PUBLIC

How-To: Create Material Master Sub-Screens in ECC Backend for Industry Extensions like DIMP/DFPS

Applicable Releases:

All

Version 2.1

December 2024

Document History

Document Version	Description
1.0	First official release of this guide (February 2016)
2.0	Update Layout (February 2022)
2.1	Format update (December 2024)

Table of Contents

1. Business Scenario

SAP Master Data Governance provides business processes to find, create, change, and mark master data for deletion. It supports the governance of master data in a central hub and the distribution to connected operational and business intelligence systems.

The processes are workflow-driven and can include several approval and revision phases, and the collaboration of all users participating in the master data maintenance.

Besides the governance aspect, MDG has introduced some improvements in the area of material master maintenance that may require changes in the backend system. This includes making fields read-only or bringing fields onto other views.

This How-To Guide describes how to bring fields onto another screen for the MM0x transactions. If you want to change in addition some fields to read-only, then please follow the corresponding steps in the guide.

2. Background Information

For industry solutions like DIMP or DFPS fields may be maintained on MARA level that are not part of the Basic Data views. For example, the field Batch Management is by default not on the Basic Data views, but instead, usually in the general data section of the Sales and Plant screen.

If MDG activates a material where only general data fields have been maintained, only the maintenance status ‘K’ is set for this material on the ECC tables. Therefore, only the Basic Data views are available during display or change in the backend (MM01 / MM02).

It is not recommended to change anything in the maintenance status handling, but instead you should copy the basic data fields from the respective screens onto one of the first two basic data screens.

3. Step by Step Explanation

In the customizing activity, there is an exact description of how to proceed. Also, there is a full Quick *"Guide Using an Example"* on the top of the section on how to maintain a complete new layout for material master backend screens.

Path: IMG ▶ *Logistics – General* ▶ *Material Master* ▶ *Configuring the Material Master* ▶ *Create Program for Customized Subscreens*

This guide uses the description from the customizing activity, enhances it where required, and adds screenshots.

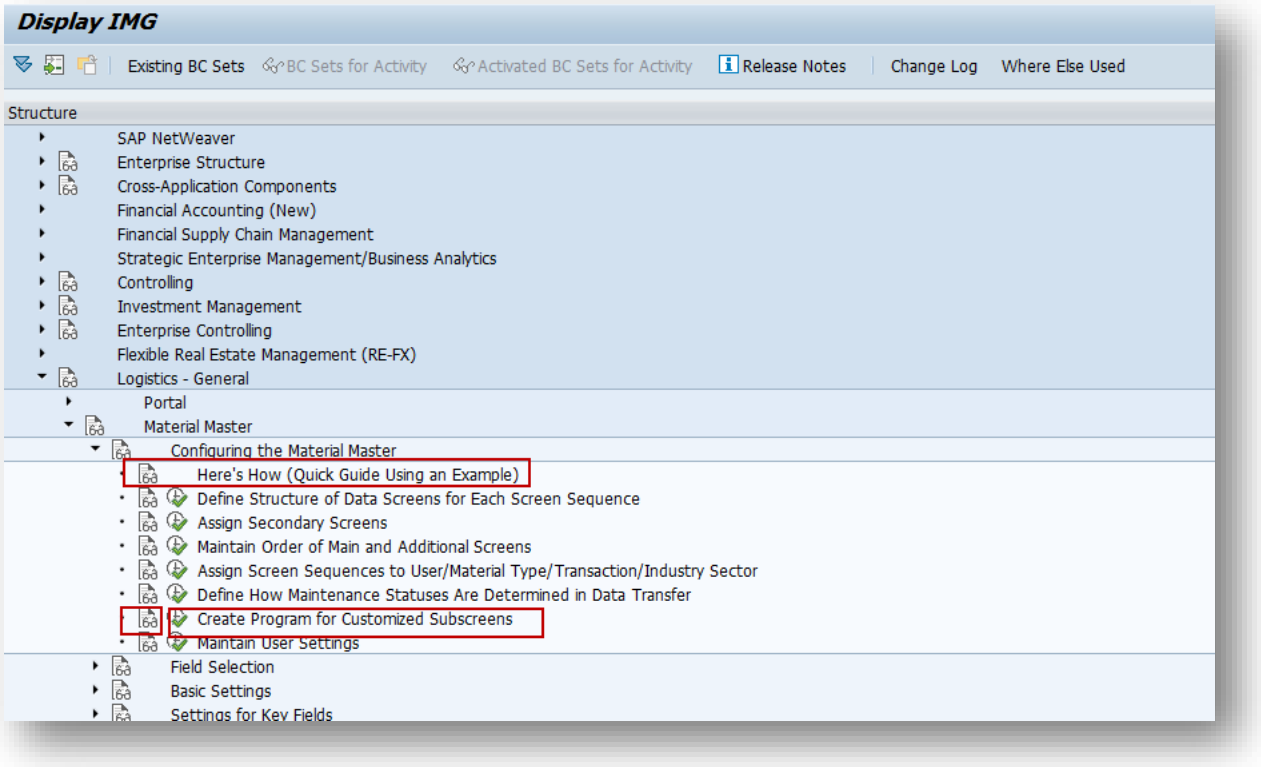
This example uses the following two fields and integrates them into the first sub-screen of *Basic Data 1*:

1) Batch indicator on material master level = MARA-XCHPF
2) Condition management (DFPS specific field) = MARA-MCOND

The example uses the industry *DFPS*.

3.1. Preparation

Open the Implementation Guide (transaction SPRO) and navigate to the path of the Material Master.



Follow the description below. A detailed breakdown with screenshots are contained in the following chapters.

3.1.1. Description from the Customizing Activity

Create Program for Customized Subscreens

In this **IMG activity**, you can create a **function group** of your own by copying function group MGD1 (for industry) or function group MGD2 (for retail). The subscreens are not copied, except for two subscreens which are copied for technical reasons. You can use this copy to create subscreens of your own which you can assign to a data screen in the activity **Define Structure of Data Screens for Each Screen Sequence**.

Requirements

Be sure to read the **program documentation** first.

Activities

1. Create a function group of your own by choosing *Execute*.

2. Enter a name containing up to 25 characters, beginning with the letter *Y* or *Z*, and choose *Save*.

3. Access the Object Navigator.

You do this from the SAP standard menu by choosing *Tools -> ABAP Workbench*, and then *Object Navigator*.

4. Display either program SAPLMGD1 (industry) or SAPLMGD2 (retail) as required.

5. Copy the subscreens as required, ensuring that they already contain as many as possible of the field names you want to use in your function group. You do this as follows:

a) Choose *Screens*, position the cursor on the corresponding subscreen, and choose *Copy* in the **context menu**.

b) Enter the program to which you want to copy the subscreen, prefixing it with *SAPL*, and enter a screen number. Use the screen number of the original subscreen where possible. If the F1 help is specific to a particular subscreen, this ensures that this context-specific help continues to be displayed.

Example
You have called your function group *YENTERPRISE*, to which you want to copy subscreen *SAPLMGD1 2301*. Enter **SAPLYENTERPRISE** as the program to which the subscreen is to be copied, and enter (preferably) **2301** as the screen number.

6. Return to the initial screen of the Object Navigator and display your program. In the example above, you would enter **SAPLYENTERPRISE**.

