



# **How To...Create New Lines in EPM 10.0 Using BPC 10.1 Embedded Model**

## **Applicable Releases:**

**SAP NetWeaver BW 7.40, SP5 and higher**

**SAP BusinessObjects Business Planning and Consolidation 10.1  
(Embedded Model)**

**SAP EPM 10.1 SP20 and higher**

## **Topic Area:**

**Business Data Warehousing**

**Version 1.0**

**April 2015**

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## Document History

Document Version	Description
1.00	First official release of this guide

## Typographic Conventions

Type Style	Description
<i>Example Text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Cross-references to other documentation
<b>Example text</b>	Emphasized words or phrases in body text, graphic titles, and table titles
Example text	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
<b>Example text</b>	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.
<b>&lt;Example text&gt;</b>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

## Icons

Icon	Description
	Caution
	Note or Important
	Example
	Recommendation or Tip



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## 1. Scenario

When using BPC 10.1 (Embedded Model) and the EPM client 10.0 it is currently not possible to create new lines in a report that is based on a BW query. Obviously this is a feature that is crucial for a planning application. Until a proper solution is provided this How to paper will show how new lines can be created with the help of a BW planning function.

## 2. General Description of the Solution

In this How to paper we will show you how you can build up and easily trigger a BW planning function that creates a zero records that can be regarded as a new line in a BW query used in an EPM client work book.

### Note

As we are creating a zero record with our planning function (a record where all key figures are equal to 0) the query must display those records. It is a general setting in the definition of the query whether zero records should be displayed or not (default is 'no zero suppression'). Please make sure that the query does not hide zero records as then the query cannot show the new lines we generate with our planning function.

### Note

When using the 'new lines' feature in a query in another client – say SAP BusinessObjects Analysis for Microsoft Office – then new lines are always displayed at the bottom of the table showing the data. In our solution we create an empty record and after the refresh triggered by the planning function the query will show this empty record at the proper place in the list of records. This means that the new empty record will usually not be at the bottom of the query.

### Note

The technique that we are using does not take the characteristic relationships into account when providing the value help for the variable values. The characteristic relationships are checked once the planning function tries to create the new record.

### Note

The technique we are using to create the empty record is client independent and could be used in other clients as well. What is specific to the EPM client is the way we select and fill the necessary parameters in the planning function.

### Note

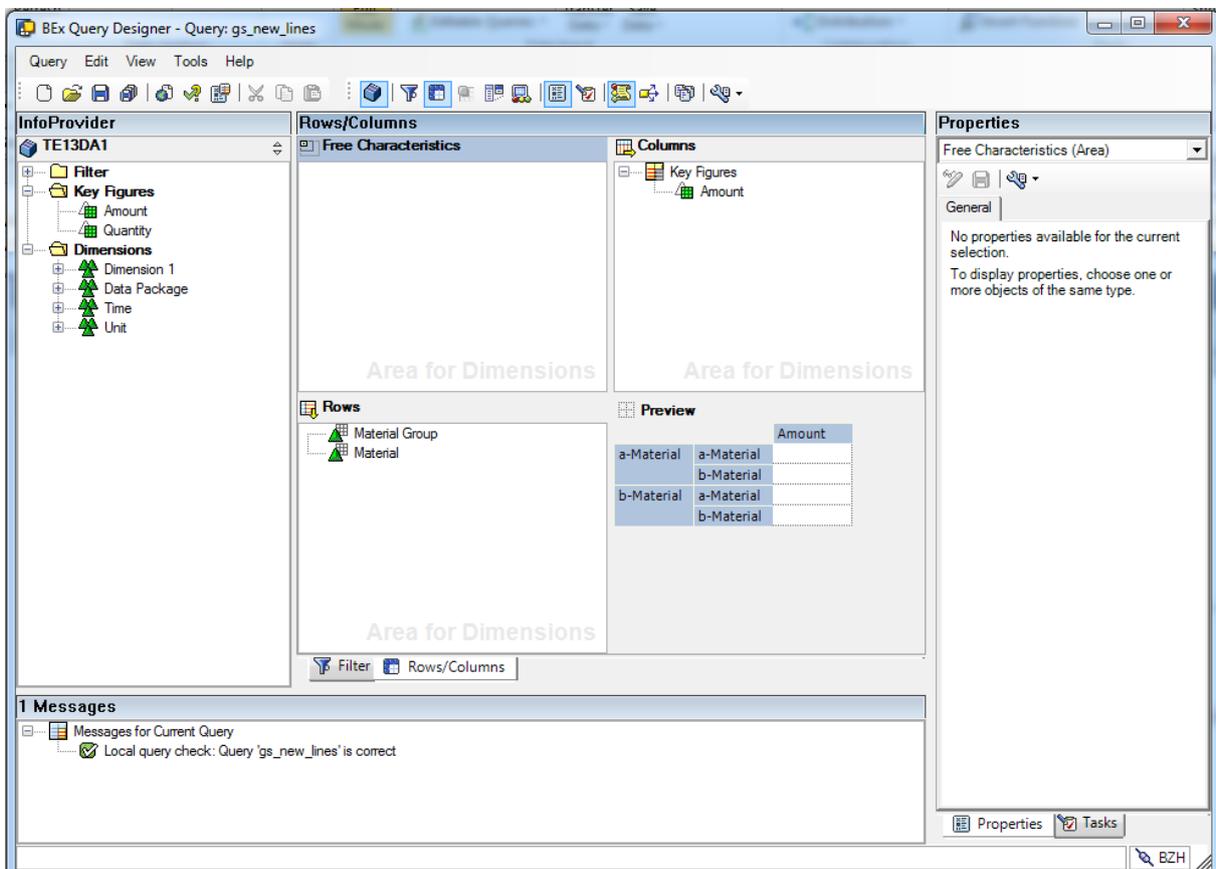
Make sure you are creating the new lines at the most detailed level of the aggregation. If you are using the disaggregation feature in a query showing data on a more aggregated level then our approach will enable you to create empty records in the query but you may not be able to enter any new data as in such a query as you might (logically) enter data on totals levels and the system tries to disaggregate the data according to the disaggregation algorithm. As you are only generating empty records the disaggregation might thus not be defined and a data entry might not be possible.

