

How-To Guide: Extend MDG-uOBJLNK 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.

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Scenario

High Level Requirements

The business requires the new attribute as part of the MDG Object Links Data Model U1.

You want to extend the (Type1) entity type OBJLINK to include attribute: ZZTELNR.

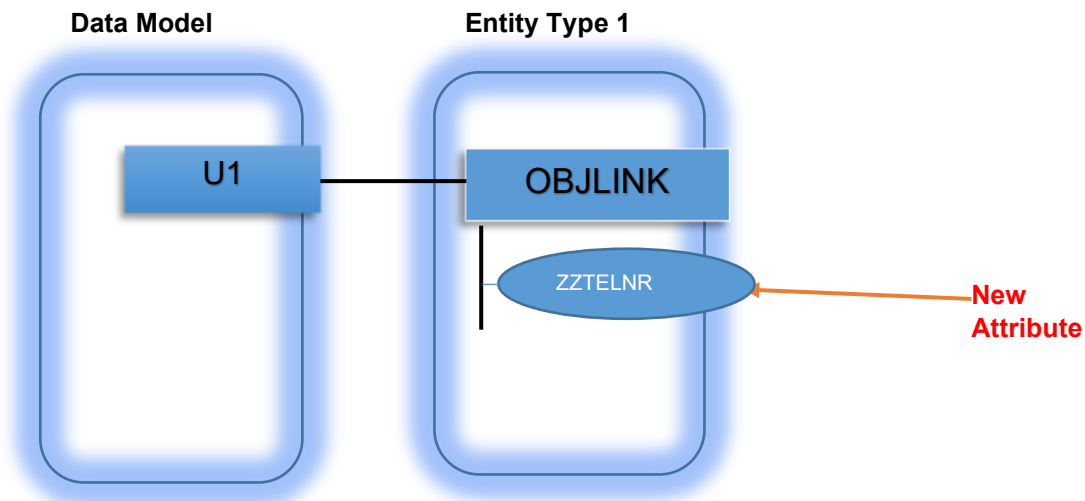


Figure: Data Model – Object Links with custom attribute ZZTELNR

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.

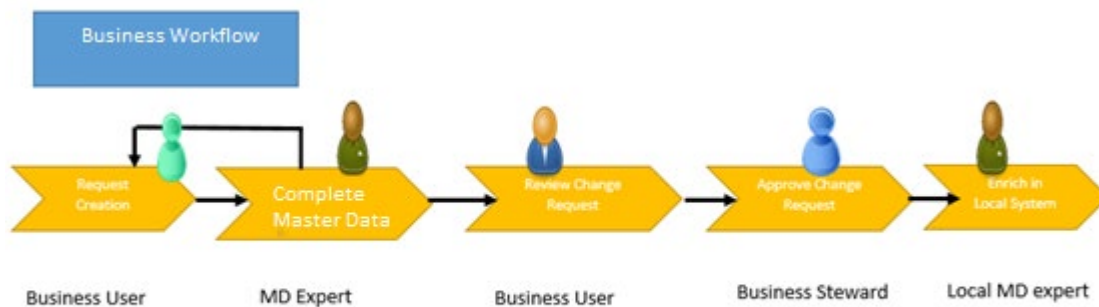


Figure: Functional Location processing in Master Data Governance

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 attribute.

