How-To Guide: Extend MDG-uEQUIP in the U1 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-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.

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Scenario

High Level Requirements

The business requires the new attributes called “User Detail” as part of the MDG Equipment Data Model.
You want to extend the (Type1) entity type EQUI to include attributes: ZZNAME, ZZID.

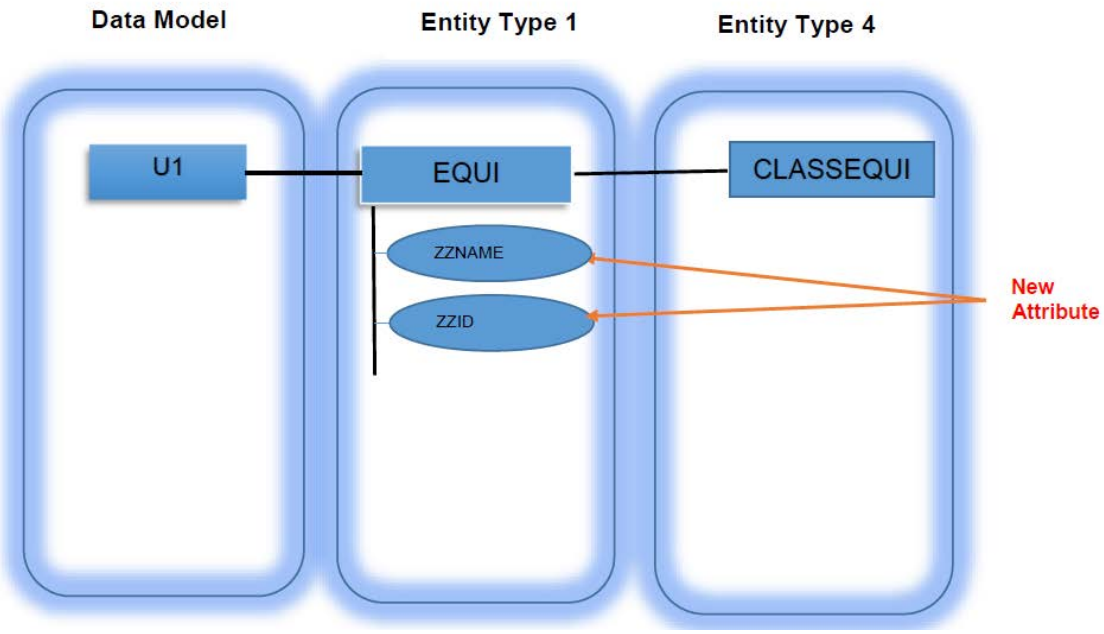


Figure: Data Model – Equipment (Scope of 2017 Delivery) with custom attributes ‘ZZNAME” and “ZZID”

Governance Process

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

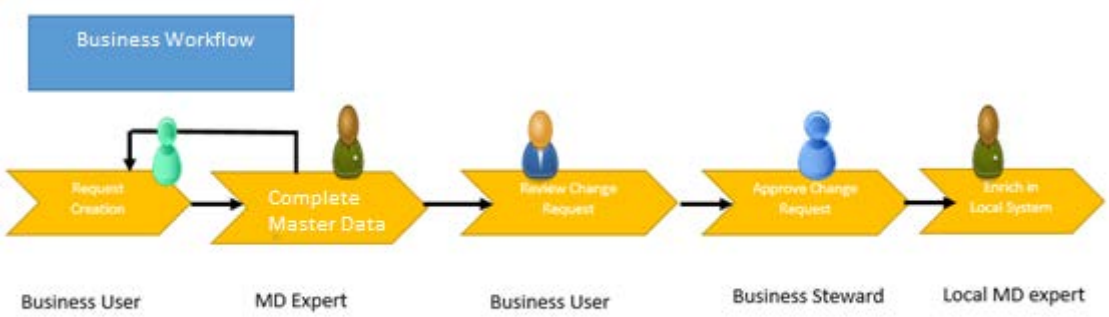


Figure: Equipment processing in Master Data Governance

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.

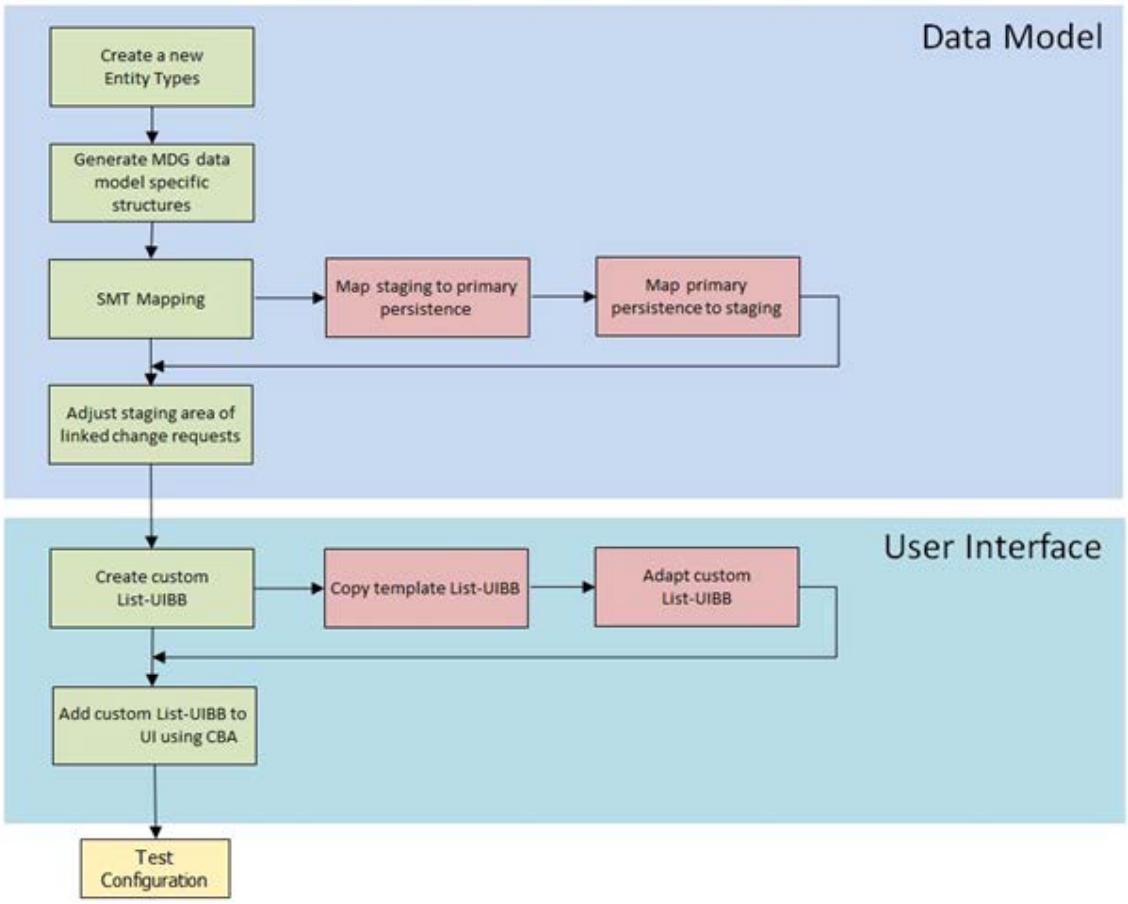
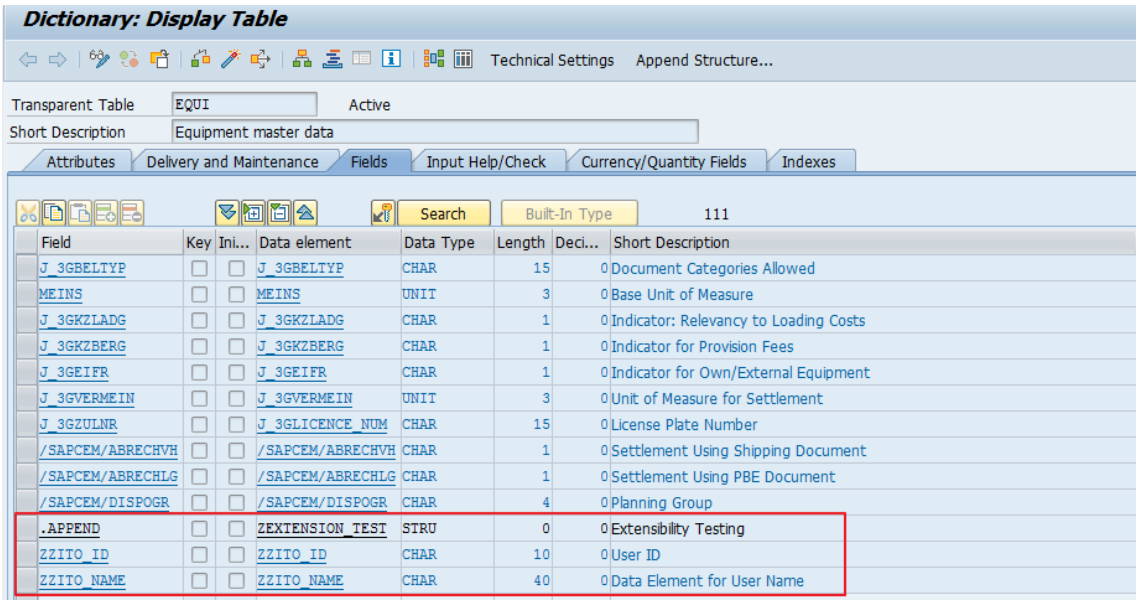


Figure: Implementation steps for re-use Entity-Type extension

Data Model Extension

You want to extend the MDG Data Model for Equipment (U1) with the additional attributes ZZITO_NAME and ZZITO_ID. The following fields from EQUI table should be modelled as attribute of entity type EQUI in MDG.