### 3. Step by Step Solution

Let us assume that you use a query with the characteristic 'Material Group' (ZD\_MTLGRP) and 'Material' (ZD\_MAT) in the rows. We have several other characteristics in the fixed filter.

#### 3.1 Create the Query, Planning Function, Filter, and Planning Sequence

Please use the BEx Query designer to create a suitable query. Keep in mind that you probably use other characteristics and thus will have to adapt the solution everywhere where we use our characteristics.



Now go to the planning modeler (transaction RSA1) and create a new planning function. The planning function should be based on the same aggregation level as the query and should be of the type 'Generate Combination'. You do not need to specify any further settings in the planning function.

**Display Planning Function TE13DN1**

← → [Icons] | Parameter [Icons]

Planning Function: TE13DN1 [TE13DN1]

Aggregation Level: TE13DA1 TE13DA1

Function Type: Generate Combinations

- Function creates empty records for all combinations of characteristic values, in accordance with the characteristic master data.
- Only the combinations that correspond to the characteristic combinations and that are in the same filter are created.
- Function works without blocking, because values are created for all characteristics in the aggregation level. Therefore the values of all the characteristics are changed.
- You do not need to perform any further settings for characteristics.

Li 1, Co 1 Ln 1 - Ln 5 of 5 lines

Now we create a filter for our planning function. In our example we will use this filter together with the planning function in a planning sequence. The planning sequence will be used in the EPM workbook. Obviously we want to be able to specify in the client which new line we want to create. Thus in our filter we need a variable for the material group and for the material.

For the other characteristics in the query we use fixed values in our filter. Obviously you can use variables here as well and fill the variables from the values in the query filter (similar technique as we use for our variables for material and material group).

Instead of using a planning sequence you can also use the planning function directly and build up the filter dynamically in the EPM client (see also remark below). The outcome of both approaches will be equivalent

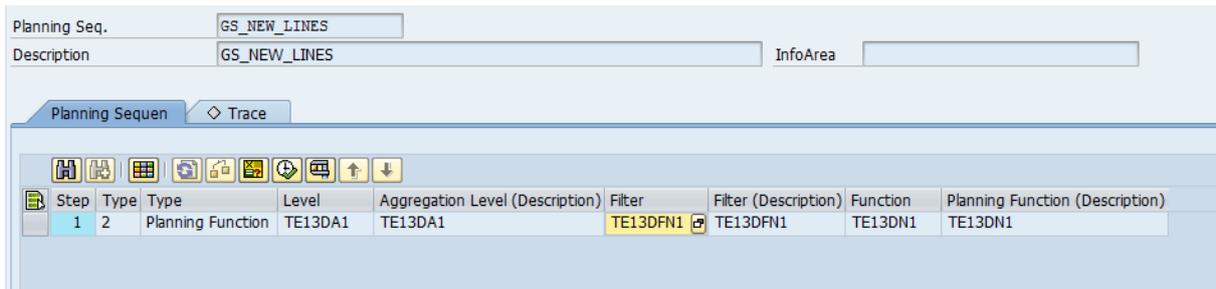
Filter: TE13DFN1 [TE13DFN1]

Aggregation Level: TE13DA1

Key Date:  Standard  
 Fixed Date: [ ]  
 From Variable: [ ]

