

How-To Guide: Extend MDG IS-U Industry Solutions in the U1 Data Model

Applies to

MDG EAM Objects by Prometheus Group.

Summary

SAP Master Data Governance provides an out-of-the box solution for the central management of various master data objects such as financial objects, supplier and material. In addition, SAP Master Data Governance also provides the flexibility to customize the solution, in cases where the pre-delivered content does not fully match customer requirements.

You can use this guide to extend the MDG-U1 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.

This document explains how to extend U1 data model for IS-U object. An example of Connection Object is considered with an entity type CONOBJ. You can follow the same procedure for other entity objects like DEVLOC and DEVICE.

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Scenario

High Level Requirements

The business requires the new attributes as part of the MDG IS-U Connection Object U1 Data Model.

You want to extend the (Type1) entity type CONOBJ to include attributes: ZZNAME, ZZID.

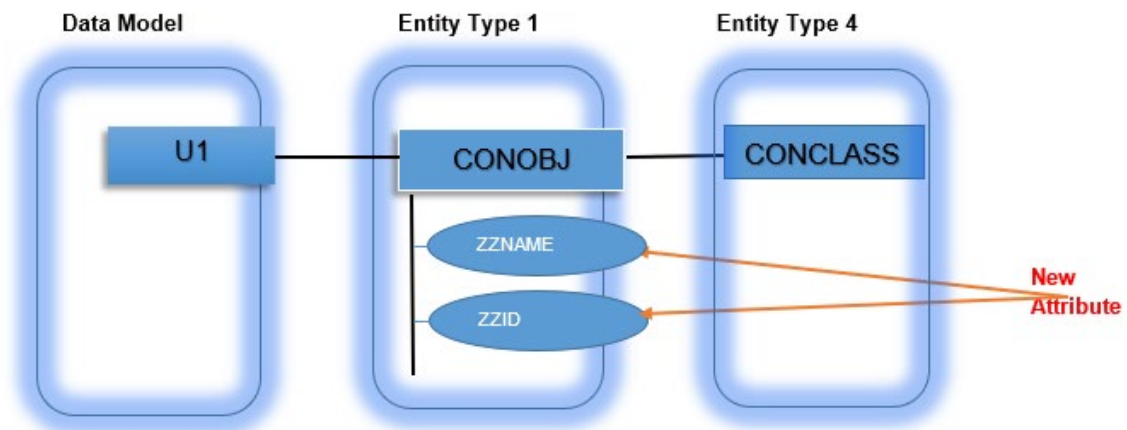
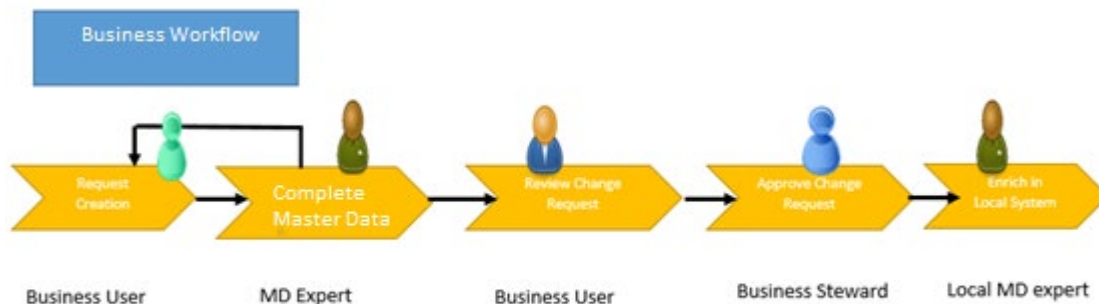


Figure: Data Model – Connection Object with custom Entity 'ZZNAME' and "ZZID".

