

How-To Guide: Extend MDG-uMNTPLN in the U1 Data Model

Applies to

MDG EAM Solutions 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.

Author: Neelima Gowni

Company: Prometheus Group

Created On: September 19, 2018

Version: 1.0

Table of Contents

Introduction.....	3
Scenario	3
High Level Requirements	3
Governance Process	3
Implementation.....	4
Data Model Extension	5
Add Attributes to Existing Entity Type.....	5
Generate MDG Data Model-Specific Structures.....	7
SMT Mapping	8
SMT Mapping – Get Mapping Names from Data Model U1.....	8
SMT Mapping - Primary Persistence to Staging	9
SMT Mapping – Staging to Primary Persistence	10
Adjust Staging area of Linked Change Requests	11
Extending the UI Configuration	12
Add Customization to UI	12
Testing the Configuration	14

Introduction

This document describes how to extend the Data Model (U1) for Maintenance Plan by adding additional attribute “ZZREVIEWBY”, “ZZREVEWDT” to the entity “MITEM”.

Scenario

High Level Requirements

The business requires the new attributes called “Review Detail” as part of the MDG Maintenance Plan Data Model.

You want to extend the (Type4) entity type MITEM to include attributes: ZZREVIEWBY, ZZREVEWDT.

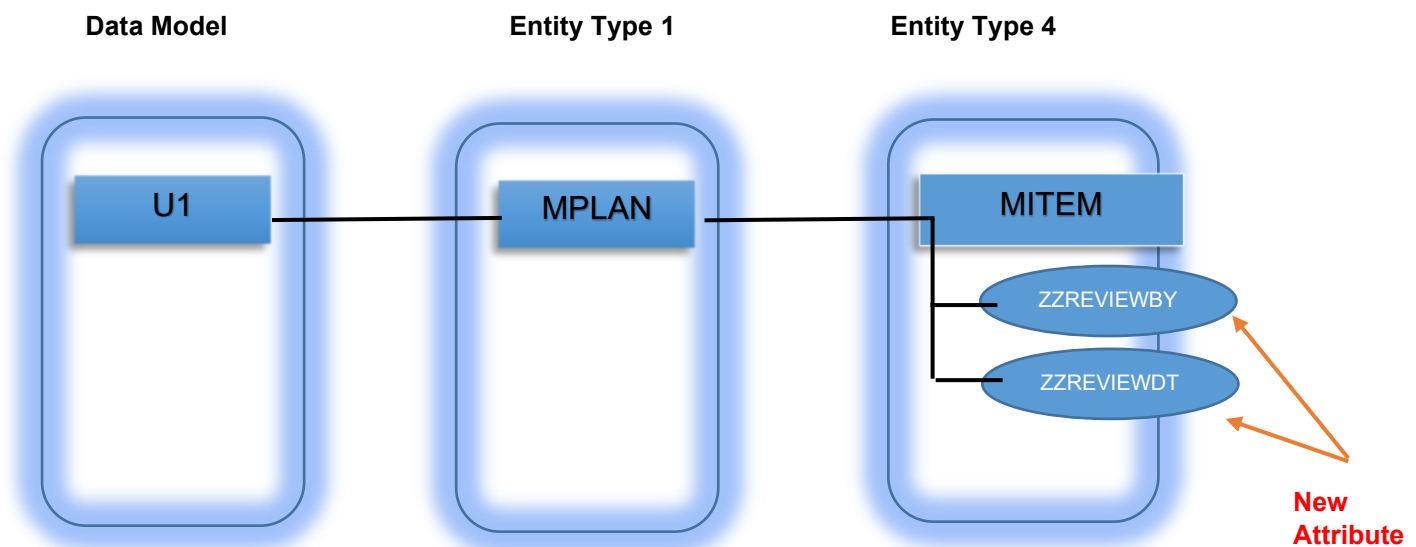


Figure: Data Model – Maintenance Plan (Scope of 2017 Delivery) with custom attributes “ZZREVIEWBY” and “ZZREVEWDT”

Governance Process

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

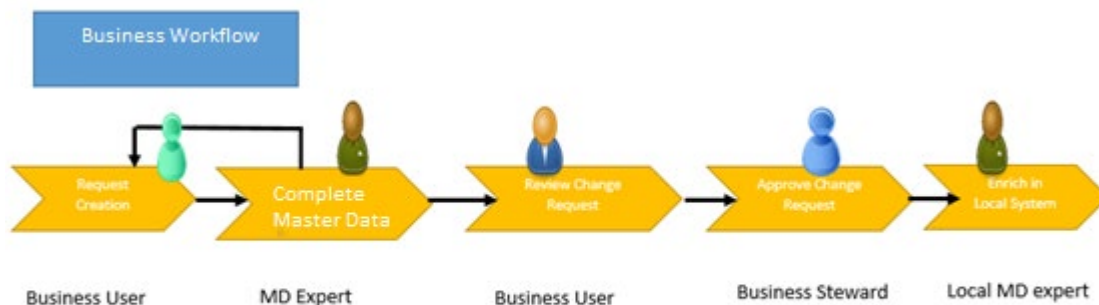


Figure: Maintenance Plan processing in Master Data Governance

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.

