

How-To Guide: Extend MDG-uMSRPTS 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.

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Scenario

High Level Requirements

Purpose: To display Catalog based on the Measuring point category.

Data Model Extension: You want to extend MDG Data Model for U1 by adding additional attribute ZZKATALOG to the entity MSPOINT.

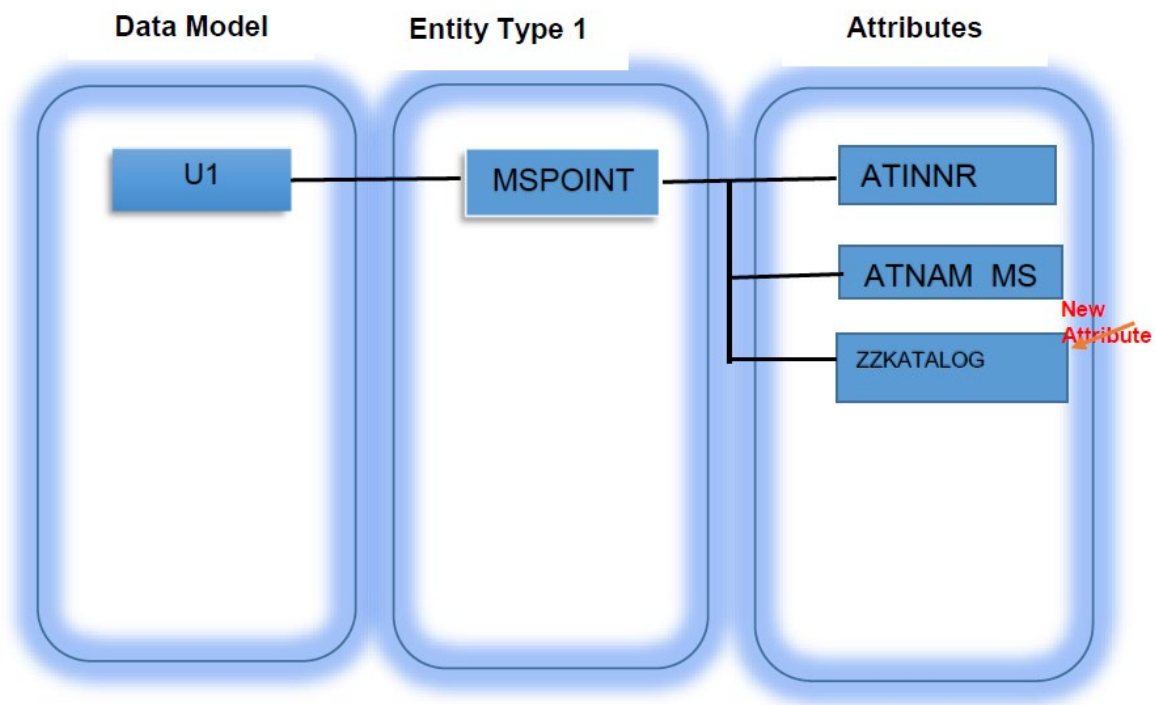


Figure: Data Model – **MSPOINT** with custom attribute “ZZKATALOG”

Governance Process

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

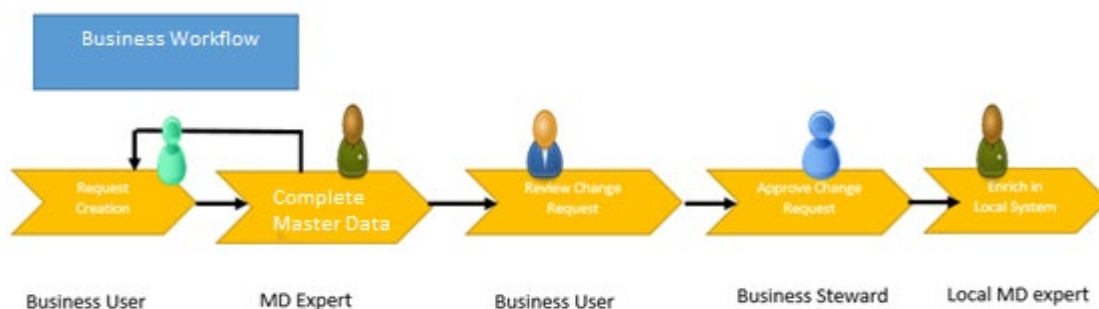


Figure: Measuring Point processing in Master Data Governance

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 to use it as an orientation.