7. Choose *Update object list*.

8. Select the subscreen you have copied and activate it by choosing *Activate* in the context menu.

Using the **Screen Painter**, you can remove fields you do not require on the subscreen or include additional fields from other subscreens (see the **ABAP Dictionary**). For information on the Screen Painter, see the SAP library documentation *BC ABAP Workbench Tools*.

Points to consider when removing or adding fields

- Make sure that a field statement exists for each field on the subscreen since data may not otherwise be transported correctly. You can use subscreen SAPLMGD1 2002 as an example.

- For the fields you have added, include any check modules and modules for self-programmed F4 help that are called up for these fields on the original subscreen. You can do this by displaying the flow logic for the original subscreen and searching for such modules. They normally have the same names as the fields themselves. When you find a module, copy the corresponding module call to your subscreen.

- If you change the order in which fields are transported that are checked together in the **flow logic** (such as the safety stock and minimum safety stock), you must deactivate the check module for the first field and activate it for the second. The system would otherwise transport the first field, and carry out the check before the second field is transported.

- Any error messages that fields are unknown when activating the subscreen are due to the fields still being included in checks, even though you have removed the fields from the subscreen. Search for the fields in the source code and make the lines in which they appear comment lines. Then reactivate the screen.

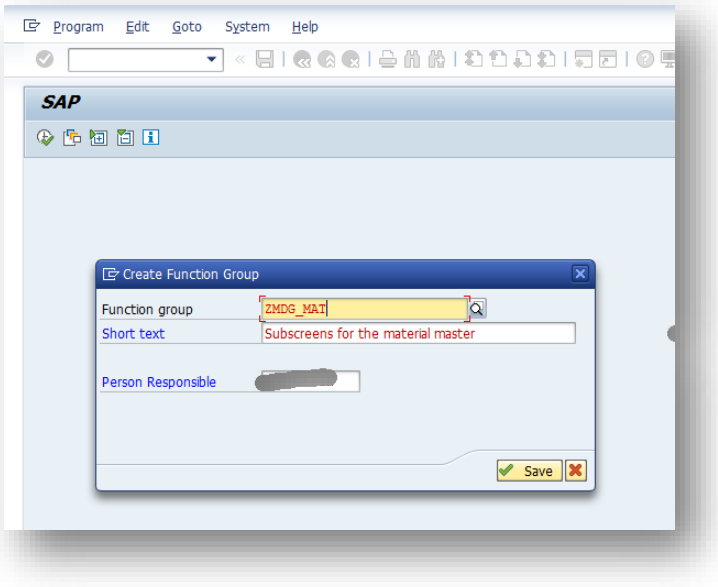
9. Assign the subscreen to a data screen as required.

3.1.2. Create Program for Customized Subscreens

Follow the first two steps in the Customizing Activity:

1. Create a function group of your own by choosing *Execute*.
2. Enter a name containing up to 25 characters, beginning with the letter *Y* or *Z*, and choose *Save*.

When you execute the customizing activity, the system displays the following window where you create the function group, in this case your function group is called *ZMDG_MAT*.

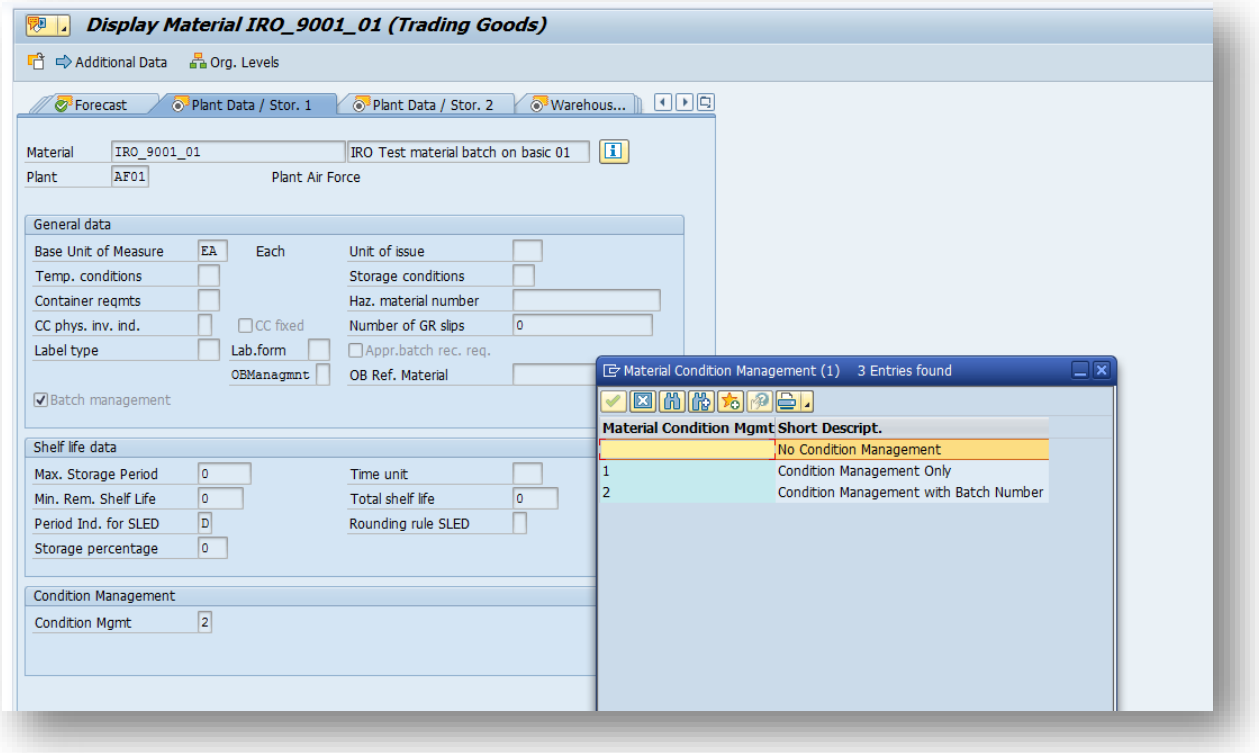


If you browse to this function group (using SE80 for example), you can find the corresponding main program name. The main program name is similar to the function group name with the prefix "*SAPL*". Note this name down for a later step. In our example, the main program **SAPLZMDG_MAT** was created.

3.1.3. Analyze the Screens of the Missing Fields

The two fields are both from the screen for Plant/Storage location data (maintenance status L = storage).

Note: By default, MDG only sets the maintenance status K = basic data if only basic data is maintained.