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

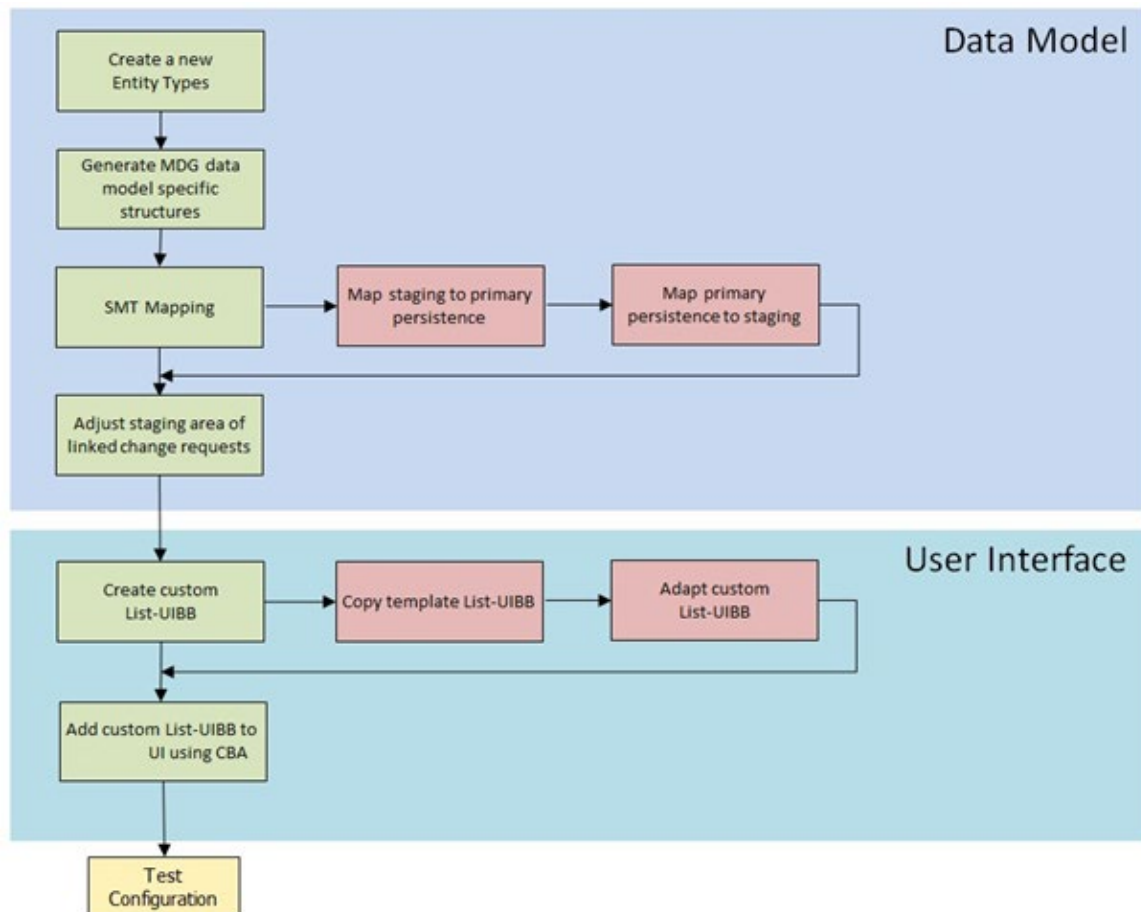


Figure: Implementation steps for re-use Entity-Type extension

Data Model Extension

You want to extend the Data Model (U1) for Object Links by the additional attribute ZZTELNR. The following additional field from INET should be modelled as an attribute of the entity type OBJLINK in MDG.

Dictionary: Display Table

Transparent Table: INET Active

Short Description: Object networking

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

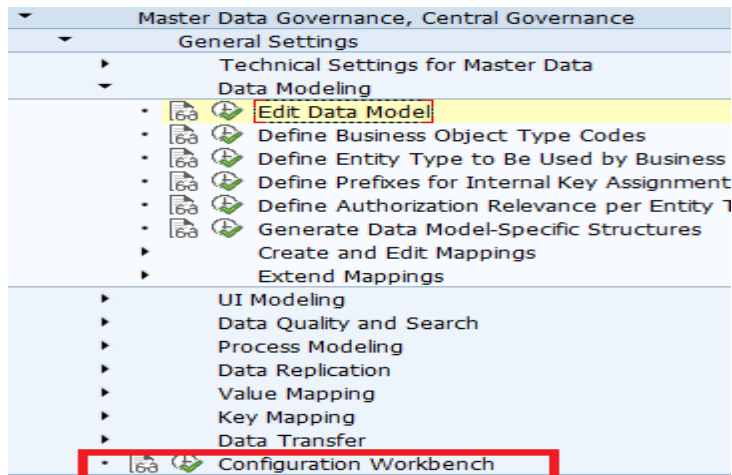
Field	Key	In...	Data element	Data Type	Length	Deci...	Short Description
AEDAT	<input type="checkbox"/>	<input type="checkbox"/>	IUPDT	DATS	8		0 Date on which the object was last changed
AENAM	<input type="checkbox"/>	<input type="checkbox"/>	AENAM	CHAR	12		0 Name of person who changed object
BGRU	<input type="checkbox"/>	<input type="checkbox"/>	IAUTG	CHAR	4		0 Technical object authorization group
LVORM	<input type="checkbox"/>	<input type="checkbox"/>	LVORM	CHAR	1		0 Deletion Indicator
NETYP	<input type="checkbox"/>	<input type="checkbox"/>	NETYP	CHAR	1		0 Link category
.APPEND	<input type="checkbox"/>	<input type="checkbox"/>	GHO_INET	STRU	0		0 Object Link Enhancement
MATNR	<input type="checkbox"/>	<input type="checkbox"/>	MATNR	CHAR	40		0 Material Number
.APPEND	<input type="checkbox"/>	<input type="checkbox"/>	ZINET_ADDL	STRU	0		0 Inet Extensionability
ZZTELNR	<input type="checkbox"/>	<input type="checkbox"/>	XUTELNR	CHAR	16		0 Telephone number (work)

You first create the attributes ZZTELNR in entity type INET.

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.



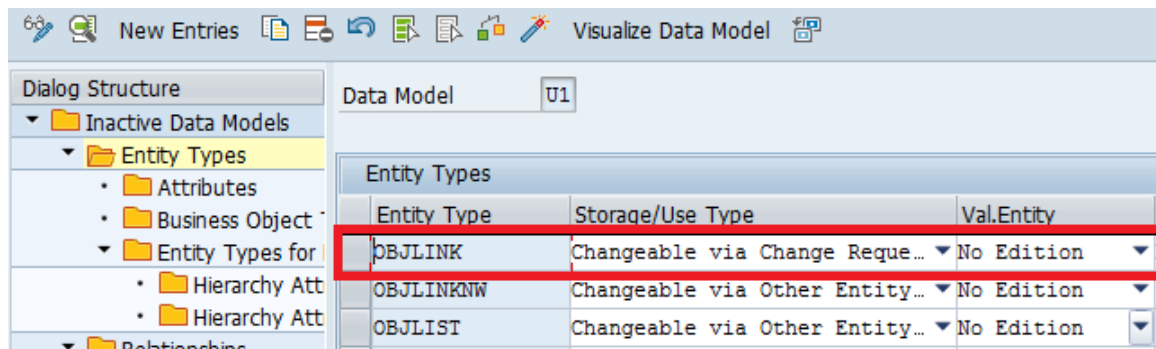
3. Add the attributes of Entity Type OBJLINK as displayed in the following screen.
4. Save your settings.

Note: It is recommended that you 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.

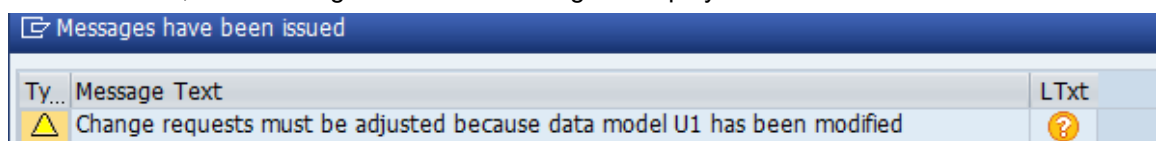
In the following steps, you define new entity types that are needed to define the key fields using relationships.