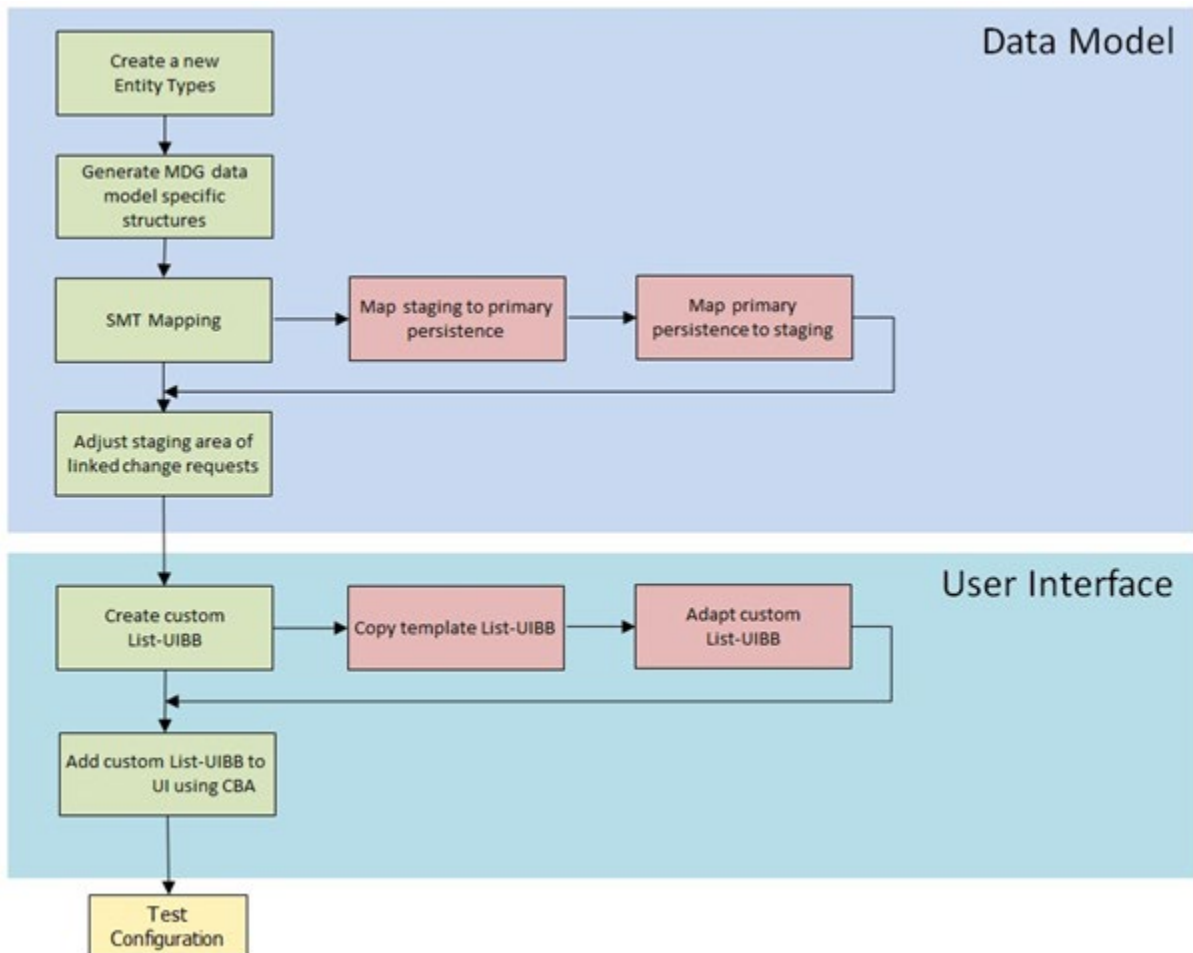


Figure: Implementation steps for re-use Entity-Type extension

Data Model Extension

You want to extend the MDG Data Model (U1) for MSPPOINT by the additional attribute “Catalog” (ZZKATALOG). The following field from IMPTT should be modeled as attributes of the Entity in MDG.

Dictionary: Display Table

Transparent Table: IMPTT Active
Short Description: Measuring Point (Table)

Attributes Delivery and Maintenance Fields Input Help/Check Currency/Quantity Fields

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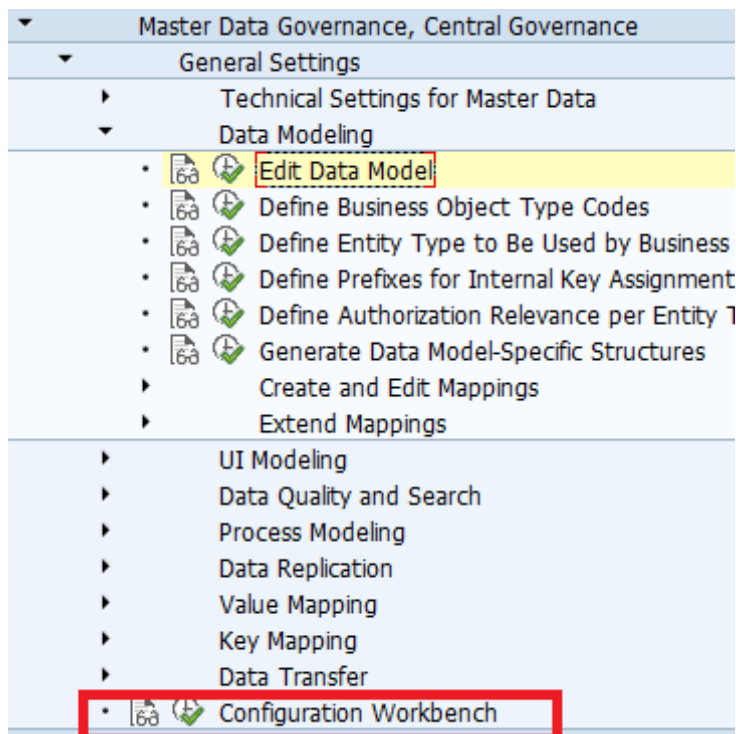
Field	Key	Ini...	Data element	Data Type	Length	Dec...	Short Description	Group
PYEAR		<input checked="" type="checkbox"/>	IMRC_PYEAR	FLTP	16		16 Annual Estimate in SI Unit	
PYEAR1		<input checked="" type="checkbox"/>	IVALU	CHAR	1		0 Indicator: Associated Number Field Contains a Value	
CODCI		<input checked="" type="checkbox"/>	IMRC_CODCI	CHAR	1		0 Catalog Type - Measurement Reading Valuation Code	
CODGR		<input checked="" type="checkbox"/>	IMRC_CODGR	CHAR	8		0 Code Group - Measurement Reading Valuation Code	
CODGR1		<input checked="" type="checkbox"/>	IMRCRCODGR	CHAR	1		0 Indicator: Code Group Comes From Reference Measuring Point	
CDSUF		<input checked="" type="checkbox"/>	IMRC_CDSUF	CHAR	1		0 Indicator: Valuation Code Sufficient for Measurmnt. Document	
MODTR		<input checked="" type="checkbox"/>	IMRC_MODTR	CHAR	1		0 Mode of Counter Reading Transfer	
INCLUDE		<input type="checkbox"/>	CI_IMPTT	STRU	0		0 Additional fields for Measuring point	
ZZKATALOGARI		<input type="checkbox"/>	QCATARI	CHAR	1		0 Catalog	
INDTR		<input checked="" type="checkbox"/>	IMRCINDTR	CHAR	1		0 Indicator: Measurement Transfer Comes from Ref. Meas. Point	
.APPEND		<input type="checkbox"/>	/ISDFPS/IMPTT	STRU	0		0 /ISDFPS/Enhancements	
LOGSYS		<input type="checkbox"/>	/ISDFPS/LOGSYS	CHAR	10		0 Logical System	
LOGSYS_CHG		<input type="checkbox"/>	T2NT3TMP3	DEC	15		0 UTC Time Stamp in Short Form (YYYYMMDDhhmmss)	

You first create the attribute ZZKATALOG in entity type IMPTT.

