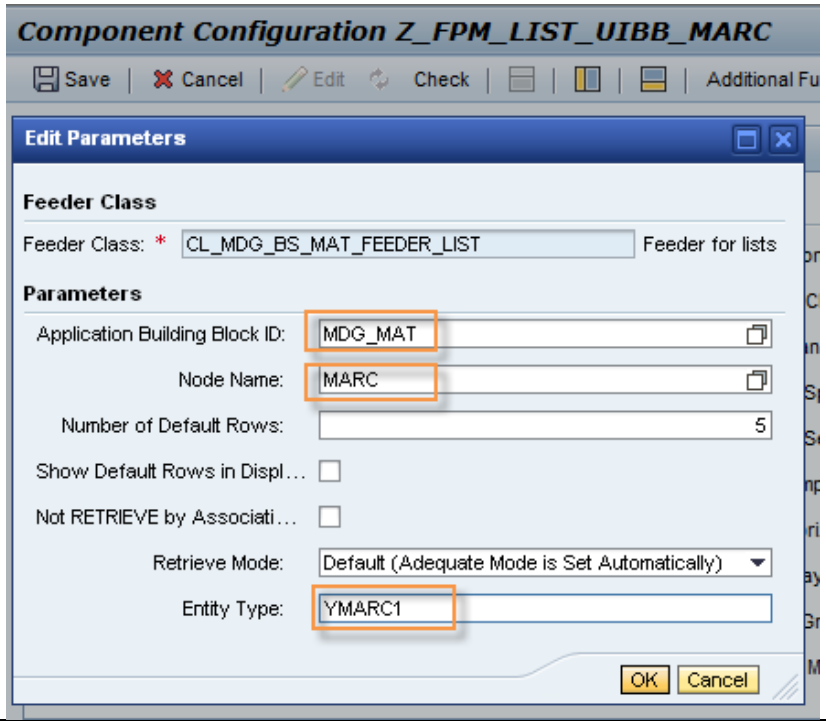
18.	Start transaction **`SE80`**. In the drop down select Web Dynpro Comp. / Intf. In the input field enter `FPM_LIST_UIBB` and press the Display button. Below the object name expand the tree node called ***Component Configurations***. Double click the component configuration `FPM_LIST_UIBB_TEMPLATE`.	

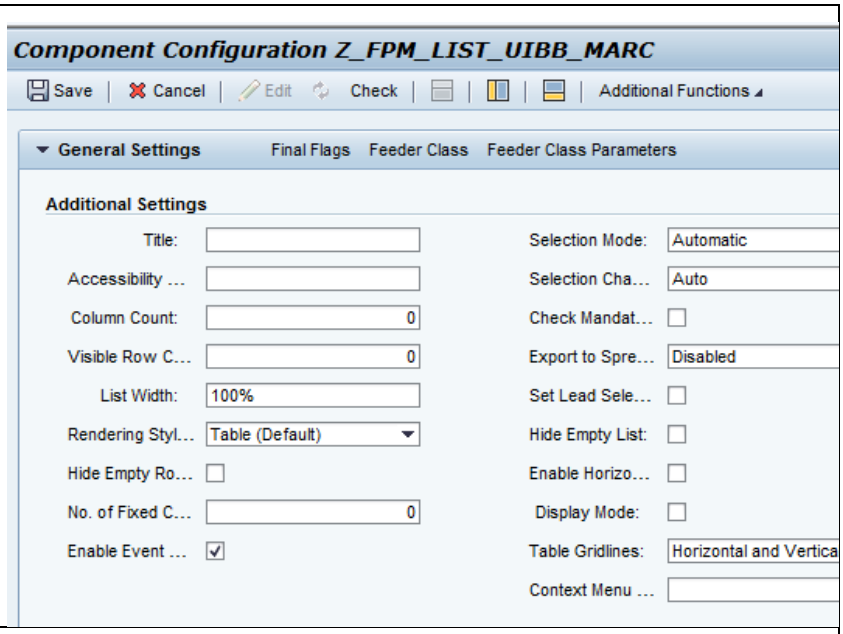
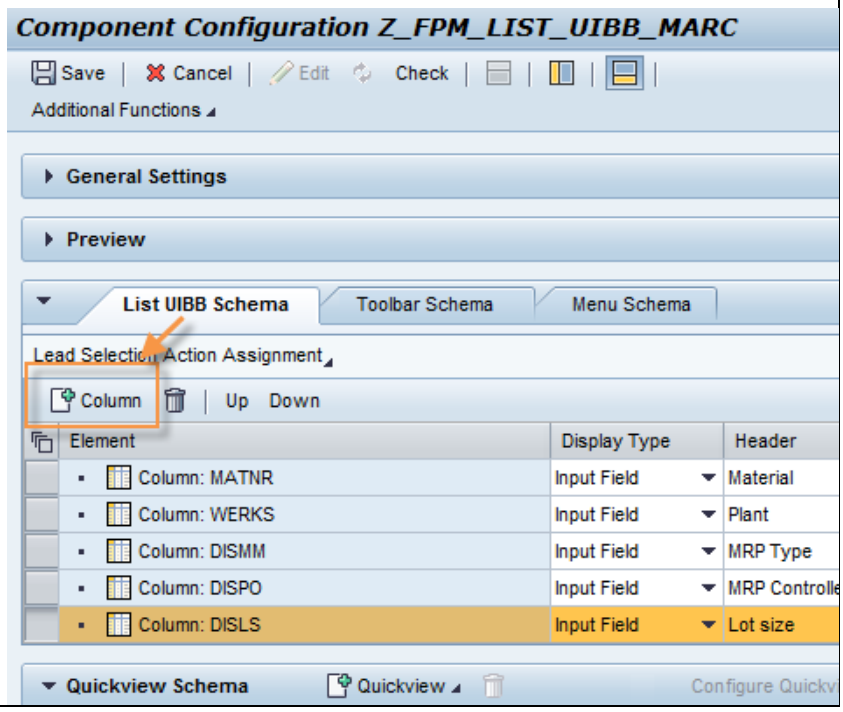
19.	Press the ***Start Configurator*** pushbutton.	
20.	In the web browser, choose the ***Copy*** pushbutton.	
21.	Enter a ***Configuration Name*** as shown in the screenshot.	