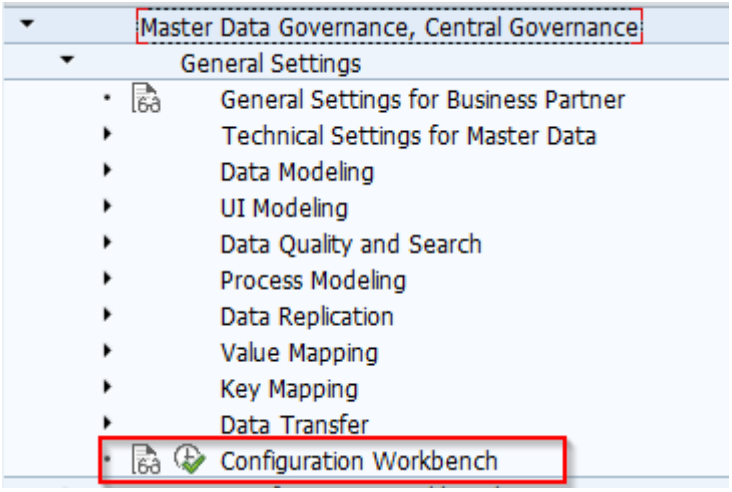
Field	Key	Ini...	Data element	Data Type	Length	Deci...	Short Description
J_3GBELTYP			J_3GBELTYP	CHAR	15	0	Document Categories Allowed
MEINS			MEINS	UNIT	3	0	Base Unit of Measure
J_3GKZLADG			J_3GKZLADG	CHAR	1	0	Indicator: Relevancy to Loading Costs
J_3GKZBERG			J_3GKZBERG	CHAR	1	0	Indicator for Provision Fees
J_3GEIFR			J_3GEIFR	CHAR	1	0	Indicator for Own/External Equipment
J_3GVERMEIN			J_3GVERMEIN	UNIT	3	0	Unit of Measure for Settlement
J_3GZULNR			J_3GLICENCE_NUM	CHAR	15	0	License Plate Number
/SAPCEM/ABRECHVH			/SAPCEM/ABRECHVH	CHAR	1	0	Settlement Using Shipping Document
/SAPCEM/ABRECHLG			/SAPCEM/ABRECHLG	CHAR	1	0	Settlement Using PBE Document
/SAPCEM/DISPOGR			/SAPCEM/DISPOGR	CHAR	4	0	Planning Group
.APPEND			ZEXTENSION_TEST	STRU	0	0	Extensibility Testing
ZZITO_ID			ZZITO_ID	CHAR	10	0	User ID
ZZITO_NAME			ZZITO_NAME	CHAR	40	0	Data Element for User Name

You first create the attributes ZZITO_NAME, ZZITO_IID in entity type EQUI.

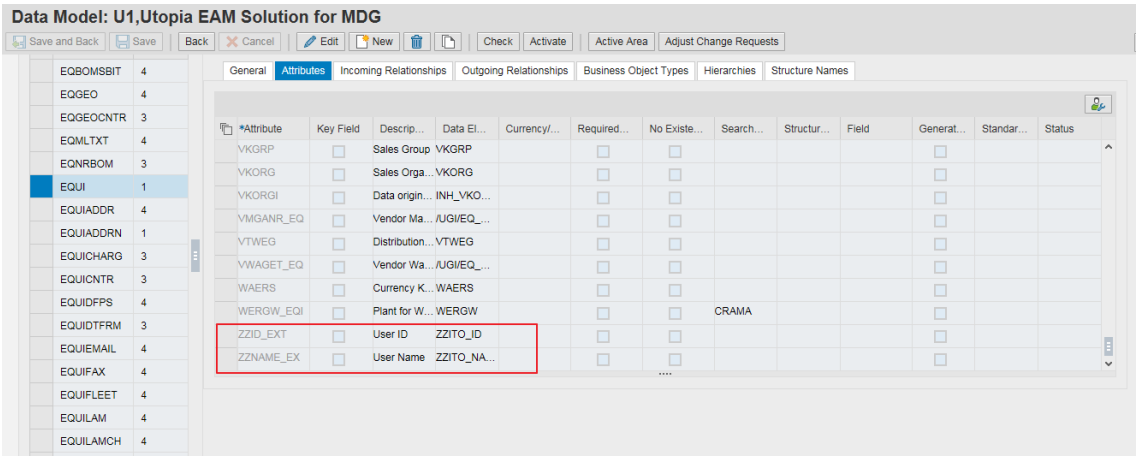
Add attributes to existing Entity Type

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

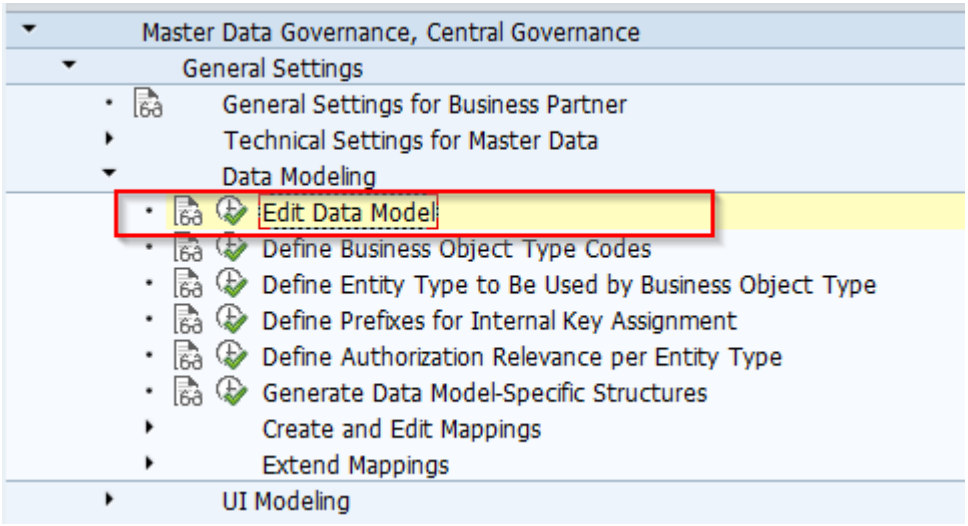
1. Log into the system for cross client maintenance.
2. Start Customizing for Master Data Governance (transaction MDGIMG). Go to > General Settings > Configuration Workbench.

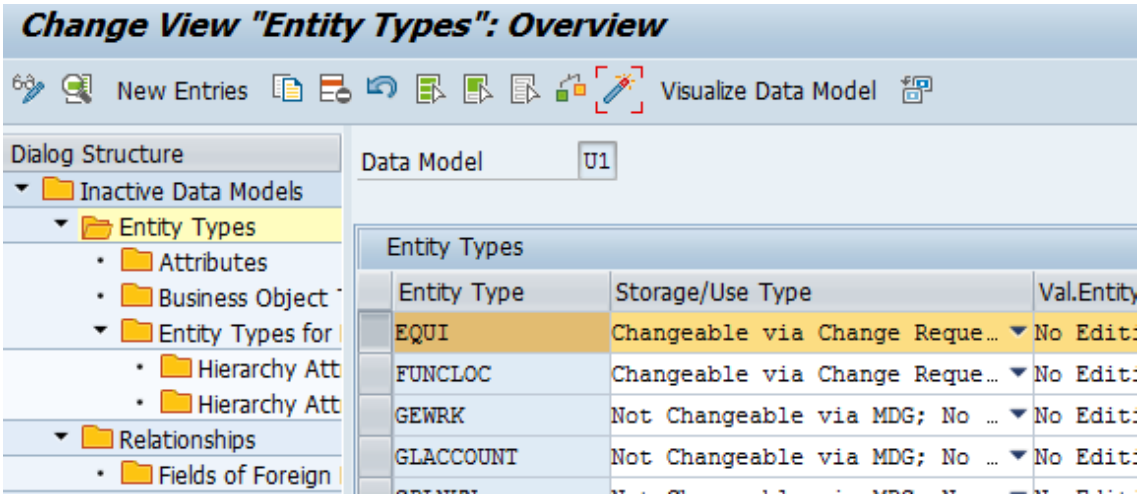


3. Inside the Configuration Workbench, select Data Model U1 > Click the “Edit” button > Select EQUI from the list of Entity Types in the left side table- > Click on the tab “Attributes” in the right side > Click the “New” button.
4. Add the new attributes of Entity Type EQUI as displayed in the following screen.