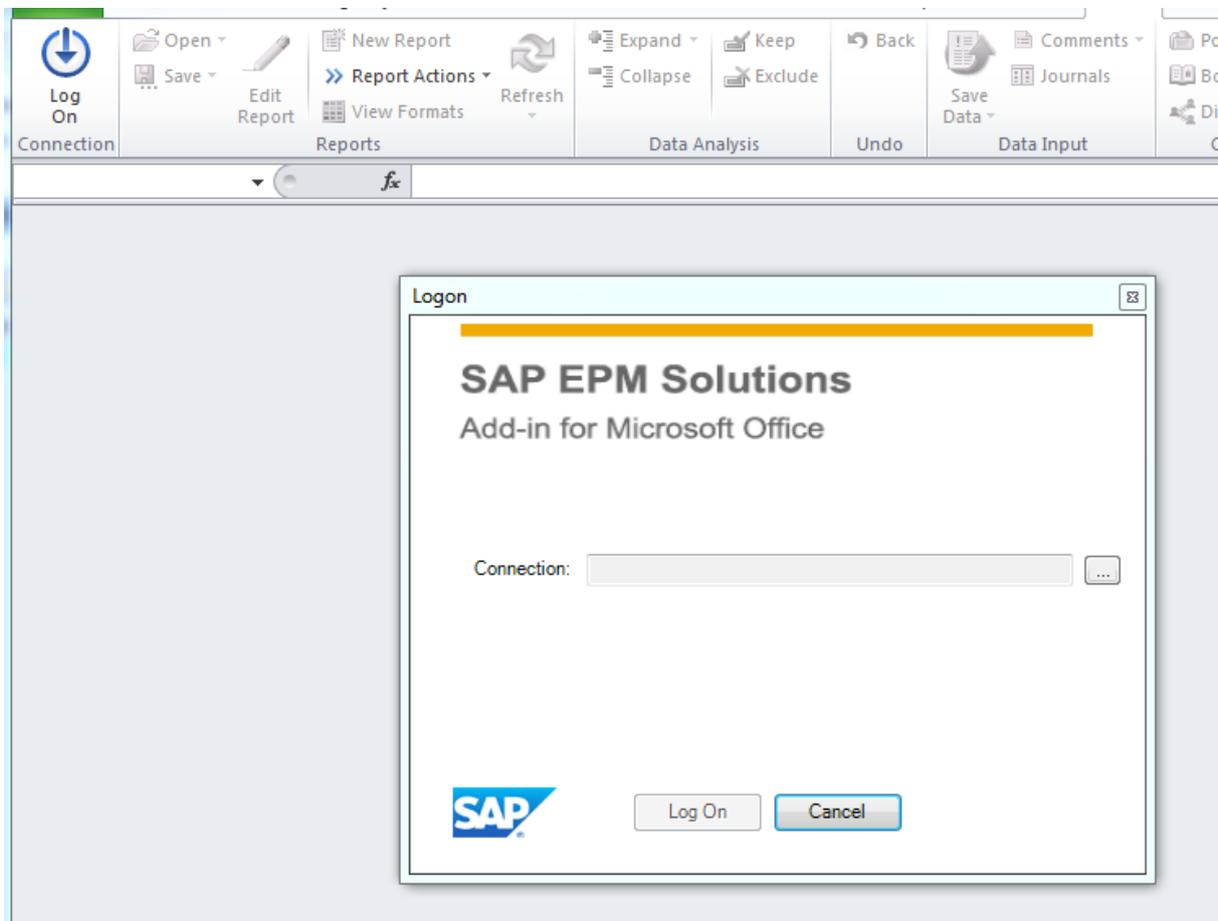
Selections			Selection	Delete	Default Values	Selection	Delete
0CALMONTH2	Calendar month	= 1	[Icon]	[Icon]		[Icon]	[Icon]
0CALYEAR	Calendar Year	= 2014	[Icon]	[Icon]		[Icon]	[Icon]
0CURRENCY	Currency key	= EUR	[Icon]	[Icon]		[Icon]	[Icon]
0INFOPROV	InfoProvider	= TE13_PL	[Icon]	[Icon]		[Icon]	[Icon]
0UNIT	Unit of measure	= ST	[Icon]	[Icon]		[Icon]	[Icon]
0VERSION	Version	= B01	[Icon]	[Icon]		[Icon]	[Icon]
TECOUNTRY	Country	= AB	[Icon]	[Icon]		[Icon]	[Icon]
YSTORE	Store	= 1	[Icon]	[Icon]		[Icon]	[Icon]
ZD_MAT	Material	var:Z_MAT	[Icon]	[Icon]		[Icon]	[Icon]
ZD_MTLGRP	Material Group	var:Z_MAT_GROUP	[Icon]	[Icon]		[Icon]	[Icon]

After you have created the filter please create a planning sequence where you use the planning function and the filter you have just defined.

