Produmex Manufacturing Customization Guide

Customization Process

The customization process for the Produmex mobile applications consists of the following steps:

- Enable the Customization Assist mode and run the client application. Check the customization information of the screen.
- Create the custom field and/or the SAP user query.
- Restart the client application and check the results of the customization.

Many screens of Produmex mobile applications are customizable with SAP Business One's queries. The used query have to be named specifically based on the screen it is used on. The query names, and parameters can be found with the help of the 'Customization Assist'. The query result column names indicate which fields to set.

Supported customization types:

- Preset field data
- Validation: The system checks if the entered values are correct during a 'validate' or a 'button' event.
- Add new fields/Hide existing fields

1. Configure and run client application

1.1. Enable the Customization Assist

To see information regarding the customization possibilities enable the Customization Assist mode.

The Customization Assist mode is only needed to see customization possibilities. It is not required to be enabled during normal operations.

Start the Produmex PDC Configuration application. On the 'Appearance' tab tick the Customization Assist checkbox to enable the Customization Assist mode.

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Configuration		X
General Appearance	Language	
Desktop Mode Customization Assist		
Font Size	AA Desktop Font size for desktop computers AA Small For 800x600 resolution	
	AA Normal For 1024x768 resolution, or above	¥
[Company Logo] [Tester Mode]		F12
ОК	Cancel	

1.2. Run client application

After the Customization Assist Mode has been activated, run the Produmex client application. Go to the screen to be customized.

Press the 🌋 button on the top of the screen. The 'Customization Info of ScreenName' screen will open up.

On the 'Parameters' tab the possible parameters for customization user queries are listed with their type and current value. On the 'Events' tab the customizable events are listed. The 'Exists' checkbox indicates whether there is an existing custom query for the event or not.

meters Events				Parameters Events	
Parameter	Туре	Current Value	^	Event name	Exists
\$[ButtonCancel]				BXPPSMobilePDC_StopJobScreen_Load	
<pre>\$[ButtonDoneAndStay]</pre>				BXPPSMobilePDC_StopJobScreen_Activate	
\$[ButtonOK]				BXPPSMobilePDC_StopJobScreen_ReActivate	
<pre>\$[CheckCompleted]</pre>	String	N		BXPPSMobilePDC_StopJobScreen_ExternalScreenLoad	
\$[CheckSetup]	String	Ν		BXPPSMobilePDC_StopJobScreen_TextBinLocation_validate	
CurrentOperation	Object			BXPPSMobilePDC_StopJobScreen_TextBinLocation_validate_after	
CurrentPDCBooking	Object			BXPPSMobilePDC_StopJobScreen_TextComments_validate	
Employee	Object			BXPPSMobilePDC_StopJobScreen_TextComments_validate_after	
RunningJobsOperations	Object			BXPPSMobilePDC_StopJobScreen_ButtonDoneAndStay_click	
SelectedWorkCenterJournalEntry	Object			BXPPSMobilePDC_StopJobScreen_ButtonDoneAndStay_click_after	
SelectedWorkCenterTicket	Object			BXPPSMobilePDC_StopJobScreen_ButtonCancel_click	
<pre>\$[TerminalID]</pre>	String	PMX_BUDTOSH2		BXPPSMobilePDC_StopJobScreen_ButtonCancel_click_after	
<pre>\$[TextBinLocation]</pre>				BXPPSMobilePDC_StopJobScreen_ButtonOK_click	
\$[TextComments]				BXPPSMobilePDC_StopJobScreen_ButtonOK_click_after	
\$[TextMinutes]	Int32	45940		BXPPSMobilePDC_StopJobScreen_TextRejectedQuantity_validate	
<pre>\$[TextOperation]</pre>	String	135-2 (oPQA - Quality .		BXPPSMobilePDC_StopJobScreen_TextRejectedQuantity_validate_after	
<pre>\$[TextProductionOrder]</pre>				BXPPSMobilePDC_StopJobScreen_TextQuantity_validate	
\$[TextQuantity]	Decimal	0.000000	~	BXPPSMobilePDC StopJobScreen TextQuantity validate after	

2. Customization

2.1. Create custom field

Open the Customization Fields table in SAP Business One via: Tools > User Defined Windows > BXCUSTFD.

Field	Description	Value
Field Name	This name will be used in the custom queries. On the Customization window the field will appear with this name. If the name of an existing field is added, the other properties can be changed. (For example this hide an existing field set the 'Visibility' to 'No')	Please see: Produmex Manufacturing Customization Examples
Field Type	Type of the field.	Supported field types: String(0): Creates a new input fields. It will have a 'validate' and 'validate after' event. Button(13): Creates a new button. It will have a 'click' and 'click after' event.
Label		
Module	The name of the mobile solution.	BXPPSMobilePDC
On External Form	Defines whether the new field is added to a new screen or not. If yes, a new button will appear to open the external screen.	Yes/No
Position Data	Object placement can be changed in this field.	 x: - horizontal position (% of screen width from left) y: - vertical position (% of screen height from top) w: - width (% of screen width) h: - height (% of screen height from top) f: - font size (pixel) only on 'Button' Only integer values are allowed. Separate the different parameters with the ';' character. Example: x:1;y:70;w:50;h:9
Protected	If set to yes, the field will be displayed on the proceeding screen as well. The entered value in read-only mode.	Yes/No
Read Only	Defines whether the field will be read only or not.	Yes/No
Screen	The screen name.	The screen name can be found in the first line on the Customization window.
Visible	Defines whether the field is displayed on the screen or not.	Yes/No

2.2. Create an SAP user query

Open the Query Manager in SAP Business One via: Tools > Queries > Query Manager

Create the user query.

The name of the query defines when it will be executed, therefore save it as the name of the event when you would like to run the user query.

EXAMPLE: The user query that runs when the 'GR PO' screen is loaded in Produmex Scan is 'BXMobileWH9_GoodsReceiptPOScreen_Load'

2.2.1. Supported message types

The following message types can be used in user queries for Produmex PDC:

• I: Information

A green line will appear at the footer of the screen with the message. The event will execute.

• W: Warning

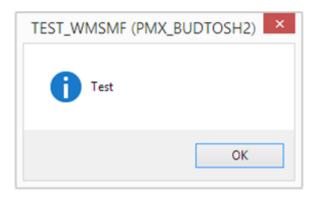
A blue line will appear at the footer of the screen with the message. The event will execute.

• E: Error

This is the default message type value. A red line will appear at the footer of the screen with the message. The event not will execute.

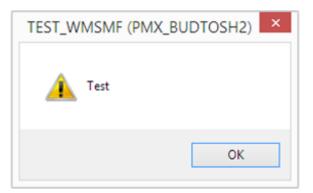
• IM: Information with message box

A pop up information message will be prompted, that needs user confirmation (OK). The event will execute.



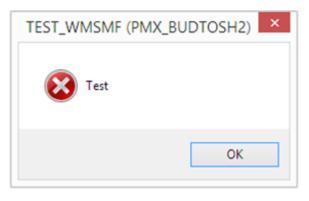
• WM: Warning with message box

A pop up warning message will be prompted, that needs user confirmation (OK). The event will execute.



• EM: Error with message box

A pop up error message will be prompted, that needs user confirmation (OK). The event will not execute.



YM: Yes/No with message box

A pop up confirmation message will be prompted, that can be answered with yes or no. The event will execute depending on user choice.

TEST_WMSMF (PMX_BUDTOSH2)
? Test
Yes No

3. Restart the application

To apply the customization restart the mobile application.

