How-To Guide: Extend MDG-uSRVMSTR in the U2 Data Model

Applies to

MDG EAM Solutions by Utopia

For more information, visit the SAP Master Data Governance homepage.

(http://scn.sap.com/community/mdm/master-data-governance)

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-U2 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.

Company: Utopia Global, Inc.

Created On: September 03, 2018

Version: 1.0

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Scenario

High Level Requirements

The business requires the new attributes called "User Detail" as part of the MDG Service Master Data Model.
You want to extend the (Type1) entity type SERVICE to include attributes: ZZNAME, ZZID.
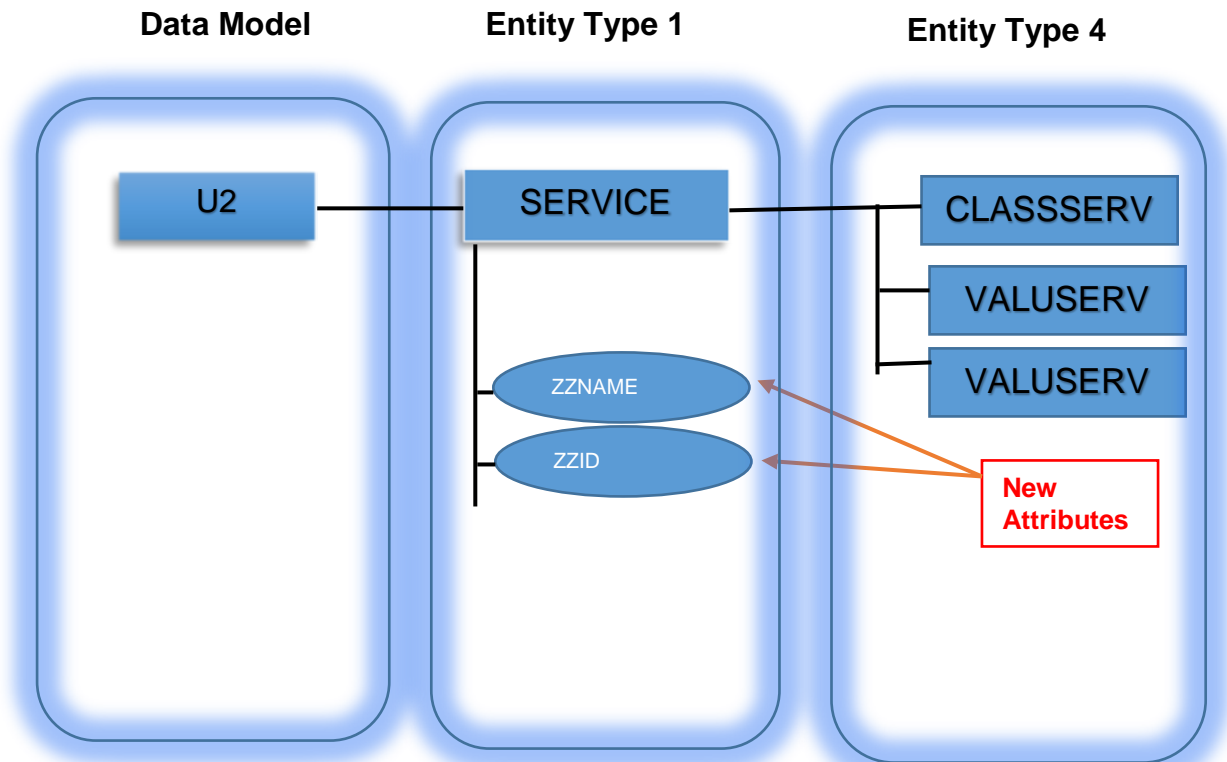

Figure: Data Model – Service Master (Scope of 2017 Delivery) with custom attributes 'ZZNAME" and "ZZID"

Governance Process

The default governance process delivered with MDG is used. No changes to the governance process are necessary as part of this scenario.
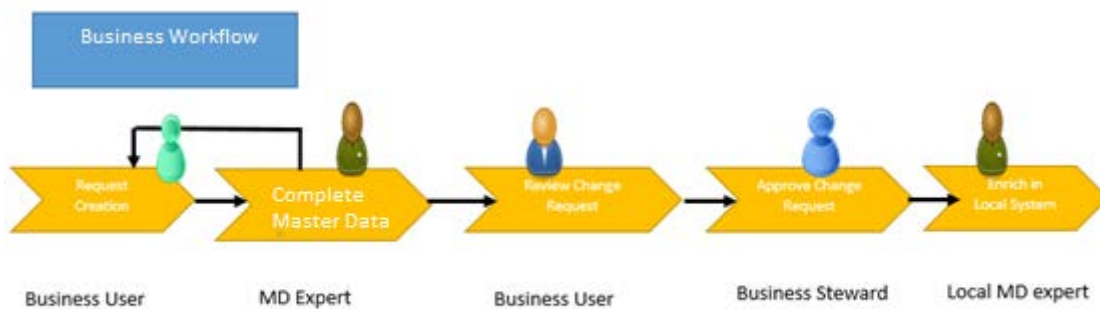
Figure: Service Master processing in Master Data Governance

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 displays the detailed implementation steps. It is recommended that you use it as an orientation.