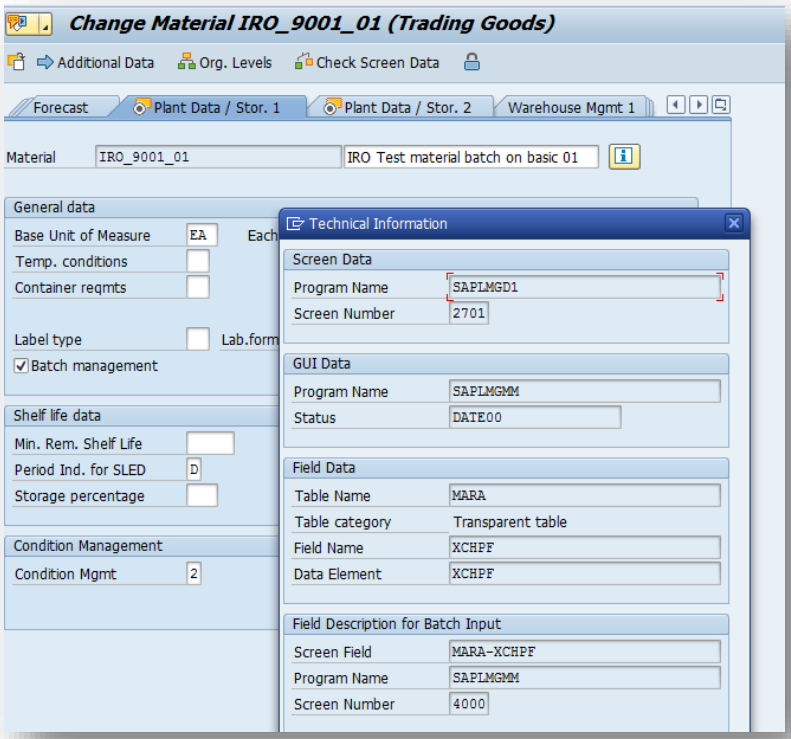


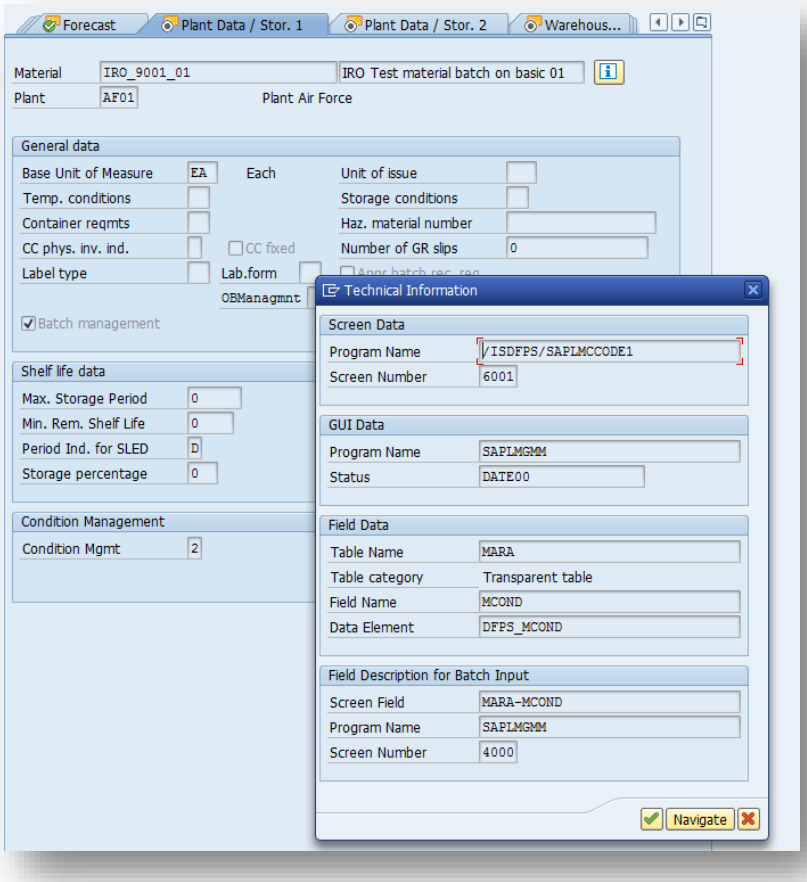
Use the F1 Help function and the technical details feature to identify the subscreen and field name.

Make sure you do this for the correct industry because this field is linked to the screen sequence.

In this example they are as follows:

1) Batch management = MARA-XCHPF on SAPLMGD1 screen 2701
2) Condition management = MARA-MCOND on /ISDFPS/SAPLMCCODE1



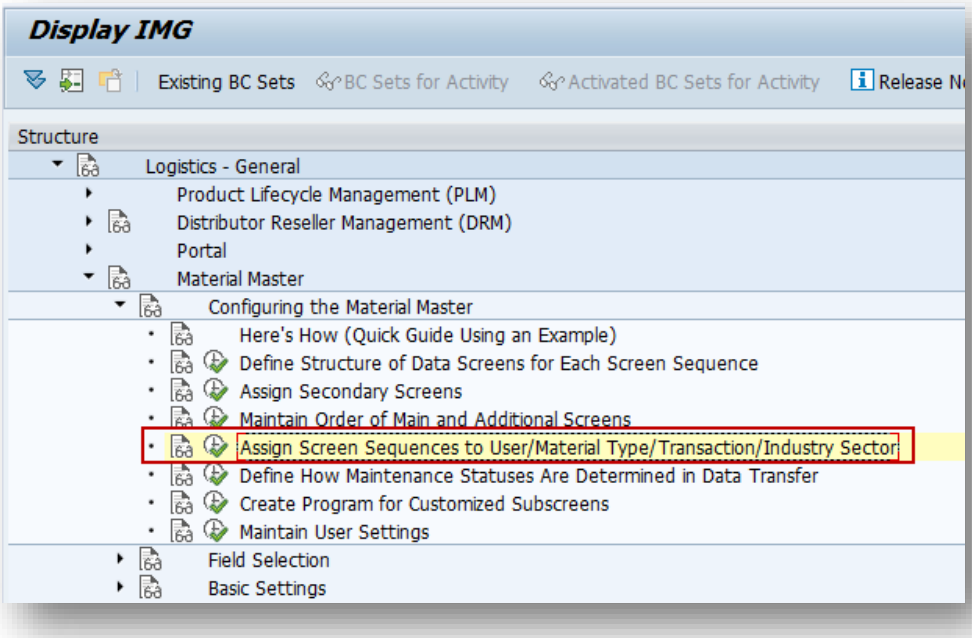


3.1.4. Identify the target subscreen

We want to include the two fields on the first Basic Data screen in the first data block. This is SAPLMGD1 screen 2001.

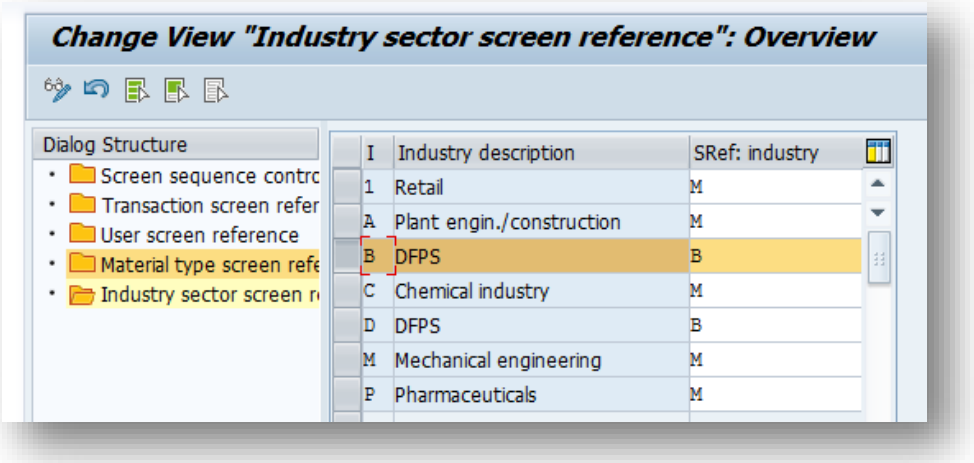
3.1.5. Analyze the screen access sequence

In Implementation Guide start the following configuration activity: Assign screen sequences to User/Material Type/Transaction/Industry Sector.