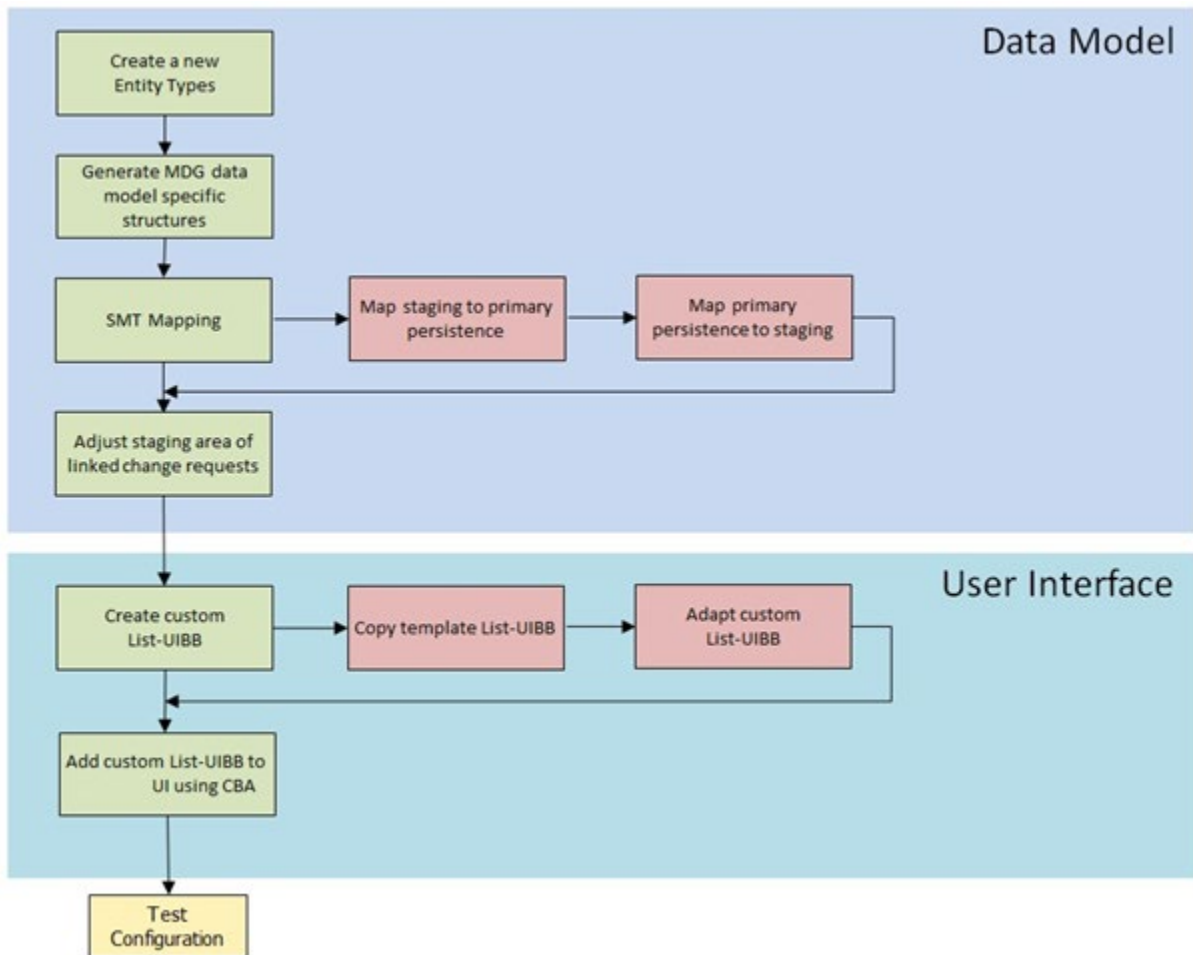
















Figure: Implementation steps for re-use Entity-Type extension

You want to extend the MDG Data Model (U1) for Maintenance Plan and Item by the additional attributes ZZREVIEWBY and ZZREVEWDT. The following fields from MPOS table should be modelled as attribute of entity type in MDG.