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

Data Model Extension

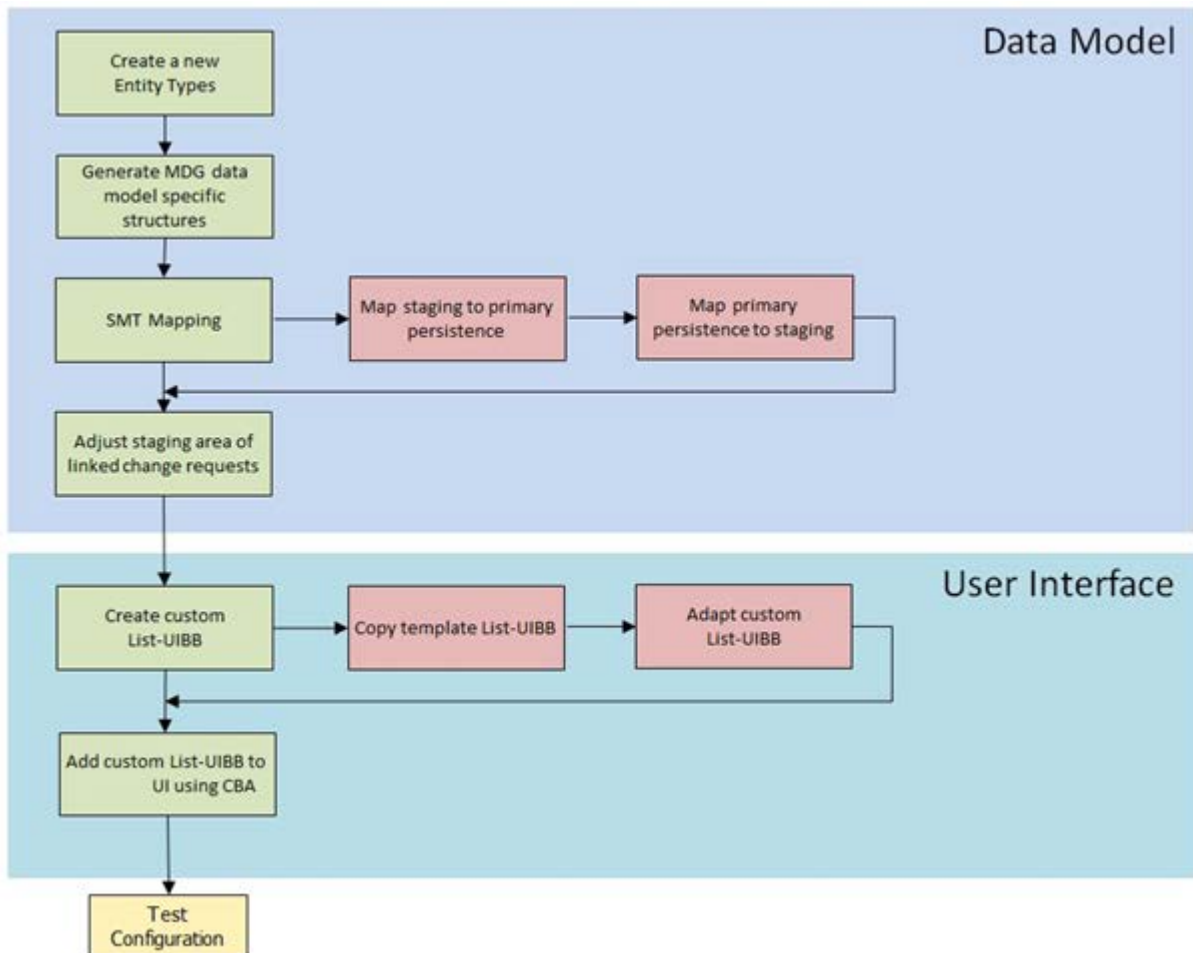You want to extend the MDG Data Model (U2) for Service Master by the additional attributes ZZNAME and ZZID. The following fields from ASMD table should be modelled as attribute of entity type in MDG.

You first create the attributes ZZNAME, ZZIID in entity type ASMD.