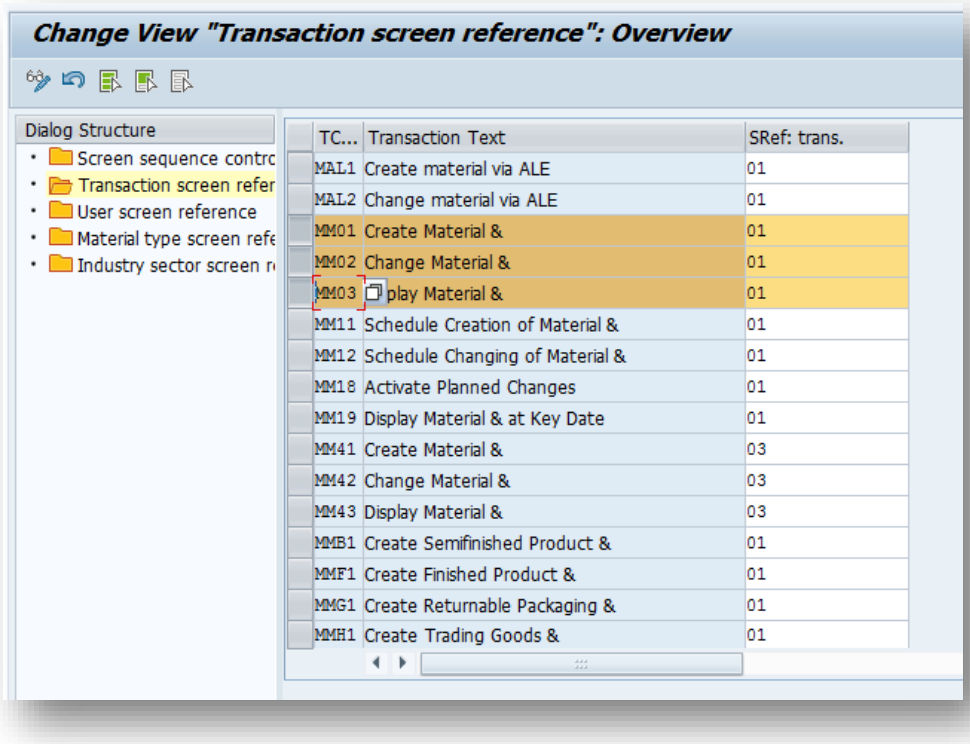


Check the settings ideally from bottom to the top:

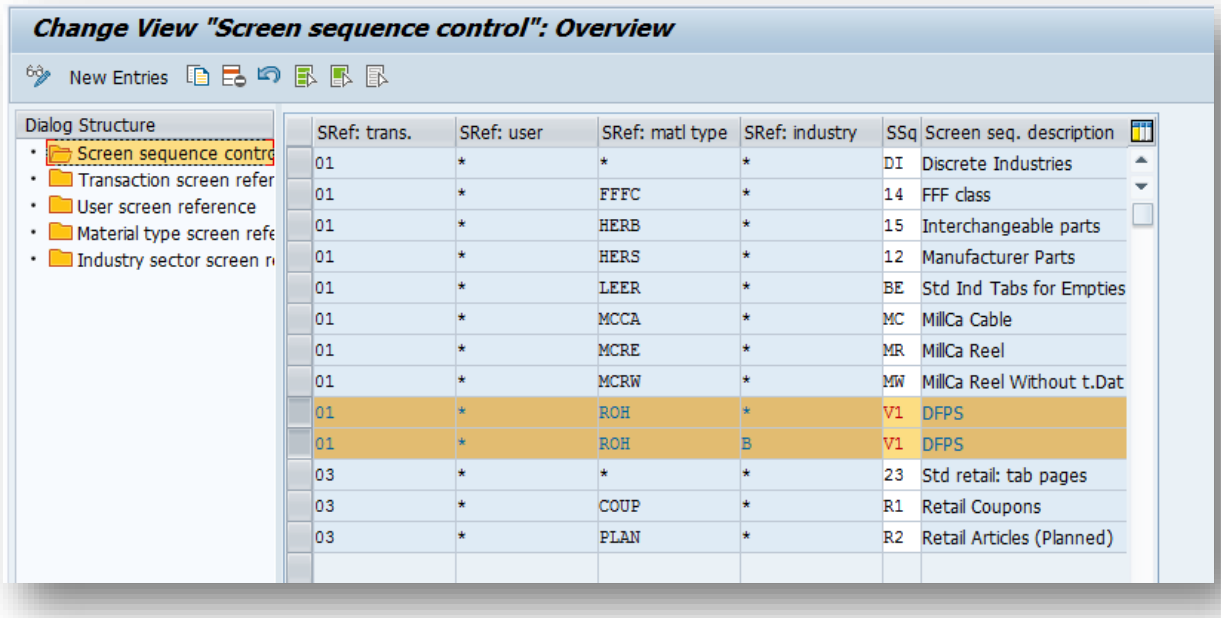
A) Industry sector – B and D are both for DFPS in this example, both refer to “B”.



B) Transaction – in our example MM01, MM02, and MM03 all reference to “01”.



C) Assignment to the screen sequence control – in our example the combinations all result in V1.



This means we have to change the subscreen assignment for this screen sequence later. In your system there may be different settings which may result in multiple places where you need to apply the change.

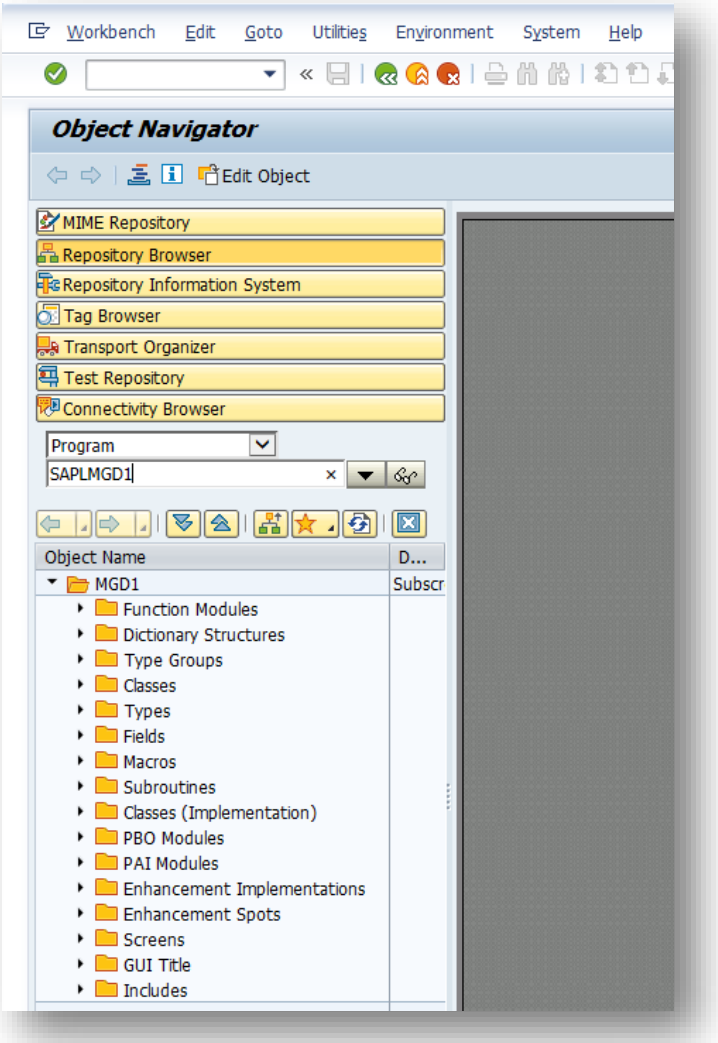
3.2. Copy the fields onto a new sub-screen

Follow the steps 3-8 of the customizing activity description:

3. Access the Object Navigator.

You do this from the SAP standard menu by choosing *Tools -> ABAP Workbench*, and then *Object Navigator*. Use transaction SE80.