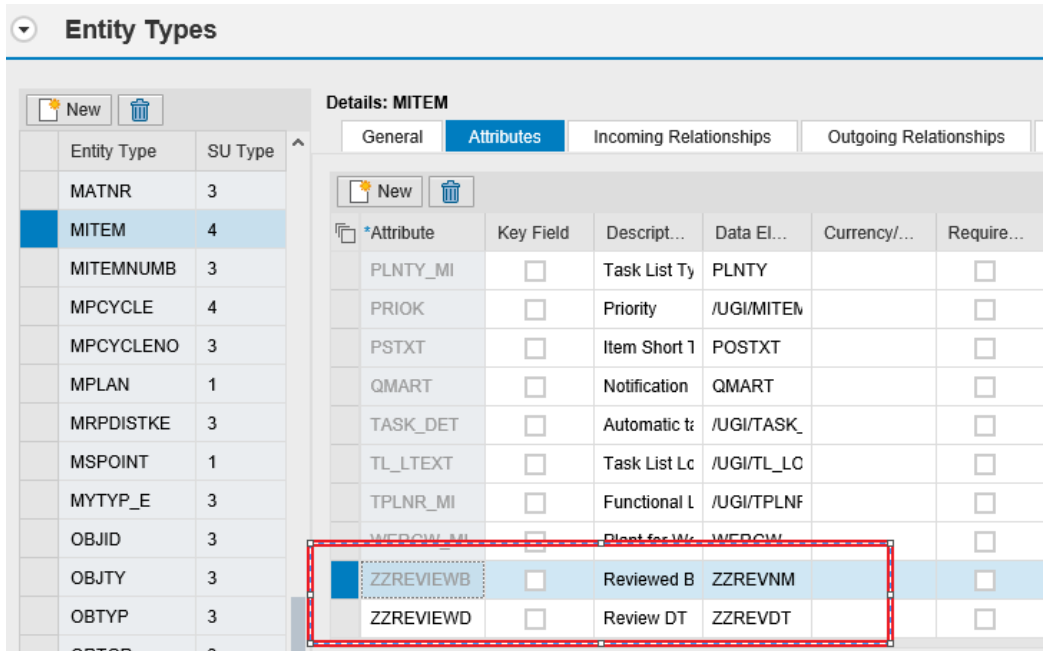


Use the following steps to add attributes to existing Entity Type.

- 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
 -   Define Prefixes for Internal Key Assignment
 -   Define Authorization Relevance per Entity
 -   Generate Data Model-Specific Structures
 - Create and Edit Mappings
 - Extend Mappings
 - UI Modeling
 - Data Quality and Search
 - Process Modeling
 - Data Replication
 - Value Mapping
 - Key Mapping
 - Data Transfer
 -   Configuration Workbench

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

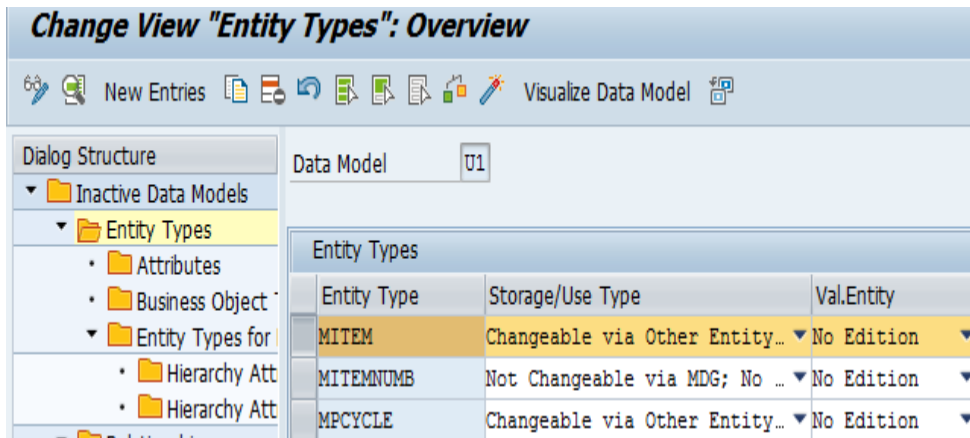
Note: Search help can be added at attribute level if required.



Entity Type	SU Type
MATNR	3
MITEM	4
MITEMNUMB	3
MPCYCLE	4
MPCYCLEN0	3
MPLAN	1
MRPDISTKE	3
MSPOINT	1
MYTYP_E	3
OBJID	3
OBJTY	3
OBTYP	3

*Attribute	Key Field	Descript...	Data El...	Currency/...	Require...
PLNTY_MI	<input type="checkbox"/>	Task List Ty	PLNTY		<input type="checkbox"/>
PRIOK	<input type="checkbox"/>	Priority	/UGI/MITEM		<input type="checkbox"/>
PSTXT	<input type="checkbox"/>	Item Short 1	POSTXT		<input type="checkbox"/>
QMART	<input type="checkbox"/>	Notification	QMART		<input type="checkbox"/>
TASK_DET	<input type="checkbox"/>	Automatic t	/UGI/TASK_		<input type="checkbox"/>
TL_LTEXT	<input type="checkbox"/>	Task List Lc	/UGI/TL_LO		<input type="checkbox"/>
TPLNR_MI	<input type="checkbox"/>	Functional L	/UGI/TPLNF		<input type="checkbox"/>
WEDGW_MI	<input type="checkbox"/>	Plant for Wc	WEDGW		<input type="checkbox"/>
ZZREVIEWB	<input type="checkbox"/>	Reviewed B	ZZREVN		<input type="checkbox"/>
ZZREVIEWD	<input type="checkbox"/>	Review DT	ZZREVD		<input type="checkbox"/>

5. Activate the extended Data Model.



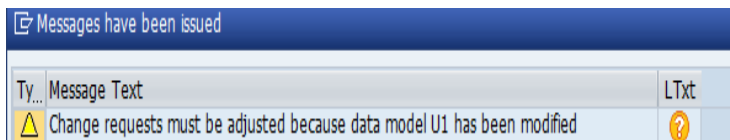
Change View "Entity Types": Overview

Dialog Structure: Inactive Data Models > Entity Types

Data Model: U1

Entity Type	Storage/Use Type	Val.Entity
MITEM	Changeable via Other Entity...	No Edition
MITEMNUMB	Not Changeable via MDG; No ...	No Edition
MPCYCLE	Changeable via Other Entity...	No Edition

6. After activation the following information message is displayed.



Messages have been issued

Ty...	Message Text	LText
Warning	Change requests must be adjusted because data model U1 has been modified	