You must restart the application every time a new user query is created but it is not necessary to restart the application when modifying an existing query.

Customization Examples

1. Preset field data

With customization it is possible to preset the field data.

Enable the Customization Assist then start Produmex PDC. Go to the screen that you would like to customize and press the Customization Assist button. Because the field data is populated when the screen loads, the event to customize is the load event.

In the example we will preset the 'Quantity' value on the 'Complete Job' screen to the open quantity on the production order.

Go to the Complete Job screen and press the Customization Assist button. The event to customize is the '*BXPPSMobilePDC_StopJobScreen_Load*' event.

Event name	Exists	^
BXPPSMobilePDC_StopJobScreen_Load		
BXPPSMobilePDC_StopJobScreen_Activate		
BXPPSMobilePDC_StopJobScreen_ReActivate		
BXPPSMobilePDC_StopJobScreen_ExternalScreenLoad		
BXPPSMobilePDC_StopJobScreen_TextBinLocation_validate		
BXPPSMobilePDC_StopJobScreen_TextBinLocation_validate_after		
3XPPSMobilePDC_StopJobScreen_TextComments_validate		
3XPPSMobilePDC_StopJobScreen_TextComments_validate_after		
3XPPSMobilePDC_StopJobScreen_ButtonDoneAndStay_click		
3XPPSMobilePDC_StopJobScreen_ButtonDoneAndStay_click_after		
3XPPSMobilePDC_StopJobScreen_ButtonCancel_click		
3XPPSMobilePDC_StopJobScreen_ButtonCancel_click_after		
3XPPSMobilePDC_StopJobScreen_ButtonOK_click		
3XPPSMobilePDC_StopJobScreen_ButtonOK_click_after		
3XPPSMobilePDC_StopJobScreen_TextRejectedQuantity_validate		
3XPPSMobilePDC_StopJobScreen_TextRejectedQuantity_validate_after		
3XPPSMobilePDC_StopJobScreen_TextQuantity_validate		
3XPPSMobilePDC_StopJobScreen_TextQuantity_validate_after		v

Create a new query in the Query Manager. User query name will be the name of the event.

In the example the query name will be: 'BXPPSMobilePDC_StopJobScreen_Load'.

Example query:

SELECT

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```

```
CASE WHEN (SELECT SUM(U_BXPCoQty) FROM [@BXPPDCB00KING] WHERE U_BXPPr00I =
$[CurrentOperation.Code] AND U_BXPIsUnd = 'N') >
$[CurrentOperation.PlannedQuantity]
THEN 0
ELSE $[CurrentOperation.PlannedQuantity] - ISNULL( (SELECT SUM(U_BXPCoQty))
FROM [@BXPPDCB00KING] WHERE U_BXPPr00I = $[CurrentOperation.Code] AND
U_BXPIsUnd = 'N'), 0)
```

END AS TextQuantity

The query in the example runs when the Complete Job screen loads. It selects the completed quantities from the PDC Booking (@BXPPDCBOOKING) table using the operation code (\$[StopJobOperation.Code]). Then it subtracts the completed quantities from the Operation Planned Quantity (\$StopJobOperation.PlannedQuantity]). The query sets the value to zero if the completed quantity is greater than the planned quantity.

After the query has been added, restart Produmex PDC in order to load the customization data.

Please note: You only need to restart the application once a new query has been added. If you only add modifications to the user query, Produmex PDC doesn't have to be restarted.

2. Validation

It is possible to add validation for 'validation' and 'button' events with customization.

In the example we will set to show warning message if the user scans an operation on the 'Start Job' screen and there is no PDC booking for the previous operation of the same production order.

Go to the Start Job screen and press the Customization Assist button. For the operation validation we will use the *BXPPSMobilePDC_StartJobScreen_TextOperation_validate* event.

Event name	Exists	^
BXPPSMobilePDC_StartJobScreen_Load		
BXPPSMobilePDC_StartJobScreen_Activate		
BXPPSMobilePDC_StartJobScreen_ReActivate		
BXPPSMobilePDC_StartJobScreen_ExternalScreenLoad		
BXPPSMobilePDC_StartJobScreen_TextDefaultWorkCenter_validate		
BXPPSMobilePDC_StartJobScreen_TextDefaultWorkCenter_validate_after		
BXPPSMobilePDC_StartJobScreen_TextWorkCenter_validate		
BXPPSMobilePDC_StartJobScreen_TextWorkCenter_validate_after		
BXPPSMobilePDC_StartJobScreen_TextOperation_validate		
BXPPSMobilePDC_StartJobScreen_TextOperation_validate_after		
BXPPSMobilePDC_StartJobScreen_ButtonApprove_click		
BXPPSMobilePDC_StartJobScreen_ButtonApprove_click_after		
BXPPSMobilePDC_StartJobScreen_ButtonClear_click		
BXPPSMobilePDC_StartJobScreen_ButtonClear_click_after		
BXPPSMobilePDC_StartJobScreen_ButtonLogout_click		
BXPPSMobilePDC_StartJobScreen_ButtonLogout_click_after		
BXPPSMobilePDC_StartJobScreen_ButtonStartJob_click		
BXPPSMobilePDC StartJobScreen ButtonStartJob click after		v

Create a new query in the Query Manager. User query name will be the name of the event.

Query name: 'BXPPSMobilePDC_StartJobScreen_TextOperation_validate'.

```
DECLARE @DocEntry INT
DECLARE @LineNumber INT
DECLARE @PrevLineNum INT
DECLARE @PrevOperation nvarchar(MAX)
DECLARE @PrevVisOrder nvarchar(MAX)
DECLARE @Warning nvarchar(MAX)
DECLARE @NumberOfBookings nvarchar(MAX)
DECLARE @INPUT nvarchar(MAX)
DECLARE @a INT
SET @Warning = ''
SET @INPUT = $[TextOperation]
SET @DocEntry = 0
SET @LineNumber = 0
SET @a = CHARINDEX('-', @INPUT)
IF @a > 0 BEGIN
   SET @DocEntry = CAST(LEFT(@INPUT, @a - 1) AS INT)
   SET @INPUT = SUBSTRING(@INPUT, @a + 1, LEN(@INPUT) - @a)
   SET @a = CHARINDEX(' ', @INPUT)
   IF @a = 0 BEGIN SET @a = LEN(@INPUT) + 1 END
   SET @LineNumber = CAST(LEFT(@INPUT, @a - 1) AS INT)
END
SELECT TOP 1 @PrevLineNum = WOR1.LineNum, @PrevOperation = WOR1.ItemCode,
@PrevVisOrder = WOR1.VisOrder
FROM WOR1 WHERE WOR1.DocEntry = @DocEntry AND WOR1.U_BXPRowTy = 2
AND WOR1.VisOrder < (SELECT VisOrder FROM WOR1 WHERE DocEntry = @DocEntry
```

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```

```
AND LineNum = @LineNumber)
ORDER BY VisOrder DESC
IF @PrevLineNum IS NOT NULL BEGIN
    SELECT @NumberOfBookings = COUNT(*) FROM [@BXPPDCBOOKING] book WHERE
book.U BXPPrODE = @DocEntry AND book.U BXPPrODL = @PrevLineNum AND
book.U BXPIsUnd = 'N'
    IF @NumberOfBookings = 0 BEGIN
        SET @Warning = 'Warning: No PDC booking for previous operation,
continue? Operation: ' + @PrevOperation + ', line: ' + CAST(@PrevVisOrder AS
nvarchar(MAX))
   END
END
IF @Warning <> ''
BEGIN
   SELECT @Warning AS 'WarningMessage$', 'W' AS 'MessageType$'
END
```

The example query can return two results:

- 1. No warning message if the previous operations have PDC bookings or there is no previous operation.
- 2. Warning message if there is no PDC booking for the previous operation.