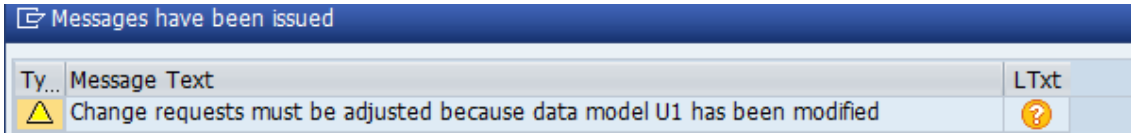


5. Save your settings.
   It is recommended to assign a Search Help to a Data Element in exceptional circumstances. If you do this, the input help executes the search help instead of reading the data in the check table or the fixed values of data element's domain.
6. Activate the extended Data Model from MDG system via Edit Data Model option as displayed in the following screen.





After activation the following information message is displayed.



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

Generate MDG Data Model-Specific Structures

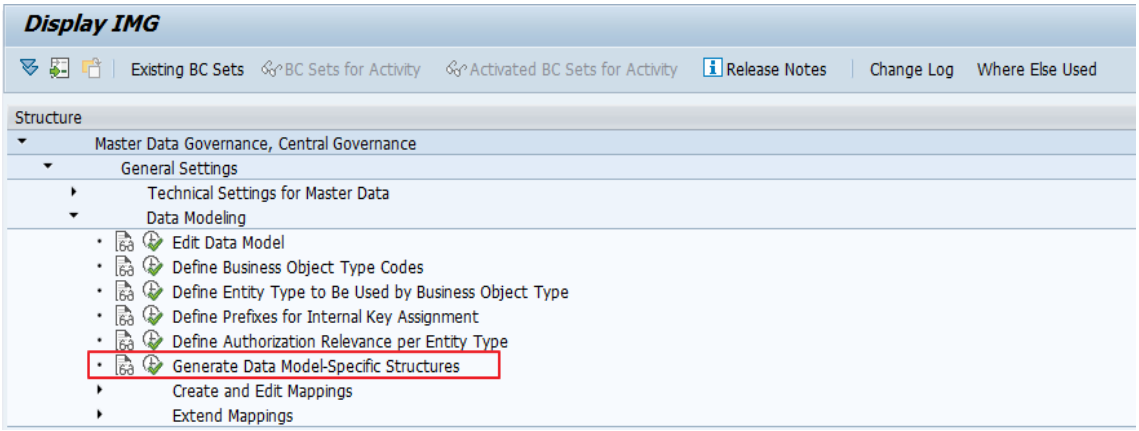
In general, if you change a Data Model (for example, if you change attributes of entity types or relationships) you need to regenerate the structures. You can assign a prefix and a package directly in the Data Model. Then the structures will be generated automatically with activation of the Data Model.

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.

Use the following steps to generate Data Model Specific Structures.

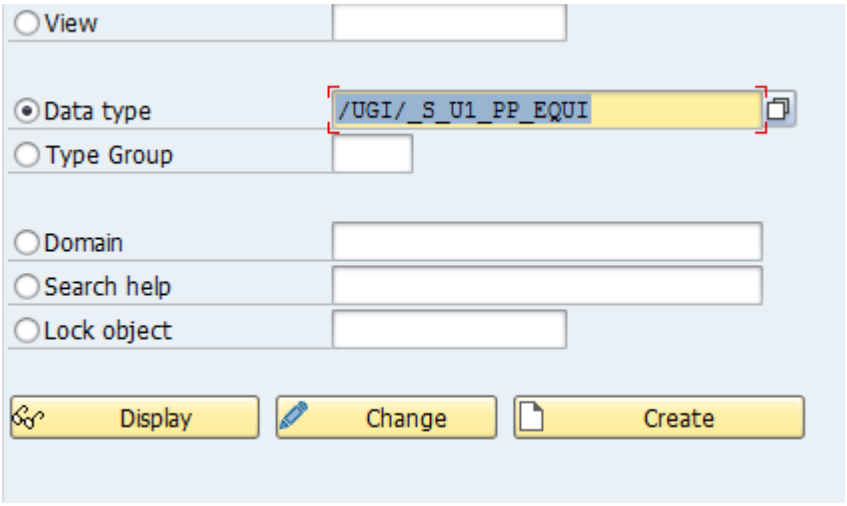
1. Start Customizing for Master Data Governance (transaction MDGIMG).
   Go to > General Settings > Data Modeling > Generate Data Model-Specific Structures.



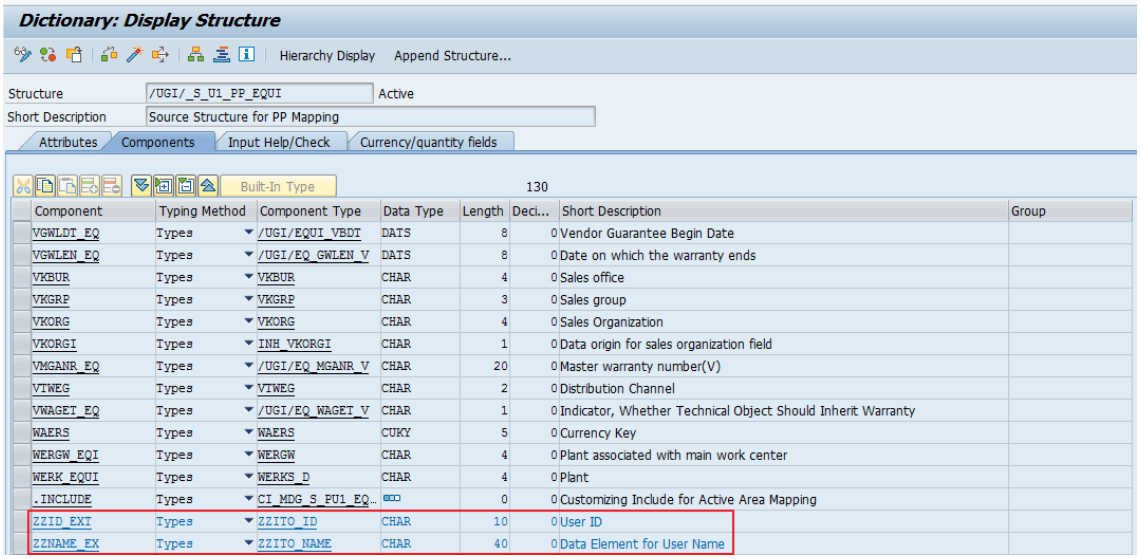
2. Select the row with Data Model U1 > Double-Click Structures in the left-hand panel > Choose the “Generate Selected Structures” button.
3. Verify that your structures were successfully generated.

Ty...	Message Text
	Data model U1: Definitions of generated structures are consistent
	Data model U1: Structure CI_MDG_S_U1_EQUI activated
	Data model U1: Structure CI_MDG_S_PU1_EQUI activated
	Data model U1: Structure CI_MDG_SF_PU1_EQUI activated
	Data model U1: Structure CI_MDG_S_EU1_EQUI activated
	Data model U1: Structure CI_MDG_S_FU1_EQUI activated
	Data model U1: Structure CI_MDG_S_FU1_EQUI activated
	Data model U1: Structure CI_MDG_S_U1_EQUI activated
	Data model U1: Structure CI_MDG_S_PU1_EQUI activated
	Data model U1: Structure CI_MDG_SF_PU1_EQUI activated

4. In the following steps, you verify that one of the active area mapping structures was successfully generated with new fields.
   Start transaction SE11 > Display structure /UGI/_S_U1_PP_EQUI.



You have now verified that the structure /UGI/_S_U1_PP_EQUI has been generated.