Add attributes to existing Entity Type

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

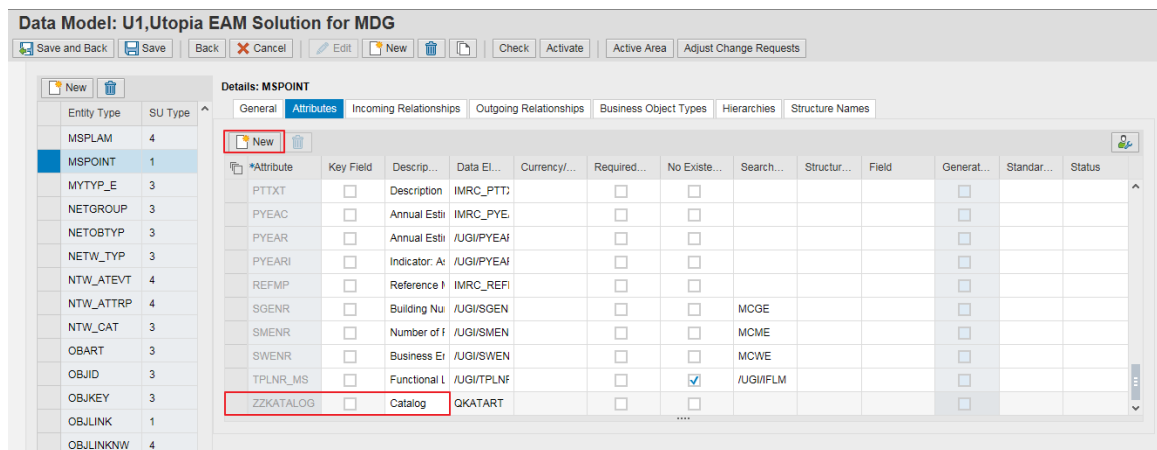
1. Log into system for cross client maintenance.
2. Start Customizing for Master Data Governance (transaction MDGIMG).
Go to > General Settings > Configuration Workbench > Select Data Model U1 > Click the “Edit” button > In the left-hand table with the list of Entity Types click the “New” button.



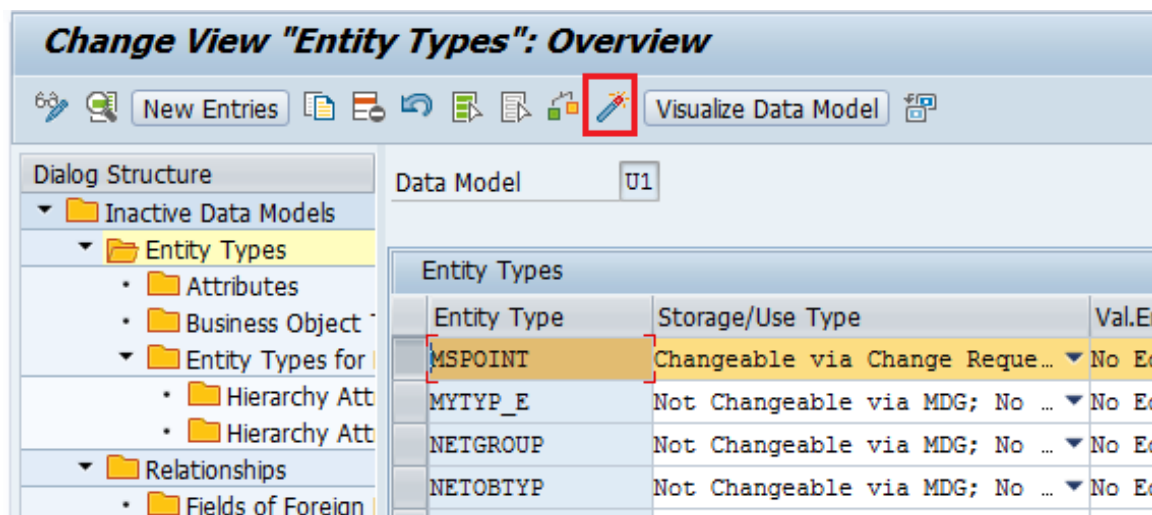
3. Add the attributes of Entity Type MSPOINT as displayed in the following screenshot.
4. Save your settings.

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.

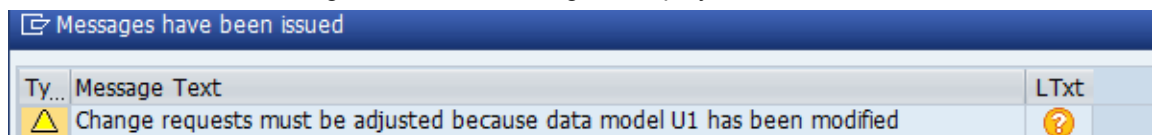
In the following steps, you define new entity types that are needed to define the key fields using relationships.



5. Activate the extended Data Model.



After activation the following information message is displayed.



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

Generate MDG Data Model-Specific Structures

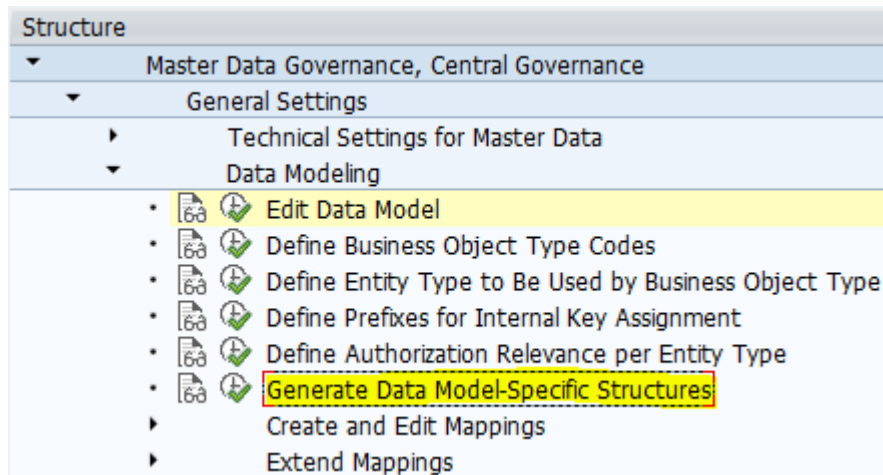
In general, if you change a Data Model (for example, if you change attributes of entity types or relationships) you need to regenerate the structures. With MDG8, you can assign a prefix and a package directly in the Data Model. Then the structures will be generated automatically with activation of the Data Model.