The user query does the following:

Parses the input (\$[TextOperation]) - the value from the screen field named Operation, separate DocEntry and LineNum. The input will be something like: '10-5', or '10-5 (Otuma...)' Checks what is the previous operation from the same Production Order. Checks if the previous operation has a booking (from [@BXPPDCBOOKING] table)

If there is no booking, returns a warning message in the result column named 'WarningMessage\$'

3. Hide existing field

It is possible to hide existing fields with customization.

Open the Customization Fields user table and add a new record for an existing field. Set the Visible value to 'No' then press the 'Update' button.

Example: In the example we hide the Default Work Center field from the Start Job screen.

Add the following record to the Customization Fields user table:

Field Name	Module	Screen	Visible
TextDefaultWorkCenter	BXPPSMobilePDC	StartJobScreen	No

Restart Produmex PDC. The customized Start Job screen will look like this:

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Mobi PDC	ile 🖁	TEST_WMSMF (PMX_BUDTOSH2) - John Doe	- 06/20/1	7 04:	X 13 PM
Server: 17.05.31007.18920 Client: 17.05.31007		Start Job		*	()
Operation		56-1 (oPAS - Bike Assembly - 56)			F12
Work Cen	ter	wAS (Assembler Team)		F11	F12
Start Se	etup [₽]	Start Job EZ Admin EZ Clear E4 Logout E50			
Ē					

4. Button customization

It is possible to set an event to trigger a button event.

Example: Automatically press the 'Login' button after the employee code has been added on the LOGIN Screen.

Query name: BXPPSMobilePDC_LoginScreen_TextEmployeeID_validate_after

```
IF $[TextEmployeeID] <> ''
BEGIN
SELECT 'ButtonLogin' AS 'Click$'
END
```

5. Custom message

It is possible to add custom messages to the events.

Example: Display a warning message if the Employee ID is not added before pressing the 'Login' button.

Query name: *BXPPSMobilePDC_LoginScreen_ButtonLogin_click*

```
IF $[TextEmployeeID] = ''
SELECT 'Scan Employee ID' AS 'Message$', 'E' AS 'MessageType$'
```

For more information about the supported message types please see: Supported message types

6. Save the Destination Bin Location for the employee

This customization will save the last added bin location on the Products screen. When this screen next loads to the employee, the Bin Location code will be automatically filled. This way if the employee uses the same destination bin location, (s)he does not have to re-enter it.

Create a new user table in SAP Business One. (In the example: PDC_TOBL). Register the new user table as an object.

#	Table Name	Description	Object Type	Archivable	Archive Date	7
86	BXPSYNCQ	SyncQueue	No Object 🔻			
87	BXPTCCONF	ThinClientConfiguration	No Object 💌			
88	BXPTIMEUNITS	TimeUnits	No Object 💌			
89	BXPTOOL	Tool	No Object 💌			
90	BXPTOOLFEAT	ToolFeatures	No Object 🔻			
91	BXPTRANCUST	TranslationCustomization	No Object 🔻			
92	BXPUDFCOPYBOMPRO	UDFCopyFromBoMToProdOrder	No Object 🔻			
93	BXPUSRLC	UserLicense	No Object 🔻			
94	BXPWCJRNL	WorkCenterJournal	No Object 🔻			
95	BXPWCTCKTS	WorkCenterTickets	No Object 💌			
96	BXPWCTCKTTP	WorkCenterTicketTypes	No Object 💌			
97	BXPWORKCENTER	WorkCenter	No Object 💌			
98	BXPWORKCENTERFEAT	WorkCenterFeatures	No Object 💌			
99	BYRWORKIOURNAL	Work Journal	No Object 🛛 🔻			
100	PDC_TOBL	PDC To Bin Location	No Object 💌			-

Add the following fields to the user table: [Tools>Customization Tools>User Defined Fields-Management]

- Employee ID (empID)
- To Bin Location (ToBL)

Category	Title	Description	
ShiftPlanDay			
SyncObjectConfig			
SyncQueue			
ThinClientConfiguration			
▶ TimeUnits			
▶ Tool			
ToolFeatures			
TranslationCustomization			
UDFCopyFromBoMToProdOrder			
UserLicense			
WorkCenterJournal			
WorkCenterTickets			
WorkCenterTicketTypes			
▶ WorkCenter			
WorkCenterFeatures			
Mark Journal			
▼ PDC To Bin Location			
	empID	Employee ID	
	ToBL	ToBin	

Define the employees on the user table.

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Tools	Window Help Layout Designer Scheduled Report Overview Pervasive Analytics Excel Report and Interactive Analysis Designer			BXPRESCAPSEG - ResourceCapacitySegment BXPRESFEAT - ResourceFeature BXPRESPLAN - ResourcePlan BXPRTPF - ReportLayoutPref BXPRTTP - ReportLayoutPref		?				Look up menus	
	Preview External Crystal Reports File			BXPSEQUENCE - Sequence							
	Eorm Settings	Ctrl+Shift+	s	BXPSHIFT - Shift	I						
	E <u>d</u> it Form Ul			BXPSHIFTDAYTYPE - ShiftDayType	I						
	<u>C</u> hange Log			BXPSHIFTPLAN - ShiftPlan		C To Bir	Location				ā
-	<u>A</u> ccess Log		_	BXPSHIFTPLANDAY - ShiftPlanDay		C TO BI	Location				1
	Searc <u>h</u>	Ctrl+F1		BXPSYNCOBJC - SyncObjectConfig		Code	Name	Employee ID	ToBin	7	
	Queries		•	BXPSYNCQ - SyncQueue	1	01	01	1		<u></u>	
	SAP Business One Studio Suite		•	BXPTCCONF - ThinClientConfiguration BXPTIMEUNITS - TimeUnits	2	02	02	2			
	<u>M</u> y Menu		•	BXPTIMEUNITS - TimeUnits BXPTOOL - Tool	3						
	M <u>y</u> Shortcuts		•	BXPTOOL - Tool BXPTOOLFEAT - ToolFeatures							
	User <u>-</u> Defined Values	Shift+F2		BXPTRANCUST - TranslationCustomization							
	User-Defi <u>n</u> ed Windows		•	BXPUDFCOPYBOMPRO - UDFCopyFromBoMToProdOrder							
	C <u>o</u> ckpit		•	BXPUSRLC - UserLicense							
	Cus <u>t</u> omization Tools		•	BXPWCJRNL - WorkCenterJournal							
	Default Forms		•	BXPWCTCKTS - WorkCenterTickets							
	Live Collaboration			BXPWCTCKTTP - WorkCenterTicketTypes							
	Send to Conversation			BXPWORKCENTER - WorkCenter						 ~	
				BXPWORKCENTERFEAT - WorkCenterFeatures		•		4		Þ	
				BXPWORKJOURNAL - WorkJournal		ОК	Cancel				
				PDC_TOBL - PDC To Bin Location				-			
				v							

Add the following user queries:

6.1. Save the destination Bin Location to the employee

This query will save the added destination Bin Location to the U_ToBL field.