Component	Typing Method	Component Type	Data Type	Length	Deci...	Short Description	Group
VGWLDT_EQ	Types	/UGI/EQUI_VBDT	DATS	8	0	Vendor Guarantee Begin Date	
VGWLEN_EQ	Types	/UGI/EQ_GWLEN_V	DATS	8	0	Date on which the warranty ends	
VKBUR	Types	VKBUR	CHAR	4	0	Sales office	
VKGRP	Types	VKGRP	CHAR	3	0	Sales group	
VKORG	Types	VKORG	CHAR	4	0	Sales Organization	
VKORGI	Types	INH_VKORGI	CHAR	1	0	Data origin for sales organization field	
VMGANR_EQ	Types	/UGI/EQ_MGANR_V	CHAR	20	0	Master warranty number(V)	
VTWEG	Types	VTWEG	CHAR	2	0	Distribution Channel	
VWAGET_EQ	Types	/UGI/EQ_WAGET_V	CHAR	1	0	Indicator, Whether Technical Object Should Inherit Warranty	
WAERS	Types	WAERS	CUKY	5	0	Currency Key	
WERGW_EQI	Types	WERGW	CHAR	4	0	Plant associated with main work center	
WERK_EQUI	Types	WERKS_D	CHAR	4	0	Plant	
.INCLUDE	Types	CI_MDG_S_PU1_EQ...		0	0	Customizing Include for Active Area Mapping	
ZZID_EXT	Types	ZZITO_ID	CHAR	10	0	User ID	
ZZNAME_EX	Types	ZZITO_NAME	CHAR	40	0	Data Element for User Name	

SMT Mapping

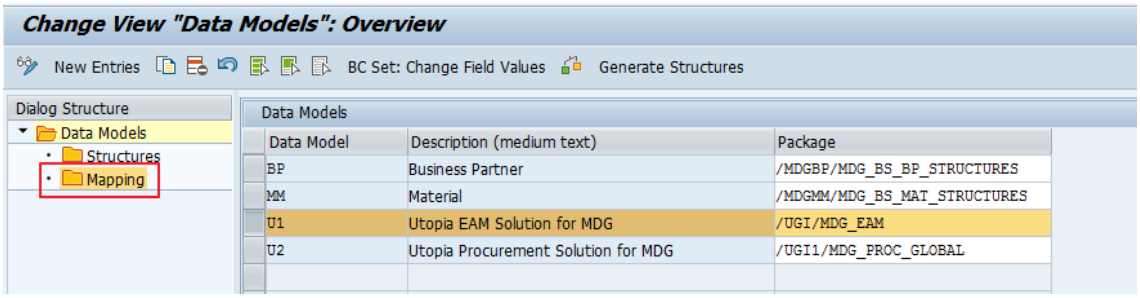
You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

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

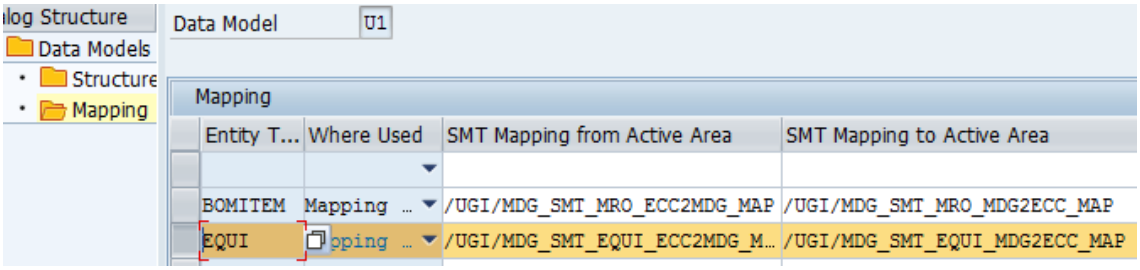
SMT Mapping – Get Mapping Names from Data Model U1

Use the following steps to get the mapping names:

1. Log into the 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.



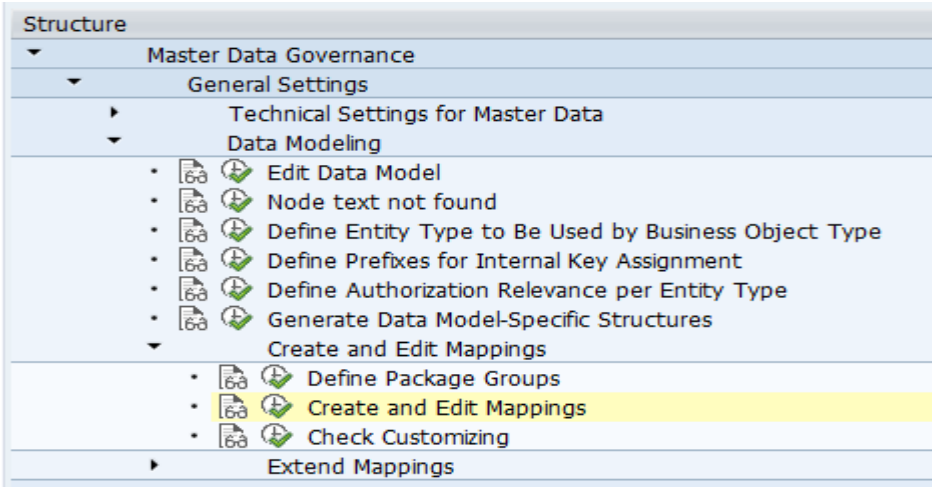
   The SMT mappings for Entity Type EQUI as displayed in the following screen.



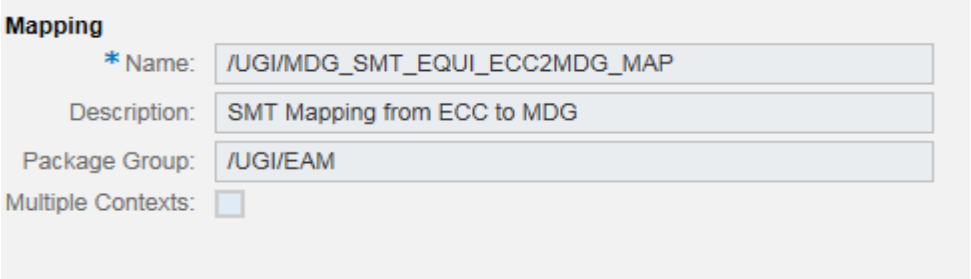
SMT Mapping - Primary Persistence to Staging

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

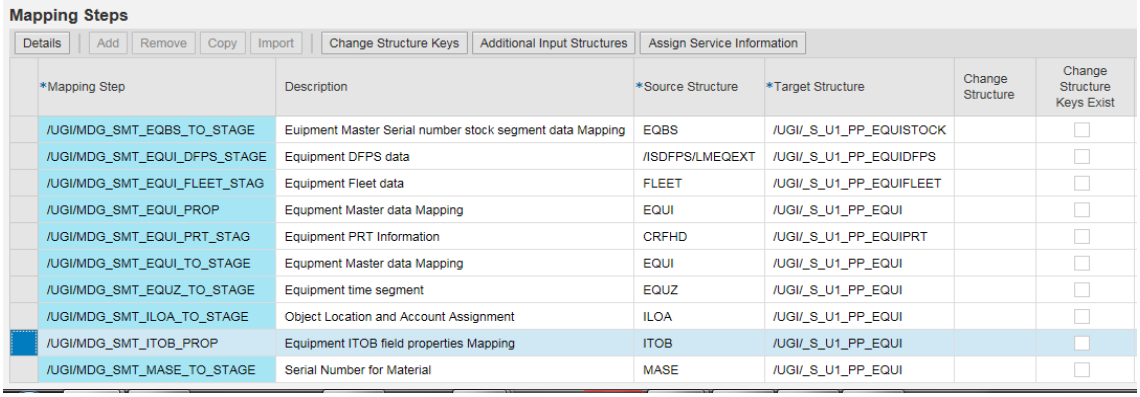
1. Log into the system for cross-client maintenance. Start Customizing for Master Data Governance (transaction MDGIMG).
   Go to > General Settings > Data Modeling > Create and Edit Mappings > Create and Edit Mappings.
   Note: For new Entity Types, it is recommended to create a new mapping. When extending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