Add attributes to existing Entity Type

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

1. Log into the system for cross client maintenance.
2. Start Customizing for Master Data Governance (t-code MDGIMG).
   Go to > General Settings > Configuration Workbench > Select Data Model U2 > Click the "Edit" button > In the left-hand table with the list of Entity Types click the "New" button.
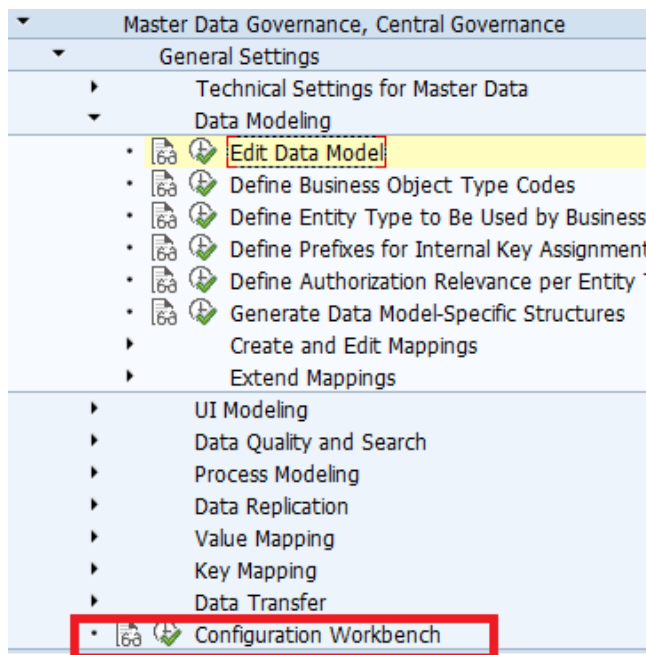
3. Add the attributes of Entity Type SERVICE as displayed in the following screenshot.
4. Save your settings.
   It is recommended to assign a Search Help to a Data Element in exceptional circumstances. If you do this, the input help executes the search help instead of reading the data in the check table 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: SERVICE

General	Attributes	Incoming Relationships	Outgoing Relationships	Busines

*Attribute	Key Field	Descripti...	Data Ele...	Currency/...	Require...	No Exis
MLANG	☐	Primary lang	MLANG		☐	☐
MSTAE	☐	General Pur	LSTAE		☐	☐
MSTDE	☐	Validity Date	LSTDE		☐	☐
NUMTP	☐	Category of	NUMTP		☐	☐
PAKNR	☐	Package nu	PACKNO		☐	☐
SPART	☐	Division	SPART		☐	☐
STLVPOS	☐	Standard Se	STLVPOS		☐	☐
TAXTARIF	☐	Tax Tariff C	/UGI1/J_1B		☐	☐
ZZNAME	☐	User Name	ZZNAME		☐	☐
ZZID	☐	User Id	ZZID		☐	☐

5. Activate the extended Data Model.

Types": Overview

BC Set: Change Field Values   Visualize Data Model

Data Model   [U2]

Entity Types

Entity Type	Storage/Use Type	Val.Entity	Data Eler
SERVICE	Changeable via Change Reque… ▼	No Edition ▼	ASNUM
SMLNTXT	Changeable via Other Entity… ▼	No Edition ▼	
TAXIND	Not Changeable via MDG; No … ▼	No Edition ▼	TAXIS
TAXTARFCD	Not Changeable via MDG; No … ▼	No Edition ▼	/UGI1/J
VALCNT	Not Changeable via MDG; No … ▼	No Edition ▼	ATZHL
VALUSERV	Changeable via Other Entity… ▼	No Edition ▼	

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.

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.

To generate the Data Model-Specific structures use the following steps.
1. Start Customizing for Master Data Governance (t-code MDGIMG).