4. Display either program SAPLMGD1 (industry) or SAPLMGD2 (retail) as required. Display the program SAPLMGD1 or related Function group MGD1.

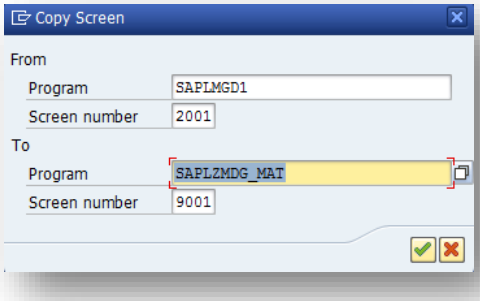


5. Copy the subscreens as required, ensuring that they already contain as many as possible of the field names you want to use in your function group. You do this as follows:

a) Choose *Screens*, position the cursor on the corresponding subscreen, and choose *Copy* in the **context menu**.

b) Enter the program to which you want to copy the subscreen, prefixing it with *SAPL*, and enter a screen number. Use the screen number of the original subscreen where possible. If the F1 help is specific to a particular subscreen, this ensures that this context-specific help continues to be displayed.

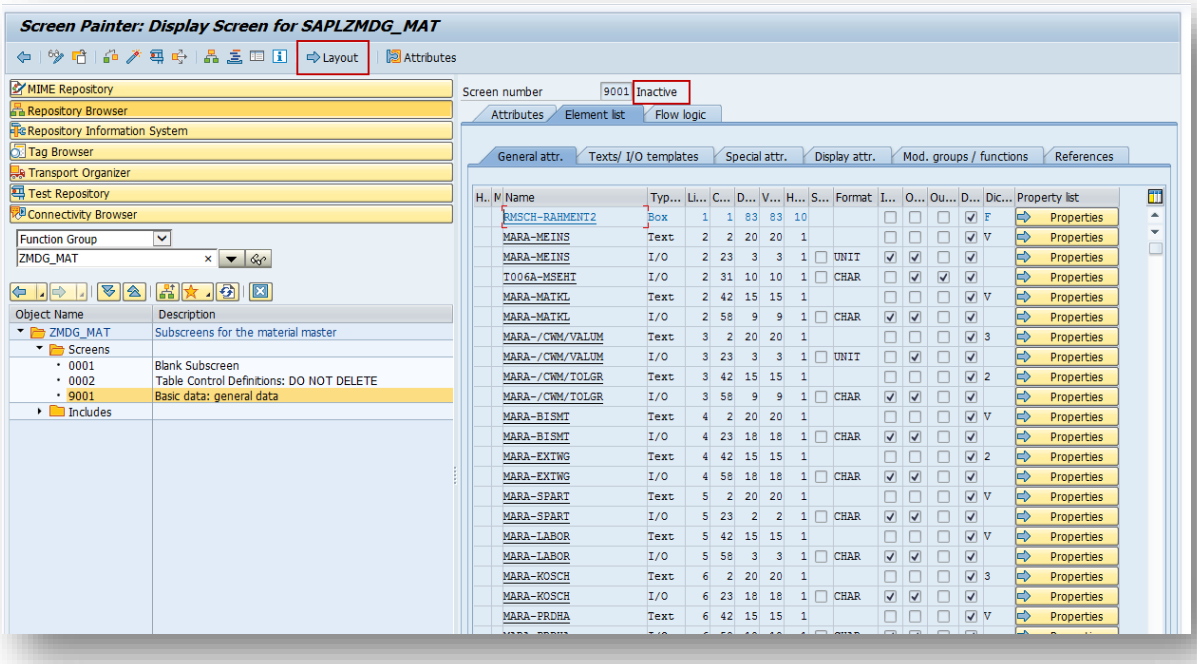
In our case, we copy from *SAPLMGD1 / 2001* to *SAPLZMDG_MAT / 9001*:



The creation is confirmed.

6. Return to the initial screen of the Object Navigator and display your program.

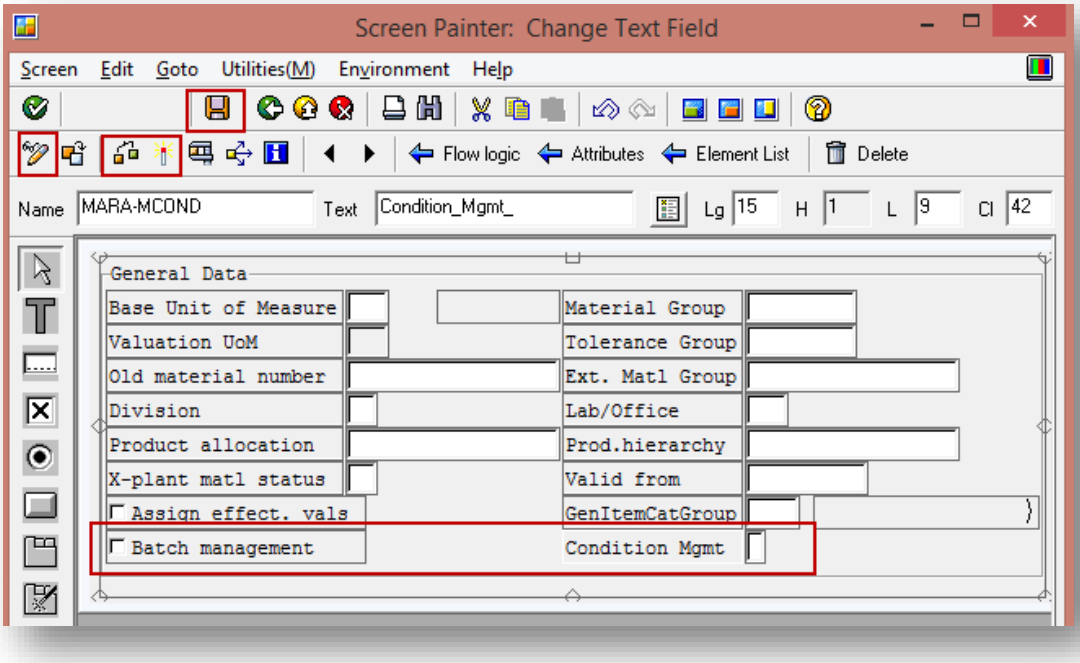
7. Choose *Update object list*.