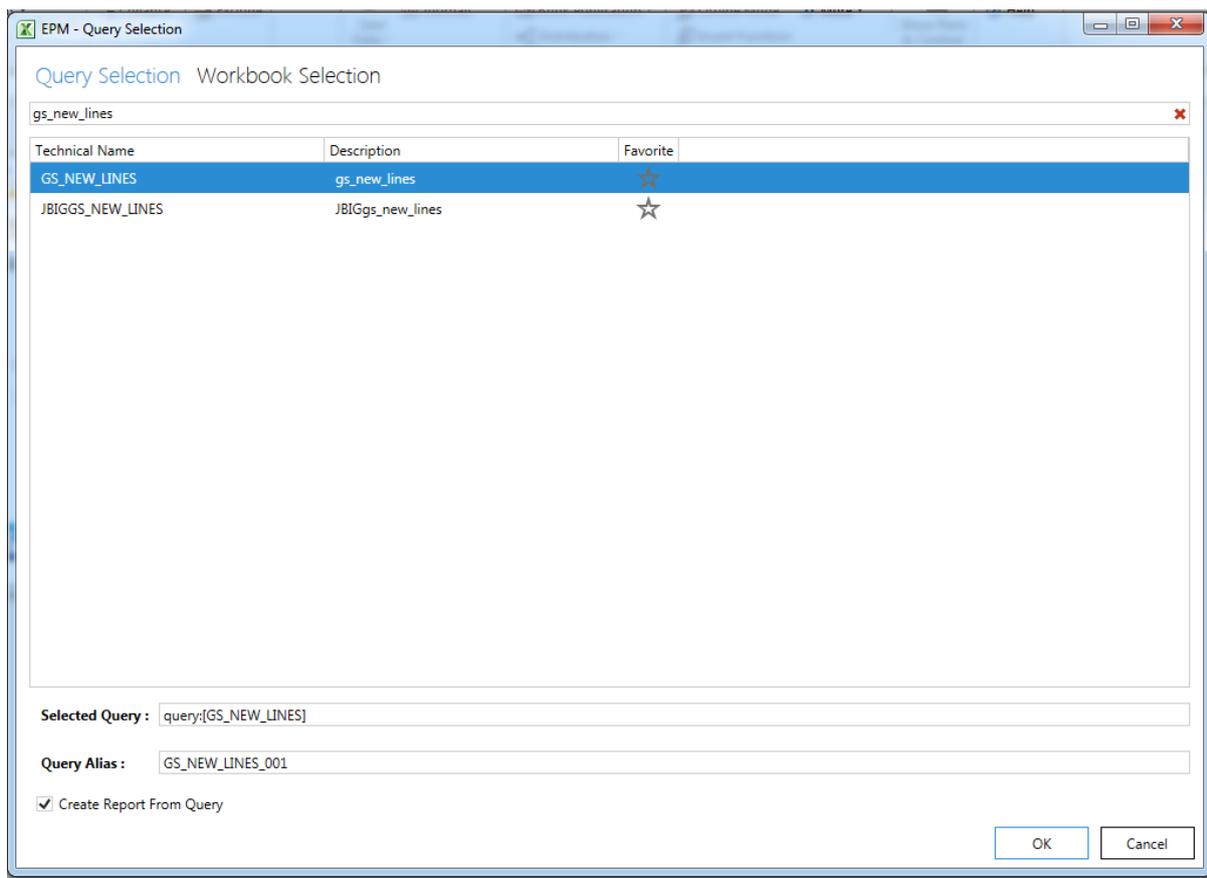


### 3.2 Create the Workbook

Open your Microsoft Excel, navigate to the EPM tab, and click on 'Log on'.