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

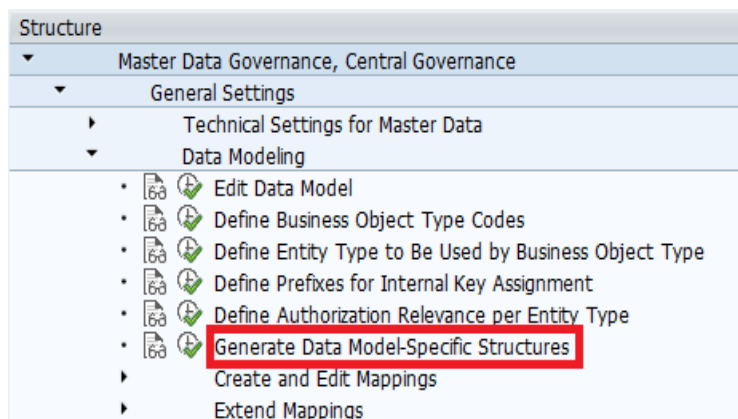
Generate MDG Data Model-Specific Structures

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 are generated automatically with activation of the Data Model.

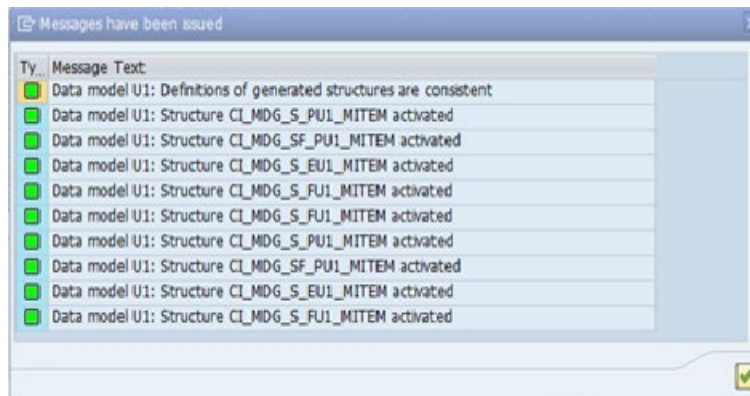
Older releases: Since the MDG Data Model was changed you need to regenerate the tables. In this Customizing activity, for each Data Model and entity type you generate technical structures and tables in the ABAP Dictionary. The system uses these structures internally for implementing the staging area.

To generate the Data Model-Specific structures use the following steps.

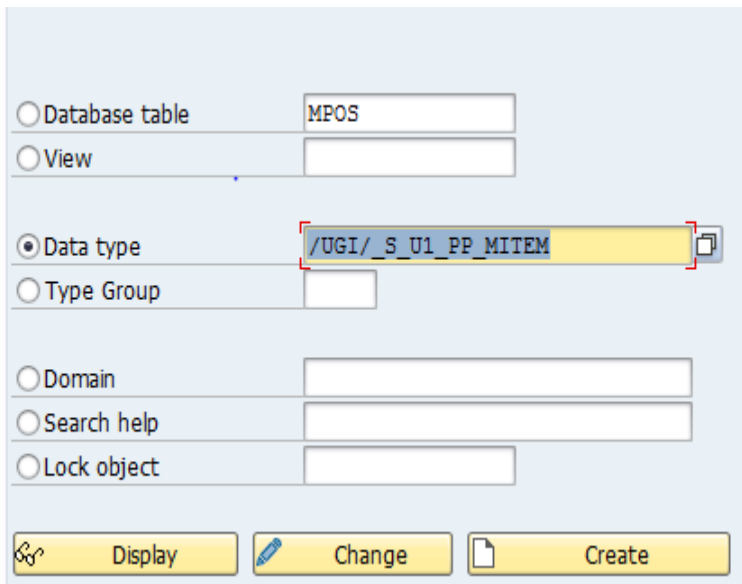
1. Start Customizing for Master Data Governance (transaction MDGIMG).
Go to > General Settings > Data Modeling > Generate Data Model-Specific Structures.



2. Select the row with Data Model U1 > Double-Click Structures in the left-hand panel > Choose the “Generate Selected Structures” button.
3. Verify that your structures are successfully generated.

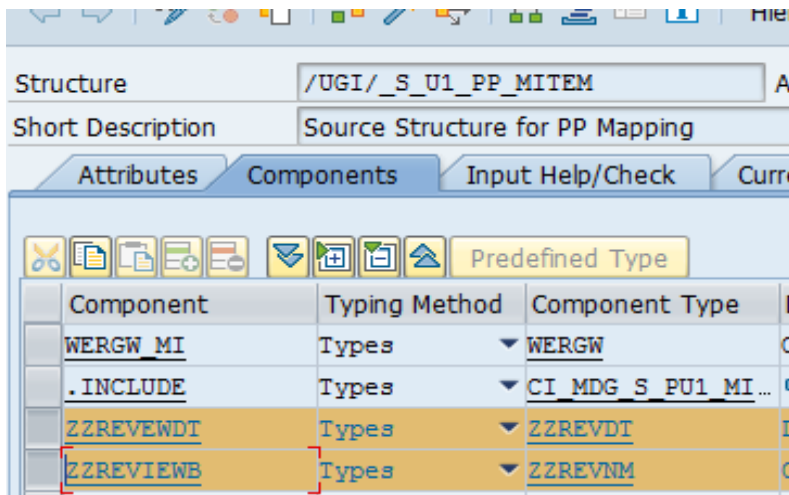


4. In the following steps, you verify that one of the active area mapping structures was successfully generated with new fields.
Start t-code SE11 > Display structure /UGI/_S_U1_PP_MITEM.