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.

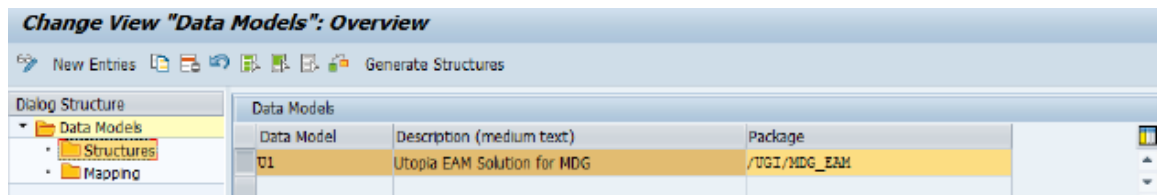
Note: In general, if you change a Data Model (for example, if you change attributes of entity types or relationships); you need to regenerate the structures.

Use the following steps to generate Data Model Specific Structures.

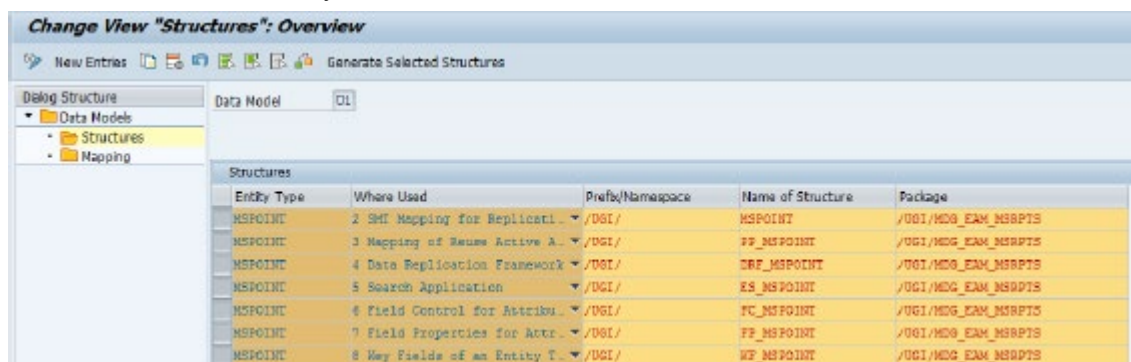
1. Start Customizing for Master Data Governance (transaction MDGIMG).
Go to > General Settings > Data Modeling > Generate Data Model-Specific Structures.



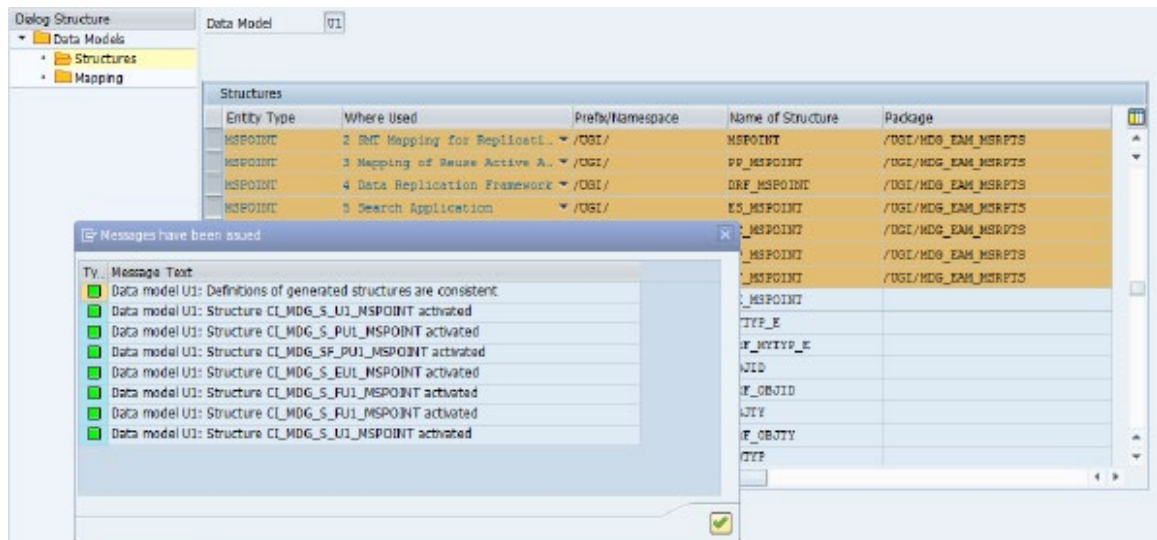
2. Select the row with Data Model U1 > Double-Click.



3. Select the structure of entity – “MSPOINT” and click on “Generate Selected Structures” button.



All structures should be generated and should be in active status and save changes.



SMT Mapping

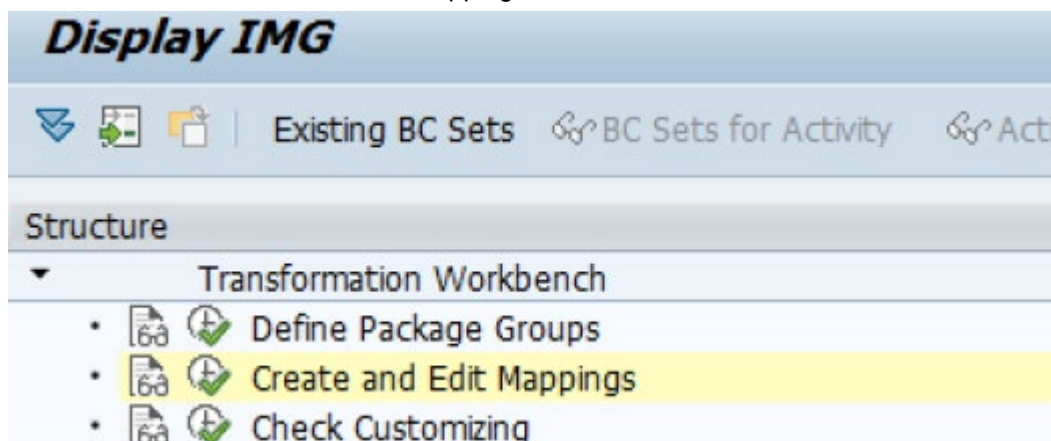
You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

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 - Primary Persistence to Staging

Use the following steps to get the mapping names:

- 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 /UGI/MDG_SMT_MSPRT_ECC2MDG_MAP and select mapping step /UGI/MDG/SMT/MSPRT_1 and click on "Details" button.