Details: OBJLINK					
General Attributes Incoming Relationships Outgoing Relationships					
*Attribute	Key Field	Descript...	Data El...	Currency/...	
NODETYP...	<input type="checkbox"/>	Node Ty...	EAML_N...		
OL_CONNPF	<input type="checkbox"/>	Position ...	EAML_O...		
OL_CONNPT	<input type="checkbox"/>	Position ...	EAML_O...		
STATTEXT	<input type="checkbox"/>	Status T...	ILOM_S...		
TPKANT	<input type="checkbox"/>	FL link o...	TPKANT		
TPNACH	<input type="checkbox"/>	link to floc	TPNACH		
TPVON	<input type="checkbox"/>	link frm floc	TPVON		
ZEITVA	<input type="checkbox"/>	Time(from)	DZEITVA		
ZEITVB	<input type="checkbox"/>	Time(to)	DZEITVB		
ZZTELNR	<input type="checkbox"/>	Telephon...	XUTELNR		

5. Activate the extended Data Model.



6. After activation, the following information message is displayed.



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

Generate MDG Data Model-Specific Structures

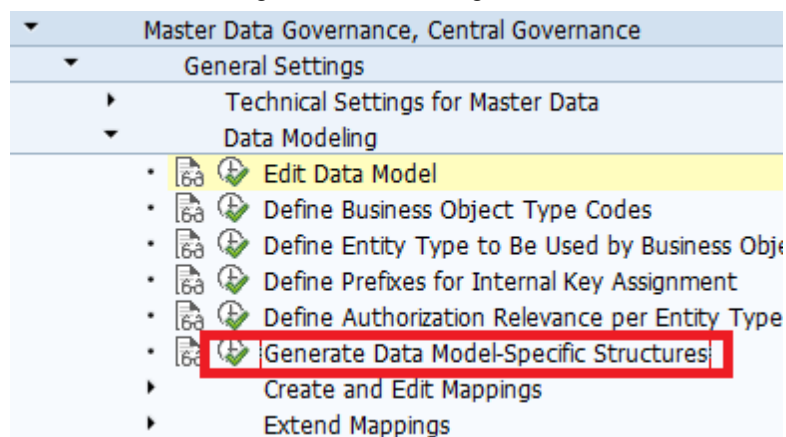
In general, if you change a Data Model (for example, if you change attributes of entity types or relationships) you need to regenerate the structures. You can assign a prefix and a package directly in the Data Model. Then the structures will be generated automatically with activation of the Data Model.

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.

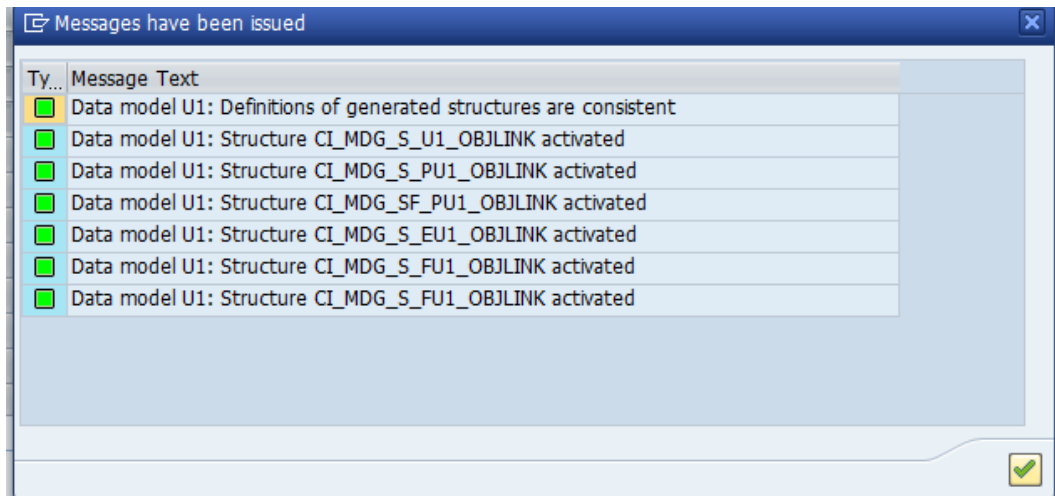
The system uses these structures internally for implementing the staging area. To generate these Data Model-Specific structures follow the steps below.

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.

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

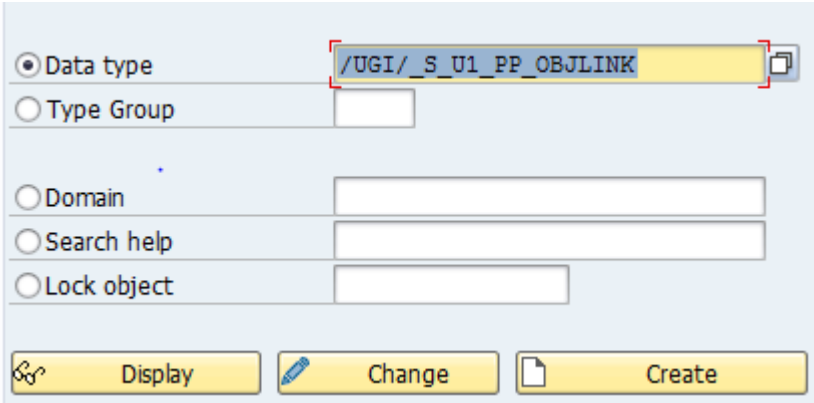


2. Select the row with Data Model U1 > Double-Click Structures in the left-hand panel > choose the “Generate Selected Structures” button.
3. Verify that your structures were successfully generated.



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_OBJLINK



The screenshot shows the SE11 'Display structure' dialog box. The 'Data type' radio button is selected, and the text field next to it contains the structure name '/UGI/_S_U1_PP_OBJLINK'. Below this, there are three empty text fields for 'Type Group', 'Domain', and 'Search help'. At the bottom, there are three buttons: 'Display' (with a magnifying glass icon), 'Change' (with a pencil icon), and 'Create' (with a document icon).