Query name: BXPPSMobilePDC_ProductsAdvScreen_TextBinLocation_validate_after

Example query:

```
IF (SELECT ISNULL ([@PDC_TOBL].U_TOBL,'')
FROM [@PDC_TOBL]
WHERE U_empID = $[Employee.EmpNumber]) <> $[TextBinLocation]
UPDATE [@PDC_TOBL] SET [U_TOBL]=$[TextBinLocation] WHERE U_empID =
$[Employee.EmpNumber]
```

6.2. Load the saved Bin Location

This query will populate the Bin Location field with the saved value when the screen loads.

Query name: BXPPSMobilePDC_ProductsAdvScreen _Load

Example query:

```
SELECT
(SELECT [@PDC_TOBL].U_ToBL FROM [@PDC_TOBL] WHERE U_empID =
$[Employee.EmpNumber])
AS 'TextBinLocation'
```

How to customize the Produmex Manufacturing Reports in MSSQL

Produmex Manufacturing offers and easy solution for report customization with Crystal Reports. *Please note: This document describes the custom report creation procedure in MSSQL.*

In our example we will include the foreign name of the operation on the Job Requirements report under the operation name.

Operation:	oPAS - Bike Assembly	Operation ID:	00048789
	Begin Date&Time:02/19/17 04:12 PM	Production Order: 579 / 4	
	Before Time: 0.00 [min]	Product Code: p1001-1 - Red Bike	
	After Time: 0.00 [min]		
	mM1001 Painted Bike Framework	1.00	

Open the report. On the 'Select Report Layout' form select a base layout on the grid then click on the 'New' button to create a new layout.

In the example we will open the Job Requirements Report.

ort JobReq view before print 🔽	Language	In_English *
Report Layout	File	Printer Name
Job Requirements (base) (default)	RL_JobRequirements	

Add the 'Layout Name' and the 'Filename' then click on the 'Add' button. The base layout will be copied to the new layout.

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Based on layout name	Job Requirements (base)	
Based on filename	RL_JobRequirements	
ayout Name		
Filename		
Printer Name		

After adding the custom layout, select it on the grid. Click on the 'Edit Layout' button and open the layout with Crystal Reports.

How o	do you want to open this file?	
L	Adobe Acrobat Reader DC	^
¥	Crystal Reports	
Ø	Internet Explorer	
M	Microsoft Visual Studio Version Selector	
	Notepad	
6	Office XML Handler	~

After the layout has been opened in Crystal Reports, setup the ODBC connection between the report and the database. On the Field Explorer right click on 'Database Fields' and select 'Database Expert' option.

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<u>File Edit View Insert Format Database Report Window H</u> elp	
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Field Explorer # × CU_JobRequirements ×	
P 2 Database Frida	
Database BXPPS Database Expert Support Database Expert	······································
Image: BXPPS Set Datasource Location Image: WOR1 VOR1	
	Created with BxPPS for SAP Business One
Image: Weight Type Show Field Type Show Field Type	
	Operation [D:] Code]
Group Header #20: BXPPSPRODORDEROPEI BXPPSPRODORDEROPEI After Time;@OperAftTm&Uom	Production Order, @ProdOrder&Line Product Code, @ProdCode&Name
Details (@ResourceType @WcCode&Name TOP:] OperationCode	้มของขอดีขอะ Çode] perationCodeScanned

On the opening 'Database Expert' form open the 'Create New Connection' folder and click on the 'OLE DB' folder. On the OLE DB form chose 'Microsoft OLE DB Provider for SQL Server' as the Provider. Click on 'Next' to proceed.

ilable Data Sources:	_	Selected Tables: OLE DB (ADO)	
BxPPSDataSetModel Create New Connection Access/Excel (DAO) ACT!	OLE DB Provider Select a provider from	the list or select a data link file.	
ADO.NET (XML) COM Connectivity Database Files Exchange 5.5 Message Tracking Log Exchange Message Tracking Log Field Definitions Only Field Definitions Only Fie System Data Legacy Exchange Molitox Admin MS IIS/Proxy Log Files	Provider:	Microsoft Jet 4.0 OLE DB Provider Microsoft Office 12.0 Access Database Engli Microsoft Office 15.0 Access Database Engli Microsoft OLE DB Provider for Analysis Servi Microsoft OLE DB Provider for ODBC Drivers Microsoft OLE DB Provider for Cracle Microsoft OLE DB Provider for Search Microsoft OLE DB Provider for Search Microsoft OLE DB Provider for Sol Server Microsoft OLE DB Provider for Sol Server Microsoft OLE DB Provider for Sol Server	
	Use Data Link File: Microsoft Data Link File:		
 ■ Repository ■ More Data Sources 	< Back Nex	t > Finish Cancel Help	

On the next screen add the connection information. Select the local server as the 'Server' and enter the User ID and Password. Then select the database from the dropdown menu and click on 'Next'.

Please note: It is possible the use the custom report in a different company as well, because the Produmex Manufacturing add-on will always set the Server and the Database name to the currently connected Company database.

Server:	PM	X_BUDTOSH2	~
User ID:	sa		
Password:	•••	••••	
Database:	Mar	nufacturing	~
ntegrated Security:			

On the next screen click on 'Finish'.

OLE DE	3 (ADO)
Advanced Information Update the property value by double of property and press the "Edit Value" bu	
Name	Value
Locale Identifier	1033
Connect Timeout	15
General Timeout	0
OLE DB Services	-5
Current Language	
Auto Translate	-1
Initial File Name	
Use Encryption for Data	0
Replication server name connect option	
Tag with column collation when possible	0
<	
Add Property Edit V	alue Remove Property
< Back Next > F	inish Cancel Hel

The database is added to the OLE DB folder.

Ð	Database Ex	pert ×
press the F2 key)	-	he 'Selected Tables' tree and click on it or
Available Data Sources: OLE DB (ADO) Make New Connection PMX_BUDTOSH2 Add Command BXManufacturing Dowser		Selected Tables:
		OK Cancel Help

Then select the database table that contains the field you would like to add and click on the right arrow to add it to the 'Selected Tables'.

In our example we would like to add the foreign name of the operation to the report. In order to do this, we have to add the OITM table (Item Master Data).

)ata Link		Databa	se Expert
Browse th (Note: to ea press the F	ne data source for dit the alias for a table		you want to add. able in the 'Selected Tables' tree and click on it o Selected Tables:
<	 OIPO OIQI OIQR OIRC OIRD OIRT OISL OISR OIST OISW OITB OITG OITL OITR OITR 	*	 Second Second Sec
			OK Cancel Help

Define the file path to the BX PPS Data Set Model by clicking on the 'Links' tab. Browse the BxPPSDataSetModel.xsd file after clicking on the '...' button on the 'ADO.NET form. Then click on 'Finish'.

The default file path is: C:\Program Files\SAP\SAP Business One\AddOns\BXP\Produmex Manufacturing\BxPPSDataSetModel.xsd

•		ADO.NET (XML)			
Data Links Browse the data (Note: to edit the a	Connection Please enter connection information				
press the F2 key) Available Data So	File Path :	PPS\BxPPSDataSets\BxPPSDataSetModel.xsd			
	Class Name: Use DataSet from Class:				
<					
	< Back Next >	Finish Cancel Help			

On the Links tab the links between the table records are shown. These links are created automatically and might not be correct for the customization goals. Correct the links by deleting the wrong ones and creating new links. Click on the 'OK' button.