2. Extend mapping /UGI/MDG_SMT_EQUI_ECC2MDG_MAP.

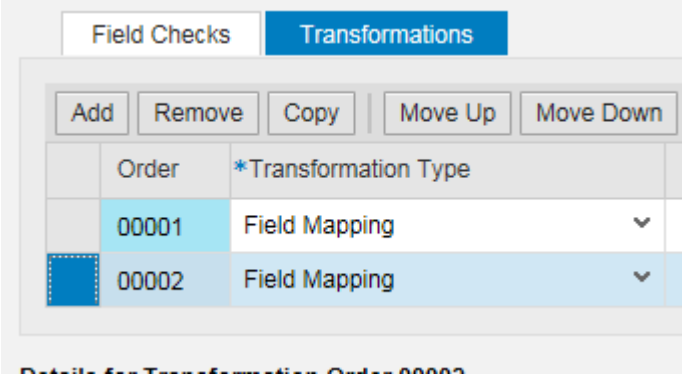


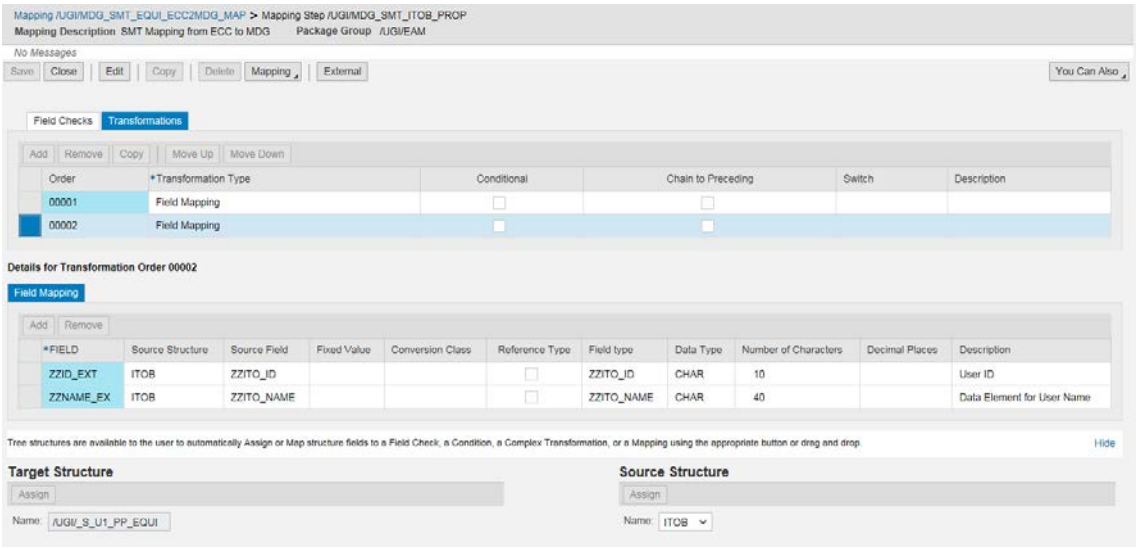
3. Select Mapping Step /UGI1/MDG_SMT_ITOB_PROP and select the “Details” button.



*Mapping Step	Description	*Source Structure	*Target Structure	Change Structure	Change Structure Keys Exist
/UGI/MDG_SMT_EQBS_TO_STAGE	Euipment Master Serial number stock segment data Mapping	EQBS	/UGI/_S_U1_PP_EQUISTOCK		
/UGI/MDG_SMT_EQUI_DFPS_STAGE	Equipment DFPS data	/ISDFPS/LMEQEXT	/UGI/_S_U1_PP_EQUIDFPS		
/UGI/MDG_SMT_EQUI_FLEET_STAG	Equipment Fleet data	FLEET	/UGI/_S_U1_PP_EQUIFLEET		
/UGI/MDG_SMT_EQUI_PROP	Equpment Master data Mapping	EQUI	/UGI/_S_U1_PP_EQUI		
/UGI/MDG_SMT_EQUI_PRT_STAG	Equipment PRT Information	CRFHD	/UGI/_S_U1_PP_EQUIPRT		
/UGI/MDG_SMT_EQUI_TO_STAGE	Equpment Master data Mapping	EQUI	/UGI/_S_U1_PP_EQUI		
/UGI/MDG_SMT_EQUZ_TO_STAGE	Equipment time segment	EQUZ	/UGI/_S_U1_PP_EQUI		
/UGI/MDG_SMT_ILOA_TO_STAGE	Object Location and Account Assignment	ILOA	/UGI/_S_U1_PP_EQUI		
/UGI/MDG_SMT_ITOB_PROP	Equipment ITOB field properties Mapping	ITOB	/UGI/_S_U1_PP_EQUI		
/UGI/MDG_SMT_MASE_TO_STAGE	Serial Number for Material	MASE	/UGI/_S_U1_PP_EQUI		

4. Add a mapping step – Assign Source Structure EQUI, assign target structure /UIG/_S_U1_PP_EQUI.



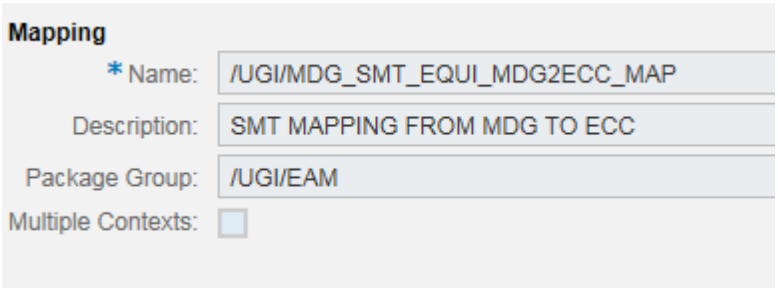


5. Save your changes.

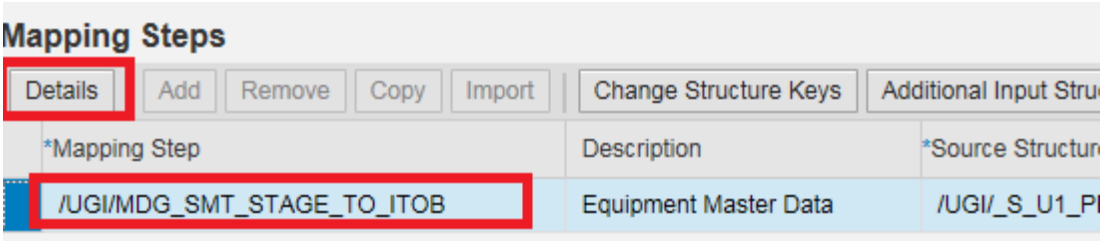
SMT Mapping - Staging to Primary Persistence

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

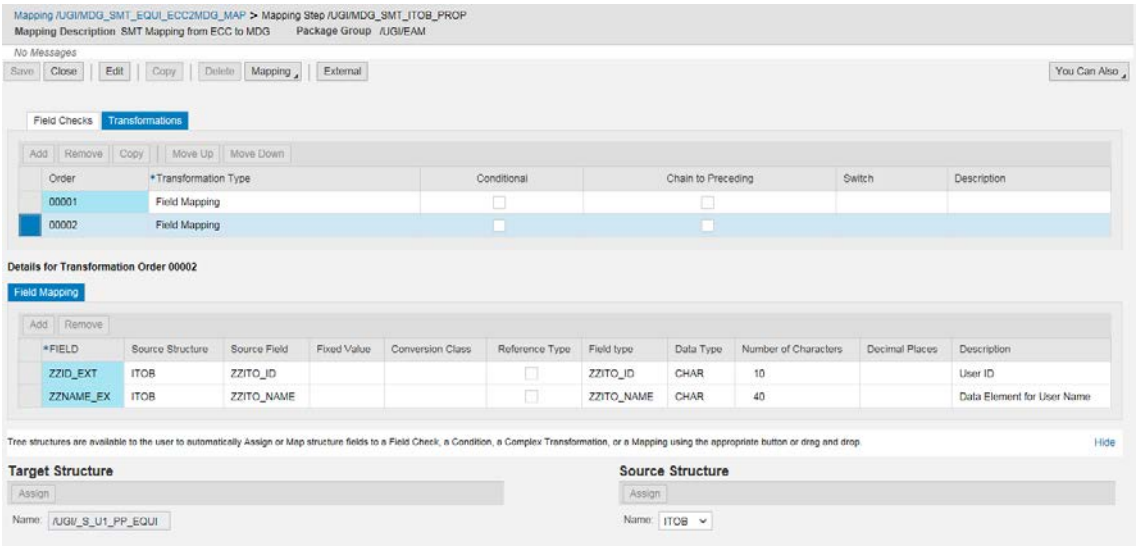
1. Extend mapping /UGI/MDG_SMT_EQUI_MDG2ECC_MAP.



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



3. Add Mapping Step – Assign target structure ITOB and Assign Source Structure /UGI/_S_U1_PP_EQUI.

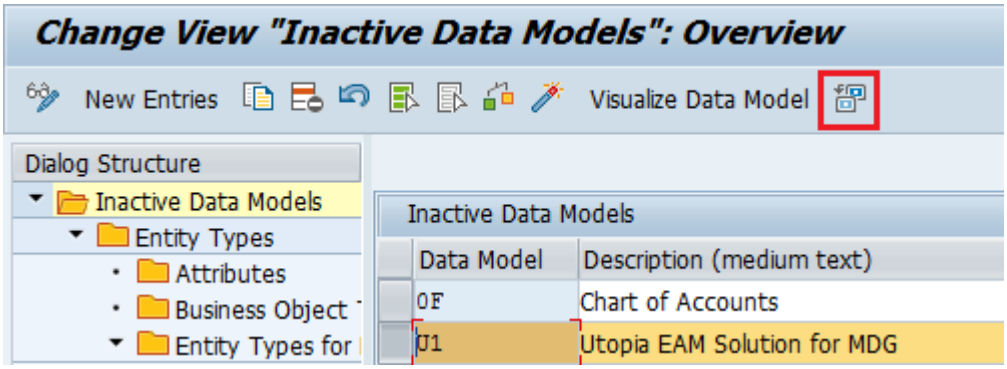


4. Save your changes.

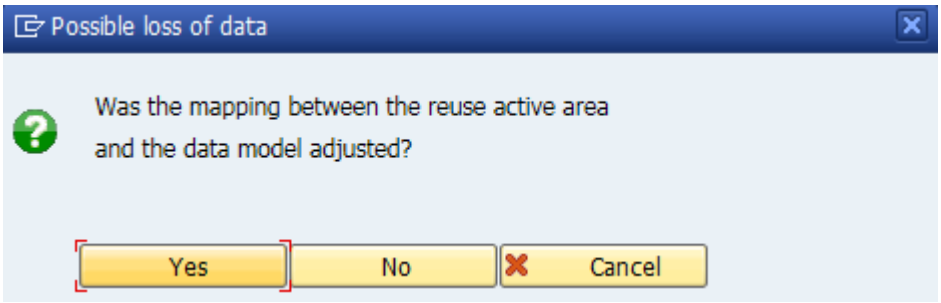
Adjust Staging Area of Linked Change Requests

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.