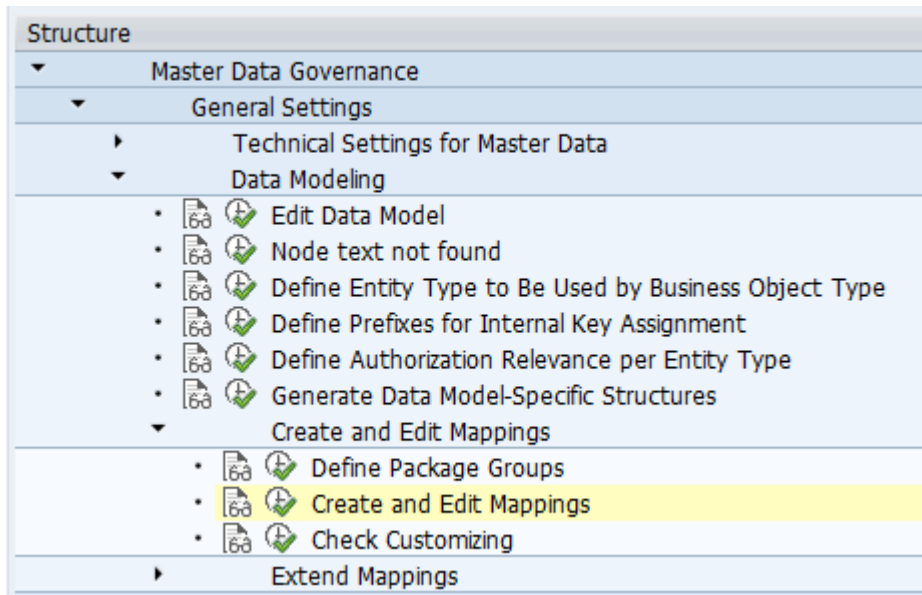
5. You have now verified that the structure /UGI/_S_U1_PP_OBJLINK has been generated.

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 /UGI/MDG_SMT_OL_ECC2MDG_MAP

Mapping

* Name: /UGI/MDG_SMT_OL_ECC2MDG_MAP

Description: SMT Mapping from Active area to staging area

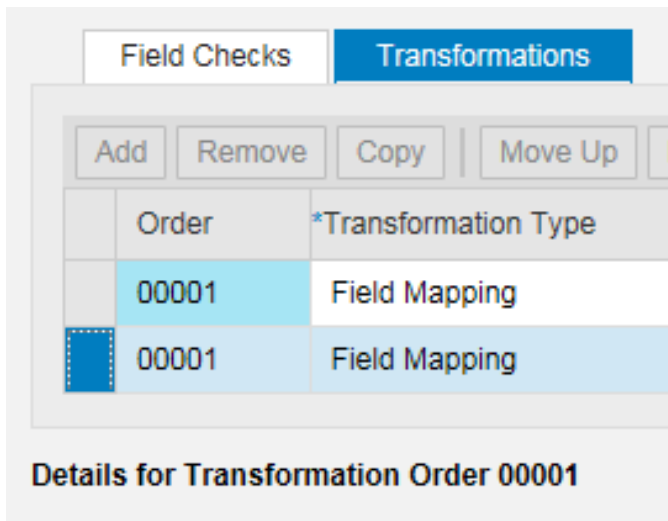
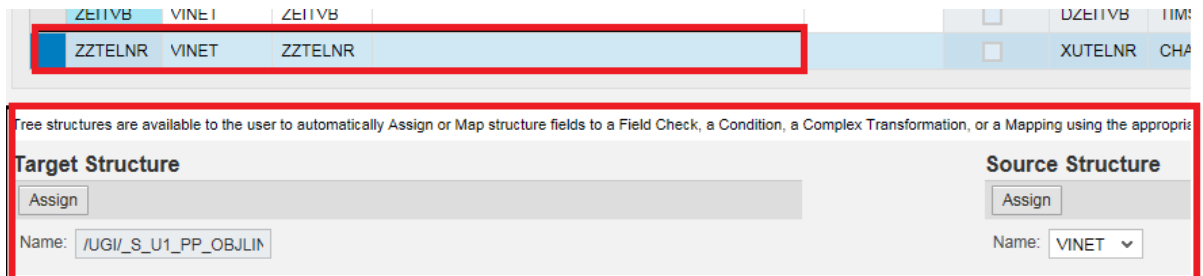
Package Group: /UGI/EAM

Multiple Contexts: ☐

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

Mapping Steps				
<div> <div>Details</div> <div>Add</div> <div>Remove</div> <div>Copy</div> <div>Import</div> <div>Change Structure Keys</div> <div>Additional Input Structures</div> <div>Assign Service Information</div> </div>				
*Mapping Step	Description	*Source Structure	*Target Structure	Change Str
/UGI/MDG/SMT/OBJLAM	Object Link LAM Data	EAML_S_LFE_DATA_UI	/UGI/_S_U1_PP_OBJLNKLAM	
/UGI/MDG/SMT/OBJLINK	Object Link Data	VINET	/UGI/_S_U1_PP_OBJLINK	
/UGI/MDG/SMT/OBJLOL	Object Link LOL Data	EAML_D_LOL_DATA	/UGI/_S_U1_PP_OBJLINK	