OITM	Auto-Arrange
► ItemCode	- Auto-Link
WOR1	By Name By Key
ItemName FrgnName Control ItemNo	Link
LineNumber	Order Links
	Clear Links
	Delete Link
BXPPSPRODORDEROPER	Link Options
BXPPSRESALLOCATION HeaderCode NextCode ProductionOrderOper	Index Legend

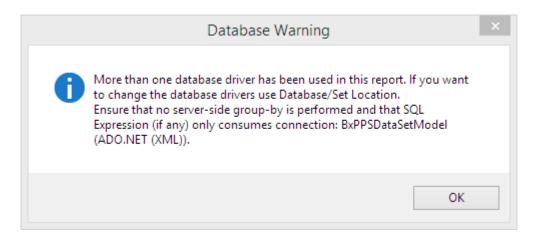
table. First we delete this link then we create the new one by connecting the Operation Code from the BXPPSPRODORDEROPER table to the Item Code on the OITM table.

Last

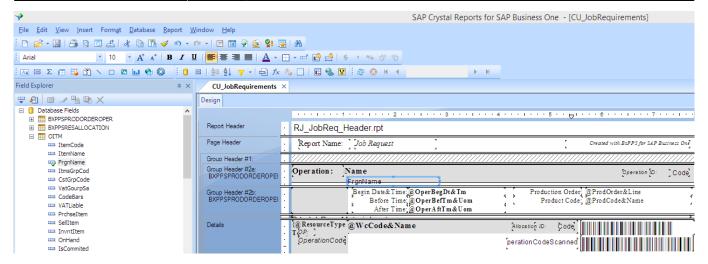
update: 2019/03/19 implementation:manufacturing:customizationcomplete http://wiki.produmex.name/doku.php?id=implementation:manufacturing:customizationcomplete 11:41

WOR1 ItemName ItemNo LineNumber ItemNo ItemNo ItenName MainProductName MaxParallelOperation: Message MinJobQuantity OperationBreak OperationCode OperationCode OperationText OverlappingTime PictureName	Data Links Link together the tables you added Linking is needed to match records of one	Database Expert I to the report. e table with corresponding records of another table.	×
	ItemName ItemNo LineNumber	BXPPSPRODORDEROPER MainProductName MaxParallelJobQuantir MaxParallelJobQuantir MaxParallelOperation: Message MinJobQuantity OperationBreak OperationCode OperationText OverlappingTime PictureName	

A database warning will pop up. Click on the 'OK' button to acknowledge the message.



Select the field to add to the report on the 'Field Explorer' module and simply drag and drop it to the report.



After the formatting is ready, save the report. Make sure that you do not save it under SAP\SAP Business One\AddOns\ because in that case the file will be overwritten by a new Produmex add-on installation. It is also recommended to save the custom report to a central location where every client will be able to see it.

When you print the custom report created in the example, the foreign name will be added under the operation name.

Operation:	oPAS - Bike Assembly	Operation ID:	00048789
	Assembly du bike		
	Begin Date&Time:02/19/17 04:12 PM	Production Order: 579 / 4	
	Before Time: 0.00 [min]	Product Code: p1001-1 - Red Bike	
	After Time: 0.00 [min]		
	mM1001 Painted Bike Framework	1.00	

Special customization

1. User queries for validation

The user queries for validation should return two columns:

- RowTy: row type can be E (error) or W (warning)
- Msg: the error/warning description

An error message will appear in red on the bottom of the screen, and block the current process. A warning message will be displayed in a separate window, asking a confirmation from the user to continue. For more information about the message types please see: Supported message types

Only the first row of the result is taken into account.

1.1. User identification

User query name: *bxtc_pdc_user_identification*

Parameters:

- [%0]: Action code (1 = OK)=/
- [%1]: Employee ID (OHEM.empID)
- [%9]: Terminal ID (IP address)

1.2. Production Operation Selection

User query name: *bxtc_pdc_production_operation_selection*

Parameters:

- [%0]: Action code ; possible values are:
 - 1 = Complete/Stop
 - 2 = Break/Partial
 - 3 = Resume (only available in old web/tomcat PDC client)
 - ∘ 4 = New Op
 - 5 = Admin
 - 6 = Materials (not available yet in BX Mobile PDC client)
- [%1]: Employee ID (OHEM.empID)
- [%2]: Operation ID (WOR1.U_BXPBxID)
- [%3]: Job/Setup (0 = Job, 1 = Setup)
- [%9]: Terminal ID (IP address)

If more than one operations are selected, then parameters [%2] and [%3] are a coma-separated list of values.

1.3. Completed/Partial Job Quantities

User query name: *bxtc_pdc_job_quantities*

Parameters:

- [%0]: Action code (1 = OK)
- [%1]: Employee ID (OHEM.empID)
- [%2]: Operation ID (WOR1.U_BXPBxID)
- [%3]: Completed Quantity
- [%4]: Rejected Quantity
- [%5]: PDC Booking Code
- [%6]: Duration (calculated) in seconds (not supported yet)
- [%7]: Work Center Code
- [%9]: Terminal ID (IP address)

1.4. Start New Operation

User query name: *bxtc_pdc_start_operation*

Parameters:

- [%0]: Action code (1 = OK)
- [%1]: Employee ID (OHEM.empID)
- [%2]: Operation ID (WOR1.U_BXPBxID)
- [%3]: Job/Setup (0 = Job, 1 = Setup)
- [%9]: Terminal ID (IP address)

2. Other user queries

2.1. Product serial/batch number

This query is used when the serial/batch selection is disabled for products by enabling the 'Skip product serial/batch quantities screen' option on the Thin client 2 tab. In that case, the operation quantities can be entered without selecting batches/serial numbers, and the user query will automatically create them when the PDC booking is being processed.

User query name: *bxtc_pdc_serial_batch_products*

Parameters	Returned columns
<pre>[%1]: Employee ID (OHEM.empID) [%2]: Operation ID (WOR1.U_BXPBxID) [%3]: PDC Booking Code [%4]: Product Code (OITM.ItemCode) [%5]: Quantity [%6]: Is Rejected? (0 = Completed, 1 = Rejected) [%7]: Purchase Order Line Extension Code (outsourcing only) [%8]: Product Type (outsourcing only) (1 = Main Product, 2 = By- Product, 3 = Unfinished Product)</pre>	SBNum: Serial or batch number Qty: Quantity

2.2. Material serial/batch number

This query is used when the serial/batch selection is disabled for materials by enabling the 'Skip material serial/batch quantities screen' option on the Thin client 2 tab. In that case, the operation quantities can be entered without selecting batches/serial numbers, and the user query will automatically create them when the PDC booking is being processed.