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

You have now verified that the structure /UGI/_S_U1_PP_MITEM has been generated.



Component	Typing Method	Component Type
WERGW_MI	Types	WERGW
.INCLUDE	Types	CI_MDG_S_PU1_MI...
ZZREVEWDT	Types	ZZREVDI
ZZREVIEWB	Types	ZZREVN...

SMT Mapping

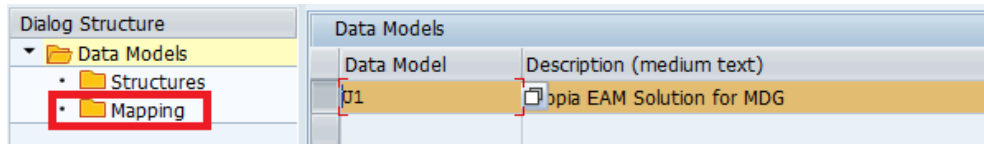
You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

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

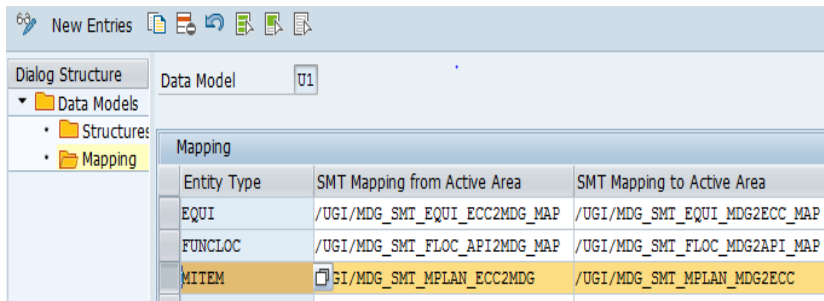
SMT Mapping – Get Mapping Names from Data Model U1

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 mapping names for Entity Type MITEM as displayed.



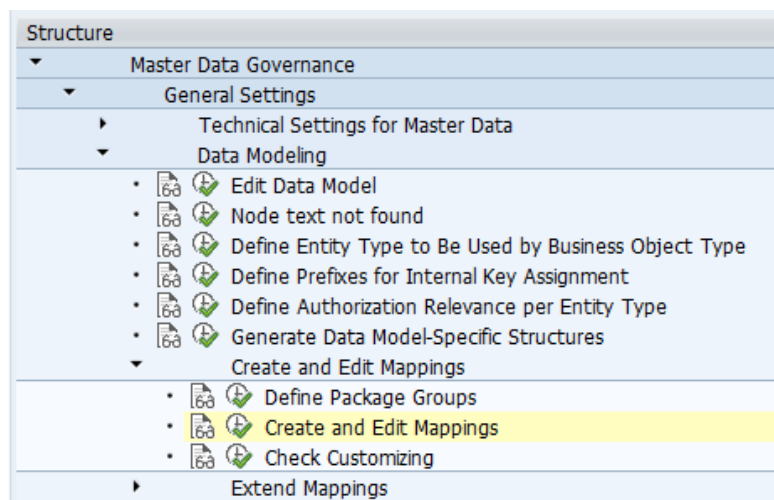
Entity Type	SMT Mapping from Active Area	SMT Mapping to Active Area
EQUI	/UGI/MDG_SMT_EQUI_ECC2MDG_MAP	/UGI/MDG_SMT_EQUI_MDG2ECC_MAP
FUNCLOC	/UGI/MDG_SMT_FLOC_API2MDG_MAP	/UGI/MDG_SMT_FLOC_MDG2API_MAP
MITEM	/UGI/MDG_SMT_MPLAN_ECC2MDG	/UGI/MDG_SMT_MPLAN_MDG2ECC

SMT Mapping - Primary Persistence to Staging

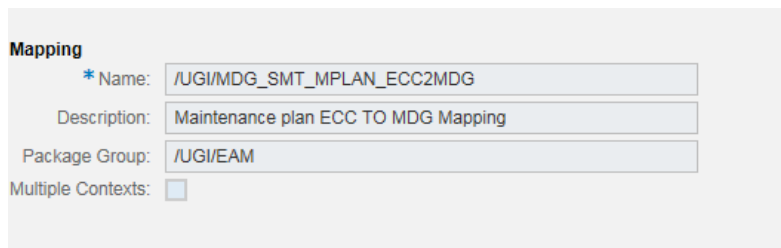
Use the following steps for SMT Mapping from Primary Persistence to Staging area.

- 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.



- Extend mapping /UGI/MDG_SMT_MPLAN_ECC2MDG.