Display Mapping: /UGI/MDG_SMT_MSRPT_ECC2MDG_MAP

No Messages

Save Close Edit Copy Delete Mapping

Mapping

Name: /UGI/MDG_SMT_MSRPT_ECC2MDG_MAP
 Description: Measuring Point ECC to MDG mapping
 Package Group: /UGI/EAM
 Multiple Contexts: ☐

Mapping Steps

Details Add Remove Copy Import Change Structure Keys Additional Input Structures

Mapping Step	Description	Source Structure	Target Structure	Change Structure	Change Structure Keys Exist	Additional Input Struct
/UGI/MDG/SMT/MSPLAM	Measuring Point LAM SMT Mapping	EAM_S_LFE_DATA_UI	/UGI/S_U1_PP_MSPLAM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
/UGI/MDG/SMT/MSRPT_1	MSPOINT SMT MAP step 1	IMPTT	/UGI/S_U1_PP_MSPOINT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Save Close Edit Copy Delete Mapping

2. Select Field mapping under Transformation Type.

Display Mapping Step: /UGI/MDG/SMT/MSRPT_1

Mapping /UGI/MDG_SMT_MSRPT_ECC2MDG_MAP > Mapping Step /UGI/MDG/SMT/MSRPT_1
 Mapping Description: Measuring Point ECC to MDG mapping Package Group: /UGI/EAM

No Messages

Save Close Edit Copy Delete Mapping

Field Checks Transformations

Add Remove Copy Move Up Move Down

Order	Transformation Type	Conditional	Chain to Preceding	Switch	Description
00001	Field Mapping	<input type="checkbox"/>	<input type="checkbox"/>		
00002	Complex Transformation	<input type="checkbox"/>	<input type="checkbox"/>		
00003	Complex Transformation	<input type="checkbox"/>	<input type="checkbox"/>		
00004	Complex Transformation	<input type="checkbox"/>	<input type="checkbox"/>		

3. Select the fields from source structure and target structure and click on “Map” button.

Target Structure

Assign

Name: /UGI/S_U1_PP_MSPOI

Target Structure

Name	Is Used
PYEAR	<input type="checkbox"/>
PYEAR9	<input checked="" type="checkbox"/>
REFMP	<input checked="" type="checkbox"/>
SCENR	<input checked="" type="checkbox"/>
SMENR	<input checked="" type="checkbox"/>
SAENR	<input checked="" type="checkbox"/>
TPUR_MS	<input checked="" type="checkbox"/>
TRANS	<input checked="" type="checkbox"/>
TXIME	<input type="checkbox"/>
ZZKATALOG	<input checked="" type="checkbox"/>

Assign

Source Structure

Assign

Name: IMPTT

Source Structure

Name	Is Used
PYEAR	<input type="checkbox"/>
CODCT	<input checked="" type="checkbox"/>
CODGR	<input checked="" type="checkbox"/>
CODGRR	<input checked="" type="checkbox"/>
CDSUF	<input checked="" type="checkbox"/>
MODTR	<input checked="" type="checkbox"/>
ZZKATALOGART	<input checked="" type="checkbox"/>
INDTRR	<input checked="" type="checkbox"/>
LOGSYS	<input type="checkbox"/>
LOGSYS_CHG	<input type="checkbox"/>

Assign

Map

4. Save your changes.

SMT Mapping - Staging to Primary Persistence

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

1. Repeat the same step for SMT Mapping for ECC to MDG.
 Open SMT mapping /UGI/MDG_SMT_MSRPT_MDG2ECC_MAP and select the mapping step /UGI/MDG/SMT/MDG_ECC.

Display Mapping: /UGI/MDG_SMT_MSRPT_MDG2ECC_MAP

No Messages

Save Close Edit Copy Delete Mapping

Mapping

Name: /UGI/MDG_SMT_MSRPT_MDG2ECC_MAP
 Description: Measuring Point MDG to ECC mapping
 Package Group: UGI/EAM
 Multiple Contexts: ☐

Mapping Steps

Mapping Step	Description	Source Structure	Target Structure	Change Structure	Change Structure Keys Exist	Additional Input Structures
/UGI/MDG_SMT_MSRPT_MDG2ECC_MAP	SMT Mapping - MDG to ECC	UGI_S_U1_PP_USPOINT	RMBR3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
/UGI/MDG_SMT/VSPLAM	Measuring Point LAM SMT Mapping	UGI_S_U1_PP_USPLAM	EAME_S_LFE_DATA_UI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
/UGI/MDG_SMT/VSPOINT_1	USPOINT SMT MAP step 1	UGI_S_U1_PP_USPOINT	IMPPT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Save Close Edit Copy Delete Mapping

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.

Change View "Inactive Data Models": Overview

New Entries Visualize Data Model

Dialog Structure

- Inactive Data Models
 - Entity Types
 - Attributes
 - Business Object
 - Entity Types for

Data Model	Description (medium text)
0F	Chart of Accounts
U1	Utopia EAM Solution for MDG

2. Choose the "Yes" button.

Possible loss of data


Was the mapping between the reuse active area and the data model adjusted?