User query name: *bxtc_pdc_serial_batch_materials*

Parameters	Returned columns
 [%1]: Employee ID (OHEM.empID) [%2]: Operation ID (WOR1.U_BXPBxID) [%3]: PDC Booking Code [%4]: Material Code (OITM.ItemCode) [%5]: Quantity [%7]: Purchase Order Line Extension Code 	SBNum: Serial or batch number Qty: Quantity

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2.3. PTM Log

User query name: *bxtc_pdc_ptm_log_query*

Example query:

EXECUTE sp_executesql N' BEGIN

DECLARE @RowNum INT, @IsStarted VARCHAR(1), @StartDate VARCHAR(20)

SET NOCOUNT ON

CREATE TABLE #EmpLog (RowNum INT, IsStarted VARCHAR(1), StartDate VARCHAR(50), EndDate VARCHAR(50), Employee INT) INSERT INTO #EmpLog SELECT ROW NUMBER() OVER(ORDER BY U BXPStamO) AS RowNum, U BXPActn AS IsStarted, U BXPStamO AS StartDate, NULL AS EndDate, U BXPEmpID AS Employee FROM [dbo].[@BXPATTLOG] WHERE U BXPEmpID = 1DECLARE log cursor CURSOR FOR SELECT RowNum, IsStarted, StartDate FROM #EmpLog OPEN log cursor FETCH NEXT FROM log cursor INTO @RowNum, @IsStarted, @StartDate; WHILE @@FETCH STATUS = 0 BEGIN IF @IsStarted = ''N'' BEGIN UPDATE #EmpLog SET EndDate = @StartDate WHERE RowNum = @RowNum - 1END FETCH NEXT FROM log cursor INTO @RowNum, @IsStarted, @StartDate; END CLOSE log_cursor; DEALLOCATE log cursor; SELECT CAST(LEFT(StartDate, 8) AS DATE) AS Date, CAST(LEFT(StartDate, 8) AS DATE) AS StartDate, CAST(LEFT(RIGHT(StartDate, 6), 4) AS INT) AS StartTime, CAST(LEFT(EndDate, 8) AS DATE) AS EndDate, CAST(LEFT(RIGHT(EndDate, 6), 4) AS INT) AS EndTime, NULL AS BreakTime, NULL AS JobTime,

DATEDIFF(MINUTE, CAST(LEFT(StartDate, 8) AS DATETIME) + CAST(DATEADD(HOUR, (CAST(SUBSTRING(StartDate, 9, 2) AS INT)), DATEADD(MINUTE, (CAST(SUBSTRING(StartDate, 11, 2) AS INT)), DATEADD(SECOND, CAST(SUBSTRING(StartDate, 13, 2) AS INT), CAST(''00:00:00'' AS TIME(3)))) AS DATETIME), CAST(LEFT(EndDate, 8) AS DATETIME) + CAST(DATEADD(HOUR, (CAST(SUBSTRING(EndDate, 9, 2) AS INT)), DATEADD(MINUTE, (CAST(SUBSTRING(EndDate, 11, 2) AS INT)), DATEADD(SECOND, CAST(SUBSTRING(EndDate, 13, 2) AS INT), CAST(''00:00:00'' AS TIME(3)))) AS DATETIME)) AS WorkTime, CASE WHEN DATENAME(dw, CAST(LEFT(StartDate, 8) AS DATETIME)) IN (''Saturday'', ''Sunday'') OR EXISTS (SELECT 1 FROM HLD1 WHERE StrDate = CAST(LEFT(StartDate, 8) AS DATETIME)) THEN ''N'' ELSE ''Y'' END AS IsWorkingDay, NULL AS InfoText1, NULL AS InfoText2 FROM #EmpLog WHERE IsStarted = ''Y'' AND StartDate IS NOT NULL AND EndDate IS NOT NULL DROP TABLE #EmpLog

END '

2.4. Workshop Monitor

User query name: *bxtc_pdc_workshop_monitor_query*

Example query:

SELECT TOP 30	
	T0.Code as Code,
	T0.Name as Name,
	T1.ItemCode as ProductCode,
	T3.ItemName as ProductName,
	T0.U_BXP0pCod as OperationCode,
	T0.U_BXPOpNam as OperationName,
	T5.U_BXPPrfWC as PreferredWorkCenter,
	T5.U_BXPFeat as PreferredFeature,
	T0.U_BXPPlQty as PlannedQuantity,
	<pre>T0.U_BXPCoQty as CompletedQuantity,</pre>
	T0.U_BXPRejQt as RejectedQuantity,
	T2.IssuedQty AS IssuedQuantity,
	T1.DocEntry as DocEntry,
	T1.DocNum as DocNum,
	T2.LineNum as LineNum,
	T0.U_BXPBSetu as SetupTime,
	T0.U_BXPEDuDt as DueDate,

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T0.U_BXPPDueT as DueTime,
T4.U_BXPPstCd AS PDCPostingCode,
T4.U_BXPPstDt as PDCPostingDate,
T4.U_BXPPstTm as PDCPostingTime,
T4.U_BXPWCent as PDCWorkCenter,
T4.Code as PDCBookingID,
T6.firstName as EmployeeFirstName,
T6.lastName as EmployeeLastName,
T6.empID as EmployeeID
FROM
[@BXPPRODORDEROPER] T0
INNER JOIN [OWOR] T1 ON T0.U_BXPPrODE = T1.DocEntry AND
T1.[Status] <> N'L'
INNER JOIN WOR1 T2 ON T2.U_BXPBxID = T0.Code
INNER JOIN OITM T3 ON T3.ItemCode = T1.ItemCode
LEFT OUTER JOIN [@BXPPDCBOOKING] T4 ON T4.U_BXPPrOOI = T0.Code AND T4.Code IN
(SELECT TX.Code FROM [@BXPPDCB00KING] TX WHERE
TX.U BXPIsUnd = 'N' AND TX.U BXPPrOOI = T0.Code AND
TX.U BXPPstDt = (SELECT MAX(U BXPPstDt) FROM
[@BXPPDCB00KING] TX1 WHERE TX1.U BXPIsUnd = 'N' AND TX1.U BXPPr00I =
TO.Code) AND
TX.U BXPPstTm = (SELECT MAX(U BXPPstTm) FROM
[@BXPPDCB00KING] TX2 WHERE TX2.U_BXPIsUnd = 'N' AND TX2.U_BXPPr00I = T0.Code
AND TX2.U_BXPPstDt = TX.U_BXPPstDt))
LEFT OUTER JOIN [@BXPPRODORDERREQU] T5 ON T5.U_BXPPrOOI =
T0.Code AND T5.U_BXPResTy = 1
LEFT OUTER JOIN OHEM T6 ON T6.empID = T4.U_BXPEmpID
WHERE
T0.U_BXPPlQty > T0.U_BXPCoQty + T0.U_BXPRejQt AND
T0.U_BXPCoQty + T0.U_BXPRejQt > 0 AND
$T0.U_BXPIsOuS = 'N'$
ORDER BY
T0.U_BXPEndDt DESC,
T0.U_BXPEndTm DESC

When using the example query, operations with completed jobs are listed where the booked quantity is less than the planned quantity and there is at least one booking on it. Outsourced operations are not displayed.

2.5. Personal duration factor for multiple PDC bookings

This query is used when reporting a completion (either partial or complete) for more than one running jobs at the same time. In that case, the machine duration will be the full duration for all PDC bookings, however the person duration will be split among the PDC bookings according to the logic defined in this user query.

User query name: *bxtc_pdc_multiple_pdc_person_duration_factor*

Parameters	Returned columns
 [%1]: Employee ID (OHEM.empID) [%2]: List of operation codes, coma-separated [%3]: List of work center codes, coma-separated (in the same order) [%4]: List of completed quantities, coma-separated (in the same order) [%5]: List of rejected quantities, coma-separated (in the same order) [%9]: Terminal ID (IP address) 	OpCod: operation code PsDur: person duration

Please note: This query has a default implementation which divides the total duration by the number of PDC bookings processed together for each PDC booking.

2.6. Order Recommendation Custom Grouping

This query is used to customize the auto grouping function for MTO planning.