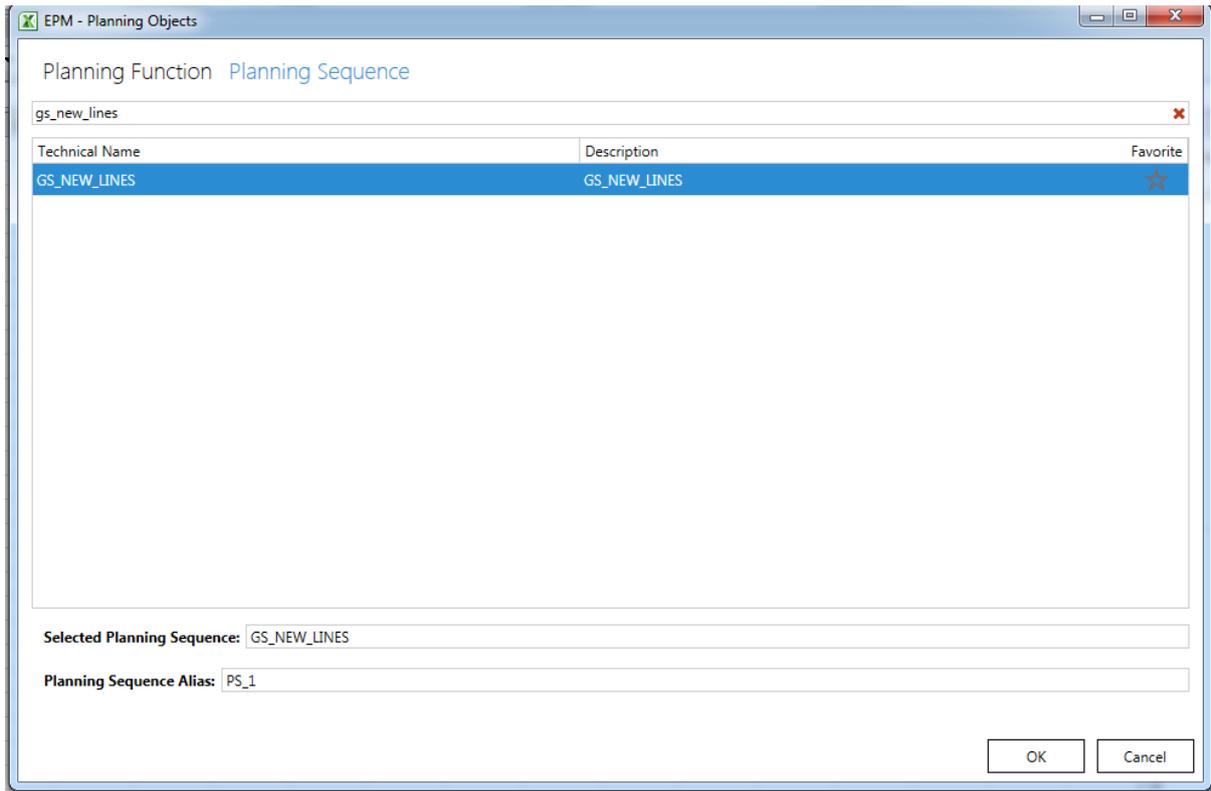
On the logon screen choose the proper connection to the system that contains your query. Enter your credentials and on the following popup enter the name of your query and select it from the list.



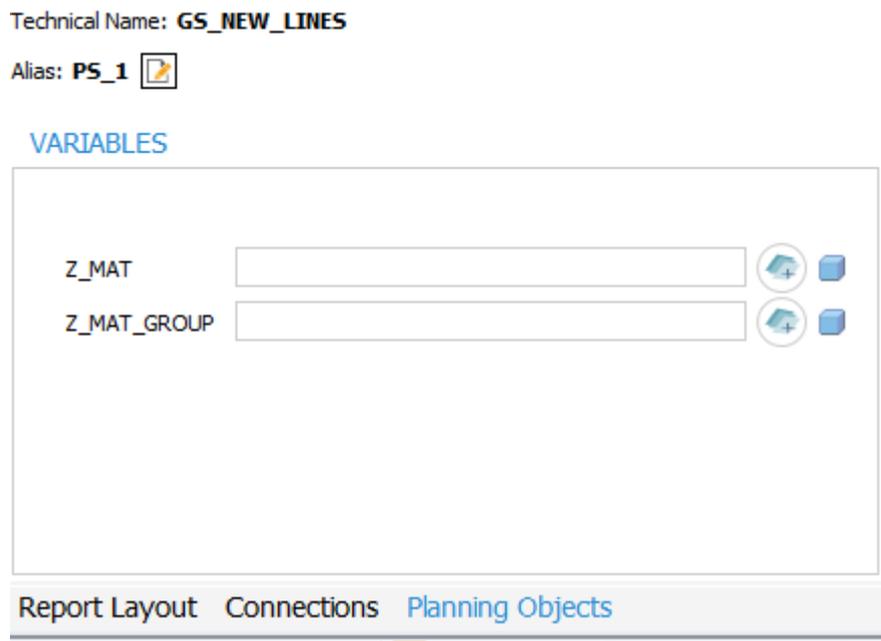
When you press ok the query will be inserted as a report into the workbook.

As we need some more space above the data in the workbook insert a number of empty lines at the top (or move the report further down).

Now go to the pane and click on 'Planning Objects'. Press the '+' symbol next to the connection name, enter the name of your planning sequence, and select the sequence.



After pressing ok you will see your planning sequence in the pane and you can see that it exposes a variable for the material group and a variable for the material.