   Go to > General Settings > Data Modeling > Generate Data Model-Specific Structures.
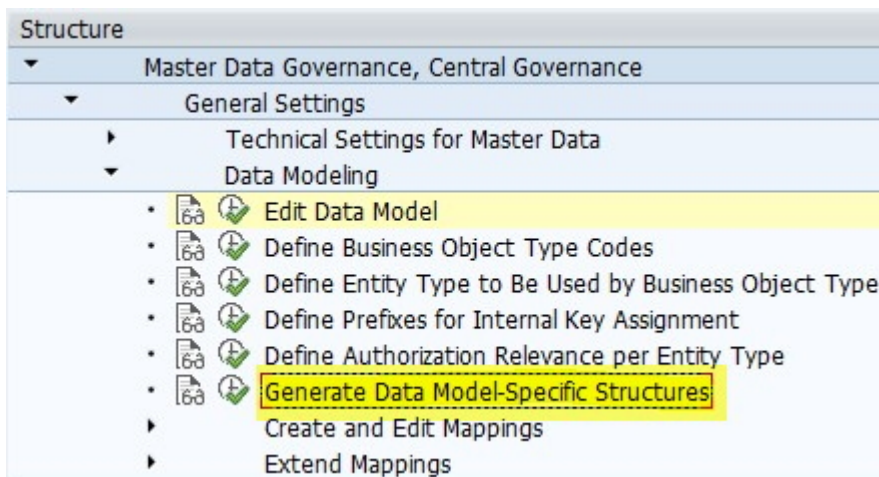
2. Select the row with Data Model U2 > Double-Click Structures in the left-hand panel > Choose the "Generate Selected Structures" button.
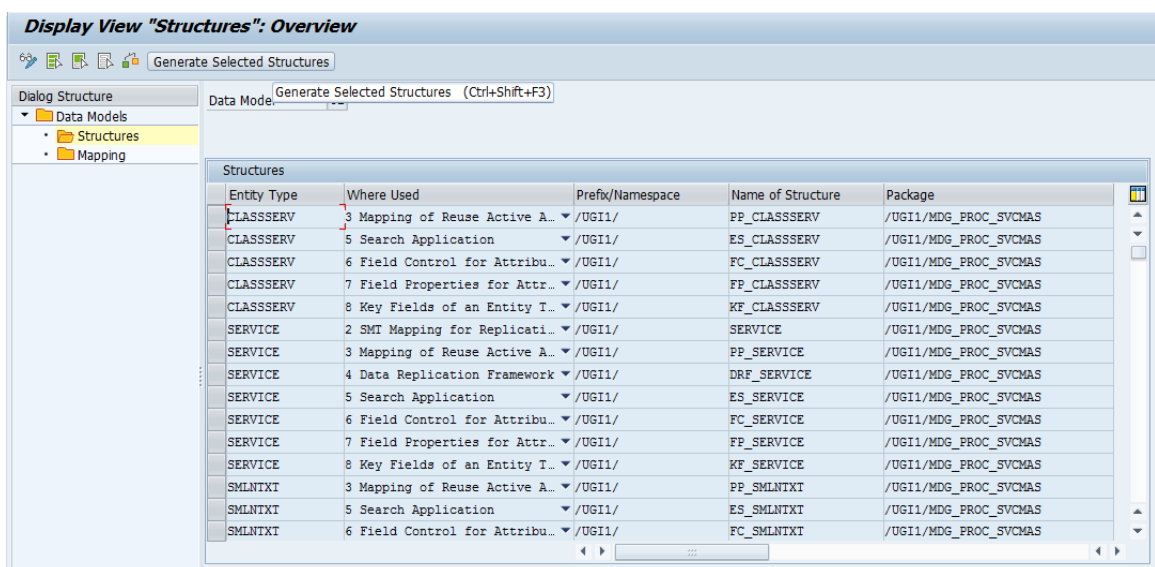
3. Verify that your structures are successfully generated.
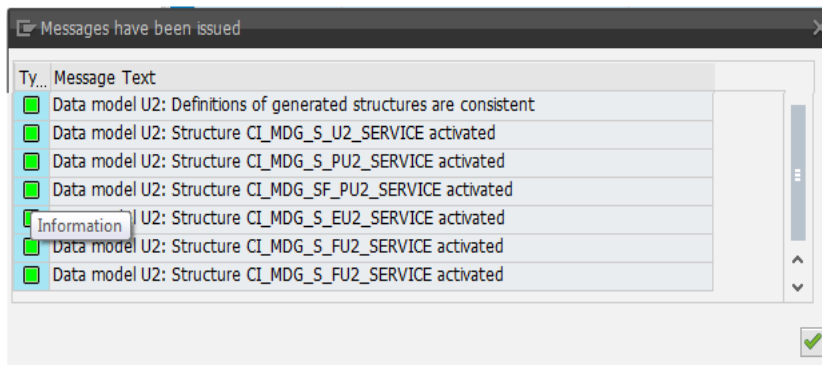
4. In the following steps, you verify that one of the active area mapping structures was successfully generated with new fields.
Start t-code SE11 > Display structure /UGI1/_S_U2_PP_SERVICE.

You have now verified that the structure /UGI1/_S_U2_PP_SERVICE has been generated.
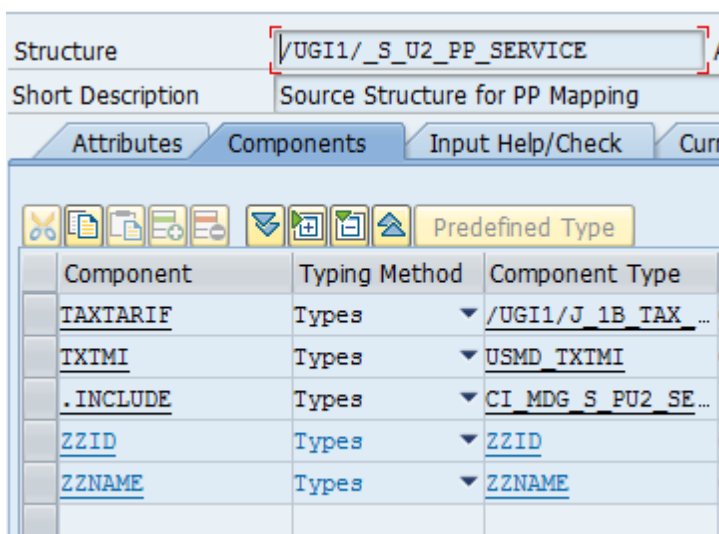
SMT Mapping

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 U2

Use the following steps for SMT Mapping.

1. Log into the system for cross-client maintenance. Start Customizing for Master Data Governance (t-code MDGIMG).
   Go to > General Settings > Data Modelling-> Generate Data Model Specific Structures > Select Data Model U2 > Double-Click on Mapping.

Dialog Structure	Packages for Generated Structures on Model Le	
▼ 🗁 Data Models	Data Model	Description (medium text)
• 🗀 Structures	U1	Utopia EAM Solution for MD
• 🗀 Mapping	U2	□ opia Procurement Solutio
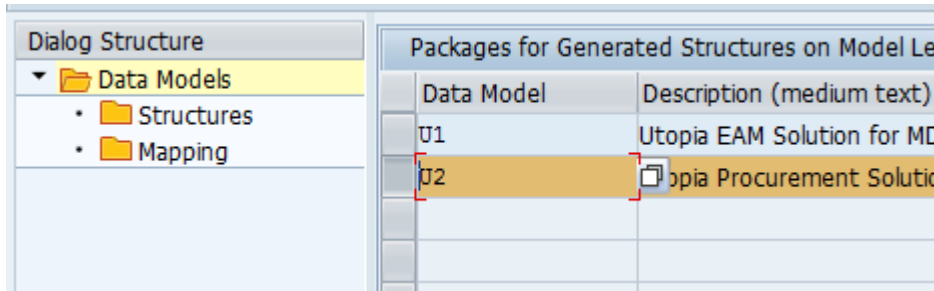
The SMT mappings for Entity Type SERVICE is displayed in the following screen.