The query runs when:

- If you click on Auto-Group button on the Group Recommendations form
- Order recommendations are being created and the 'Auto Group' option is set to true on the MTO tab of Produmex Manufacturing settings

User query name: BXPPS_MTO_QueryNonGroupableItems

Parameters:

• [%0]: MTO scenario code

Example query:

```
SELECT Code FROM [@BXPMTOORDRSOLREF]
WHERE U_BXPMTOSc = '[%0]' AND U_BXPItmCd IN (
        SELECT OITM.ItemCode
        FROM OITM, itt1
        WHERE oitm.itemcode = itt1.father and (itt1.code='ITEM01' or
        itt1.code='ITEM02' or itt1.code='ITEM03') )
```

Set up Password Protected Login for Produmex PDC

Add a new PDC Password user field to the Employee Master Data table.

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egory	Title	Description	Type	Title	PDCPass	Description	PDC Password
2 /	nue	Description	Type	Tibe	PDCPass	Description	PDC Password
Master Data				Туре	Alphanumeric	Length	10
Activities				Structure	Regular		
Agent Name							
Bin Location				Validation	None	*	
Blanket Agreement							
Business Partner							
Campaign							
Cargo Customs Declaration Nur							
Electronic Transactions							
▼ Employees							
▼ Employees				_			
	BXPATC	AT Class	Numeric (8)	Set Defa	a <u>u</u> lt Value for Field		
	BXPMaxOp	Maximum Parallel O	pe Numeric (8)				
	BXPShtP	Shitft Plan	Alphanumeric (8)	Mandatory Field			
	PDCPass	PDC Password	Alphanumeric (10)	- Mandato	ory rield		
Absence Information							

Set the password on this field.

Employee Master Data		▲ ▼) General	• <u>×</u>
First Name John Middle Name Doe	Employee No. 1 Ext. Employee No.	AT Class Maximum Parallel Operations Shift Plan PDC Password	None

Open Produmex Manufacturing settings. Set the new user field as the 'Employee Card Code Field' on the PDC tab.

Produmex Manufacturing Settings	
General SQL Logs Reports MRP PDC Prod.Order Master Data MTO	Thin Client Thin Client 2 Food Scheduled Reallocator Custom Settings
General SQL 2003 Reports MIKP PDC Production master bata Mito	Thin Client Thin Client 2 Pood Scheduled Kealocator Coston Settings
Is Serial Batch PDC Enabled	
800x600 PDC Wizard	
HD resolution PDC Wizard	
PDC Use Direct State	
PDC Allow Undo	
PDC Undo Only No Transaction	
PDCTooGoodPerformanceThreshold	1.000000
PDCTooBadPerformanceThreshold	1.000000
PDC book duration in Break bookings	
Use Operation Parameters	
GoodsIssue Series Name	
ReceiptFromProd. Series Name	
IssueForProduction Series Name	
GoodsReceipt Series Name	
PDCProcessor Last Run Date	07/28/17
PDCProcessor Last Run Time	1422
PDCProcessor Retry Times	5;15;60
Managing Rejected Batched PDC Transactions	
Default Production Warehouse for Managing Rejected Batched PDC Transactions	
Default Base Item Warehouse for Managing Rejected Batched PDC Transactions	
Employee Card Code Field	U_PDCPass
Default Attendance Model	
PDCProcessor Block Start Date	
PDCProcessor Block Start Time	0
PDCProcessor Block Minutes	0
Profit Center for Managing Rejected Batched PDC Transactions	
Account Code for Managing Rejected Batched PDC Transactions	
Use Production Order Doc Entry and Line For PDC	
No Work Center Change with Use Production Order Doc Entry and Line For PDC	
PDC Delete Allocation Last Date	
FlexProdScheduler Last Run Date	
FlexProdScheduler Last Run Time	0
Enable Lost Allocations in PDC Shop-Floor Wizard	
PDC Processor Interval Time	30
PDC Material Batch Overbooking Permission	VVOverbookingPermission_NotAllowed
OK Cancel	

Enable the 'Login is Password protected' setting on the Thin Client 2 tab.

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Produmex Manufacturing Settings	
General SQL Logs Reports MRP PDC Prod.Order Master Data MTO	Thin Client 2 Food Scheduled Reallocator Custom Settings
Worker can modify bookings	
Approver can modify bookings	
Global idle timeout (seconds)	0
Global screen timeout (seconds)	0
Employee approver role	Approver
Emplayee Workshop Monitor Role	Workshop Monitor
Employee Quality Control Role	QC Inspector
Workcenter Admin Role	
Enable PDC	
Enable PTM	▼ ▼ <
Enable QC	
Enable Workshop Monitor	
Enable Workcenter Journal	
Enable Workcenter Tickets	
Enable Legacy Mode in PDC	
Pre-fill planned material quantities	
Pre-fil planned by-product quantities	
Pre-fill the bin locations quantities with available quantities	
Skip material quantities screen	
Skip by-product quantities screen	
Skip material serial/batch quantities screen	
Skip product serial/batch quantities screen	
Logout after PDC bookings	
Enable Partial Book & Stay	
Can insert new materials into production orders	
Login Is Password Protected	
Only Job Bookings On Running Jobs Screen	
Force enter product serial/batch numbers and quantities	
Update Cancel	

In order to login on the terminal, the employee has to enter the password instead of the employee number.

Mobile PDC	STEST_WMSMF (PMX_BUDTOSH2)	_ X 08/07/17 03:03 PM
Server: 17.05.31007.18920 Client: 17.05.31007	Login	* 🛈
Employee	John Doe	

How to connect a scale to Produmex PDC

This customization example shows how to use a scale in Produmex PDC with the help of the Produmex WMS ScaleComm Service.

We will add a new Weigh button to the screens where the products can be received and materials can be issued. When this button is pressed, a user query fills the product/material Quantity field with the measured weight. The used scale will be identified based on the work center.

Prerequisites:

- Installed Produmex Manufacturing and Produmex PDC
- Installed Produmex WMS up to version 7.0
- Installed Produmex ScaleCommService

For more information about Produmex PDC customization please see: Customization Technology.

1. Add Weigh button to PDC screens

Open the Customization Fields table via: Tools > User Defined Windows > BXPCUSTFD -Customization Fields. For more information about the Customization Fields user table please see: Create custom field Add the Weigh button to the following screens:

- Stop Job/Partial Job
- Product (for by-products)
- Product batch
- Material
- Material batch

Field Name	Field Type	Label	Screen	Visible	Protected
PWeigh	Button	Weigh	StopJobScreen	Yes	No
BPWeigh	Button	Weigh	ProductsAdvScreen	Yes	No
MWeigh	Button	Weigh	MaterialsAdvScreen	Yes	No
PBWeigh	Button	Weigh	ProductBatchNumbersAdvScreen	Yes	No
MBWeigh	Button	Weigh	MaterialBatchNumberPickerAdvScreen	Yes	No

In order to use the UoM conversion for batch managed items, add the following user fields on the Customization Fields table as well.

Field Name	Field Type	Screen	Visible	Protected	ReadOnly
ItemM	String	MaterialsAdvScreen	No	Yes	Yes
ItemP	String	ProductsAdvScreen	No	Yes	Yes

2. Add user fields

The used scale will be identified based on the work center. In order to assign a work center to a scale, add a new user field to the Scale Weigh result user table.

In order to add UoM conversion, define a UoM for PDC user field as well.

Open the User-Defined Fields- Management screen from Tools > Customization Tools and add the work center field and PDC UoM field.