Governance Process

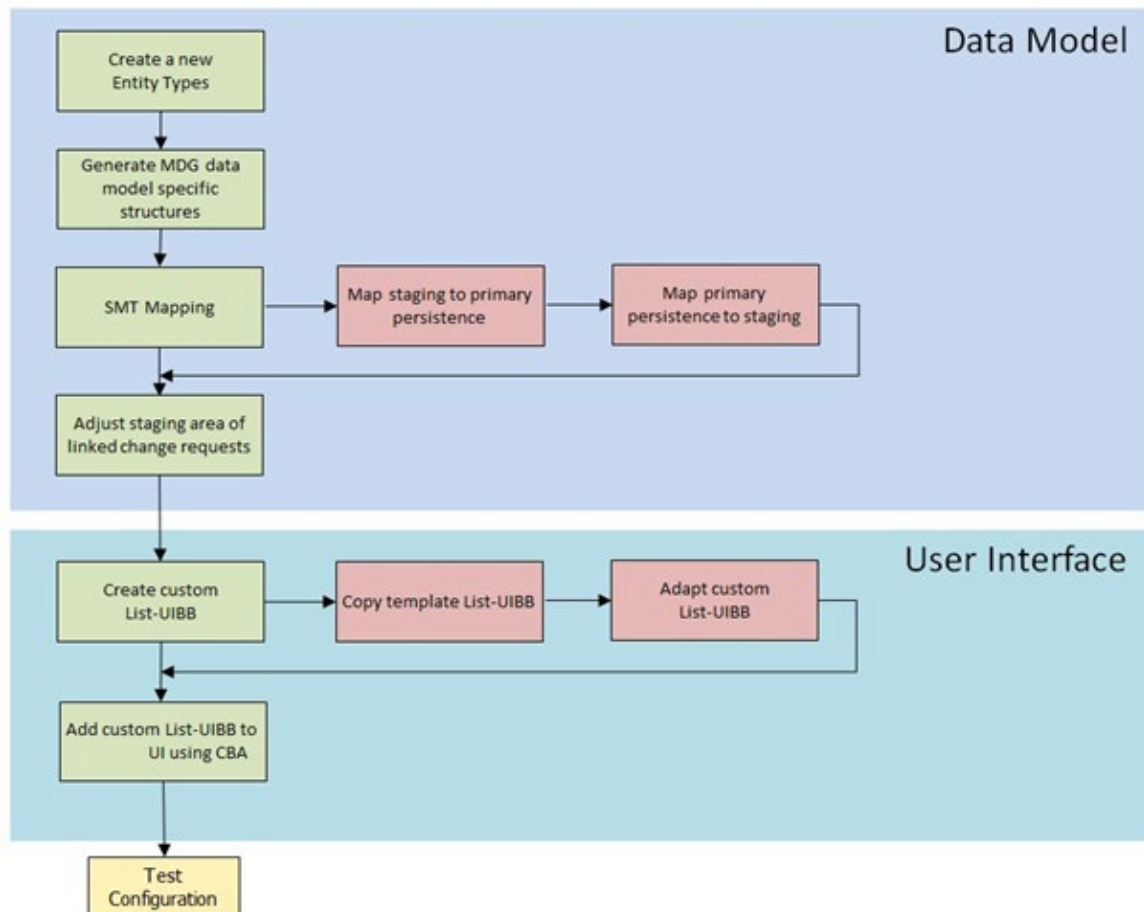
The default governance process delivered with MDG is used. No changes to the governance process are necessary as part of this scenario.



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 following flow diagram shows the detailed implementation steps. It is recommended that you use it as an orientation.



Data Model Extension

You want to extend the MDG Data Model for Connection Object (U1) by the additional new Entity ZZNAME and ZZID. The following fields from EHAISU table should be modelled as attribute of entity type in MDG.

Transparent Table

EHAUISU

Active

Short Description

Connect. Obj.