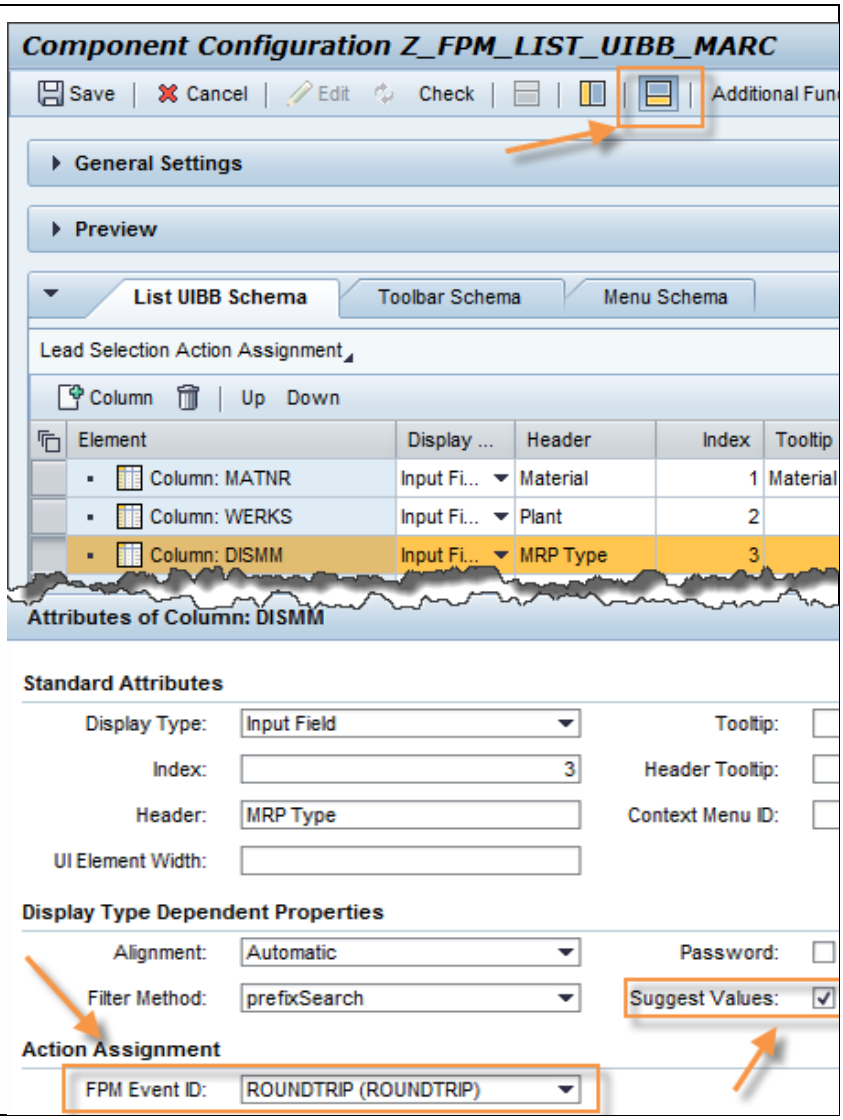
22.	Assign a ***Package*** or choose the ***Local Object*** pushbutton.	
23.	Back in the SAP GUI, refresh the object list. Confirm that your new configuration is there.	

7.1.2 Adapt Custom List-UIBB

24.	Double click on the new configuration (for example `Z_FPM_LIST_UIBB_MARC`).	
25.	Press the ***Start Configurator*** pushbutton.	

26.	In the web browser, choose the ***Continue in Change Mode*** pushbutton.	
27.	Choose the pushbutton ***Feeder Class***. In the input field enter `CL_MDG_BS_MAT_FEEDER_LIST` and choose the ***Edit Parameters*** pushbutton.	
28.	Enter the parameters in the input fields as shown in the screenshot.	

29.	In the ***General Settings*** section of the UIBB configuration enter the details as shown in the screenshot.	
30.	Add your `MARC` attributes the table by choosing the ***Column*** pushbutton and selecting the attributes from the list.	

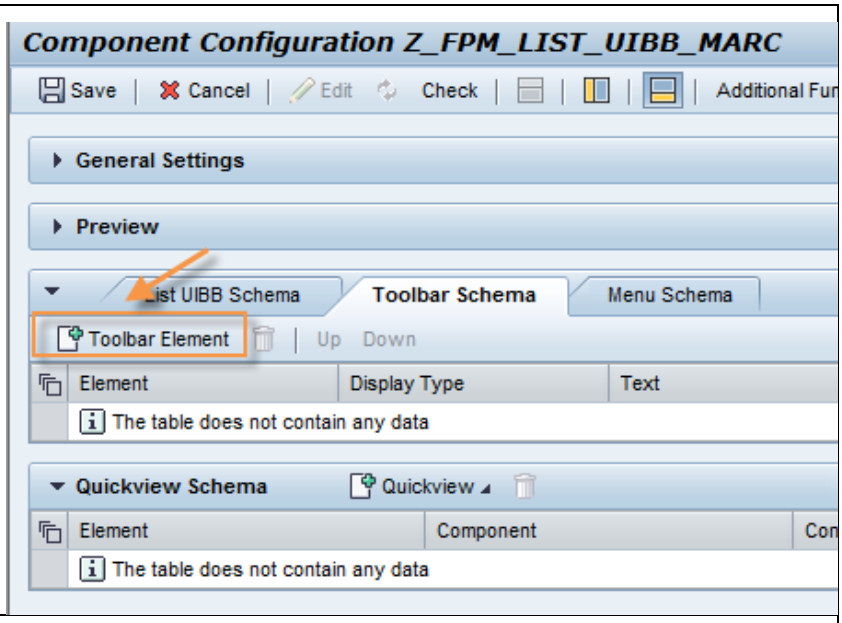
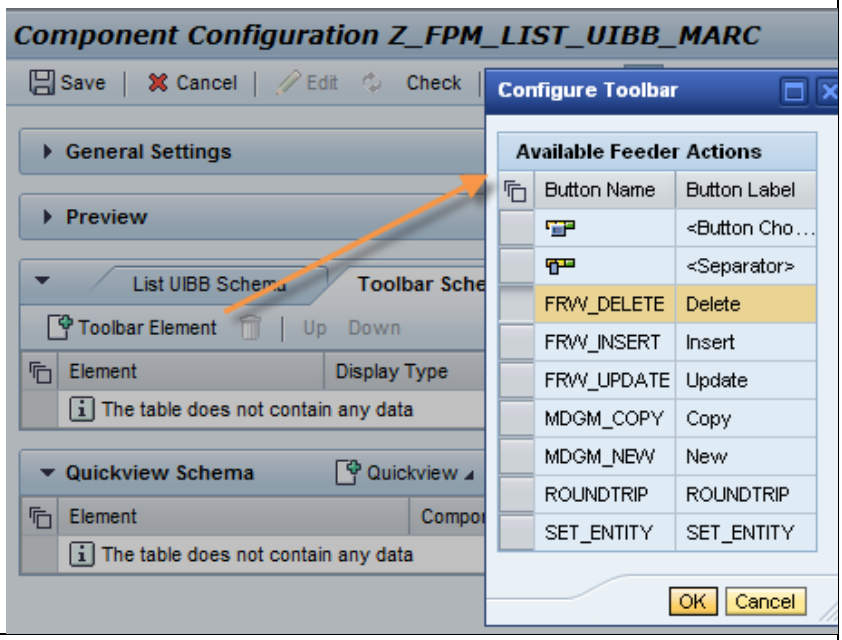
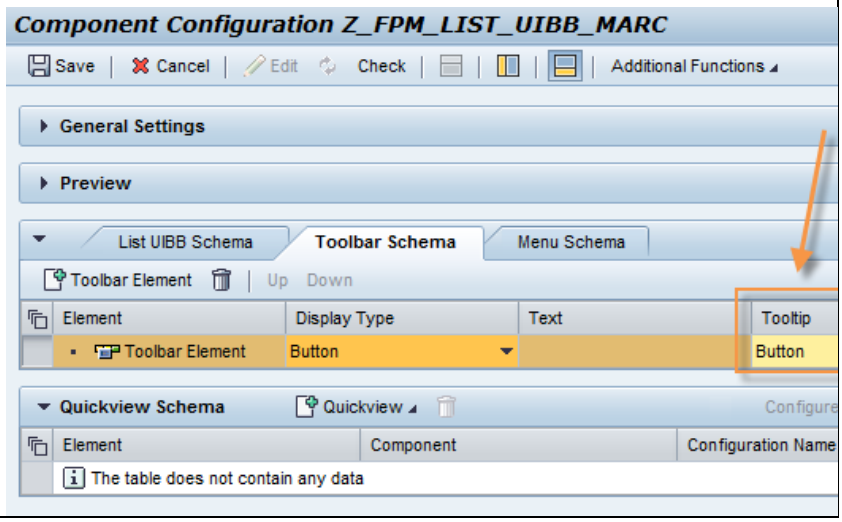
31.	Choose the **Attributes**-icon as shown in the screenshot to display the attribute details box at the bottom of the screen. For each element in the table, set the attributes ***FPM Event ID*** and ***Suggest Values*** as shown in the screenshot.	