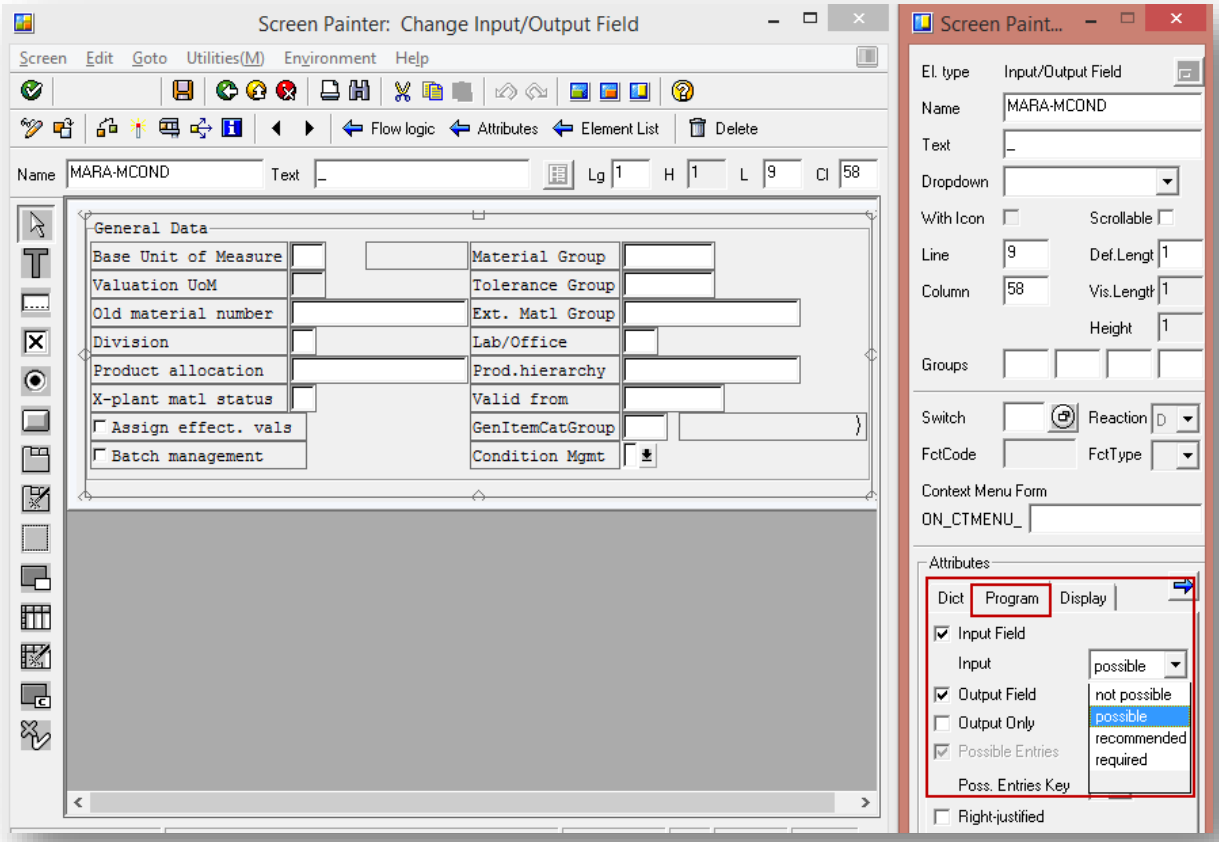
8. Select the subscreen you have copied and activate it by choosing *Activate* in the context menu.

Using the **Screen Painter**, you can remove fields you do not require on the subscreen or include additional fields from other subscreens (see the **ABAP Dictionary**). For information on the Screen Painter, see the SAP library documentation *BC ABAP Workbench Tools*.

1. Start the Screen Painter using the Layout button.
2. If required, enhance the line numbers by extending the frame of the subscreen.
   Make sure you choose the correct field category (radio button, check-box, I/O field, text field, etc.). In our example the batch management is a *check field* and the conditions management is an *input field* of length 1.
3. Click on the left side on the icon for the element, click on the place where you want to put the field. Enter the field name in the “Field” field; because they are bound to text fields using the SAP Data Dictionary the corresponding text/description field is automatically proposed.
4. You may need to some manual adjustment for the condition management description field. If this is the case, add a custom text field and correct to the entries when you are back on the field list in SE80.

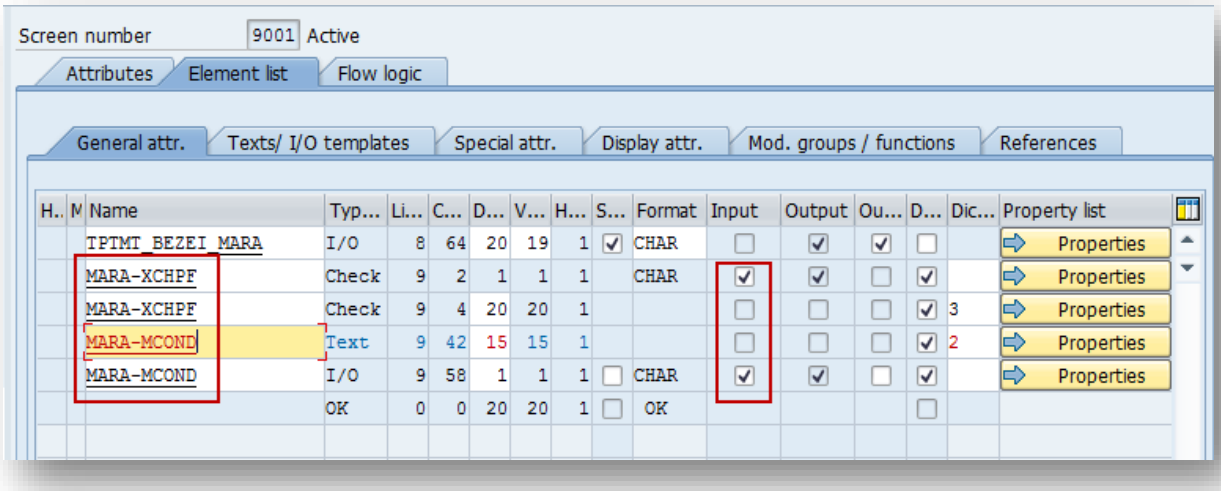


If required, you can also change the input behavior of the field in the attributes:



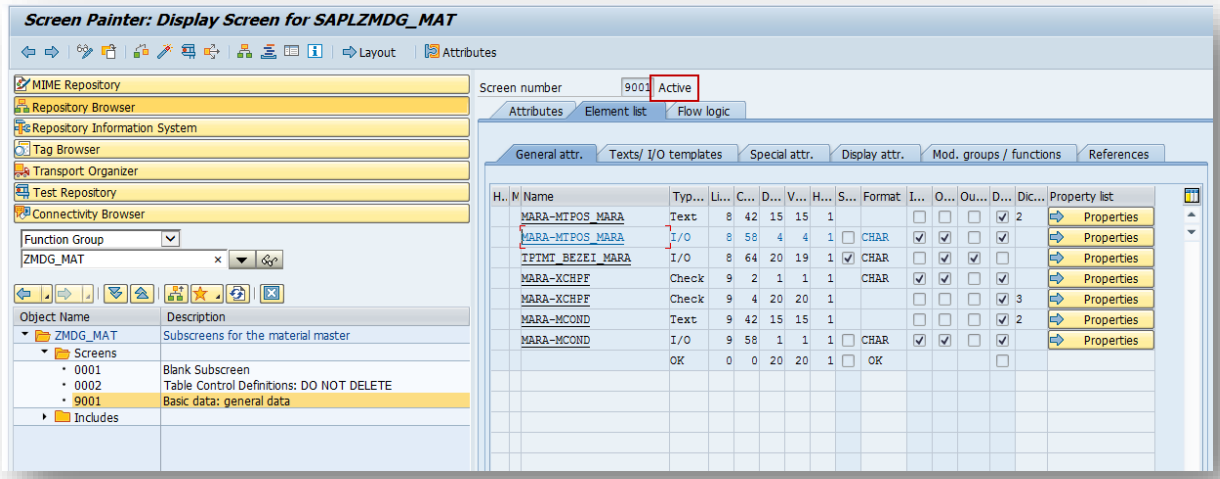
5. Check, save, activate in Screen Painter.