Data Model	U2		

Mapping			
Entity Type	Where Used	SMT Mapping from Active Area	SMT Mapping to Active Area
SERVICE	Mapping of Reuse Active Area ▾	/UGI1/MDG_SMT_SM_ECC2MDG_MAP	/UGI1/MDG_SMT_SM_MDG2ECC_MAP
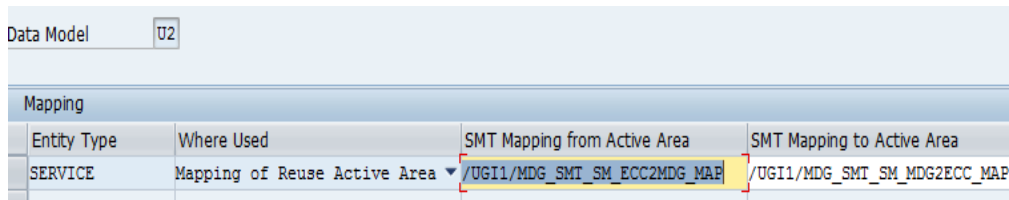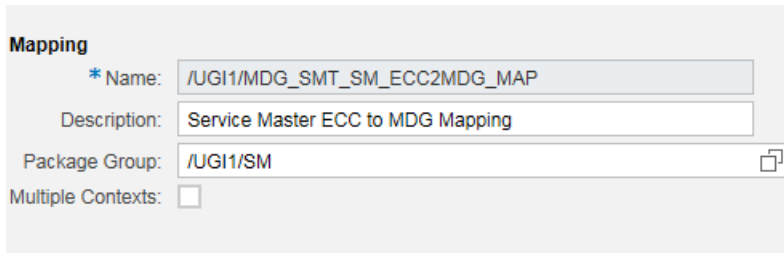
SMT Mapping - Primary Persistence to Staging

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

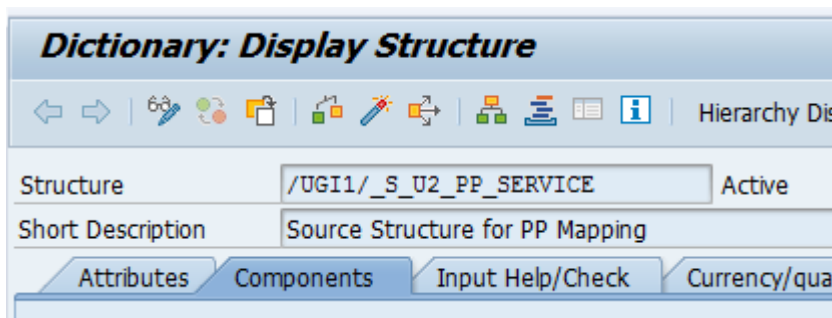1. Log into the system for cross-client maintenance. Start Customizing for Master Data Governance (t-code MDGIMG).
   Go to > General Settings > Data Modeling > Create and Edit Mappings > Create and Edit Mappings.
   Note: For new Entity Types, it is recommended to create a new mapping. When extending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

Structure
▼   Master Data Governance
▼   General Settings
▸   Technical Settings for Master Data
▼   Data Modeling
• 🗎 🕒 Edit Data Model
• 🗎 🕒 Node text not found
• 🗎 🕒 Define Entity Type to Be Used by Business Object Type
• 🗎 🕒 Define Prefixes for Internal Key Assignment
• 🗎 🕒 Define Authorization Relevance per Entity Type
• 🗎 🕒 Generate Data Model-Specific Structures
▼   Create and Edit Mappings
• 🗎 🕒 Define Package Groups
• 🗎 🕒 Create and Edit Mappings
• 🗎 🕒 Check Customizing
▸   Extend Mappings

2. Extend mapping /UGI1/MDG_SMT_SM_ECC2MDG_MAP.
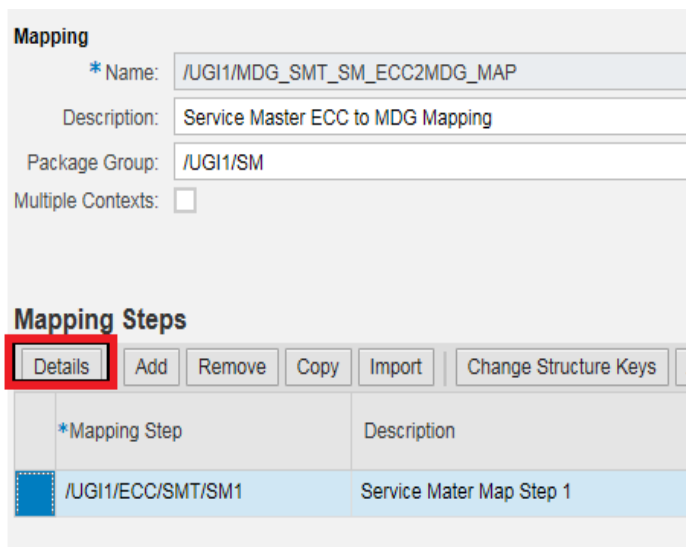
Mapping
* Name: /UGI1/MDG_SMT_SM_ECC2MDG_MAP
Description: Service Master ECC to MDG Mapping
Package Group: /UGI1/SM
Multiple Contexts: ☐