7.1.3 Information Only: Adding a Delete button to the Plant Data Table

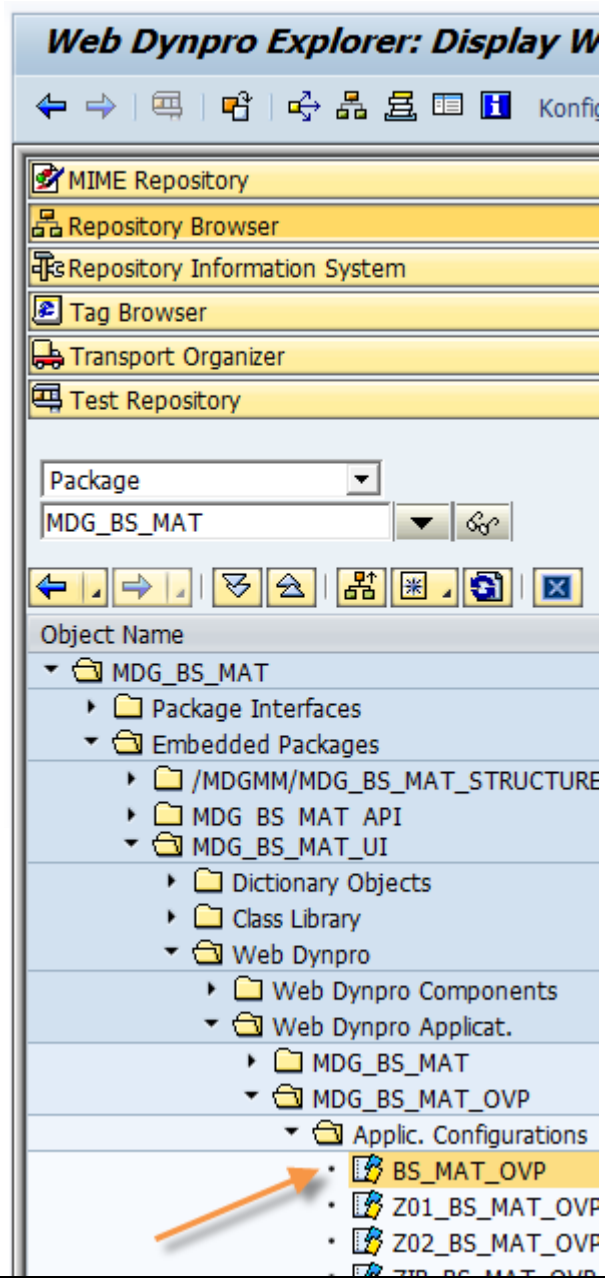
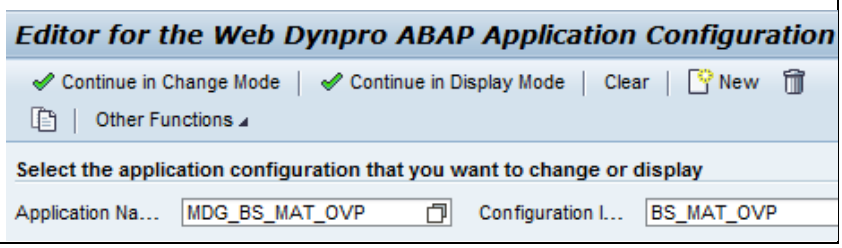
You may want to have a Delete-button to remove lines from the Plant Data table. The screenshots below show the UI-configuration steps required to display the Delete-button on the Plant Data table.

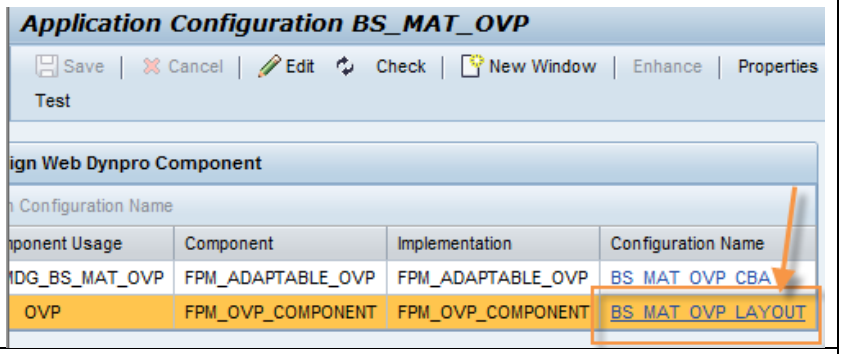
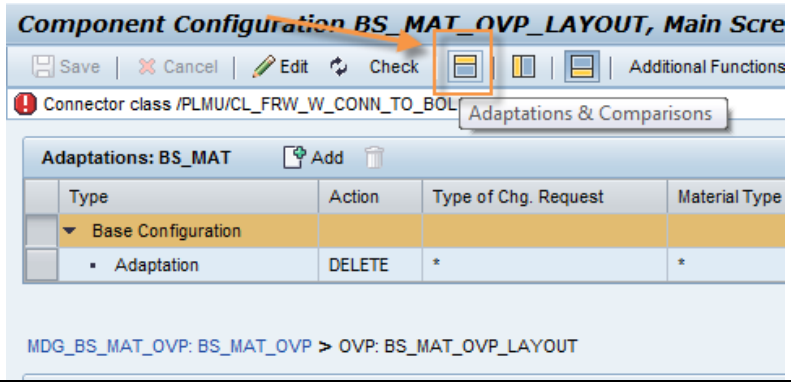
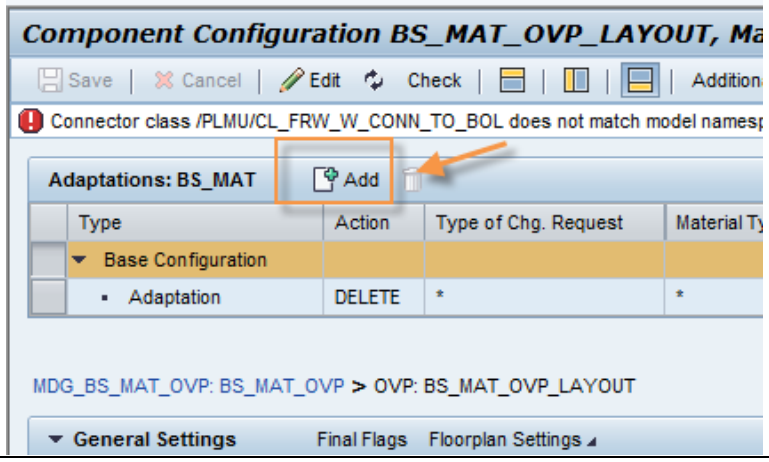
It is not sufficient however to have the button, but the feeder class must also be able to remove the relevant data from the change request. Therefore, it is recommended to create your own feeder class that inherits from feeder class `CL_MDG_BS_MAT_FEEDER_LIST` and handles the Delete-event.