Yes No Cancel

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,

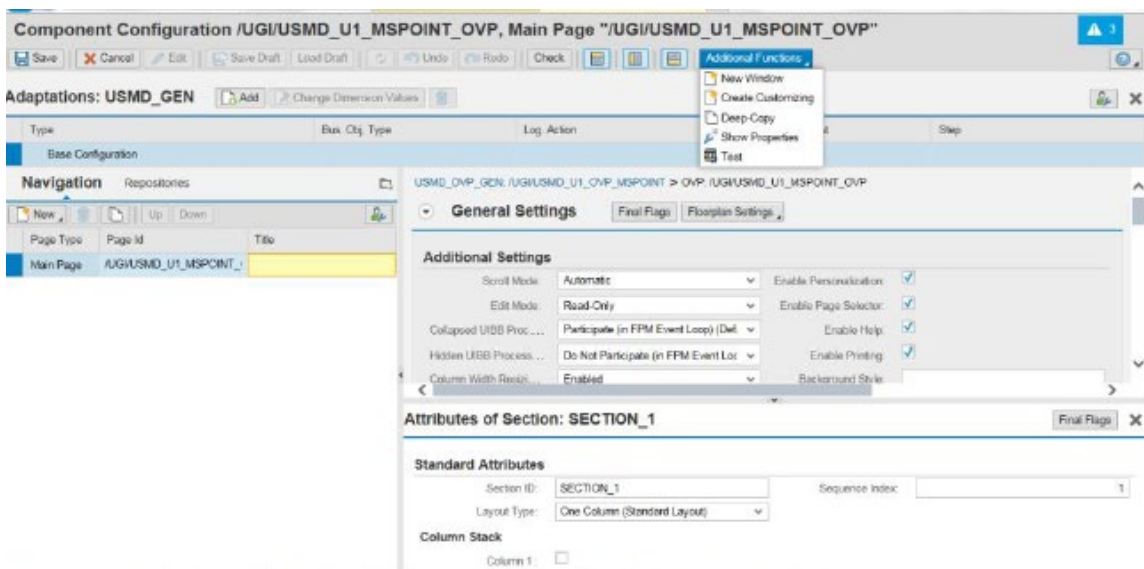
Extending the UI Configuration

Use the following steps to add customization to UI:

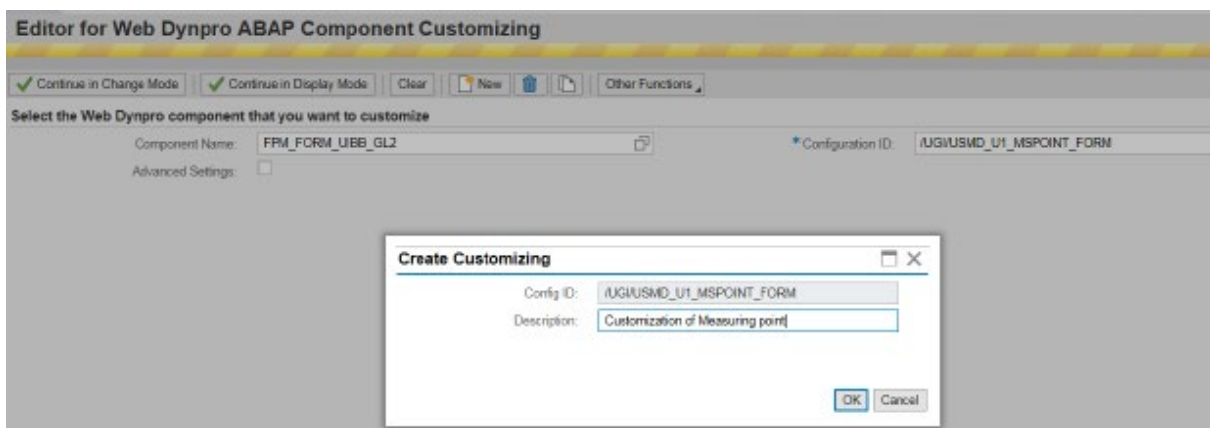
1. Start t-code SE80 > In the drop down select Package > In the input field enter /UGI/MDG_EAM_MSPRTS > Navigate to Web Dynpro > FPM Application Configurations > UGI/USMD_U1_OVP_MSPOINT.

Assign Web Dynpro Component			
Assign Configuration Name			
Component Usage	Component	Implementation	Configuration Name
USMD_OVP_GEN	FPM_ADAPTABLE_OVP	FPM_ADAPTABLE_OVP	/UGI/USMD_OVP_CBA
OVP	FPM_OVP_COMPONENT	FPM_OVP_COMPONENT	/UGI/USMD_U1_MSPOINT_OVP

2. Click on the configuration UGI/USMD_U1_OVP_MSPOINT click on “Additional Functions” menu button and click on create customizing.



3. Enter description and click on “OK” button.



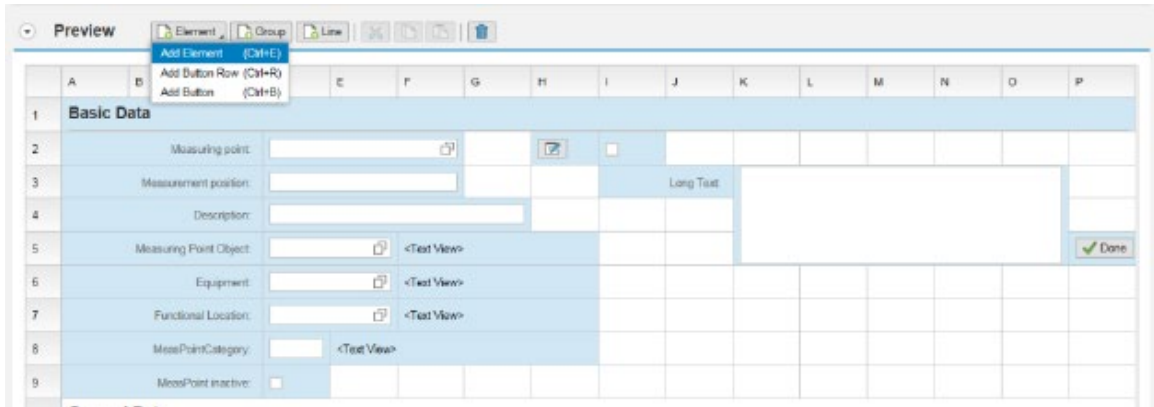
4. Create TR for customization.