3. Select Mapping Step /UGI1/ECC/SMT/SM1 and choose the "Details" button.

Mapping
* Name: /UGI1/MDG_SMT_SM_ECC2MDG_MAP
Description: Service Master ECC to MDG Mapping
Package Group: /UGI1/SM
Multiple Contexts: ☐
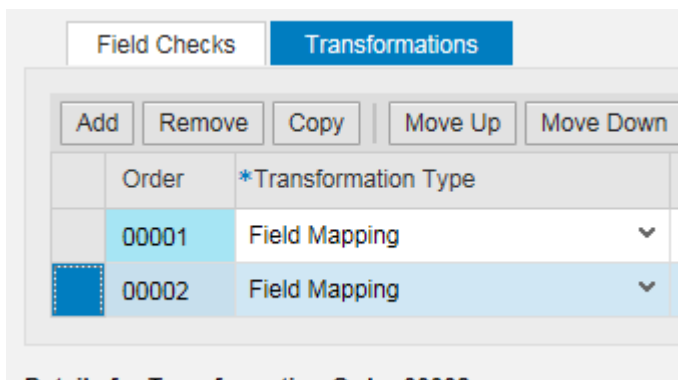
Mapping Steps

| Details | Add | Remove | Copy | Import | Change Structure Keys | A |

*Mapping Step	Description
/UGI1/ECC/SMT/SM1	Service Mater Map Step 1

4. Click on the "Add" button and add a new Transformation of type Field Mapping. Perform mapping for the new fields.

| Field Checks | Transformations |

| Add | Remove | Copy | Move Up | Move Down |

	Order	*Transformation Type	
	00001	Field Mapping	⌄
	00002	Field Mapping	⌄

Details for Transformation Order 00002

Details for Transformation Order 00002

Field Mapping

	*FIELD	Source Structure	Source Field	Fixed Value
	ZZNAME	ASMD	ZZNAME	
	ZZID	ASMD	ZZID	

5. Save your changes.

SMT Mapping - Staging to Primary Persistence

Use the following steps for SMT Mapping from the Staging area to Primary Persistence.
1. Extend mapping /UGI1/MDG_SMT_SM_MDG2ECC_MAP.

Mapping

*Name:	/UGI1/MDG_SMT_SM_MDG2ECC_MAP
Description:	Service Master MDG to ECC
Package Group:	/UGI1/SM
Multiple Contexts:	☐

2. Select mapping step UGI/MDG/SMT/SM_2 and select the "Details" button.
   Map the fields as displayed in the following screen.

Mapping

*Name:	/UGI1/MDG_SMT_SM_MDG2ECC_MAP
Description:	Service Master MDG to ECC
Package Group:	/UGI1/SM
Multiple Contexts:	☐

Mapping Steps

Details | Add | Remove | Copy | Import | Change Structure Keys | A

	*Mapping Step	Description	*
	/UGI/MDG/SMT/SM_1	Service Master SMT mapping Step 1	
	/UGI/MDG/SMT/SM_2	Service Master SMT mapping Step 2	

3. Click on the "Add" button and add a new Transformation of type Field Mapping.

   Perform mapping from source structure /UGI1/_S_U2_PP_SERVICE to target structure BAPISRV_TE_ASMD.

Field Checks	Transformations	

Add	Remove	Copy	Move Up	Move Down

	Order	*Transformation Type	
	00001	Field Mapping	⌄
	00002	Field Mapping	⌄

Field Mapping

Add	Remove

	*FIELD	Source Structure	Source Field	F
	SERVICE	/UGI1/_S_U2_	SERVICE	
	ZZNAME	/UGI1/_S_U2_	ZZNAME	
	ZZID	/UGI1/_S_U2_	ZZID	

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 (t-code MDGIMG).

    Go to > General Settings > Data Modeling > Edit Data Model > Select Data Model U2 > Double-Click on Entity Types > Choose the "Adjust staging area of linked Change Requests" button.