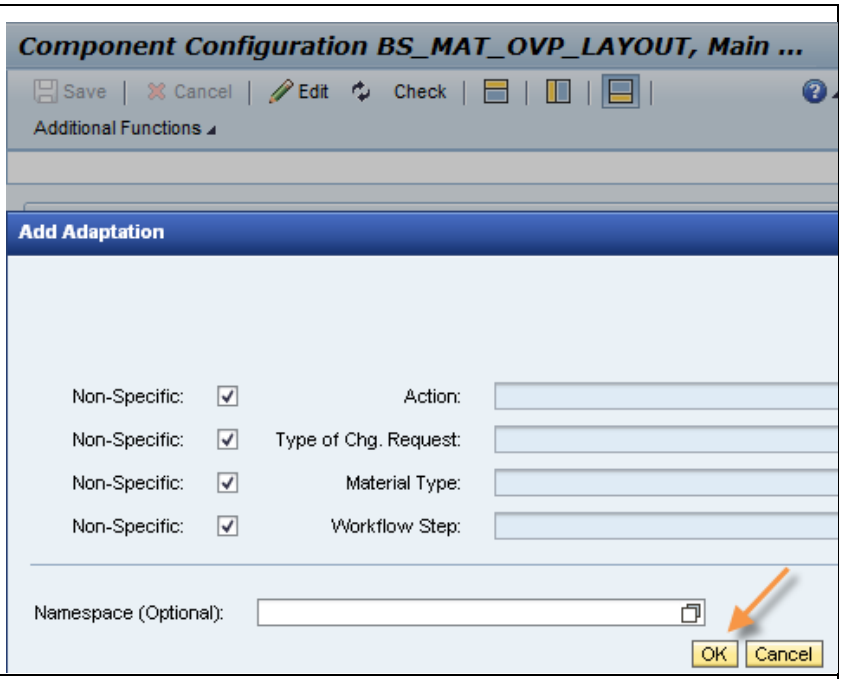
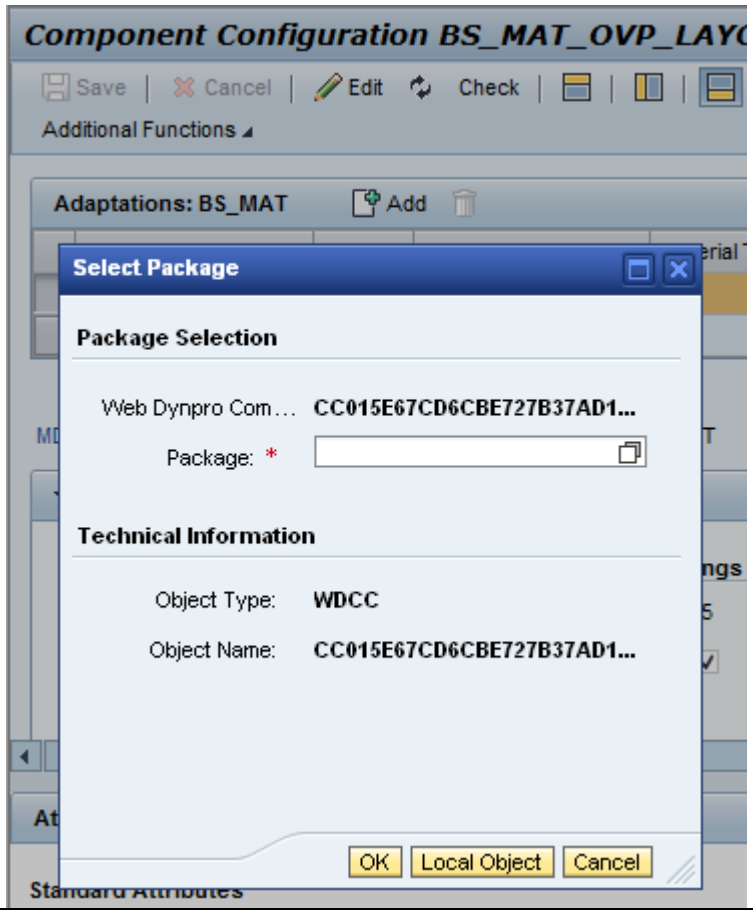
Only the UI changes are documented in this guide, the extension of the feeder class is not shown in this guide.