Back on the element list should look like this:



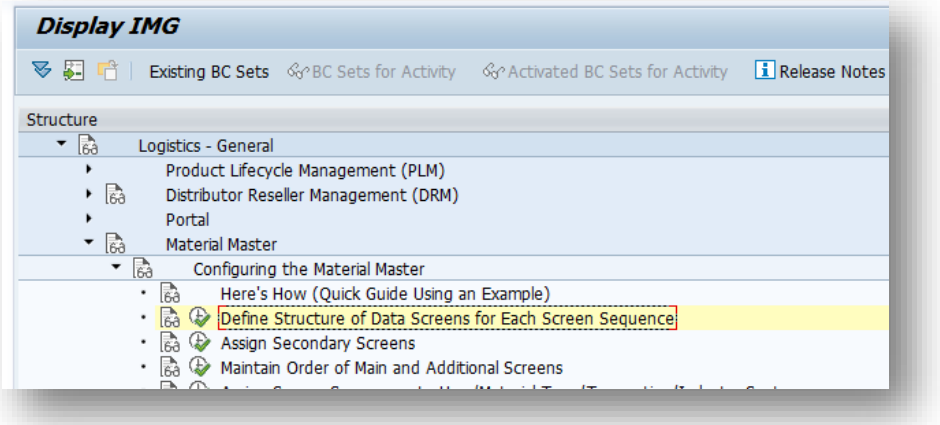
You also have the option to make fields e.g., read-only by removing the flag from column “Input”.

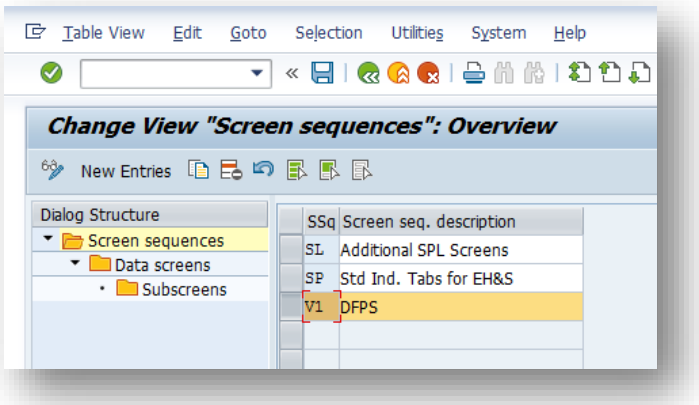
6. If you ran into issues, correct the text field for the condition management to match the line in red above (except the position coordinates).
If you changed anything, activate here as well.



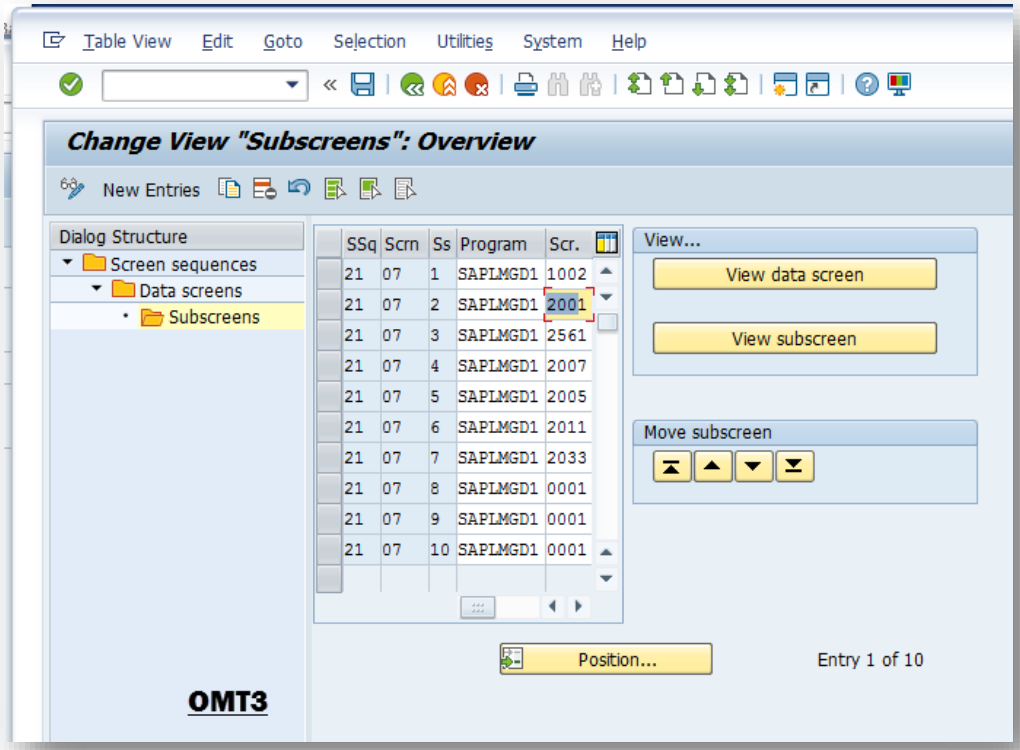
3.3. Replace the Original Sub-Screen

We replace the original sub-screen using the following customizing path and activity *Define Structure of Data Screens for Each Screen Sequence* or directly using transaction OMT3:

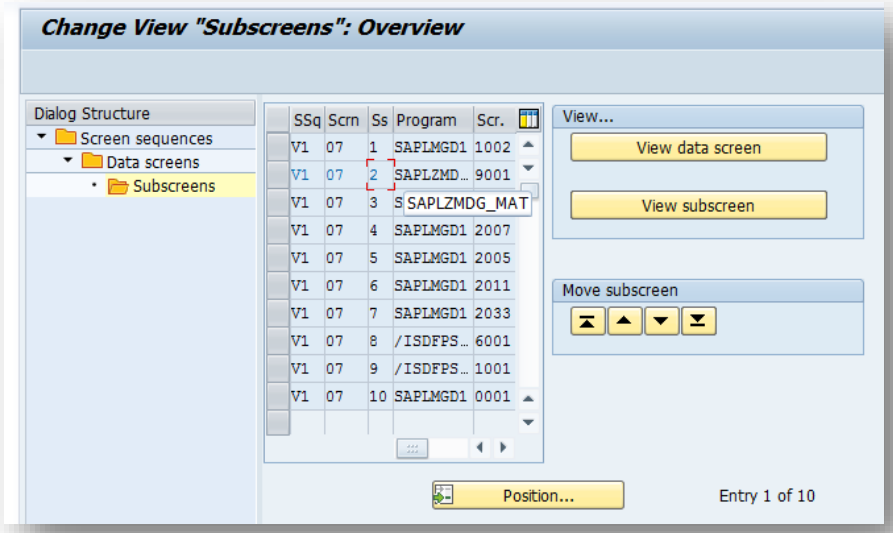




During preparation in earlier step, we found out that for this example, we only need to adjust the V1 screen sequence.