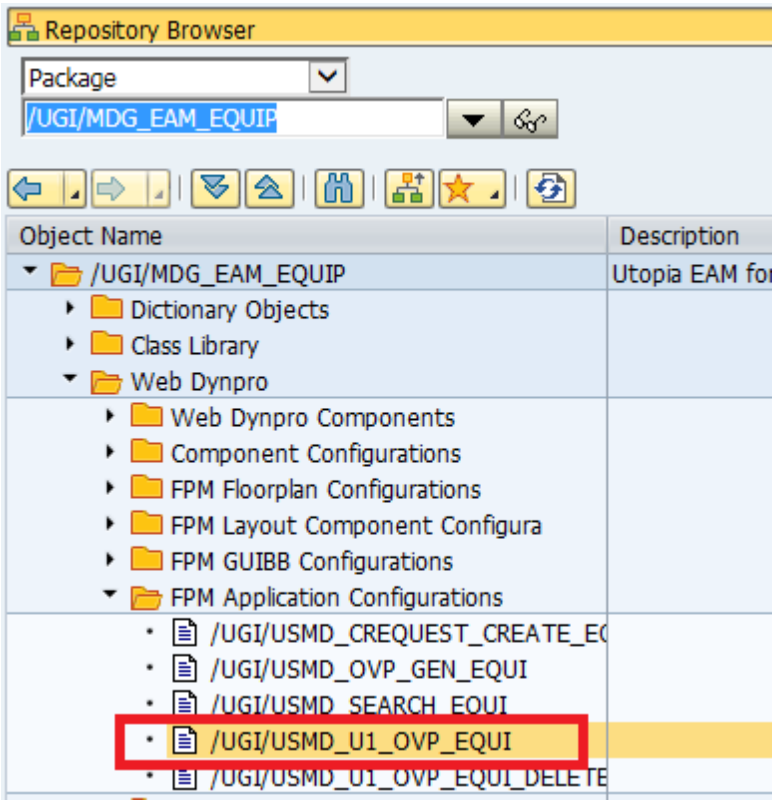


   The following message appears.
   Note: Make sure that user DDIC exist in all relevant clients.

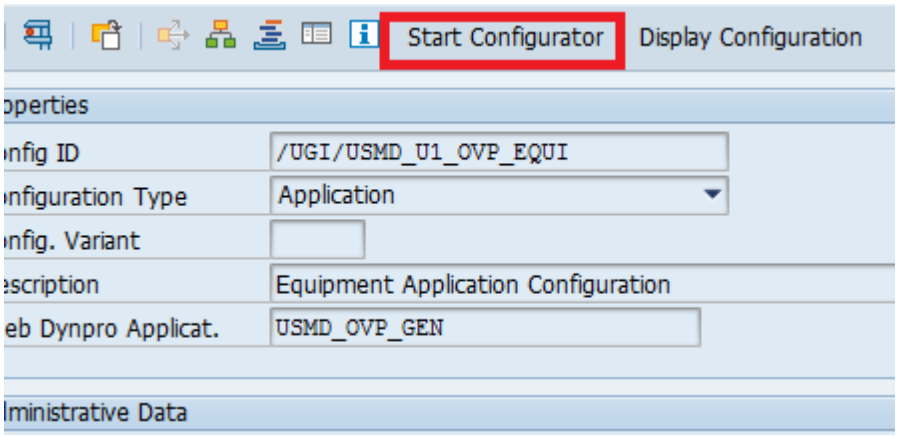
Extending the UI Configuration

Use the following steps to add customization to UI:

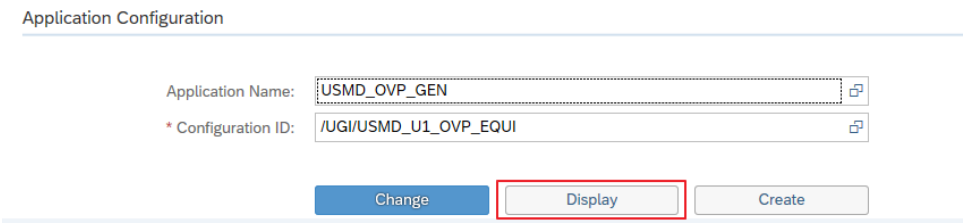
1. Start transaction SE80 > In the drop down select Package > In the input field enter /UGI/MDG_EAM_EQUIP > Navigate to Web Dynpro > FPM Application Configurations > UGI/USMD_U1_OVP_EQUIP.



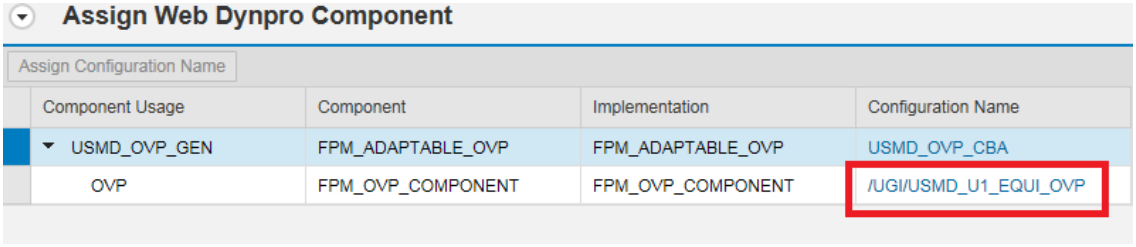
2. Enter the “Start Configurator” button.



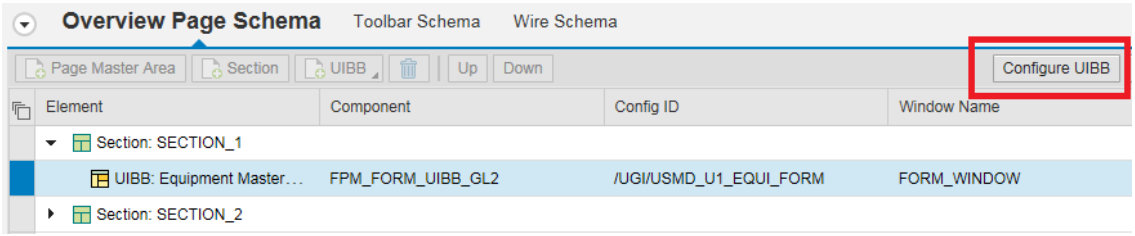
3. In the web browser, click on “Continue in Display Mode”.



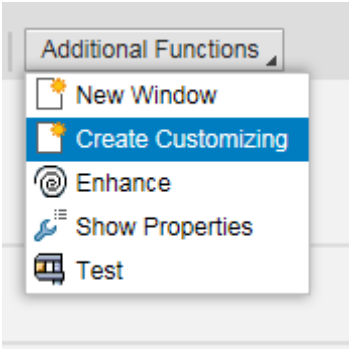
4. Click on the configuration UGI/USM_U1_EQUI_OVP.



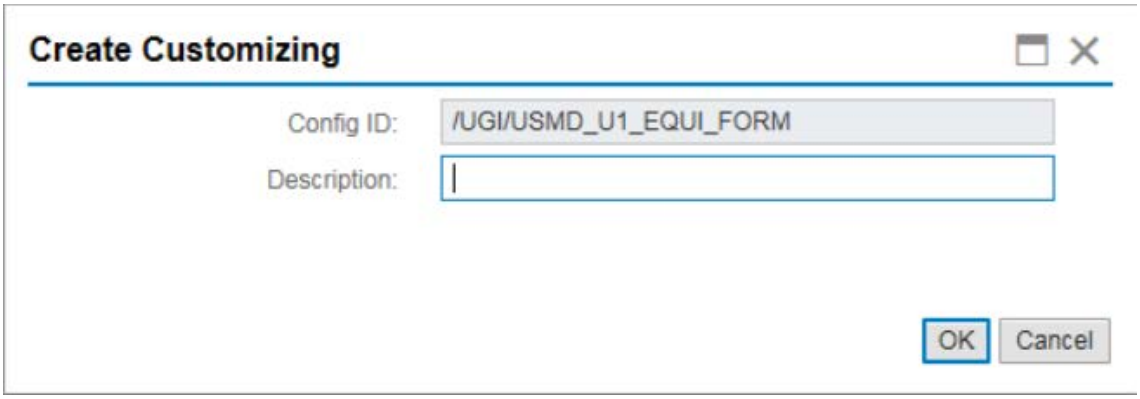
5. Select the UIBB where you want to add new attributes and click on “Configure UIBB” button.