* Name:	/UGI/MDG_SMT_MPLAN_ECC2MDG
Description:	Maintenance plan ECC TO MDG Mapping
Package Group:	/UGI/EAM
Multiple Contexts:	<input type="checkbox"/>

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

Mapping Steps

*Mapping Step	Description	*Source Structure
/UGI/MDG/SMT/MITEM	Maintenece Item	MPLAN_MPOS
/UGI/MDG/SMT/MPCYCLE	Maintenance Plan Cycle	MPLAN_MMPT
/UGI/MDG/SMT/MPLAN	Maintenance Plan	MPLAN_MPLA
/UGI/MDG/SMT/MPLANLAM	Maintenance Plan LAM attributes	EAML_S_LFE_DATA_UI

4. Add a mapping step – Assign Source Structure MPLAN_MPOS, assign target structure /UGI/_S_U1_PP_MITEM.

Field Checks **Transformations**

Add Remove Copy Move Up

Order	*Transformation Type
00001	Field Mapping
00001	Field Mapping

Details for Transformation Order 00001

Target Structure	Source Structure
ZZREVIEWDT	ZZREVDAT
ZZREVIEWBY	ZZREVNAM

Tree structures are available to the user to automatically Assign or Map structure fields to a Field Check, a Condition, a Complex Transformation, or a Mapping using the appropriate

Target Structure **Source Structure**

Assign Assign

Name: /UGI/_S_U1_PP_MITEM Name: MPLAN_MPC

Name	Is Used
/UGI/_S_U1_PP_MITEM	<input type="checkbox"/>

Name
MPLAN_MPOS

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 /UGI/MDG_SMT_MPLAN_MDG2ECC.

Mapping

*Name: /UGI/MDG_SMT_MPLAN_MDG2ECC

Description: Maintenance plan MDG to ECC mapping

Package Group: /UGI/EAM

Multiple Contexts: ☐

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

Mapping Steps				
Details	Add	Remove	Copy	Import
Change Structure Keys	Additional Input Structures			
*Mapping Step	Description	*Source Structure	*Target Structure	Ch
/UGI/MDG/SMT/MITEM	Maintenance Item	/UGI/_S_U1_PP_MITEM	MPLAN_MPOS	
/UGI/MDG/SMT/MPCYCLE	Maintenance Plan Cycle	/UGI/_S_U1_PP_MPCYCLE	MPLAN_MMPT	
/UGI/MDG/SMT/MPLAN	Maintenance Plan	/UGI/_S_U1_PP_MPLAN	MPLAN_MPLA	

3. Add a mapping step - Assign Target Structure MPLAN_MPOS and Assign Source Structure /UGI/_S_U1_PP_MITEM.

*FIELD	Source Structure	Source Field	Fixed Value	Conversion Class	Reference Type	Field type	Data Type	Number
ZZITO_ID	/UGI/_S_U1_PP_FUNCLOC	ZZID			<input type="checkbox"/>	ZZITO_ID	CHAR	10
ZZITO_NAME	/UGI/_S_U1_PP_FUNCLOC	ZZNAME			<input type="checkbox"/>	ZZITO_NAME	CHAR	40

Tree structures are available to the user to automatically Assign or Map structure fields to a Field Check, a Condition, a Complex Transformation, or a Mapping using the appropriate button.

Target Structure
Assign
Name: ITOB

Source Structure
Assign
Name: /UGI/_S_U1_PP_FUNCLOC

Target Structure
Name | Is Used
ITOB | ☐

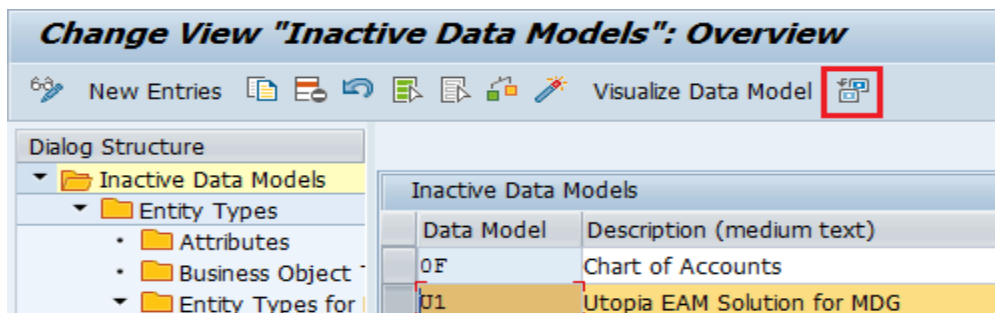
Source Structure
Name
/UGI/_S_U1_PP_FUNCLOC

4. Save your changes.

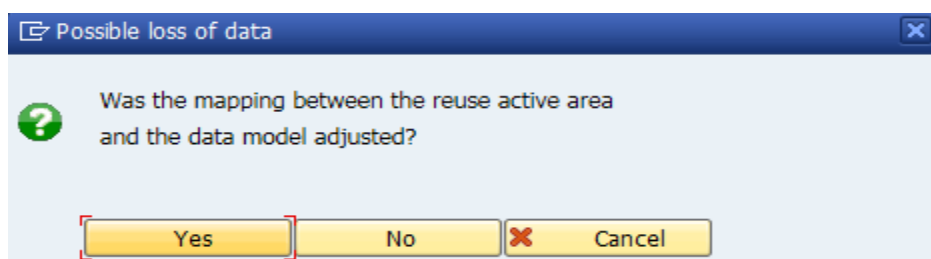
Adjust Staging area of Linked Change Requests

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.