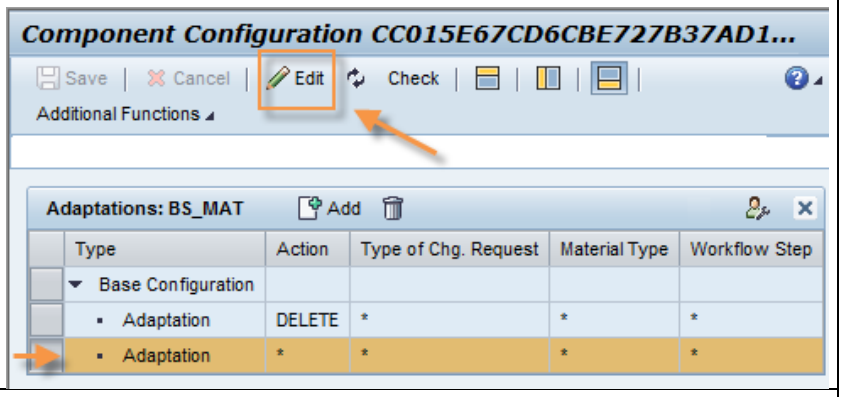
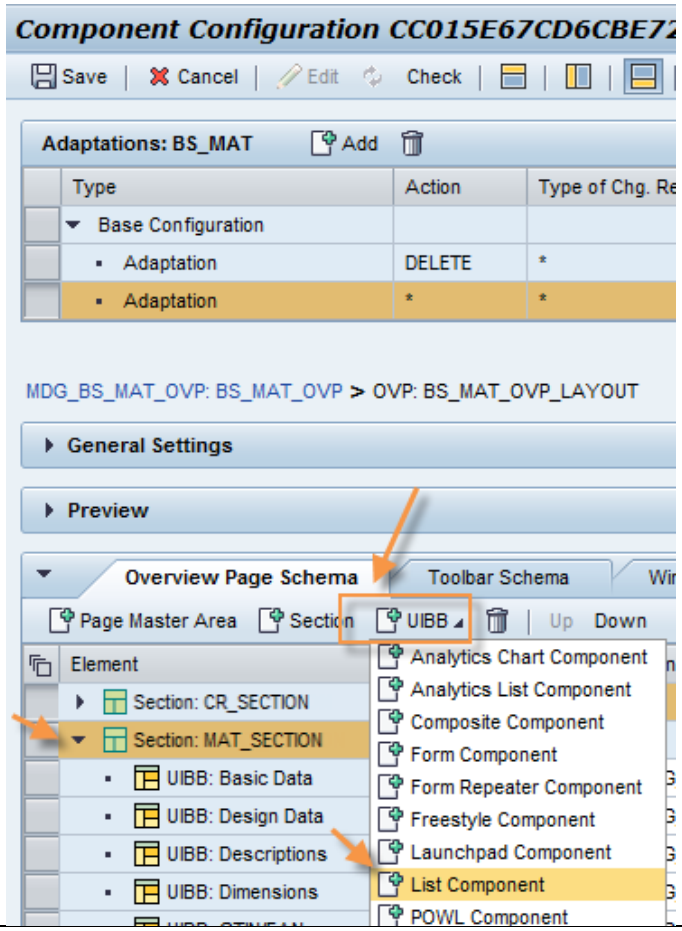
32.	To allow deleting of plant data from the table you can add a ***Delete*** toolbar element in this step. Open the ***Toolbar Schema*** tab and choose the ***Toolbar Element*** pushbutton.	
33.	Select the `FRW_DELETE` line and choose ***OK***.	
34.	Enter a Tooltip name for the button, for instance “Delete”.	

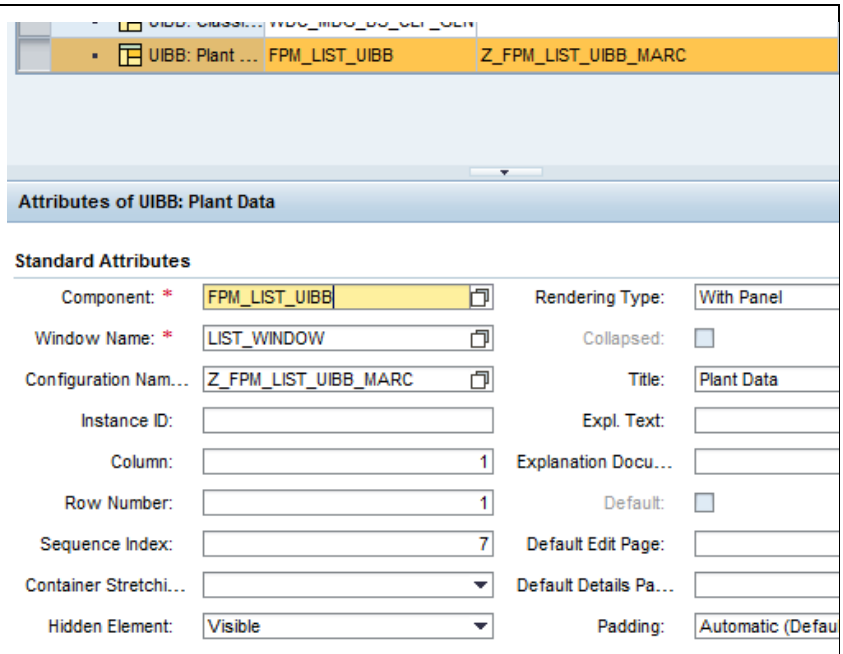
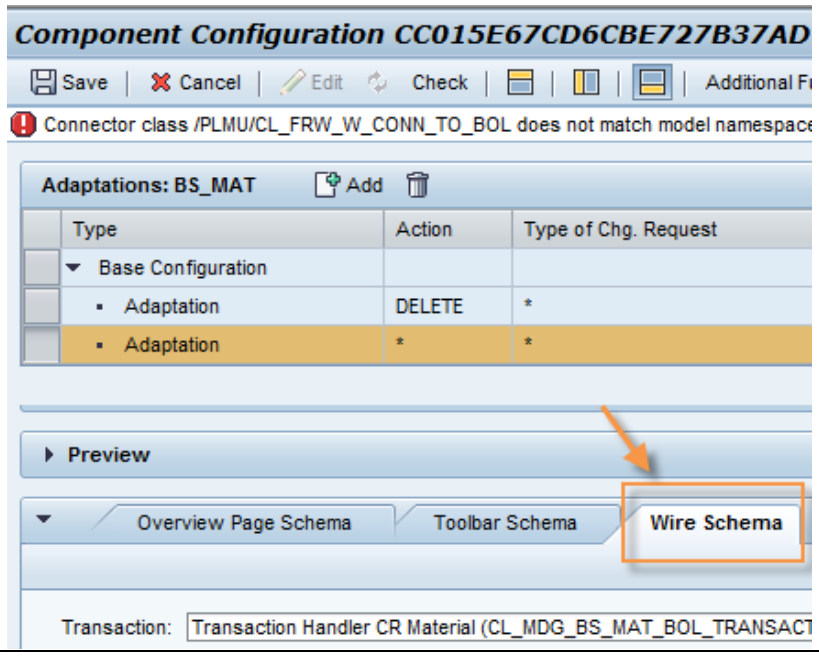
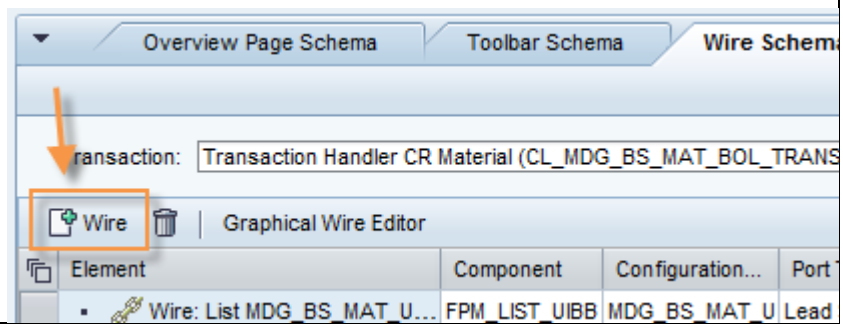
7.2 Add a Custom List-UIBB as a Context-Based Adaptation