4. Add a mapping step Assign Source Structure OBJLINK and assign Target Structure /UGI/_S_U1_PP_OBJLINK.

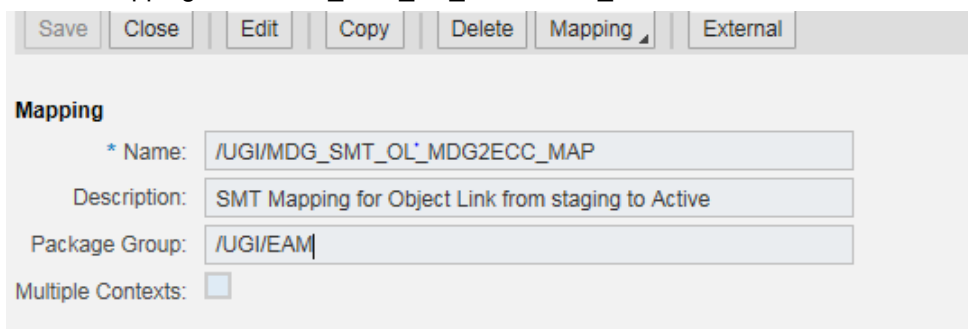



5. Save your changes.

SMT Mapping – Primary Persistence to Staging

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

1. Extend mapping /UGI/MDG_SMT_OL_MDG2ECC_MAP.



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

Mapping Steps			
<div> <div>Details</div> <div>Add</div> <div>Remove</div> <div>Copy</div> <div>Import</div> <div>Change Structure Keys</div> <div>Additional Input Structures</div> <div>Assign Service Information</div> </div>			
*Mapping Step	Description	*Source Structure	*Target Structure
/UGI/MDG/SMT/OBJLAM	SMT Mapping For Object Link LAM Data	/UGI/_S_U1_PP_OBJ	EAML_S_LFE_DATA
/UGI/MDG/SMT/OBJLINK	SMT Mapping for Obejct Link	/UGI/_S_U1_PP_OBJ	VINET
/UGI/MDG/SMT/OBJLOL	Object Link LOL SMT mapping	/UGI/_S_U1_PP_OBJ	EAML_D_LOL_DATA

3. Add a mapping step Assign Target Structure VINET. Assign Source Structure /UGI/_S_U1_PP_OBJLINK.

<div> <div>Add</div> <div>Remove</div> </div>									
*FIELD	Source Structure	Source Field	Fixed Value	Conversion Class	Reference Type	Field type	Data Type	Number	Character
TPNACH	/UGI/_S_U1_	TPNACH			<input type="checkbox"/>	TPNACH	CHAR	30	
TPVON	/UGI/_S_U1_	TPVON			<input type="checkbox"/>	TPVON	CHAR	30	
ZEITVA	/UGI/_S_U1_	ZEITVA			<input type="checkbox"/>	DZEITVA	TIMS	6	
ZEITVB	/UGI/_S_U1_	ZEITVB			<input type="checkbox"/>	DZEITVB	TIMS	6	
ZZTELNR	/UGI/_S_U1_	ZZTELNR			<input type="checkbox"/>				

Free 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 or drop-down menu.

Target Structure	Source Structure
<div>Assign</div> <div>Name: VINET</div>	<div>Assign</div> <div>Name: /UGI/_S_U1_PP_OBJLINK</div>

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.

Change View "Inactive Data Models": Overview

New Entries

Visualize Data Model

Dialog Structure

Inactive Data Models

Entity Types

Attributes

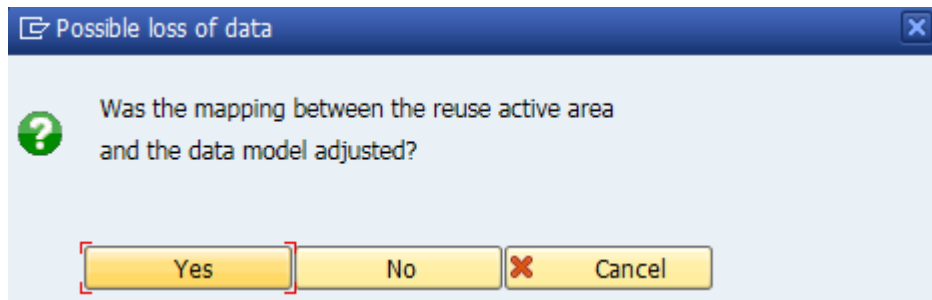
Business Object

Entity Types for

Inactive Data Models

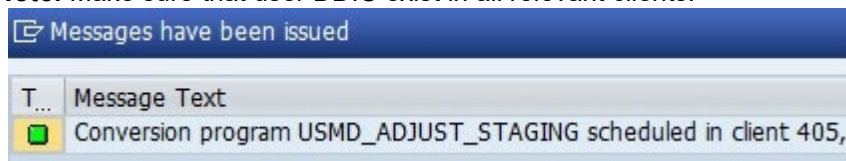
Data Model	Description (medium text)
0F	Chart of Accounts
U1	Utopia EAM Solution for MDG

2. Choose the "Yes" button.



The following message appears.

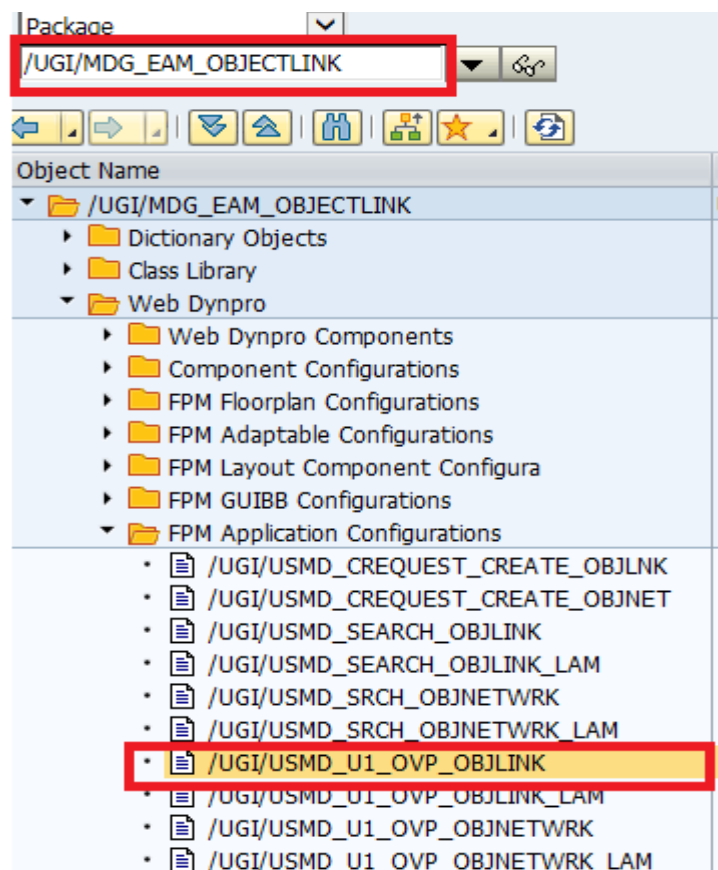
Note: Make sure that user DDIC exist in all relevant clients.