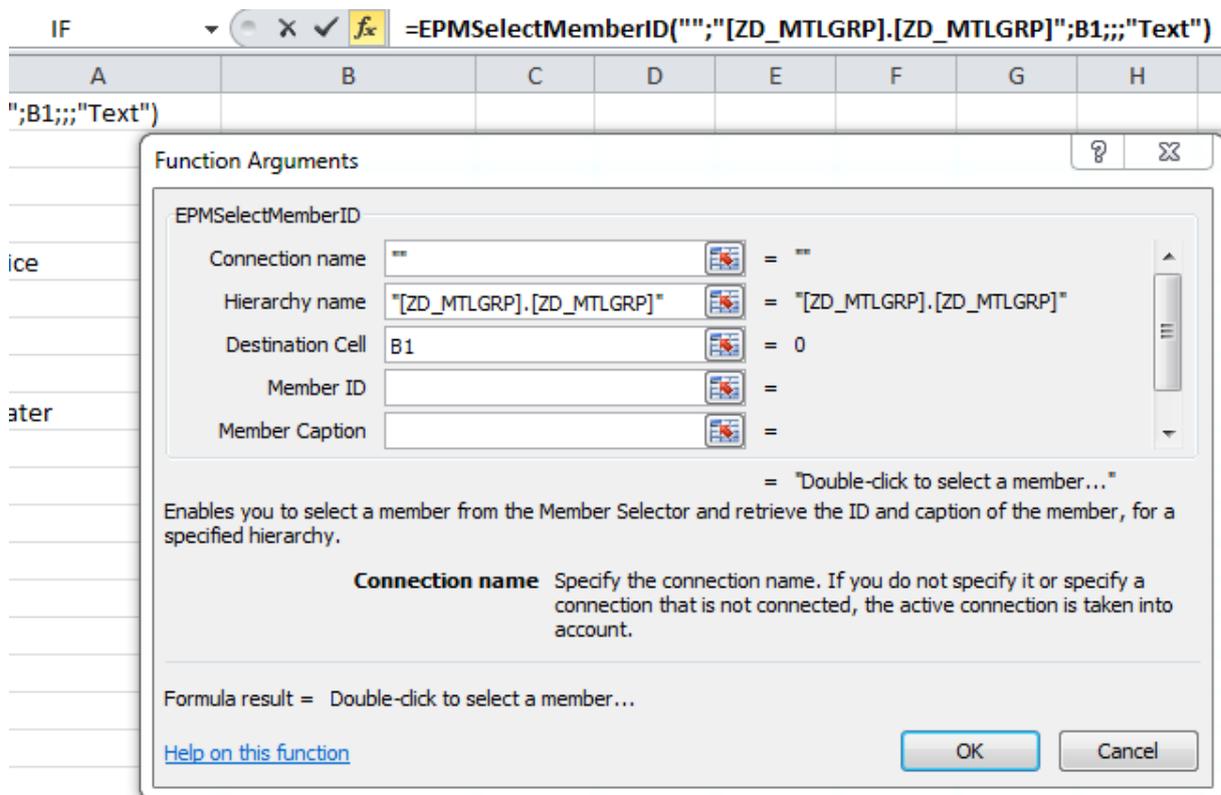


### 3.3 Insert a Value Help for the Characteristic Values

We want to enable the user to decide which new line he/she wants to create. Thus we need a value help for the material group and the material. We could use the value help in the pane but we want to enable the user to operate the entire application from the Excel grid area.

We use an EPM formula to provide a value help. Place your cursor on cell A1 and enter the EPM formula '=EPMSelectMemberID'. When you click on the formula symbol 'fx' in Excel then you get further information and can enter the parameters more easily. Use the following parameters:

- Connection name: can be left blank
- Hierarchy name: if you want to use a hierarchy you can enter the name of the hierarchy here. If you do not want to use a hierarchy in the selector then enter the technical name of the characteristic. In our case we have to enter [ZD\_MTLGRP]. [ZD\_MTLGRP].
- Destination cell: in order to fill the variable properly we need the key of the selected characteristic value. We will find this key in the destination cell. We display the key right next to the text but you can also use a destination cell that is not visible to the user.
- Member ID: can be left blank, will be filled once the user chooses a value
- Member Caption: same as above
- Property: Enter "Text" in order to display the text of the selected value



In a similar way create a second formula for the material. Now use the formula:

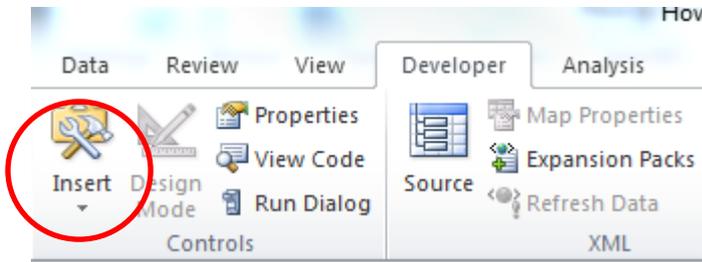
`=EPMSelectMemberID(;;;"[ZD_MAT].[ZD_MAT]";B2;;; "Text")`

Obviously you will have to adapt the names of the characteristics to your model.