☒ New Transport Request

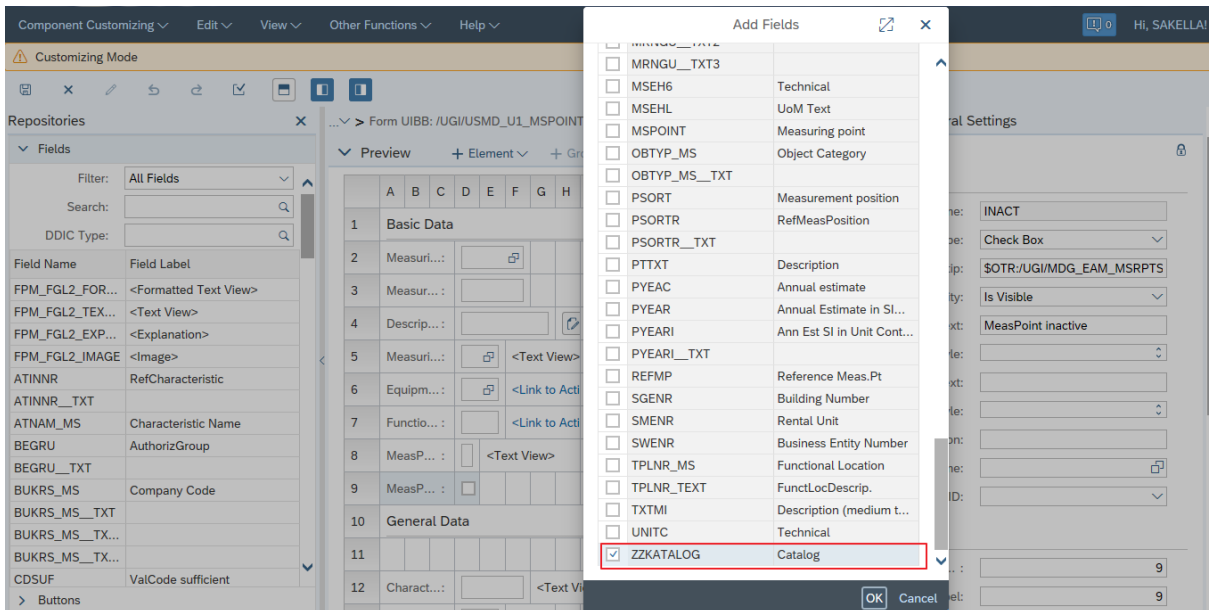
Description:

☐ No Transport Request

5. Click on “Element” button > Add element.



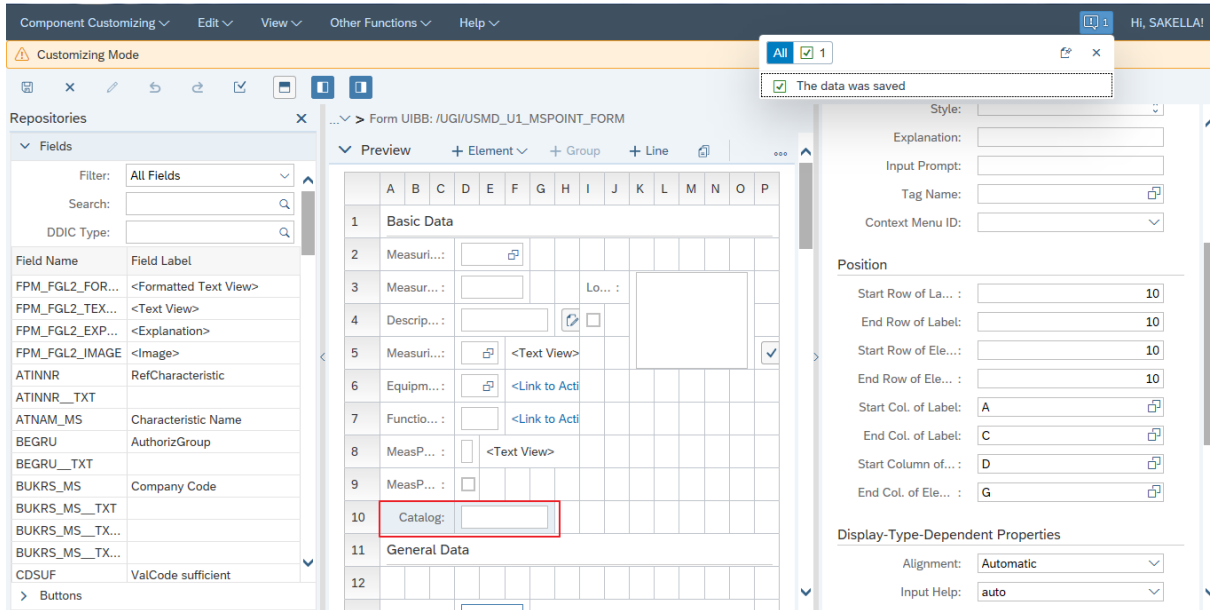
6. Select the attribute or field which is to be added in UI.



Field Name	Field Label
FPM_FGL2_FOR...	<Formatted Text View>
FPM_FGL2_TEX...	<Text View>
FPM_FGL2_EXP...	<Explanation>
FPM_FGL2_IMAGE	<Image>
ATINNR	RefCharacteristic
ATINNR_TXT	
ATNAM_MS	Characteristic Name
BEGRU	AuthorizGroup
BEGRU_TXT	
BUKRS_MS	Company Code
BUKRS_MS_TXT	
BUKRS_MS_TX...	
BUKRS_MS_TX...	
CDSUF	ValCode sufficient

Field Name	Field Label
MRNGU_TXT3	
MSEH6	Technical
MSEHL	UoM Text
MSPOINT	Measuring point
OBTP_MS	Object Category
OBTP_MS_TXT	
PSORT	Measurement position
PSORTR	RefMeasPosition
PSORTR_TXT	
PTTXX	Description
PYEAC	Annual estimate
PYEAR	Annual Estimate in SI...
PYEARI	Ann Est SI in Unit Cont...
PYEARI_TXT	
REFMP	Reference Meas.Pt
SGENR	Building Number
SMENR	Rental Unit
SWENR	Business Entity Number
TPLNR_MS	Functional Location
TPLNR_TEXT	FunctLocDescrip.
TXTMI	Description (medium t...
UNITC	Technical
ZZKATALOG	Catalog