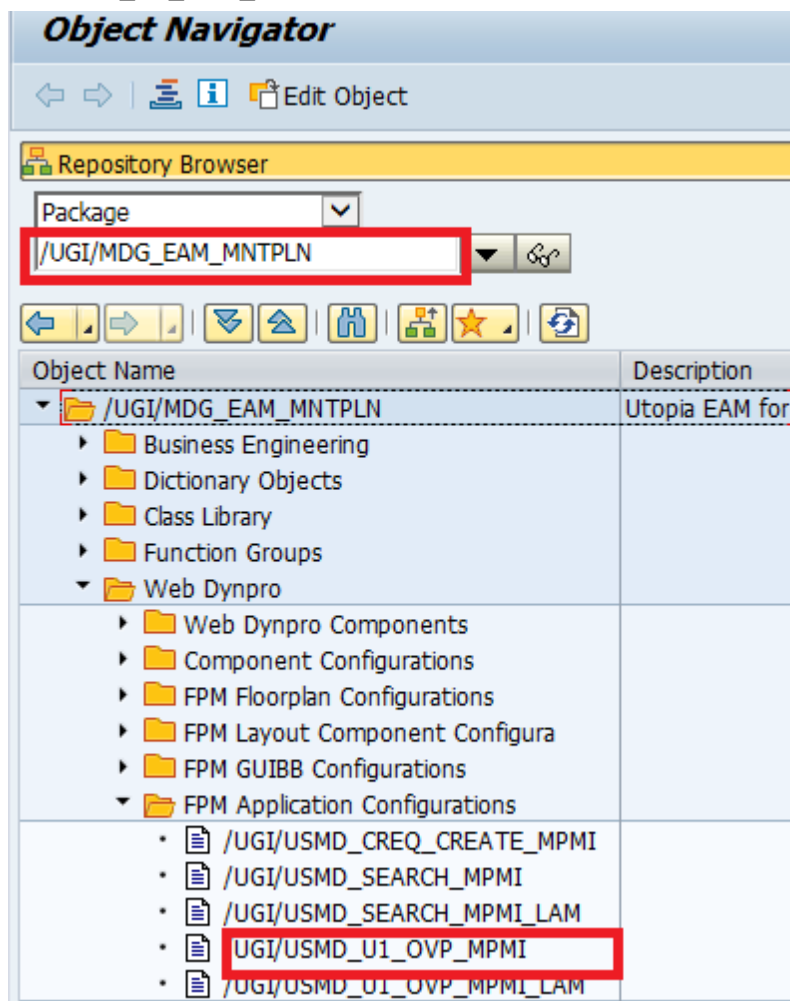
Messages have been issued	
T...	Message Text
	Conversion program USMD_ADJUST_STAGING scheduled in client 405,

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 /UGI/MDG_EAM_MNTPLN > Navigate to Web Dynpro > FPM Application Configurations > UGI/USMD_U1_OVP_MPMI.



2. Click the "Start Configurator" button.

ay web Dynpro Configuration

Start Configurator | Display Configuration

Properties

Config ID: /UGI/USMD_U1_OVP_MPMI

Configuration Type: Application

Config. Variant:

Description: Template Configuration for Generic MDG

Web Dynpro Applicat.: USMD_OVP_GEN

Administrative Data

Created By: NTANGUTURI | Created on:

Last Changed By: SGELIVI | Changed On:

Package: /UGI/MDG_EAM_MNTPLN

Original Language: EN

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

Editor for the Web Dynpro ABAP Application Configuration

Continue in Change Mode | **Continue in Display Mode** | Clear | New | Other Functions

Select the application configuration that you want to change or display

Application Name: USMD_OVP_GEN | * Configuration ID: /UGI/USMD_U1_OVP_MPMI

- Click on the configuration /UGI/USMD_U1_MPMI_OVP.

Assign Web Dynpro Component

Component Usage	Component	Implementation	Configuration Name
USMD_OVP_GEN	FPM_ADAPTABLE_OVP	FPM_ADAPTABLE_OVP	USMD_OVP_CBA
OVP	FPM_OVP_COMPONENT	FPM_OVP_COMPONENT	/UGI/USMD_U1_MPMI_OVP

- Select the UIBB where you want to add new attributes and click on Configure UIBB.