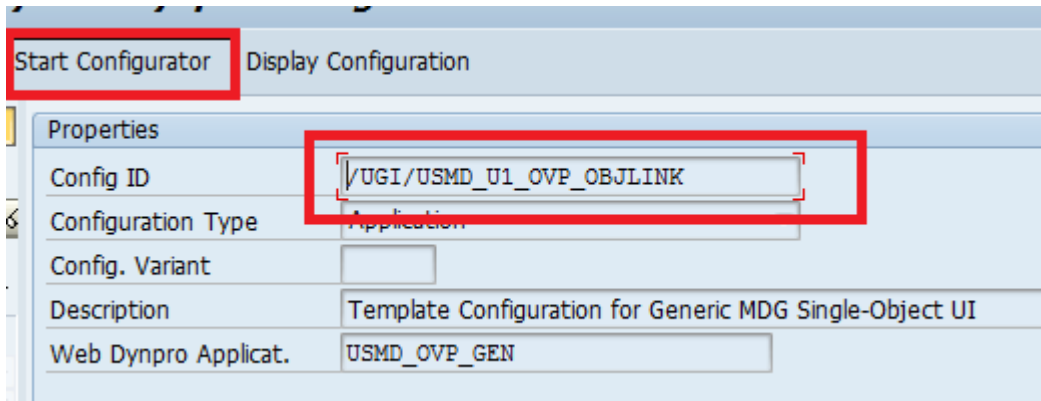
Extending the UI Configuration

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 /UGI/MDG_EAM_OBJECTLINK > Navigate to Web Dynpro > FPM Application Configurations > /UGI/USMD_U1_OVP_OBJLINK.



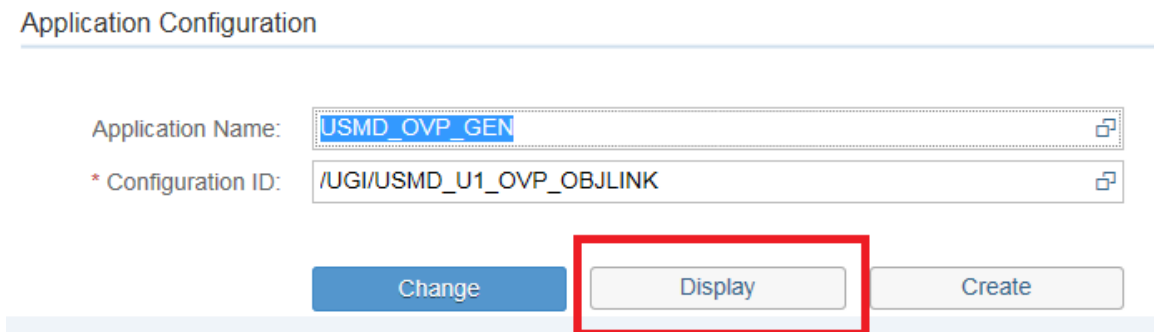
- Click the “Start Configurator” button.



The screenshot shows the 'Start Configurator' button highlighted with a red box. Below it, the 'Display Configuration' tab is active, showing the following properties:

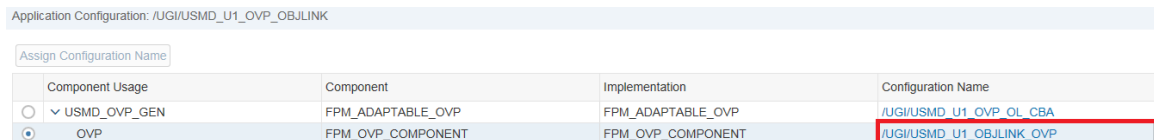
Config ID	/UGI/USMD_U1_OVP_OBJLINK
Configuration Type	Application
Config. Variant	
Description	Template Configuration for Generic MDG Single-Object UI
Web Dynpro Applicat.	USMD_OVP_GEN

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



The screenshot shows the 'Application Configuration' page. The 'Application Name' is 'USMD_OVP_GEN' and the 'Configuration ID' is '/UGI/USMD_U1_OVP_OBJLINK'. The 'Display' button is highlighted with a red box.

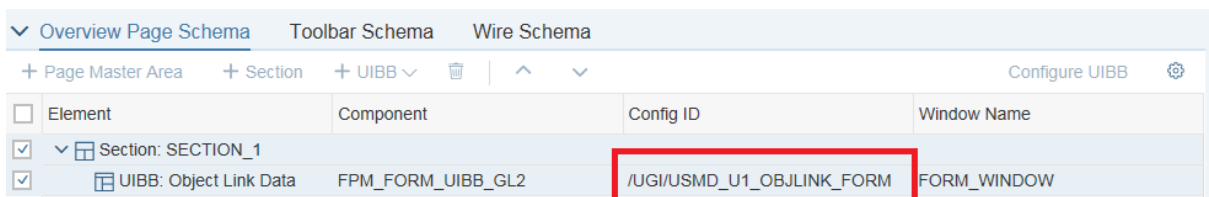
- Click on the configuration /UGI/USMD_U1_OBJLINK_OVP.