7. Catalog field is added in UI as displayed in the following screen.



Component Customizing ▾ Edit ▾ View ▾ Other Functions ▾ Help ▾

Customizing Mode

Repositories

Fields

Filter: All Fields ▾

Search:

DDIC Type:

Field Name	Field Label
FPM_FGL2_FOR...	<Formatted Text View>
FPM_FGL2_TEX...	<Text View>
FPM_FGL2_EXP...	<Explanation>
FPM_FGL2_IMAGE	<Image>
ATINNR	RefCharacteristic
ATINNR_TXT	
ATNAM_MS	Characteristic Name
BEGRU	AuthorizGroup
BEGRU_TXT	
BUKRS_MS	Company Code
BUKRS_MS_TXT	
BUKRS_MS_TX...	
BUKRS_MS_TX...	
CDSUF	ValCode sufficient

Buttons

Preview

Form UIBB: /UGI/USMD_U1_MSPPOINT_FORM

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Basic Data															
2	Measur...															
3	Measur...															
4	Descrip...															
5	Measur...															
6	Equipm...															
7	Funcio...															
8	MeasP...															
9	MeasP...															
10	Catalog:															
11	General Data															
12																

Position

Start Row of La... : 10

End Row of Label: 10

Start Row of Ele... : 10

End Row of Ele... : 10

Start Col. of Label: A

End Col. of Label: C

Start Column of... : D

End Col. of Ele... : G

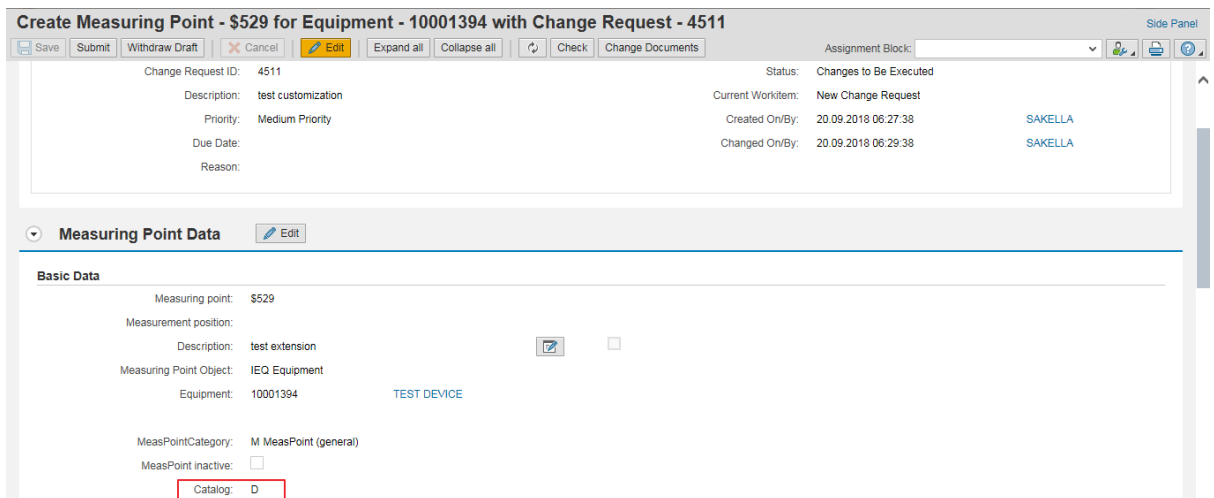
Display-Type-Dependent Properties

Alignment: Automatic ▾

Input Help: auto ▾

Testing the Configuration

Result: Measuring Point 421 with Change Request 4511.



Create Measuring Point - \$529 for Equipment - 10001394 with Change Request - 4511

Save Submit Withdraw Draft Cancel Edit Expand all Collapse all Check Change Documents

Assignment Block:

Change Request ID: 4511

Description: test customization

Priority: Medium Priority

Due Date:

Reason:

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 20.09.2018 06:27:38 SAKELLA

Changed On/By: 20.09.2018 06:29:38 SAKELLA

Measuring Point Data

Basic Data

Measuring point: \$529

Measurement position:

Description: test extension

Measuring Point Object: IEQ Equipment

Equipment: 10001394 TEST DEVICE

MeasPointCategory: M MeasPoint (general)

MeasPoint inactive: ☐

Catalog: D

Data in ECC – IMPTT Table: Measuring Point 421

Table IMPTT Display	
Check Table...	
MANDT	100 <input type="checkbox"/>
POINT	421
MPOBJ	IE0000000000010001394
PSORT	
PSORTR	
PTTXT	test extension
MLANG	EN
KZLTX	
MPTYP	M
IRFMP	
ERDAT	20.09.2018
ERNAM	SAP_WFRT
AEDAT	
AENAM	
BEGRU	
INACT	
LVORM	
LOCAS	
REFMP	
ATINN	CBTA-FUEL
ATINNR	
EXPON	0
DECIM	0
DESIRI	

Table IMPTT Display	
Check Table...	
ATINNR	<input type="checkbox"/>
EXPON	<input type="text" value="0"/>
DECIM	<input type="text" value="0"/>
DESIRI	<input type="checkbox"/>
DESIRR	<input type="checkbox"/>
DSTXT	<input type="text"/>
DSTXTR	<input type="checkbox"/>
MRMINI	<input type="checkbox"/>
MRMAXI	<input type="checkbox"/>
MRNGU	<input type="text" value="L"/>
INDCT	<input type="checkbox"/>
INDRV	<input type="checkbox"/>
INDTR	<input type="checkbox"/>
TRANS	<input type="text"/>
CJUMPI	<input type="checkbox"/>
PYEARI	<input type="checkbox"/>
CODCT	<input type="checkbox"/>
CODGR	<input type="text"/>
CODGRR	<input type="checkbox"/>
CDSUF	<input type="checkbox"/>
MODTR	<input type="checkbox"/>
ZZKATALOG	<input type="text" value="D"/>
INDTRR	<input type="checkbox"/>
LOGSYS	<input type="text"/>
LOGSYS CHG	<input type="text" value="0"/>