Attributes





Delivery and Maintenance





Fields


Input Help/Check

Currency/Quantity Fields

Indexes





 Search

Built-In Type

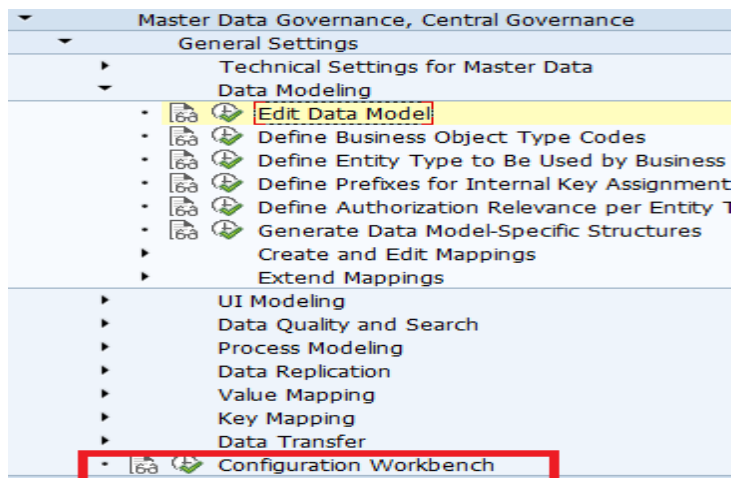
14

Field	Key	Ini...	Data element	Data Type	Length	Deci...	Short Description
REGIOGROUP	<input type="checkbox"/>	<input type="checkbox"/>	REGIOGROUP	CHAR	8	0	Regional structure grouping
REGPOLIT	<input type="checkbox"/>	<input type="checkbox"/>	REGPOLIT	CHAR	8	0	Political regional structure element
REGIOGROUP_PERM	<input type="checkbox"/>	<input type="checkbox"/>	REGIOGROUP_PERM...	CHAR	8	0	Regional structure group for supply permit processing
CRM_GUID	<input type="checkbox"/>	<input type="checkbox"/>	EHAU_GUID	RAW	16	0	CRM GUID of Connection Object
.APPEND	<input type="checkbox"/>	<input type="checkbox"/>	/SAPCE/IURU_EHA...	STRU	0	0	Russia: Extension of Connection Object
.INCLUDE	<input type="checkbox"/>	<input type="checkbox"/>	/SAPCE/IURU_EHAU	STRU	0	0	Russia: Extension of Connection Object
/SAPCE/IURU_IED	<input type="checkbox"/>	<input type="checkbox"/>	/SAPCE/IURU_IESD	CHAR	8	0	Interregional Energy Sales Department
/SAPCE/IURU_IEDO	<input type="checkbox"/>	<input type="checkbox"/>	/SAPCE/IURU_IES...	CHAR	8	0	Local Office of Interregional Energy Sales Department
.APPEND	<input type="checkbox"/>	<input type="checkbox"/>	ZZISU_EXTEND	STRU	0	0	Extend ISU Data model for extensibility test
ZZNAME	<input type="checkbox"/>	<input type="checkbox"/>	ZZITO_NAME	CHAR	40	0	Data Element for User Name
ZZID	<input type="checkbox"/>	<input type="checkbox"/>	ZZITO_ID	CHAR	10	0	User ID

Add Custom Entity Type to Existing Data Model U1

Use the following steps to add attributes to existing Entity Type.

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 U1 > Click the “Edit” button > In the left-hand table with the list of Entity Types click the “New” button.



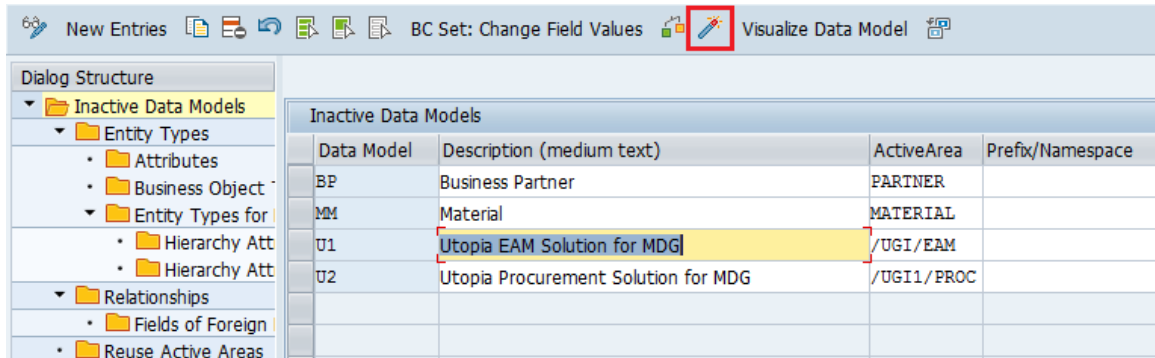
3. Add the attributes of Entity Type CONOBJ as shown in the following screen.
4. Save your settings.

It is recommended to 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.

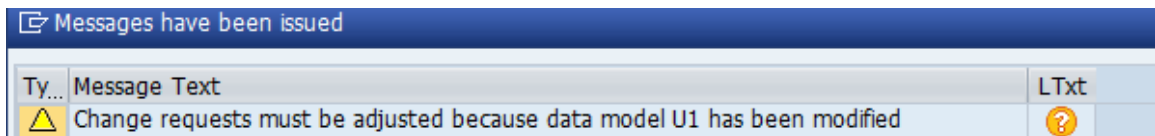
Details: CONOBJ				
<div>General</div> <div>Attributes</div> <div>Incoming Relationships</div> <div>Outgoing</div>				
*Attribute	Key Field	Descrip...	Data El...	
LVORM	<input type="checkbox"/>	Deletion In...	LVORM	
PLTXT	<input type="checkbox"/>	Description	PLTXT	
REG_GRP	<input type="checkbox"/>	Structure ...	REGIOGR...	
REG_GRP_P	<input type="checkbox"/>	SPP reg.st...	REGIOGR...	
STXTS	<input type="checkbox"/>	System sta...	ILOM_STT...	
STXTU	<input type="checkbox"/>	User status	ILOM_STT...	
SWERK_CON	<input type="checkbox"/>	Maintenan...	SWERK	
TPLMA_CON	<input type="checkbox"/>	Superior F...	TPLMA	
ZZID	<input type="checkbox"/>	User ID	ZZITO_ID	
ZZNAME	<input type="checkbox"/>	User Name	ZZITO_NA...	

5. Activate the extended Data Model.



Data Model	Description (medium text)	ActiveArea	Prefix/Namespace
BP	Business Partner	PARTNER	
MM	Material	MATERIAL	
U1	Utopia EAM Solution for MDG	/UGI/EAM	
U2	Utopia Procurement Solution for MDG	/UGI1/PROC	

After activation, the following information message is displayed.



Ty...	Message Text	L Txt
⚠	Change requests must be adjusted because data model U1 has been modified	?