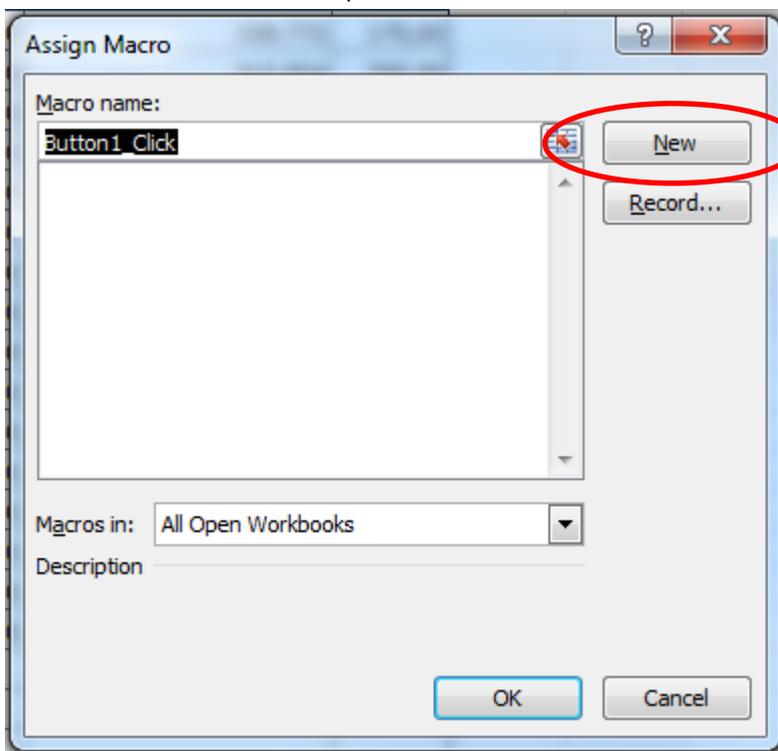
### 3.4 Insert a Button with the VBA Coding

We finally create the button for executing the planning sequence. In the 'Developer' tab in the Excel ribbon choose the button 'Insert'.

If you cannot find this tab you have to enable it in Excel under 'Options->Customize Ribbon'.



Now choose 'Form Control' and insert a button. Excel will prompt you for a macro that is to be executed when the button is pressed.



If you want you can change the name of the macro. In any case you have to press the 'New' button so Excel creates the macro for you. Excel will automatically jump to the Visual Basic editor.

Now insert the following coding into the macro:

```
Sub Button1_Click()
```

```
Dim addin As New FPMXLClient.EPMAddInAutomation
```

```
addin.SetPlanningSequenceVariable "PS_1", "Z_MAT_GROUP", Range("B1").Value
```

```
addin.SetPlanningSequenceVariable "PS_1", "Z_MAT", Range("B2").Value
```

```
addin.ExecutePlanningSequence "PS_1"
```

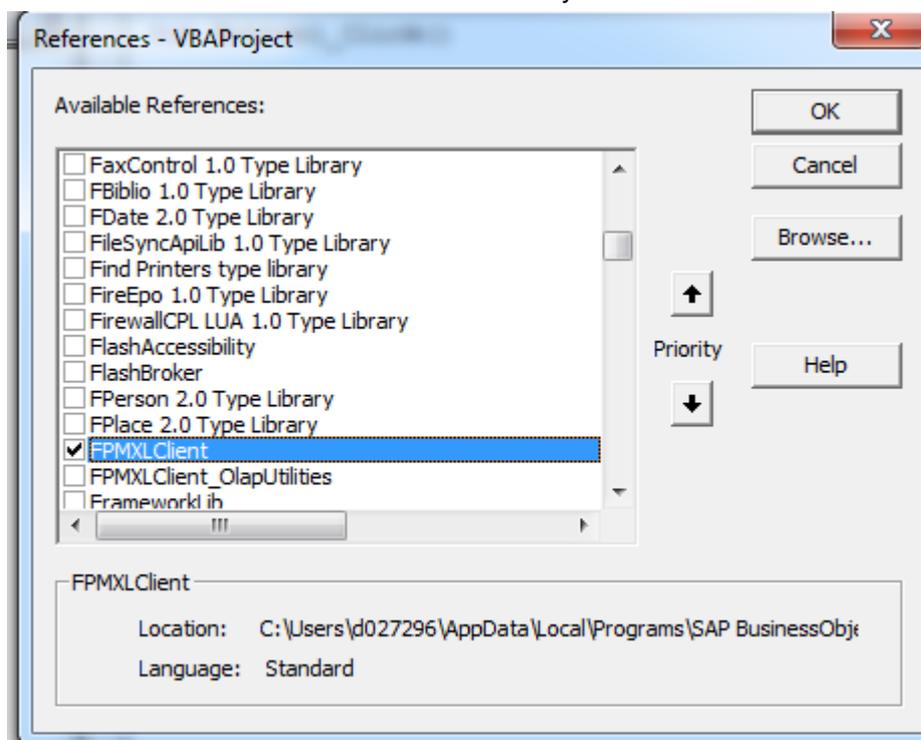
```
addin.RefreshMasterdatasForConnection "GS_NEW_LINES_001"
```

End Sub

Again you will have to adapt the coding to your model and change the name of the characteristics, the variables, and the planning sequence.