			BC Set: Change Field Values		Visualize Data Mode	

Inactive Data Models

	Data Model	Description (medium text)	ActiveArea	Prefix/N
	0F	Chart of Accounts		
	U1	Utopia EAM Solution for MDG	/UGI/EAM	
	U2	Utopia Procurement Solution for MDG	/UGI1/PROC	

2. Choose the "Yes" button.
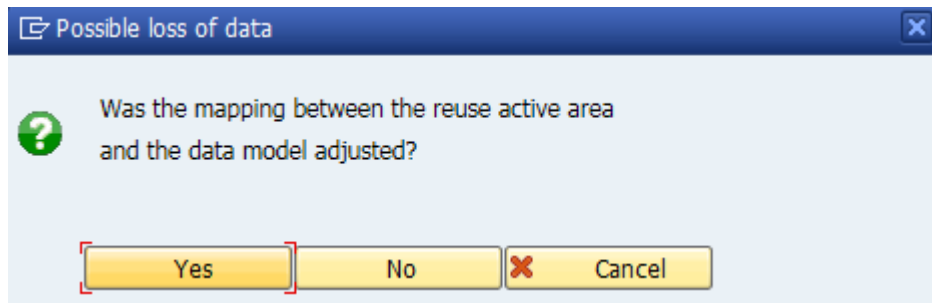
The following message appears.

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

Extending the UI Configuration

Add Customization to UI

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
   /UGI1/MDG_PROC_SVCMAS -> Navigate to Web Dynpro > FPM Application Configurations >
   UGI1/USMD_U2_OVP_SERVICE.
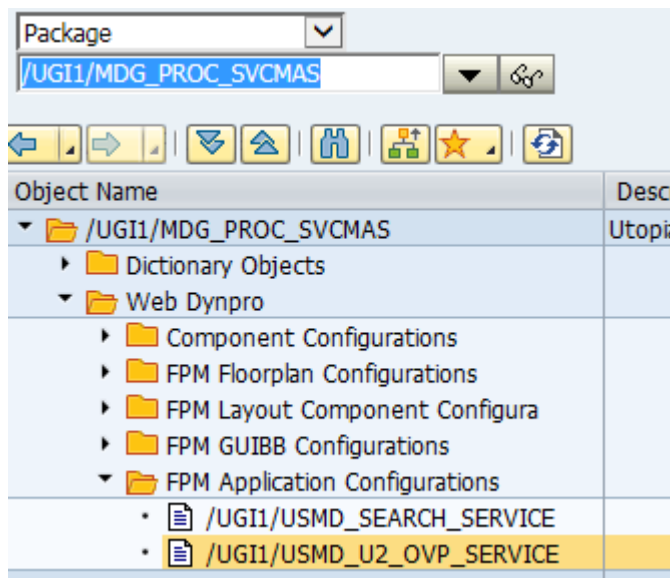
2. Click the "Start Configurator" button.

Start Configurator	Display Configuration	

	Properties	
	Config ID	/UGI1/USMD_U2_OVP_SERVICE
	Configuration Type	Application
	Config. Variant	
Description	Description	Service Master UI
Utopia PROC for	Web Dynpro Applicat.	USMD_OVP_GEN
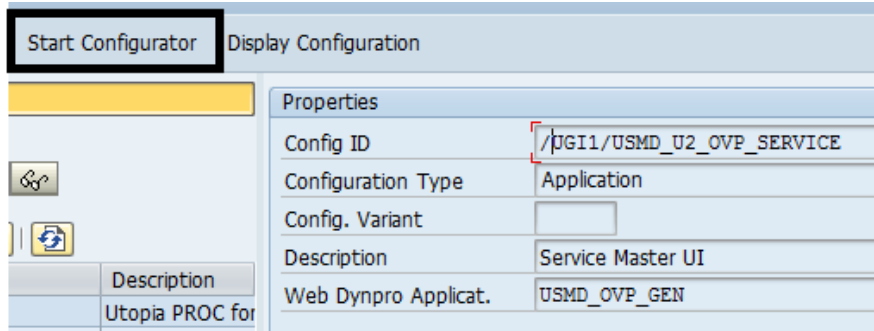
3. In the web browser, click on Continue in Display Mode.

Editor for the Web Dynpro ABAP Application Configura

✓ Continue in Change Mode	✓ Continue in Display Mode	Clear	🗋 New	🗑

Select the application configuration that you want to change or display

Application Name: USMD_OVP_GEN
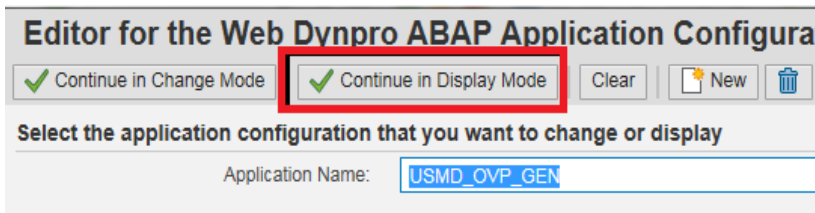
4. Click on the configuration UGI1/USMD_U2_SERVICE_OVP.