6. Make Change Request adjustments after creating the SMT mapping.

Generate MDG Data Model-Specific Structures

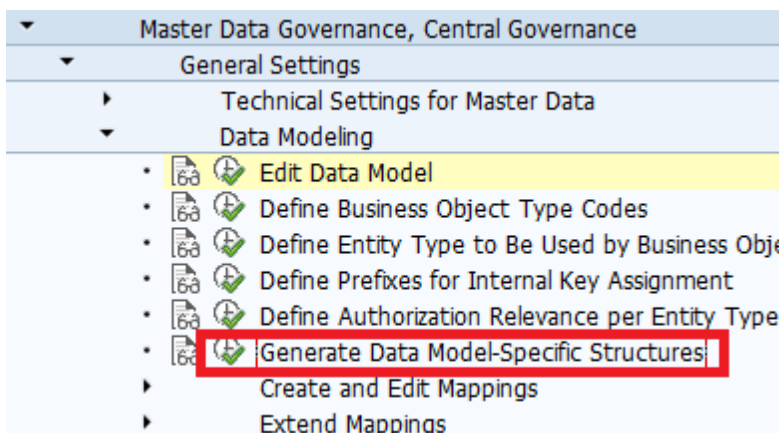
In general, if you change a Data Model (for example, if you change attributes of entity types or relationships) you need to regenerate the structures. You can assign a prefix and a package directly in the Data Model. Then the structures will be generated automatically with activation of the Data Model.

Older releases: Since the MDG Data Model was changed you need to regenerate the tables. In this Customizing activity, for each Data Model and entity type you generate technical structures and tables 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 need to regenerate the structures.

1. Start Customizing for Master Data Governance (transaction MDGIMG).
Go to > General Settings > Data Modeling > Generate Data Model-specific Structures.



Master Data Governance, Central Governance
General Settings
Technical Settings for Master Data
Data Modeling
• Edit Data Model
• Define Business Object Type Codes
• Define Entity Type to Be Used by Business Object
• Define Prefixes for Internal Key Assignment
• Define Authorization Relevance per Entity Type
• Generate Data Model-Specific Structures
• Create and Edit Mappings
• Extend Mappings

2. Select the row with Data Model U1 > Double-Click Structures in the left-hand panel > Choose the "Generate Selected Structures" button.

- Verify that your structures were successfully generated.

Ty...	Message Text
<input checked="" type="checkbox"/>	Data model U1: Structure CI_MDG_S_U1_CONOBJ activated
<input checked="" type="checkbox"/>	Data model U1: Structure CI_MDG_S_PU1_CONOBJ activated
<input checked="" type="checkbox"/>	Data model U1: Structure CI_MDG_SF_PU1_CONOBJ activated
<input checked="" type="checkbox"/>	Data model U1: Structure CI_MDG_S_EU1_CONOBJ activated
<input checked="" type="checkbox"/>	Data model U1: Structure CI_MDG_S_FU1_CONOBJ activated
<input checked="" type="checkbox"/>	Data model U1: Structure CI_MDG_S_FU1_CONOBJ activated

In the following steps, you verify that one of the active area mapping structures was successfully generated with new fields.

- Start t-code SE11 > Display structure /UGI/_S_U1_PP_CONOBJ.

☐ Database table
☐ View
☒ Data type
☐ Type Group
☐ Domain
☐ Search help
☐ Lock object

You have now verified that the structure /UGI/_S_U1_PP_CONOBJ has been generated.

Structure	/UISU/_S_U1_PP_CONOBJ	Active				
Short Description	Source Structure for PP Mapping					
Attributes	Components	Input Help/Check				
Currency/quantity fields						
Built-In Type 24						
Component	Typing Method	Component Type	Data Type	Length	Deci...	Short Description
SWERK_CON	1 Types	SWERK	CHAR	4	0	Maintenance Plant
TPLMA_CON	1 Types	TPLMA	CHAR	30	0	Superior functional location
TXIMI	1 Types	USMD_TXTMI	CHAR	40	0	Description (medium text)
USTA_CON	1 Types	/UGI/ILOM_STTXU	CHAR	40	0	Display lines for user status
USTW_CON	1 Types	/UGI/J_TXT04	CHAR	4	0	Individual status
USWO_CON	1 Types	/UGI/STATUSWO	CHAR	20	0	Status without status number
.INCLUDE	1 Types	CI_MDG_S_PU1 CO...		0	0	Customizing Include for Active Area Mapping
ZZID	1 Types	ZZITO_ID	CHAR	10	0	User ID
ZZNAME	1 Types	ZZITO_NAME	CHAR	40	0	Data Element for User Name

SMT Mapping

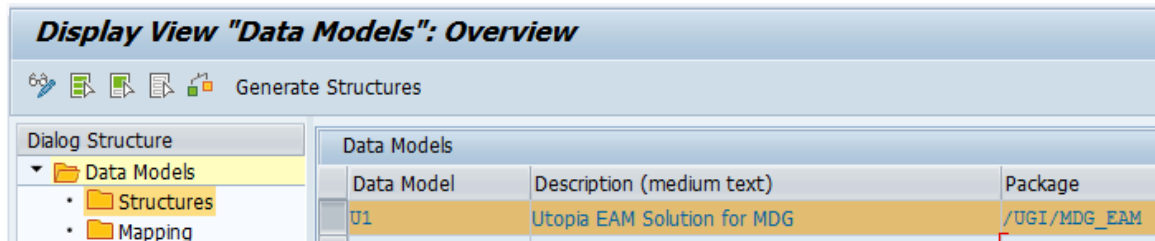
You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