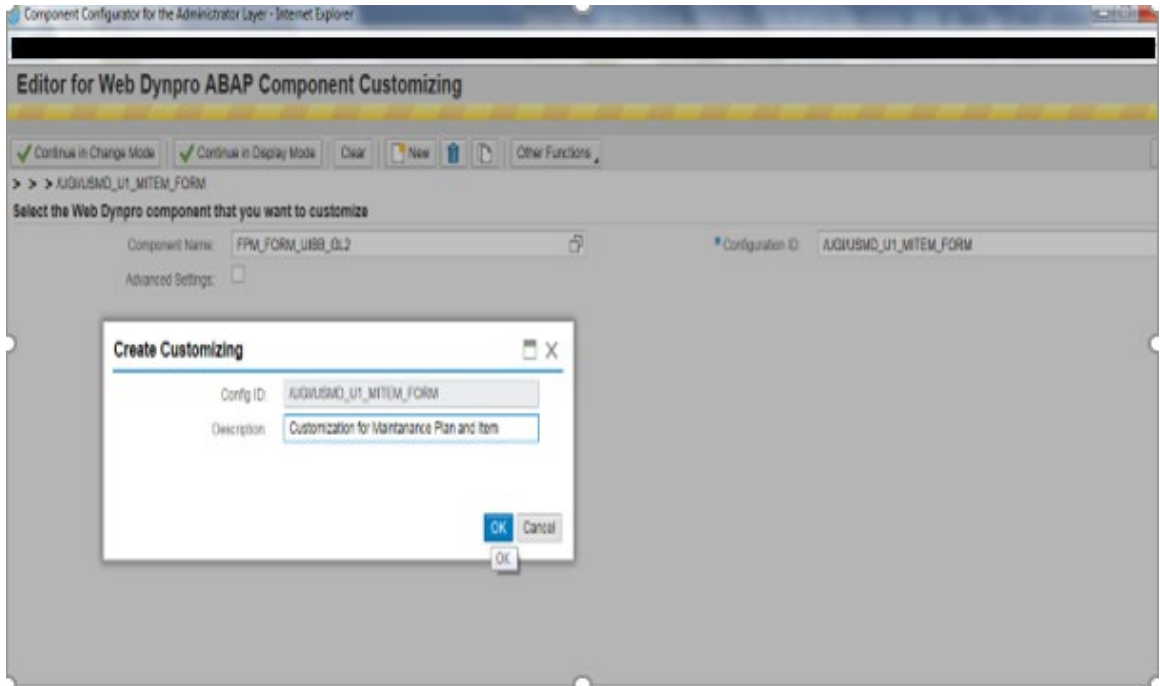
Component	Config ID	Window Name
FPM_LIST_UIBB_ATS	/UGI/USMD_U1_MPMI_MITEM_LIST	LIST_WINDOW
FPM_FORM_UIBB_GL2	/UGI/USMD_U1_MITEM_FORM	FORM_WINDOW

- Click on Additional Functions > Create Customizing.

Additional Functions

- New Window
- Create Customizing**
- Enhance
- Show Properties
- Test

6. Click on OK.



7. Change your UI. Add new fields that was added in entity MITEM.

[illegible]

Testing the Configuration

Note: If you extend the Data Model per 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, Go to NWBC > Create/Change Maintenance Plan

Create Maintenance Plan - \$59 /Category - PM with Change Request - 552

Save Submit Cancel Edit Check Undo Redo

Change Request Edit

General Notes Attachments

General Data

Change Request ID: 552

* Description: Test Mplan Extensibility

Priority:

Due Date:

Reason:

Process Data

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 11/03/2016 09:31:06 NTANGUTURI

Maintenance Plan Edit

Basic Data

* Maintenance Plan: \$59 Test Mplan Extensibility

* Maint. plan cat.: Maintenance Order

☐ Inactive

☐ Mark for deletion

Scheduling Indicator

Scheduling indicator: Time

Maintenance Item Details

* Maintenance item: %4 Test Mplan Extensibility

Reference Object

Functional Location:

Equipment:

Assembly:

Planning Data

Planning plant: 0001 Werk 0001

Order Type: PM01 Corrective order

Main work center: MECH-002 0001 Werk 0001

Priority:

Reviewed by: NTANGUTURI

Reviewed On: 11/03/2016

Planner group:

Business Area:

MaintActivityType: 001 Inspection

Save and Submit the CR. Finalize processing and Approve.

Create Maintenance Plan - 23 /Category - PM with Change Request - 552

Save Cancel Edit Validation Log Change Documents Workflow Log Undo Redo

Change Request

General Notes Attachments

General Data

Change Request ID: 552

Description: Test Mplan Extensibility

Priority:

Due Date:

Reason:

Process Data

Status: Final Check Approved

Current Workitem:

Created On/By: 11/03/2016 09:31:06 NTANGUTURI

Changed On/By: 11/03/2016 09:37:47 NTANGUTURI

Finalized On/By: 11/03/2016 09:38:10 NTANGUTURI

Maintenance Plan Edit

Basic Data

Maintenance Plan: \$59 Test Mplan Extensibility

Maint. plan cat.: Maintenance Order

☐ Inactive

☐ Mark for deletion

Scheduling Indicator

Scheduling indicator: Time

After activation, use t-code SE16 and open table MPOS. Verify attributes that have been transferred correctly.

Data Browser: Table MPOS Select Entries 21

Check Table...

MANDT	WAPOS	WARPL	WSTRA	WPPOS	PSTXT	EQUNR
100	0000000000000001	00				
100	0000000000000002	00				
100	0000000000000003	00				
100	0000000000000004	00				
100	0000000000000005	00				
100	0000000000000006	00				
100	0000000000000007	00				
100	0000000000000008	00				
100	0000000000000009	00				
100	0000000000000010	00				
100	0000000000000011	00				
100	0000000000000012	00				
100	0000000000000013	00				
100	0000000000000014	00				
100	0000000000000015	00				
100	0000000000000016	00				
100	0000000000000017	00				
100	0000000000000018	00				
100	0000000000000021	00				
100	0000000000000022	00				
100	0000000000000023	00				

Details

Group description	Cell Content...
QMNUM	
QMART	
LBLNI	
TASK_DETERMINE	
PRIOK	
QMKAT	
OMGRP	
ZZREVIEWBY	NTANGUTURI
ZZREVIEWDT	11/03/2016
QMCOD	
PHYNR	
ART	
PRUEFLOS	
TSTMP_BW	0
NO_AUFRELKZ	
DESNUM	
CYCLESEQIND	
ADPSP	
IND_MPOS_API	CU