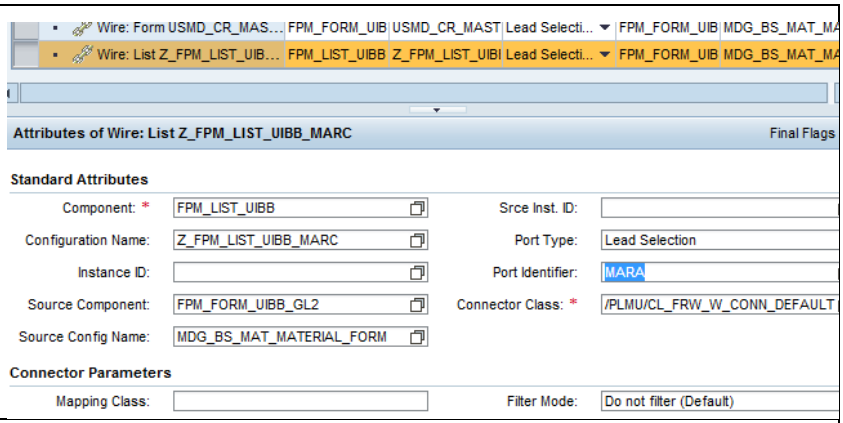
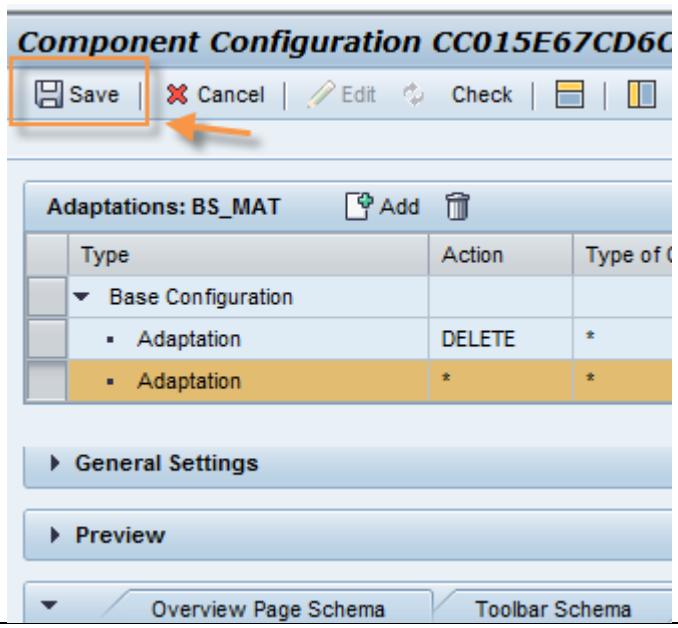
35.	Start transaction `SE80`. In the dropdown select ***Package***. Enter `MDG_BD_MAT` in the input field. Navigate the ***Application Configuration*** as shown in the screenshot. Double click on the ***Application Configuration*** `BS_MAT_OVP`.	
36.	In the browser window, choose the ***Continue in Display Mode*** pushbutton.	

37.	Click on the link for ***Configuration Name*** `BS_MAT_OVP_LAYOUT`.	
38.	Choose the icon as shown in the screenshot to display the ***Adaptations & Comparisons***.	
39.	Press the ***Add*** pushbutton as shown in the screenshot to add a new adaptation.	

40.	Add the filter criteria for your adaptation. In the screenshot no filter was set. As a consequence the UI changes will be applied every time the Material UI is shown. Press the ***OK*** pushbutton.	
41.	Assign a package to save the changes. Press the ***OK*** pushbutton.	

42.	In the ***Adaptations*** section select the newly created adaptation as shown in the screenshot and choose the ***Edit*** pushbutton.	
43.	In the tab *Overview Page Schema* select the row with element `MAT_SECTION`. In the UIBB drop down menu, select ***List Component*** to add your custom List-UIBB component.	

44.	In the ***Attributes*** section, enter the details of your custom ***List-UIBB*** as shown.	
45.	Select the ***Wire Schema*** tab.	
46.	Press the ***Wire*** pushbutton to connect your custom List-UIBB to the rest of the UI.	

47.	Enter the wire attributes as shown in the screenshot. Connector Class: `/PLMU/CL_FRW_W/CONN_DEFAULT`	
48.	Save your changes.	