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

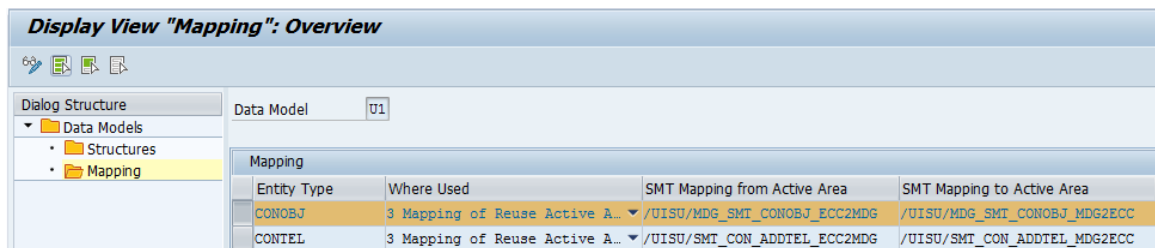
SMT Mapping - Get Mapping Names from Data Model U1

Use the following steps to get the mapping names.

1. Log into system for cross-client maintenance. Start Customizing for Master Data Governance (transaction MDGIMG). Go to > General Settings > Data Modelling > Generate Data Model Specific Structures > Select Data Model U1 > Double-Click on Mapping.



The SMT mappings for Entity Type CONOBJ as displayed.

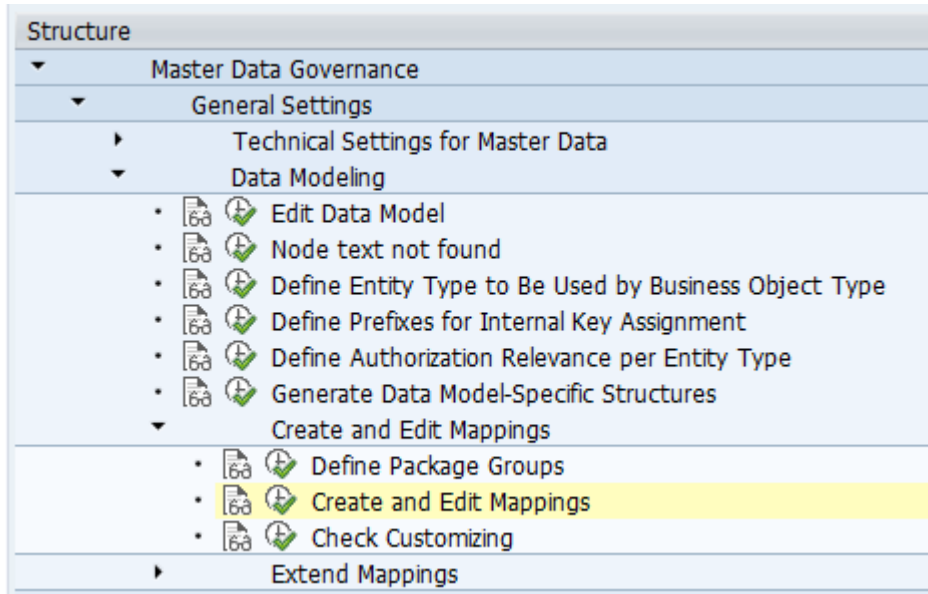


SMT Mapping - Primary Persistence to Staging

Use the following steps for SMT Mapping from Primary Persistence to Staging area.

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. Extend mapping /UISU/MDG_SMT_CONOBJ_MDG2ECC.

Mapping

* Name: /UISU/MDG_SMT_CONOBJ_MDG2ECC

Description: SMT Mapping from MDG to ECC for Connection Object

Package Group: /UISU/MDG

Multiple Contexts: ☐

3. Select mapping step and choose the “Details” button.

4. Map the fields as shown in the following screen.

Add a mapping step -Assign Source Structure /UGI/_S_U1_PP_CONOBJ, Assign Target EHAUD Structure.