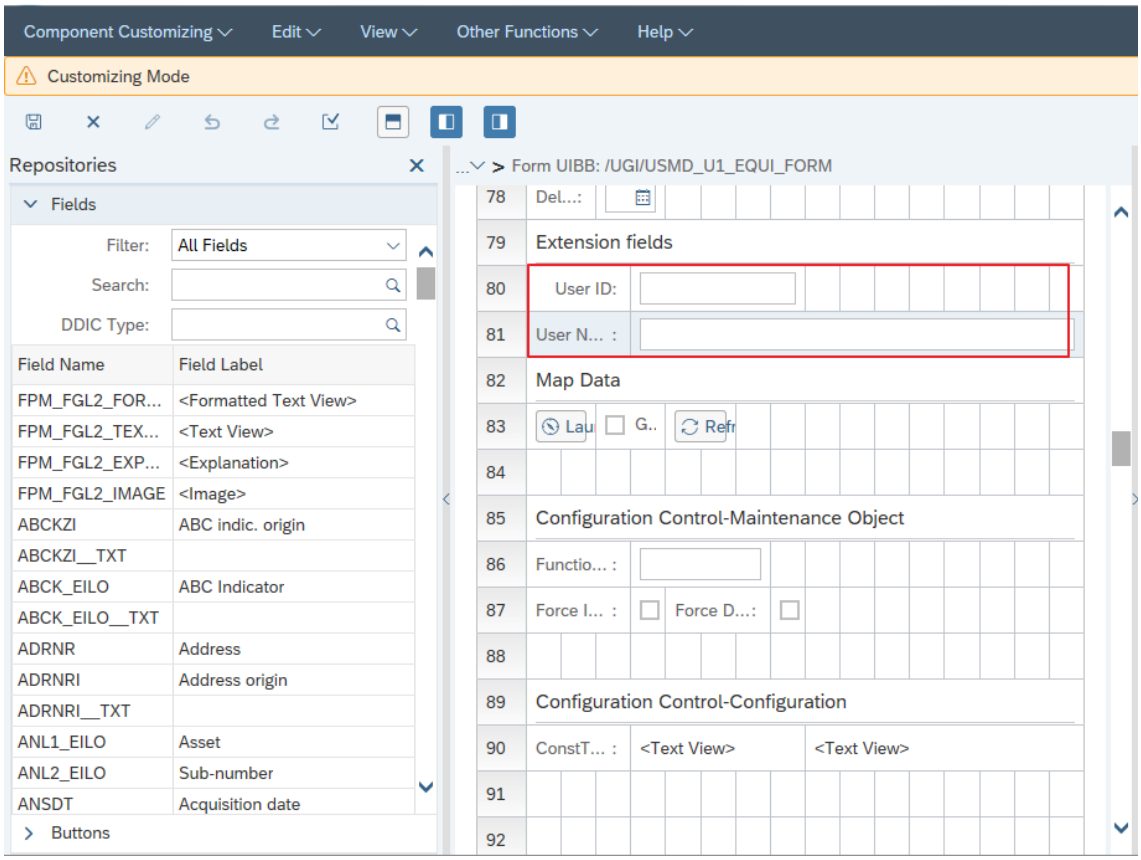
6. Click on Additional Functions > Create Customizing.



7. Click on the “OK” button.



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



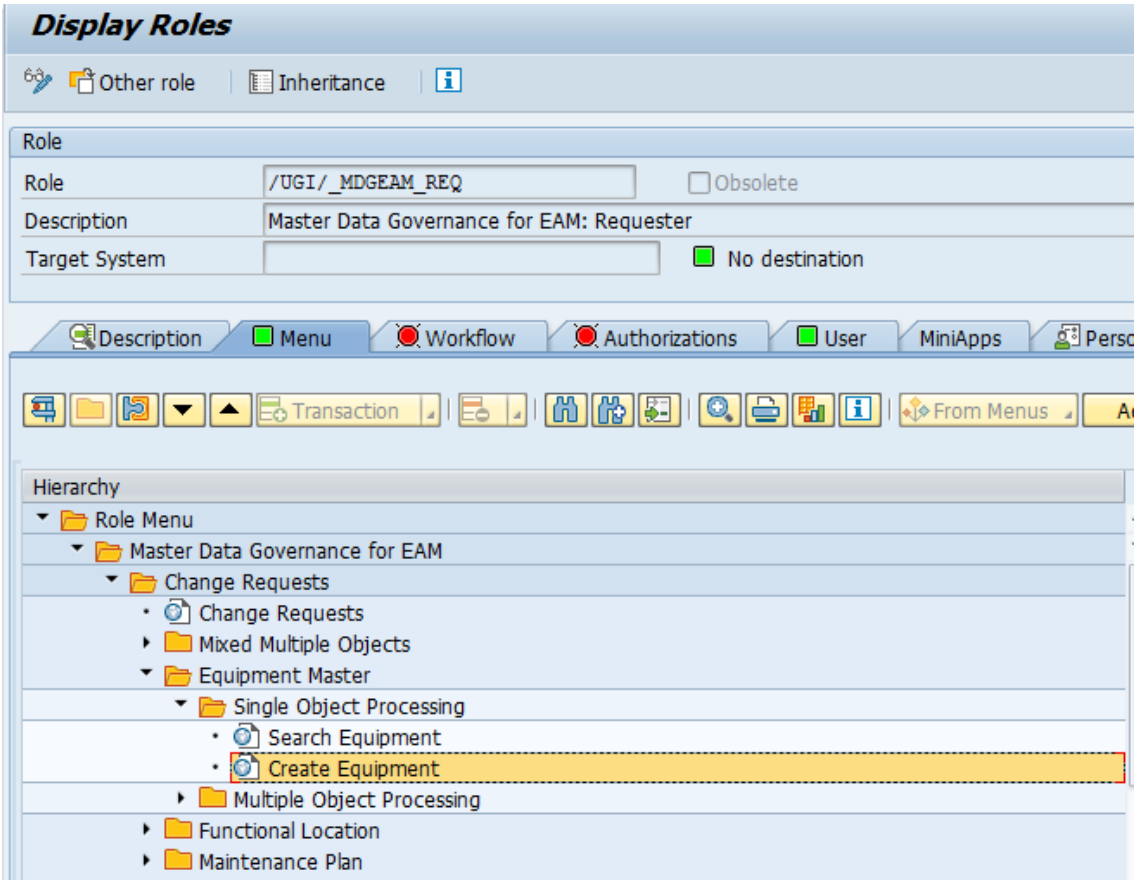
Testing the Configuration

***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.

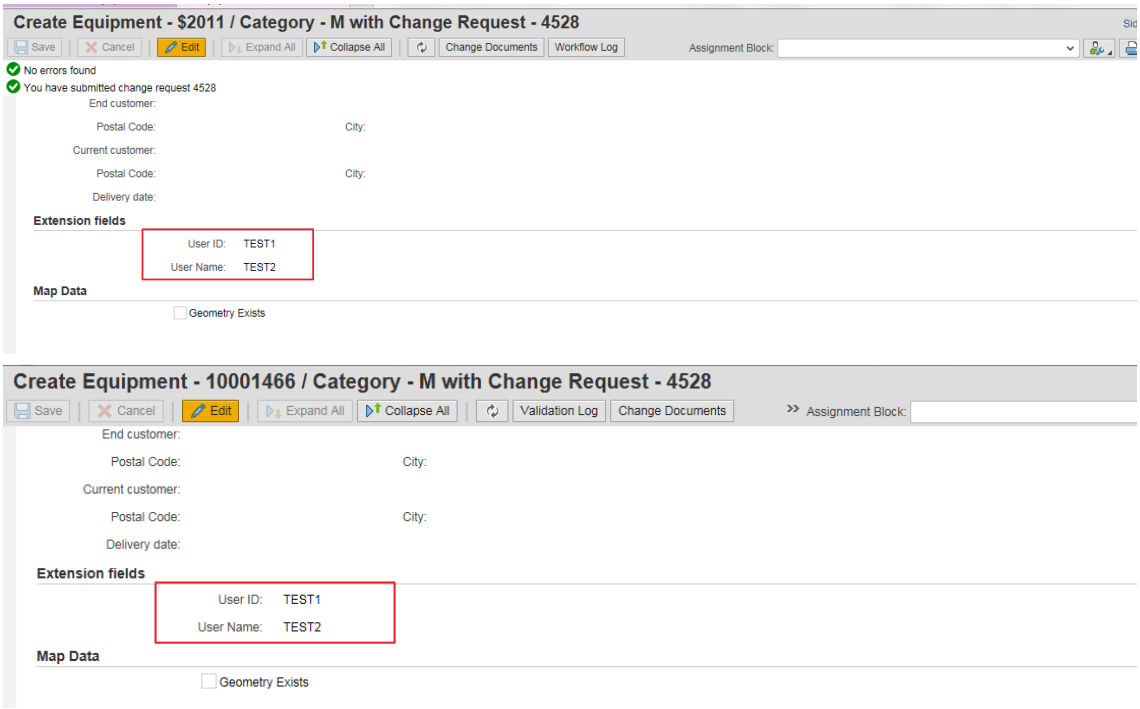
To test your configuration, start the MDG Equipment Master UI using the following URL (replace the parameters host, port and client-id to match your landscape):

https://<host>:<port>/sap/bc/webdynpro/sap/ usmd_ovp_gen?
ACTION=CREATE&FPM_EDIT_MODE=E&saplanguage=EN&WDCONFIGURATIONID=
%2fUGI1%2fUSMD_U1_OVP_EQUI#