7.3 Testing the Configuration

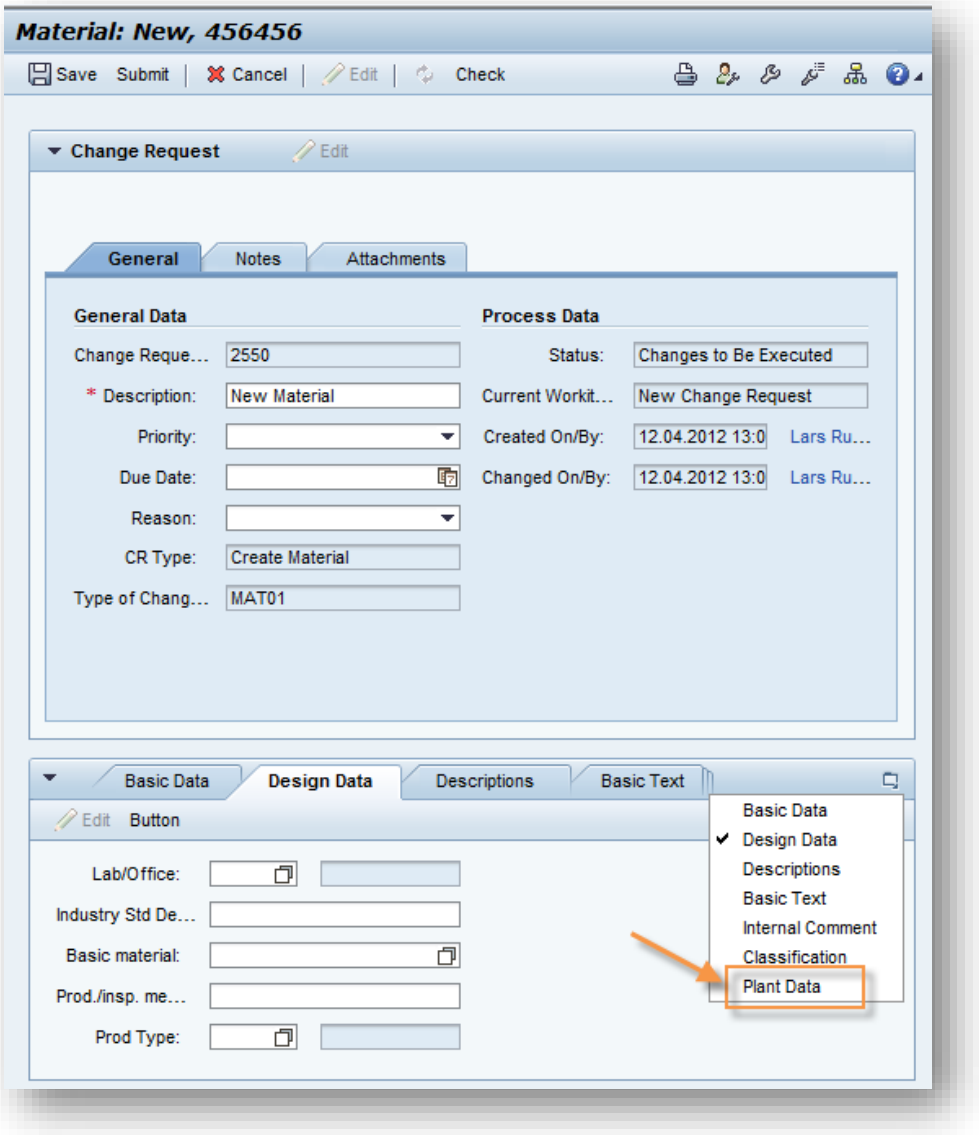
Note

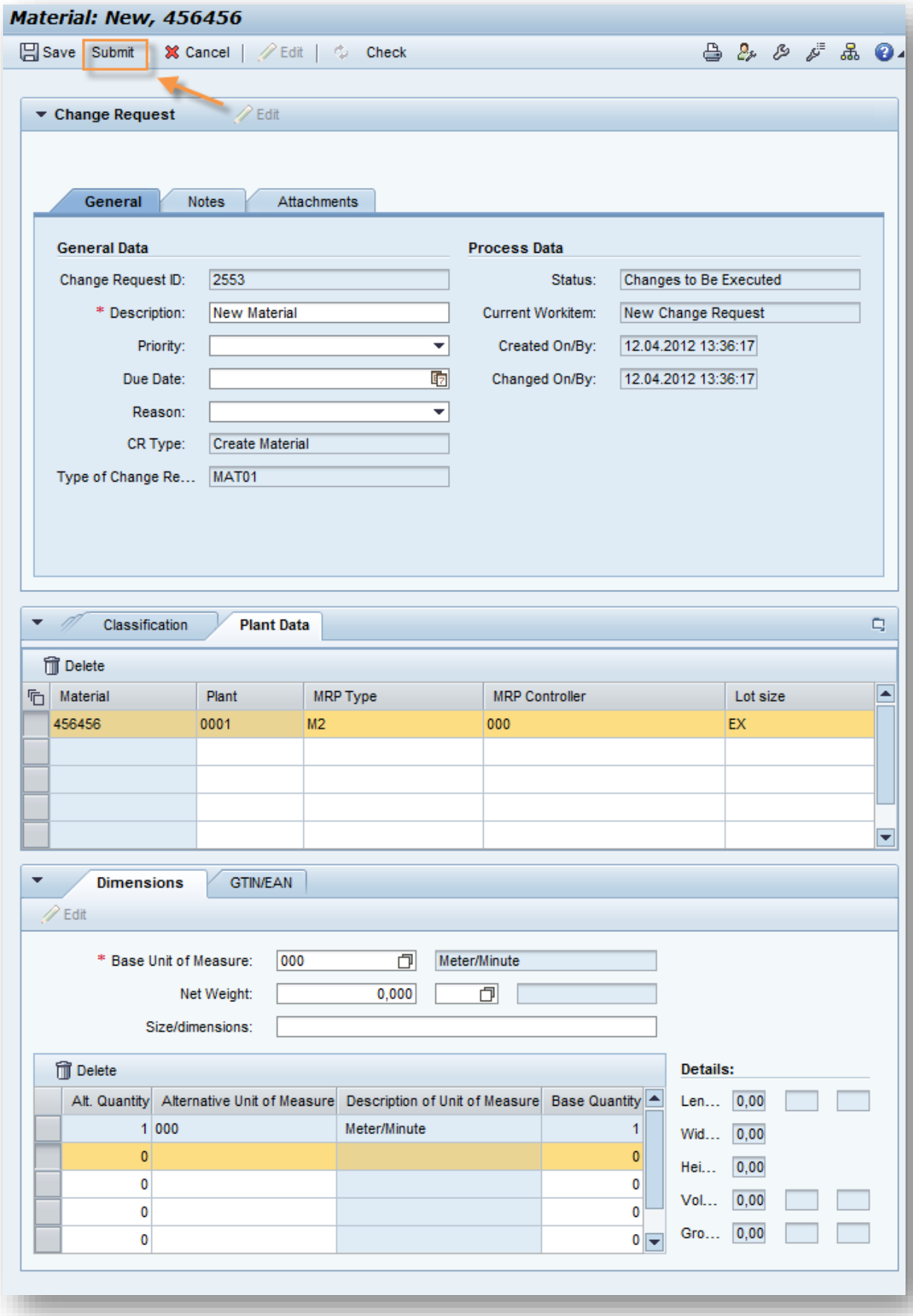
If you extend the data model according to the guidelines shown below, but the fields are not populated when you activate the data model, see SAP Note 1641867 - Values for extension field missing after CR activation

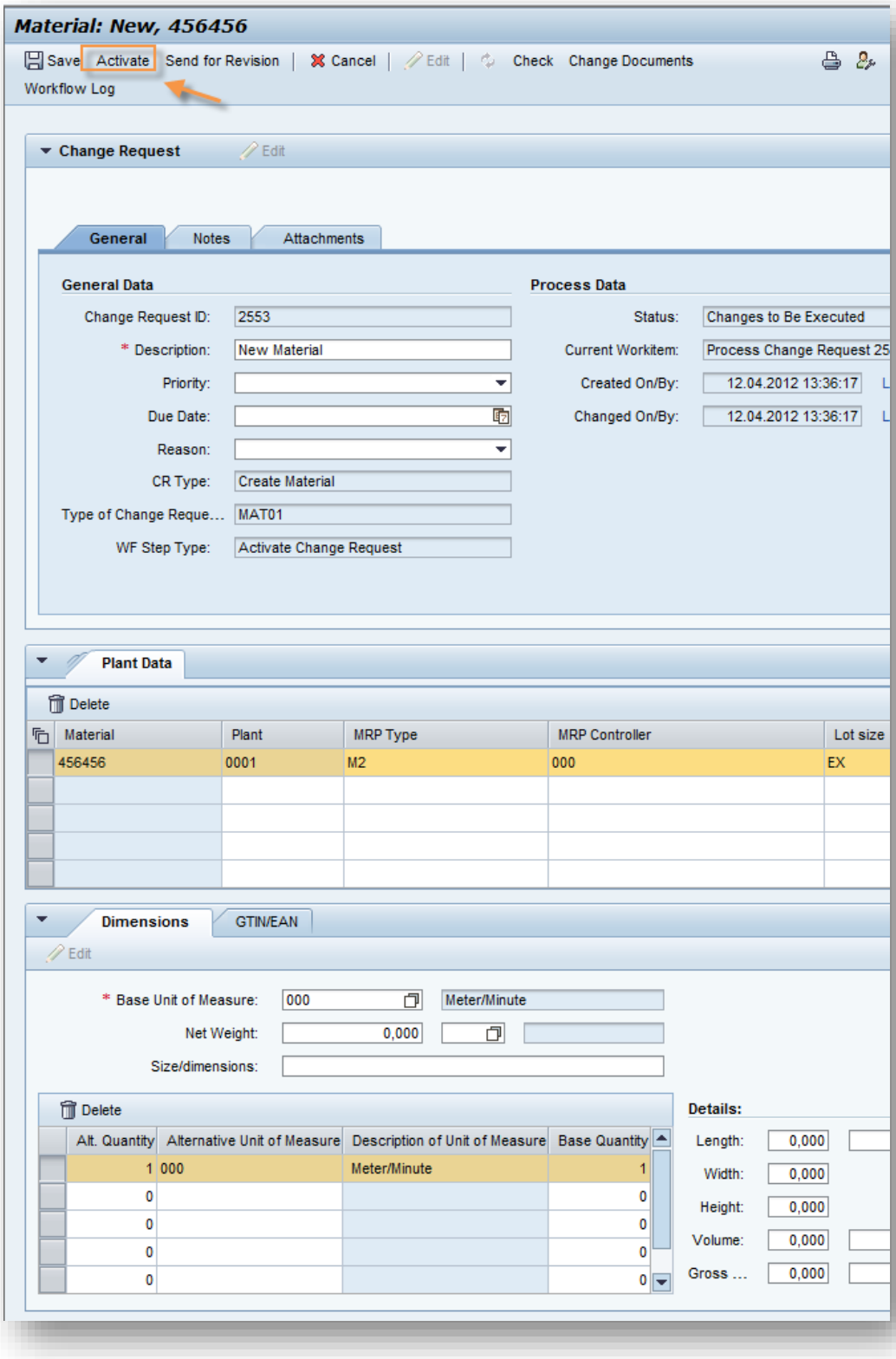
To test your configuration, start the MDG Material UI using the following URL (replace the parameters host, port and client-id to match your landscape):