AddRemoveCopyMove UpMove Down

	Order	*Transformation Type	Conditional
	00001	Field Mapping	<input type="checkbox"/>

Field Mapping

	Add	Remove					
*FIELD	Source Structure	Source Field	Fixed Value	Conversion Class	Reference Type	Field type	Data Type
STTXTU	/UISU/_S_U1_PP_CONOBJ	STTXTU			<input type="checkbox"/>	ILOM_STTXU	CHAR
SWERK	/UISU/_S_U1_PP_CONOBJ	SWERK_CON			<input type="checkbox"/>	SWERK	CHAR
TPLMA	/UISU/_S_U1_PP_CONOBJ	TPLMA_CON			<input type="checkbox"/>	TPLMA	CHAR
ZZID	/UISU/_S_U1_PP_CONOBJ	ZZID			<input type="checkbox"/>	ZZITO_ID	CHAR
ZZNAME	/UISU/_S_U1_PP_CONOBJ	ZZNAME			<input type="checkbox"/>	ZZITO_NAME	CHAR

Target Structure		Source Structure	
Sort: Original Field Order		Sort: Original Field Order	
Name	Is Used	Name	Is Used
REGIOGROUP_PERM	<input checked="" type="checkbox"/>	STTXTS	<input checked="" type="checkbox"/>
OBJNR	<input checked="" type="checkbox"/>	STXTU	<input checked="" type="checkbox"/>
ERDAT	<input type="checkbox"/>	SWERK_CON	<input checked="" type="checkbox"/>
ERNAM	<input type="checkbox"/>	TPLMA_CON	<input checked="" type="checkbox"/>
AEDAT	<input type="checkbox"/>	TXIMI	<input type="checkbox"/>
AENAM	<input type="checkbox"/>	USTA_CON	<input type="checkbox"/>
CRM_GUID	<input type="checkbox"/>	USTW_CON	<input type="checkbox"/>
STRNO	<input type="checkbox"/>	USWO_CON	<input type="checkbox"/>
ZZNAME	<input checked="" type="checkbox"/>	ZZID	<input checked="" type="checkbox"/>
ZZID	<input checked="" type="checkbox"/>	ZZNAME	<input checked="" type="checkbox"/>

5. Save your changes.

SMT Mapping - Staging to Primary Persistence

Use the following steps for SMT Mapping from Staging area to Primary Persistence.

1. Extend mapping /UISU/MDG_SMT_CONOBJ_ECC2MDG.

Mapping

* Name: /UISU/MDG_SMT_CONOBJ_ECC2MDG

Description: SMT Mapping from ECC to MDG for Connection Object

Package Group: /UISU/MDG

Multiple Contexts: ☐

2. Select mapping step and choose the “Details” button. Map the fields as displayed in the following screen.

*Mapping Step	Description	*Source Structure	*Target Structure
/UISU/MDG_SMT_EHAUD_TO_STAGE	Connection Object to ECC2MDG	EHAUD	/UISU/_S_U1_PP_CONOBJ

3. Add a mapping step - Assign Source Structure EHAUD and Assign Target Structure /UGI/_S_U1_PP_CONOBJ.

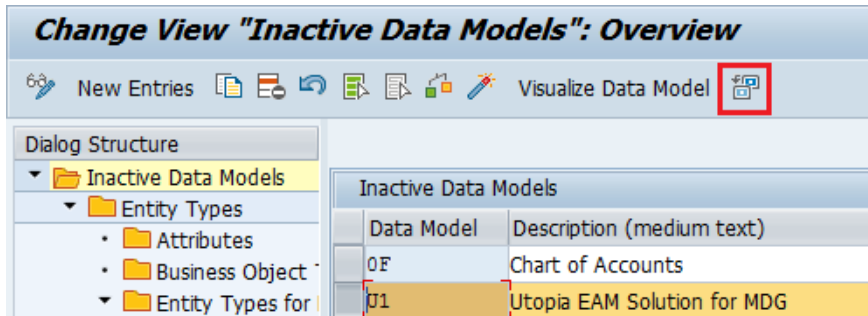
Field Mapping								
Add	Remove							
*FIELD	Source Structure	Source Field	Fixed Value	Conversion Class	Reference Type	Field type	Data Type	
STXTU	EHAUD	STXTU			<input type="checkbox"/>	ILOM_STTXU	CHAR	
SWERK...	EHAUD	SWERK			<input type="checkbox"/>	SWERK	CHAR	
TPLMA_...	EHAUD	TPLMA			<input type="checkbox"/>	TPLMA	CHAR	
ZZID	EHAUD	ZZID			<input type="checkbox"/>	ZZITO_ID	CHAR	
ZZNAME	EHAUD	ZZNAME			<input type="checkbox"/>	ZZITO_NAME	CHAR	

4. Save your changes.

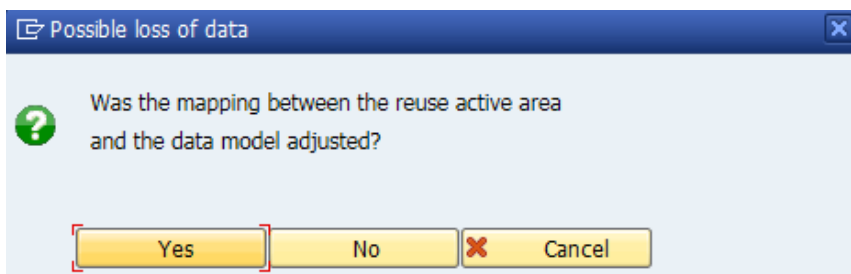
Adjust Staging Area of Linked Change Requests

Note: This step is necessary to adjust any open Change Requests after you have changed the Data Model.