The screenshot shows the 'Application Configuration: /UGI/USMD_U1_OVP_OBJLINK' page. The table below lists the configurations, with the last row highlighted by a red box.

Component Usage	Component	Implementation	Configuration Name
<input type="radio"/> USMD_OVP_GEN	FPM_ADAPTABLE_OVP	FPM_ADAPTABLE_OVP	/UGI/USMD_U1_OVP_OL_CBA
<input checked="" type="radio"/> OVP	FPM_OVP_COMPONENT	FPM_OVP_COMPONENT	/UGI/USMD_U1_OBJLINK_OVP

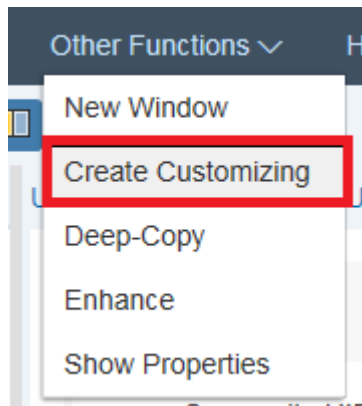
- Select the UIBB where you want to add new attributes and click on “Configure UIBB”.



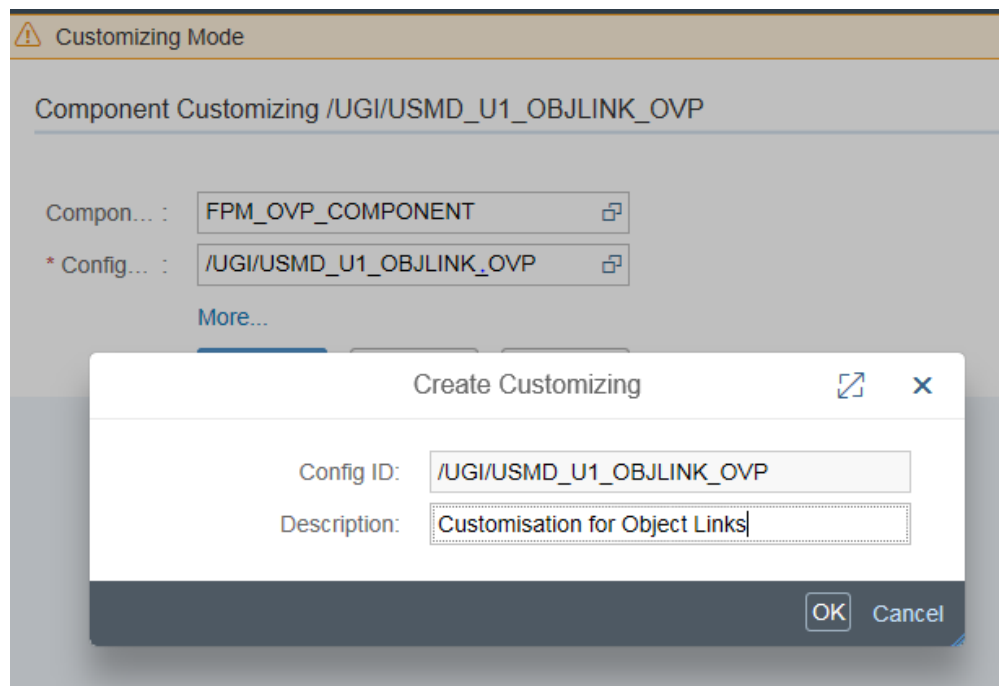
The screenshot shows the 'Overview Page Schema' table. The configuration ID '/UGI/USMD_U1_OBJLINK_FORM' is highlighted with a red box.

Element	Component	Config ID	Window Name
<input checked="" type="checkbox"/> Section: SECTION_1			
<input checked="" type="checkbox"/> UIBB: Object Link Data	FPM_FORM_UIBB_GL2	/UGI/USMD_U1_OBJLINK_FORM	FORM_WINDOW

- Click on Additional Functions >Create Customizing.