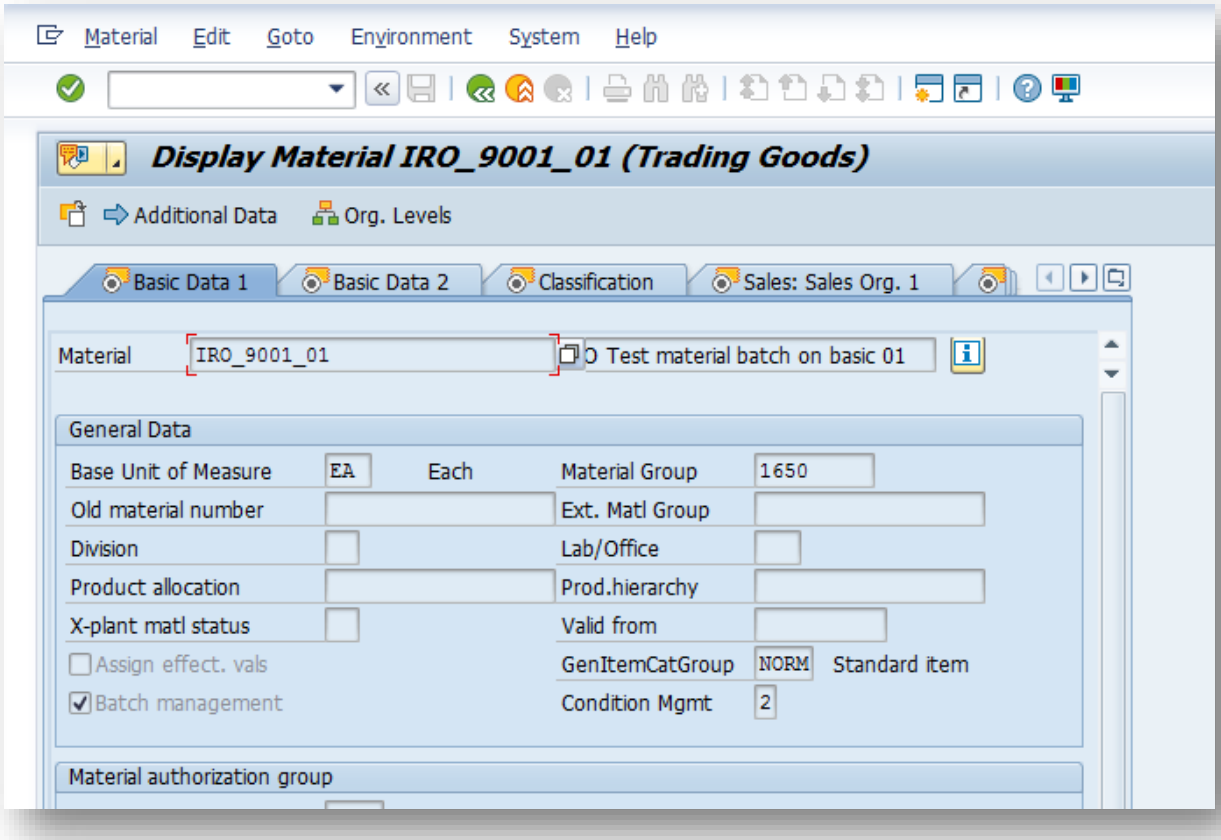


We now replace the corresponding entry for SAPLMGD1/2001 with our new SAPLZMDG_MAT/9001 subscreen.



3.4. Test the results

Start any of the transactions MM01, MM02, or MM03 to verify the results.



4. Further Remarks

- SAP Online Help for Material Master:
  https://help.sap.com/viewer/f7fddfe4caca43dd967ac4c9ce6a70e4/latest/en-US/b724ba53422bb54ce10000000a174cb4.html?q

- More details for the screen sequence analysis is available here:
  https://blogs.sap.com/2014/03/02/material-master-screens-and-fields/

- For more information on how MDG-M handles the Maintenance Status please refer to the guide 'Best Practice for Maintenance Status' https://www.sap.com/documents/2015/07/2a77e74e-5b7c-0010-82c7-eda71af511fa.html

- In general, SAP recommends the following for the Backend Fields that are under MDG Governance:
  Setting Backend Fields to Read-Only
  If you operate a MDG hub, and if you make changes to fields under governance in the material master using a backend transaction ERP, these changes will be overwritten by the next change request created for that material. To prevent this, SAP recommends that you set fields under governance to ready-only in your non-hub systems. The recommended approach for this process in SAP systems is to define new material master backend data screens and screen sequences in the configuration activity "Configuring the Material Master".
  (https://help.sap.com/viewer/6d52de87aa0d4fb6a90924720a5b0549/latest/en-US/5b362c74ba324597ace35c6422370afe.html)

- For those aspects you can find further hints and details via the SAP Note 1557967 "Restricting Material Maintenance on operative target ERP systems for MDG-M governed data"
  (https://launchpad.support.sap.com/#/notes/1557967)

5. Additional Information

5.1. Further Reading

5.1.1. Information on SAP MDG on SAP S/4HANA

- Exchange knowledge: SAP Community | Q&A | Blog
- Try SAP Master Data Governance on S/4HANA for free: Trial Version
- Try SAP Master Data Governance on S/4HANA on the SAP Cloud Appliance Library: S/4HANA 2022 FPS1
- Learn more: Latest Release | Help Portal | How-to Information | Key Presentations

5.1.2. SAP Roadmap Explorer

- Please see the roadmap for SAP Master Data Governance

5.1.3. Related Information

- Learn more: Floorplan Manager for Web Dynpro ABAP | How to Adapt FPM | FPM Blog | How-to Information | Service Mapping Tool | SAP S/4HANA Cookbook CVI

5.2. SAP Notes

In addition to the detailed explanations written in this document, please see the following SAP Notes for further important information.

Note	Description
3372801	Upgrade or Conversion for Master Data Governance, Central Governance
3043582	MDG Customer Connection 2020
3194967	MDG Customer Connection 2021 for S/4HANA 2022
3311039	MDG Customer Connection 2023
3428179	Master Data Governance: Continuous Influence
3134600	MDG-M: Supported fields in Data Model MM
1806108	Functional restrictions in MDG-M in MDG7 (incl. SP02)
2129261	Functional restrictions in MDG-M in MDG8
2284745	Functional Restrictions in MDG for Material with SAP Master Data Governance 9.0
2461516	Functional Restrictions in MDG for Material with SAP Master Data Governance 9.1

2656693	Functional Restrictions in MDG for Material in SAP Master Data Governance 9.2 and on SAP S/4HANA 1809
2816571	Functional Restrictions in MDG for Material on SAP S/4HANA 1909
2948873	Functional Restrictions in MDG for Material on SAP S/4HANA 2020
3070012	Functional Restrictions in MDG for Material on SAP S/4HANA 2021
3219945	Functional Restrictions in MDG for Material on SAP S/4HANA 2022
3374998	Functional Restrictions in MDG for Material on SAP S/4HANA 2023
2479869	Usage of Lean Classification with SAP Master Data Governance
1619534	How to Create, Enhance and Adapt FPM Applications
1637249	MDG: Information for efficient message processing
2105467	MDG Performance
2561461	Scope of support for SAP Master Data Governance (MDG)
1637249	MDG: Information for efficient message processing