1. Start Customizing for Master Data Governance (transaction MDGIMG).
Go to > General Settings > Data Modeling > Edit Data Model > Select Data Model U1 > Double-Click on Entity Types > Choose the “Adjust staging area of linked Change Requests” button.

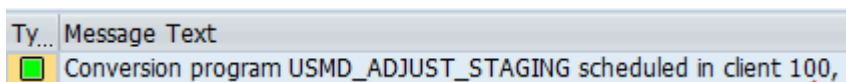


2. Choose the “Yes” button.



The following message appears.

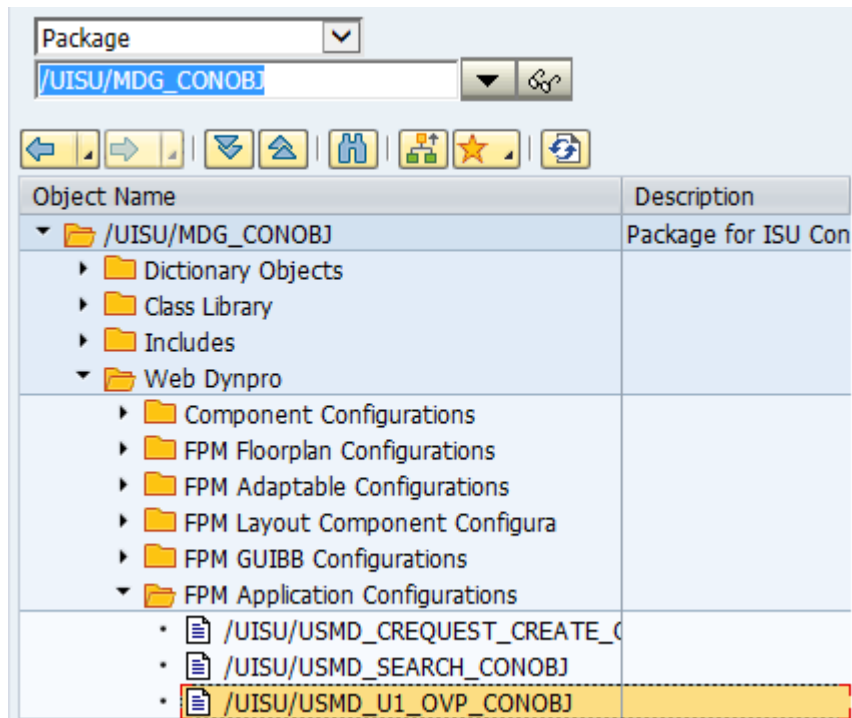
Note: Make sure that user DDIC exist in all relevant clients.



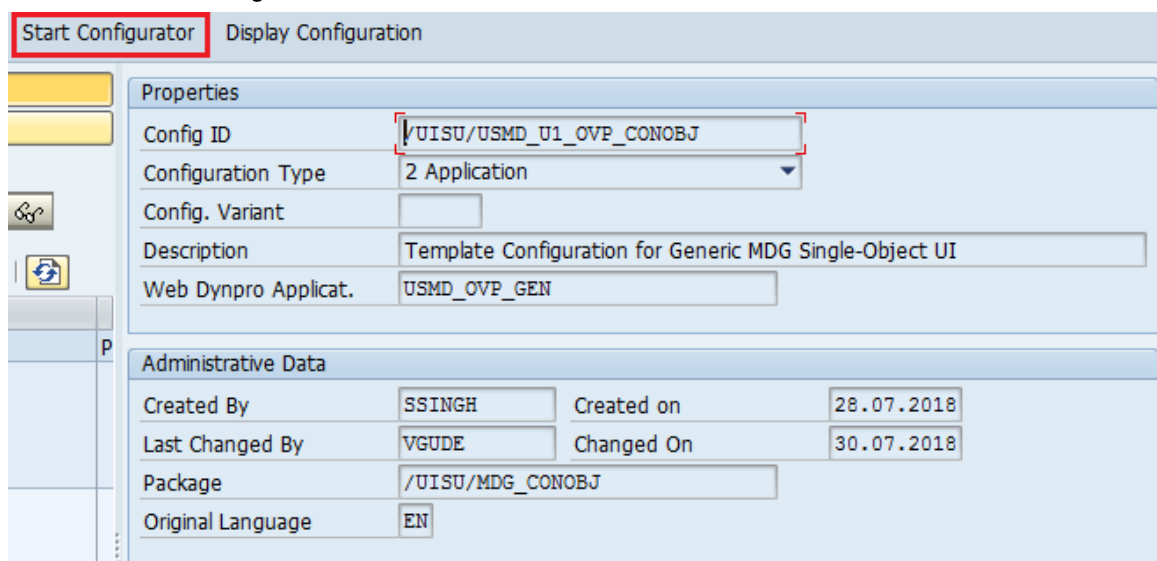
Extending the UI Configuration

Use the following steps to add customization to UI.