7. Click on OK.



8. Change your UI. Add new fields that was added in entity OBJLINK.

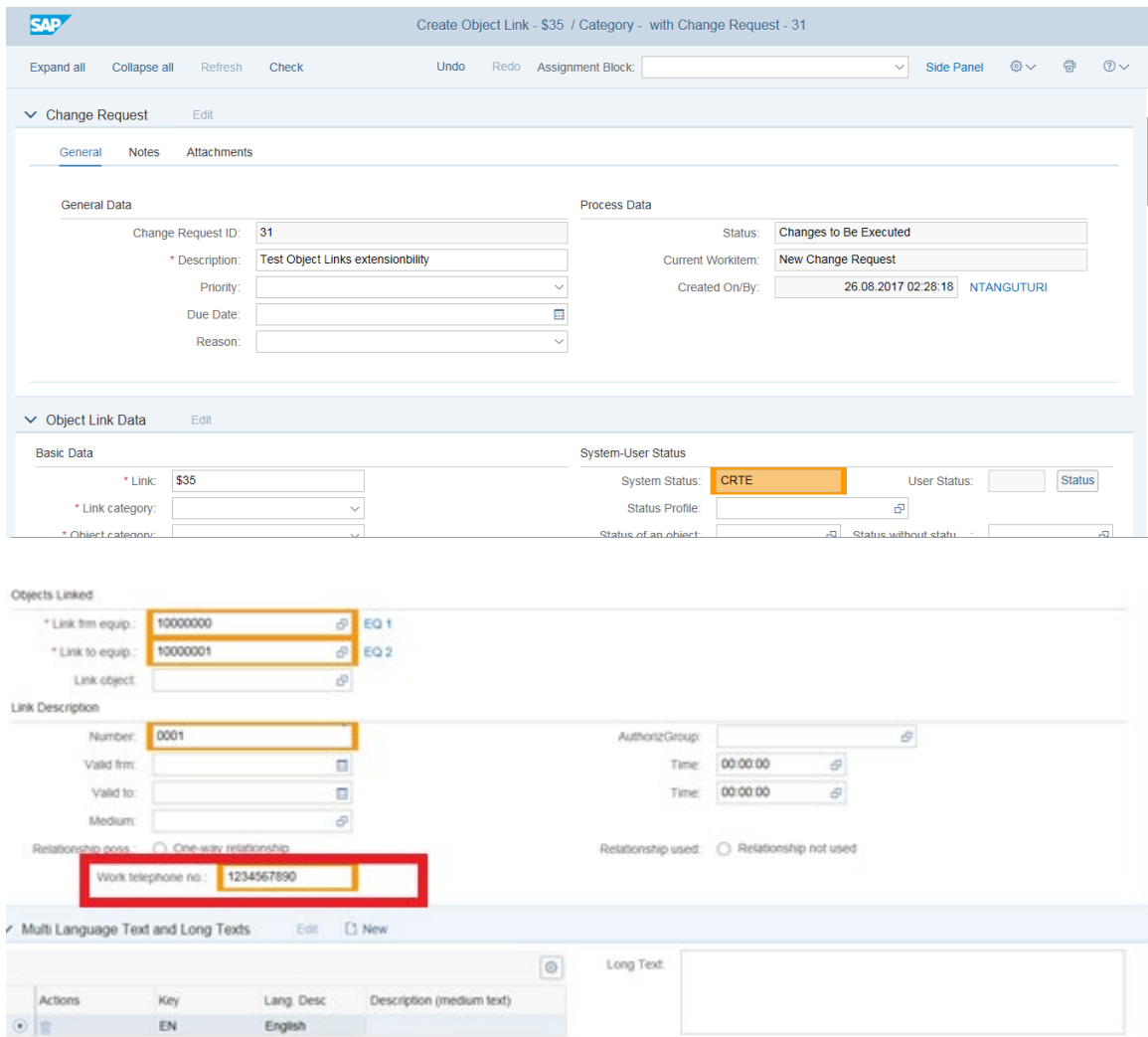
Link Description									
Number:	0000				AuthorizGroup:		<Text View>		
Valid frm:					Time:	00:00:00			
Valid to:					Time:	00:00:00			
Medium:		<Text View>							
Relationshi... :	<input type="radio"/> One-way relationship				Relationshi... :	<input type="radio"/> Relationship not used			
Work telephone no.:									

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 Object Links 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=USMD_U1_OVP_OBJLINK#.`



The screenshot displays the SAP MDG Object Links UI for creating a new object link. The form is titled "Create Object Link - \$35 / Category - with Change Request - 31".

Change Request Section:

- Change Request ID: 31
- Description: Test Object Links extensionility
- Priority: (dropdown)
- Due Date: (calendar icon)
- Reason: (dropdown)
- Status: Changes to Be Executed
- Current Workitem: New Change Request
- Created On/By: 26.08.2017 02:28:18 NTANGUTURI

Object Link Data Section:

- Basic Data:
 - Link: \$35
 - Link category: (dropdown)
 - Object category: (dropdown)
- System-User Status:
 - System Status: CRTE
 - User Status: (dropdown)
 - Status Profile: (dropdown)
 - Status of an object: (dropdown)
 - Status without status: (dropdown)

Objects Linked Section:

- Link from equip.: 10000000 EQ 1
- Link to equip.: 10000001 EQ 2
- Link object: (dropdown)

Link Description Section:

- Number: 0001
- Valid from: (calendar icon)
- Valid to: (calendar icon)
- Medium: (dropdown)
- Authorize Group: (dropdown)
- Time: 00:00:00
- Time: 00:00:00
- Relationship used: Relationship not used
- Work telephone no.: 1234567890

Multi Language Text and Long Texts Section:

- Long Text: (text area)
- Table with columns: Actions, Key, Lang. Desc, Description (medium text)
- Table data: EN, English

Save and Submit the CR. Finalize processing and Approve.

SAP Create Object Link - 10000004 / EQUIP / Category - L with Change Request - 31

Expand all Collapse all Refresh Validation Log Undo Redo Assignment Block: Side Panel

General Data

Change Request ID: 31

Description: Test Object Links extensionibility

Priority:

Due Date:

Reason:

Process Data

Status: Final Check Approved

Current Workitem:

Created On/By: 26.08.2017 02:28:18 NTANGUTURI

Changed On/By: 26.08.2017 02:32:06 NTANGUTURI

Finalized On/By: 26.08.2017 02:32:33

Object Link Data

Basic Data

Link: 10000004

Link category: Lam Lam

Object category: Link between equipment Link between equipment

Link description: Test Links Extensionibility

System-User Status

System Status: CRT User Status: TEST C... Status

Status Profile: OBJECTLK Object Links

Status of an object: CRTD Status without statu...: TEST

Objects Linked

* Link from equip.: 10000000 EQ 1

* Link to equip.: 10000001 EQ 2

Link object:

Link Description

Number: 0001

Valid from:

Valid to:

Medium:

Relationship used: ☐ One-way relationship ☐ Relationship not used

Work telephone no.: 1234567890

Multi Language Text and Long Texts Edit New

Actions	Key	Lang. Desc	Description (medium text)
	EN	English	

Long Text:

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

Table Entry Edit Goto Settings System Help

Data Browser: Table INET Select Entries 3

Check Table...

MANDT	KANTE	MILANG	NETID	KANTYP	TPVON	ET
100	000000000010000002			E	00	
100	000000000010000003			E	00	
100	000000000010000004			E	00	

Details

Group description	Cell Content...
ZEITVB	00:00:00
STATUS	IN000000000010000004
TPKANT	
EQKANT	
MEDIU	
BEZARP	
BEZARL	
ERDAT	
ERNAM	
AEDAT	
AENAM	
BEGRIU	
LVORM	
NETYP	L
MATNR	
ZZTELNR	1234567890
KANXT	Test Links Extensionality
KZLTx	
KZMLA	