If you get error when using the above coding then one reason might be that you have not referenced the EPM Addin in VBA. In order to do so choose 'Tools' from the menu in the VBA window and click on 'References'.

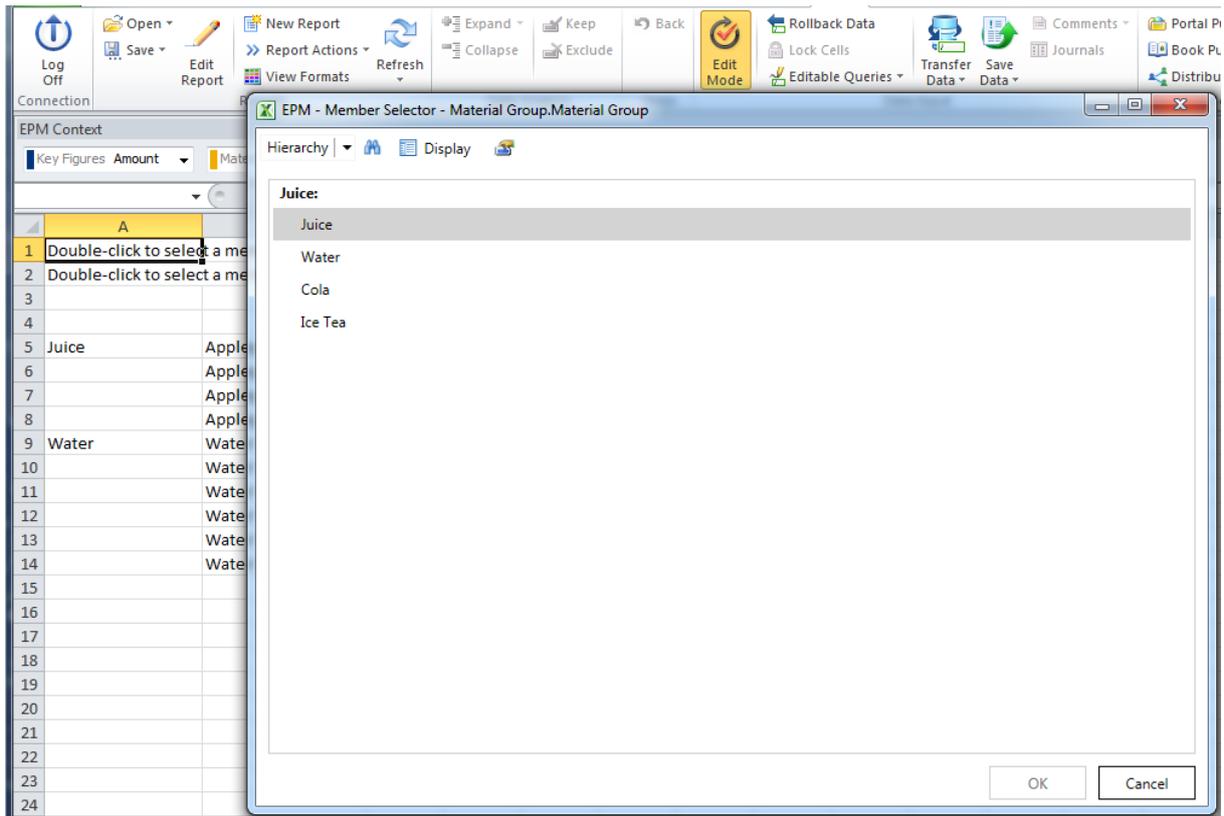
Now look for 'FPMXMLClient' and select the entry.



Finally you can rename the button in your workbook to 'Create New Line'.

Note: if you do not want to use a planning sequence but a planning function instead then you either have to specify the filter in the EPM pane or fill the filter via the macro as well. This can be done by using the method 'SetPlanningFunctionFilter'.

You can now save and test your workbook. By double clicking on the cells A1 and A2 the user can select the key for the new line. After pressing the button the system creates a line with the selected key and zero values in the key figures.



Cola	[ZD_MTLGRP].[ZD_MTLGRP].[000000102]		
Diet Cola 1.0L Bottl	[ZD_MAT].[ZD_MAT].[COPA500110]		Create New Line
		Amount	
Juice	Applejuice 0.2L Pal	16251,06	
	Applejuice 0.7L Box	5284,71	
	Applejuice 1.0L Pal	5284,71	
	Applejuice 2.0L Pal	16251,06	
Water	Water Sparkling 0.50	2607,39	
	Water Sparkling 1.0L	3908,88	
	Water Sparkling 1.5L	1899	
	Water Still 0.5L Bot	3454,17	
	Water Still 1.0L Bot	5064	
	Water Still 2.0L Bot	8870,22	
Cola	Diet Cola 1.0L Bottl	0	

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