1. Start t-code SE80 > In the drop down select Package > In the input field enter /UISU/MDG_CONOBJ > Navigate to Web Dynpro > FPM Application Configurations > /UISU/USMD_U1_OVP_CONOBJ.





- Click the “Start Configurator” button.



- In the web browser, click on “Continue in Display Mode”.


Application Configuration


Application Name: 

* Configuration ID: 

4. Click on the configuration /UGI/USMD_U1_CONOBJ_OVP.

Component Usage	Component	Implementation	Configuration Name
<input checked="" type="radio"/> USMD_OVP_GEN	FPM_ADAPTABLE_OVP	FPM_ADAPTABLE_OVP	/UISU/USMD_OVP_CONOBJ_CBA
<input type="radio"/> OVP	FPM_OVP_COMPONENT	FPM_OVP_COMPONENT	/UISU/USMD_U1_CONOBJ_OVP


5. Select the UIBB where you want to add new attributes and click on “Edit UIBB” 



Form UIBB





Window Name: FORM_WINDOW


Configuration Name: /UISU/USMD_U1_CONOBJ_FORM




6. Click on Additional Functions > Create Customizing.

Component Configuration ▾ Edit ▾ View ▾ **Other Functions ▾** Help ▾









Repositories 

▾ Fields

/USMD_U1_CONOBJ_FORM
 Element ▾ + Group + Line 

7. Click on OK.

FORM UIBB GL2 

Create Customizing  

Config ID:

Description:

8. Change your UI. Add new fields that is added in entity CONOBJ.

Enhanced Fields			
User ID:	<input type="text"/>	<input type="text"/>	<input type="text"/>
User Name:	<input type="text"/>		

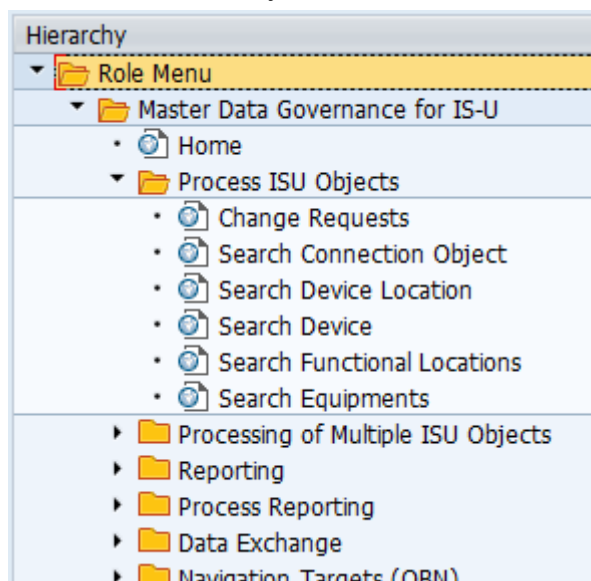
Testing the Configuration

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 Connection Object UI using the following URL (replace the parameters host, port and client-id to match your landscape):


https://<host>:<port>/sap/bc/webdynpro/sap/usmd_ovp_gen?ACTION=CREATE&FPM_EDIT_MODE=E&saplanguage=EN&WDCONFIGURATIONID=Z_USMD_U1_OVP_CONOBJ#













1. Go to t-code PFCG > enter role name /UISU/_MDGISU_REQ and click the “Display” button - Select the Menu – Tab > In the hierarchy window navigate to Role Menu > Master Data Governance for IS-U > Process IS-U Objects> Search Connection Object > Right-Click on Search Connection Object and select Execute from the drop-down.




In UI click on NEW button.

Search Connection Object

Search Criteria Saved Searches: 







Connection Object	is	<input type="text"/>			
County Code	is	<input type="text"/>			
Structure Group	is	<input type="text"/>			
Pol.Reg.Struc.Elem.	is	<input type="text"/>			


☒ Maximum Number of Results:

Save Search As: 


Search Results


Result List


     


	Pending Change...	Connection Object	Connection Objec...	Rank	AuthorizGroup	County Code	Pol.Reg.Struc.El...
---	-------------------	-------------------	---------------------	------	---------------	-------------	---------------------

Attributes


AuthorizGroup: 

SPP reg.struc.group: 

Structure Group: 

Maintenance Plant: 

Superior Functional Location


Superior FunctLoc.: 

Enhanced Fields

User ID:

User Name:

2. Save and Submit the CR. Finalize processing and Approve.
3. After activation use t-code SE16 and open table EHAUISU. Verify attributes have been transferred correctly.

Table: EHAUISU
Displayed Fields: 8 of 8 Fixed Columns:  2 List Width 0250

	MANDT	HAUS	COUNC	REGIOGROUP	REGPOLIT	REGIOGROUP_PERM	ZZNAME	ZZID
<input type="checkbox"/>	100	448	001	DOMLUR	00000002	DOMLUR	ALBERT E	ABCDEF