Component	Implementation	Configuration Name
FPM_ADAPTABLE_OVP	FPM_ADAPTABLE_OVP	USMD_OVP_CBA
FPM_OVP_COMPONENT	FPM_OVP_COMPONENT	/UGI1/USMD_U2_SERVICE_OVP

5. Select the UIBB where you want to add new attributes and click on "Configure UIBB" button.

Page Master Area	🗋 Section	🗋 UIBB	🗑	Up	Down			Configure UIBB	🔧

Element	Component	Config ID	Window Name
▼ 🔲 Section: SECTION_1			
🔲 UIBB: Service Data	FPM_FORM_UIBB_GL2	/UGI1/USMD_U2_SMHDR_MAIN	FORM_WINDOW
🔲 UIBB: Service Master Text	FPM_COMPOSITE_UIBB	/UGI1/USMD_U2_COMP_LONGTXT	COMPOSITE_WINDOW
▶ 🔲 Section: SECTION_2			
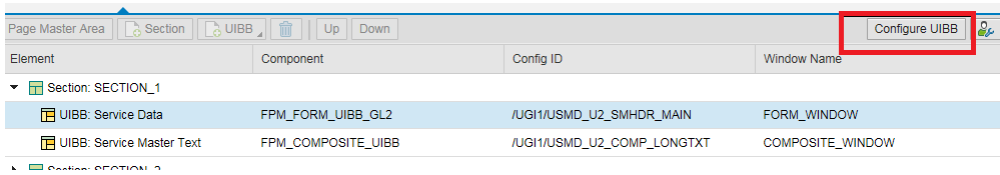
6. Click on Additional Functions > Create Customizing.

Additional Functions ▾
🗋 New Window
📄 Create Customizing
⊚ Enhance
🔧 Show Properties
🔲 Test
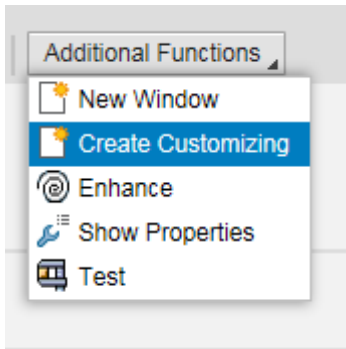
7. Click on OK.

Create Customizing □ ✕

Config ID: /UGI1/USMD_U2_SMHDR_MAIN

Description:

OK   Cancel

8. Change your UI. Add new fields that we added in entity SERVICE.

Valuation Class:

User id: User name:

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 Service Master 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=
%2fUGI1%2fUSMD_U2_OVP_SERVICE#

Start t-code PFCG > enter role name /UGI1/_MDGPROC_REQ and click the "Display" button > Select the Menu – Tab > In the hierarchy window navigate to Role Menu > Master Data Governance for EAM > Change Request > Service Master > Single Object Processing > Right-Click on Create Service and select Execute from the drop-down.

Display Roles

⚙ 🖺 Other role | 📋 Inheritance | ℹ️

Role		
Role	/UGI1/_MDGPROC_REQ	☐ Obsolete
Description	Master Data Governance for Procurement Solution: Requester	
Target System		🟩 No destination

🖳 Description | 🟩 Menu | 🔴 Workflow | ⚠️ Authorizations | ⚠️ User | MiniApps | 🖳 Personaliz

🔲 🗀 🗀 ▼ ▲ 🗔 Transaction ⬚ | 🗔 ⬚ | 🔍 🔍 🗔 | 🔍 🖨 🖳 ℹ️ | ⬩From Menus ⬚ | Additi

Hierarchy
- ▼ 🗀 Role Menu
  - ▼ 🗀 Master Data Governance for EAM
    - ▼ 🗀 Change Requests
      - • ⏱ Change Requests
      - ▼ 🗀 Service Master
        - ▼ 🗀 Single Object Processing
          - • ⏱ Search Service Master
        - ▶ 🗀 Multiple Objects Processing
    - ▶ 🗀 Reporting

Save and Submit the CR. Finalize processing and Approve.

Create Service Master - 3000014 /Category - ALL with Change Request - 95

🖫 Save | ✖ Cancel | ✏ Edit | ↻ | Validation Log | Change Documents | Workflow Log

General Data

		Process Data	
Change Request ID:	95	Status:	Final Check Approved
Description:	test	Current Workitem:	Process Change Request 95 (test)
Priority:		Created On/By:	08/15/2017 22:41:24
Due Date:		Changed On/By:	08/15/2017 22:42:07
Reason:		Finalized On/By:	08/15/2017 22:42:31

Service Data ✏ Edit

Activity number:	3000014	Service Category:	Complete service Complete service	
Base UOM:	22S mm2/s	Deletion Indicator:	☐	Text Change Allowed:

Basic Data

Mat/Srv.Grp:	01 Material group 1	Authorization Group:	
Division:		Tax Indicator:	
Valuation Class:			
User id:	2020	User name:	CCHAUNG
Formula:			

Standard Serv. Cat.

Service Type:		Edition:	
SSC Item:			

After activation use t-code SE11 to display table ASMD and verify attributes have been transferred correctly.

Data Browser: Table ASMD Select Entries   1

Check Table...

Table: ASMD
Displayed Fields: 5 of 5   Fixed Columns: 1   List Width 0250

ASNUM	ERDAT	ZZNAME	ZZID	ASKTX
000000000003000014	08/15/2017	CCHAUNG	2020	test sm

Custom Validations/Derivations for lean classification

As part of SAP OSS Note 2479869 customers can implement the CROSS_ENTITY_BADI for adding customized error handling/derivations for their scenarios.

BADI definition provided by SAP is USMD_RULE_SERVICE_CROSS_ET