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

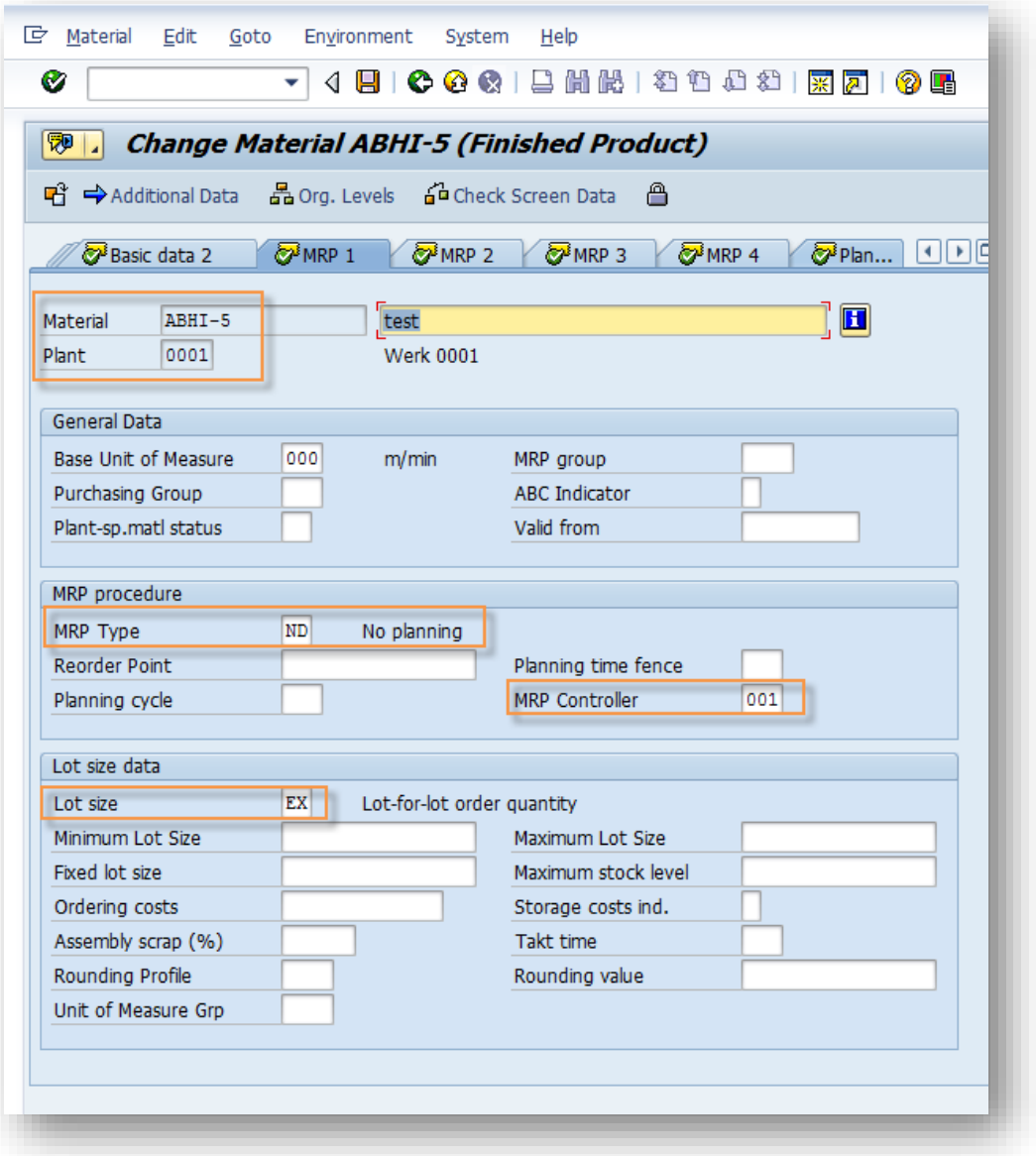
Alternatively, start transaction PFCG, enter role name `SAP_MDGM_MENU` and click the **Display** button. Select the Menu – Tab. In the hierarchy window navigate to *Role Menu -> Material Governance -> Material Processing*. Right click on **Create Material** and select **Execute** from the drop-down.







After activation use transaction `MM02` on the hub to verify the `MARC` attributes have been transferred correctly.



8 Additional Information

8.1 Further Reading

8.1.1 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
- Try SAP Master Data Governance on S/4HANA on the SAP Cloud Appliance Library: S/4HANA 2022 FPS1
- Learn more: Latest Release | Help Portal | How-to Information | Key Presentations

8.1.2 SAP Roadmap Explorer

- Please see the roadmap for SAP Master Data Governance

8.1.3 Related Information

- Learn more: Floorplan Manager for Web Dynpro ABAP | How to Adapt FPM | FPM Blog | How-to Information | Service Mapping Tool | SAP S/4HANA Cookbook CVI

8.2 SAP Notes

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

Note	Description
3043582	MDG Customer Connection 2020
3194967	MDG Customer Connection 2021 for S/4HANA 2022
3311039	MDG Customer Connection 2023
3134600	MDG-M: Supported fields in Data Model MM
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
3374998	Functional Restrictions in MDG for Material on SAP S/4HANA 2023
2479869	Usage of Lean Classification with SAP Master Data Governance
1619534	How to Create, Enhance and Adapt FPM Applications
1637249	MDG: Information for efficient message processing
2105467	MDG Performance
2561461	Scope of support for SAP Master Data Governance (MDG)