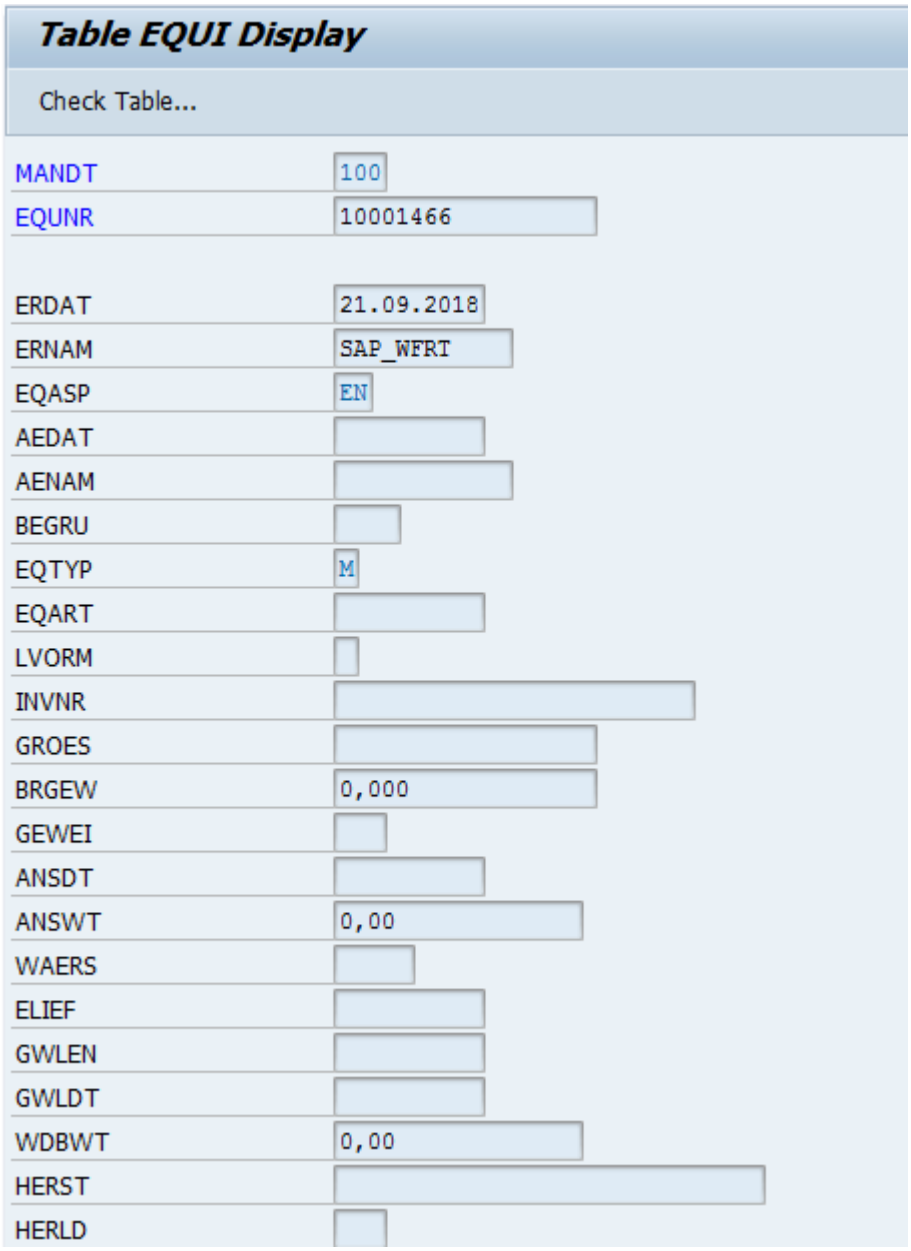
1. Start transaction PFCG > Enter role name /UGI/_MDGEAM_REQ and click the “Display” button > Select the Menu – Tab > In the hierarchy window navigate to Role Menu > Master Data Governance for EAM > Change Request > Equipment Master > Single Object Processing > Right-Click on Create Equipment and select Execute from the drop-down.



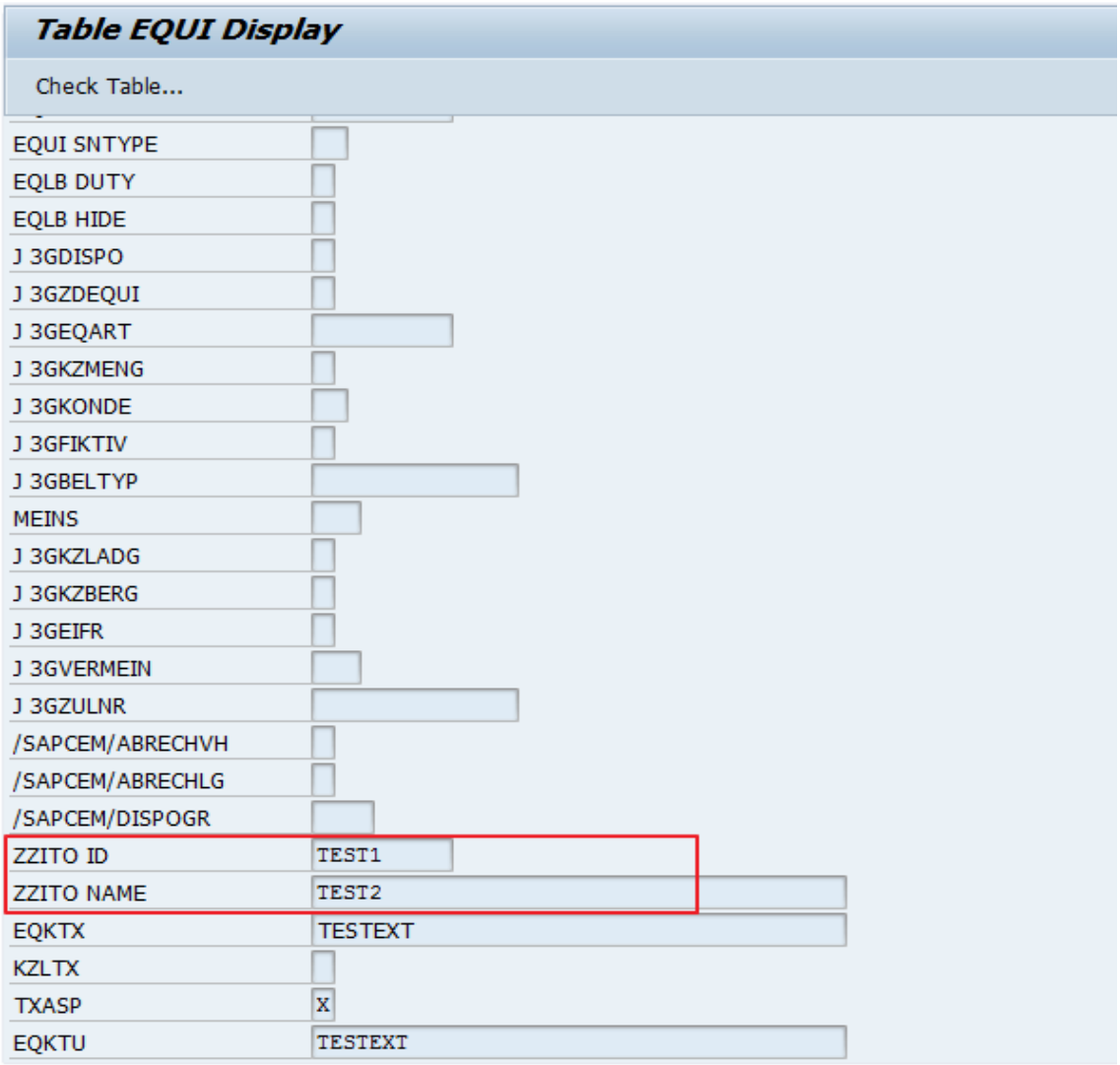
2. Save and Submit the CR. Finalize processing and Approve.



3. After activation, check table EQUI and verify that the attributes have been transferred correctly.



Custom attributes have been populated correctly.



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