In the example we added the following user fields:

Title	Description	Туре	Length
WORKCENTE	R Work center	Alphanumeric	50
UOMPDC	UoM for PDC	Alphanumeric	2

Register the fields with the Objects Registration Wizard. Make sure to mark the new fields as 'Visible' during the registration. *Please note: A work center can only have one assigned scale.*

Code	Name	Weigh	Uom	Work center	Uom for PDC	7
scale01	Scale 1	425	g	wWC	g	·
scale02	Scale 2	2.23	kg	wAS	kg	
_						
_						
_						
_						
_						

3. Configure scales and the ScaleComm service

3.1. Define the scales

Define the scales in the Organizational Structure of Produmex WMS. For more information about the scale configurations in the Organization Structure please see: Scale

3.2. Configure ScaleComm Service

Open the configuration file of the ScaleComm Service from its installation folder.

Define the scales with the ScalesCodes. Add the code of the scales from the Organizational Structure. To define multiple scales, separate them by comma.

Make sure that the 'Skip Polling' option is set to false and adjust the Polling Interval if needed. For more information about the ScaleComm Service configurations please see: Application configurations.

3.3. Assign work centers to the scales

Open the Scale weigh result user table via the following path: Tools > Default forms > PMX_SCWR - Scale weigh result.

- Add the scale code to the Code field.
- Add the work center code to the user field you created for work centers.
- Add the UoM of the scale to the user field you created for UoM for PDC.

When the ScaleComm Service runs, it will add the weight to the 'Weigh' field of the matching scale.

In order to convert between units of measurements correctly, make sure that both the UoM of the item and the UoM of the scale is defined properly on the following standard SBO tables:

- Weight Setup (OWGT)
- Units of Measure Setup (OUOM)

Please note: When using SAP HANA, value names are case sensitive.

3.4. PDC Settings

Make sure that the '*PDC Custom Validation UQ setting enabled*' option is enabled on the Thin Client tab of Produmex Manufacturing Settings.

4. Add the custom queries

Add the custom queries with the Query Manager. For more information about PDC custom queries please see: Create a SAP user query.

4.1. Product

Query name: BXPPSMobilePDC_StopJobScreen_PWeigh_click

```
SELECT
'TextQuantity' as Click$,
(
SELECT [@PMX_SCWR].U_PMX_WEIGH * OWGT.WightInMG / OWGT2.WightInMG
FROM [@PMX_SCWR]
JOIN OWGT ON OWGT."UnitDisply" = [@PMX_SCWR].U_UOMPDC
JOIN OUTM ON OITM."ItemCode" = $[CurrentPDCBooking.ProductCode]
JOIN OWGT AS OWGT2 ON OWGT2."UnitDisply" = OITM."InvntryUom"
WHERE U_WORKCENTER= $[CurrentPDCBooking.WorkCenterCode]
)
AS TextQuantity,
'TextRejectedQuantity' as Click$
```

Query name: BXPPSMobilePDC_StopJobScreen_PWeigh_click_after

SELECT 'TextRejectedQuantity ' as Click\$

4.2. By-product

Query name: BXPPSMobilePDC_ProductsAdvScreen_BPWeigh_click

```
SELECT
'TextQuantity' as Click$,
(
SELECT [@PMX_SCWR].U_PMX_WEIGH * OWGT.WightInMG / OWGT2.WightInMG
FROM [@PMX_SCWR]
JOIN OWGT ON OWGT."UnitDisply" = [@PMX_SCWR].U_UOMPDC
JOIN OITM ON OITM."ItemCode" = $[SelectedProduct.ProductCode]
JOIN OWGT AS OWGT2 ON OWGT2."UnitDisply" = OITM."InvntryUom"
WHERE U_WORKCENTER= $[CurrentPDCBooking.WorkCenterCode]
)
AS TextQuantity
```

This query runs when the user clicks on the 'Weigh' button.

First it clicks in the Quantity field.

Then it selects the weigh from the PMX_SCWR table based on the current work center and it converts the measured weigh from the UoM of the scale defined on the UoM for PDC field to the UoM of the item specified on the Produmex Inventory tab of the Item Master Data.

Query name: BXPPSMobilePDC_ProductsAdvScreen_BPWeigh_click_after

```
SELECT 'TextProduct' as Click$
```

This query runs after the click on the 'Weigh' button. It clicks in the Product field in order to validate the quantity added with the previous query.

4.3. Product and by-product batch

Query name: BXPPSMobilePDC_ProductsAdvScreen_ButtonSerialBatch_click

SELECT \$[SelectedProduct.ProductCode] AS 'ItemP'

This query fills the ItemP user field with the item code of the selected product when the Serial/Batch button is pressed. As the ItemP user field is a 'Protected' field, the field value can be used in custom queries for events of the next screen.

Query name: BXPPSMobilePDC_ProductBatchNumbersAdvScreen_PBWeigh_click

```
SELECT
'TextBatchQuantity' as Click$,
(
SELECT [@PMX_SCWR].U_PMX_WEIGH * OWGT.WightInMG / OWGT2.WightInMG
FROM [@PMX_SCWR]
JOIN OWGT ON OWGT."UnitDisply" = [@PMX_SCWR].U_UOMPDC
JOIN OITM ON OITM."ItemCode" = $[ItemP]
JOIN OWGT AS OWGT2 ON OWGT2."UnitDisply" = OITM."InvntryUom"
WHERE U_WORKCENTER= $[CurrentPDCBooking.WorkCenterCode]
)
```

```
AS TextBatchQuantity,
'TextBatch' as Click$
```

Query name: BXPPSMobilePDC_ProductBatchNumbersAdvScreen_PBWeigh_click_after

```
SELECT 'TextBatch' as Click$
```

4.4. Material

Query name: *BXPPSMobilePDC_MaterialsAdvScreen_MWeigh_click*

```
SELECT
'TextQuantity' as Click$,
(
SELECT [@PMX_SCWR].U_PMX_WEIGH * OWGT.WightInMG / OWGT2.WightInMG
FROM [@PMX_SCWR]
JOIN OWGT ON OWGT."UnitDisply" = [@PMX_SCWR].U_UOMPDC
JOIN OITM ON OITM."ItemCode" = $[SelectedMaterial.ItemCode]
JOIN OWGT AS OWGT2 ON OWGT2."UnitDisply" = OITM."InvntryUom"
WHERE U_WORKCENTER= $[CurrentPDCBooking.WorkCenterCode]
)
AS TextQuantity,
'TextItem' as Click$
```

Query name: BXPPSMobilePDC MaterialsAdvScreen MWeigh click after

SELECT 'TextItem' as Click\$

4.5. Material batch

Query name: *BXPPSMobilePDC_MaterialsAdvScreen_ButtonSerialBatch_click*

```
SELECT $[SelectedMaterial.ItemCode] AS 'ItemM'
```

Query name: *BXPPSMobilePDC_MaterialBatchNumberPickerAdvScreen_MBWeigh_click*

```
SELECT
'TextBatchQuantity' as Click$,
(
SELECT [@PMX_SCWR].U_PMX_WEIGH * OWGT.WightInMG / OWGT2.WightInMG
FROM [@PMX_SCWR]
JOIN OWGT ON OWGT."UnitDisply" = [@PMX_SCWR].U_UOMPDC
JOIN OITM ON OITM."ItemCode" = $[ItemM]
JOIN OWGT AS OWGT2 ON OWGT2."UnitDisply" = OITM."InvntryUom"
WHERE U_WORKCENTER= $[CurrentPDCBooking.WorkCenterCode]
)
```

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AS TextBatchQuantity

Query name: *BXPPSMobilePDC_MaterialBatchNumberPickerAdvScreen_MBWeigh_click_after*

SELECT 'TextBatch' as Click\$

5. Customized production data collection process

Process the PDC booking as described in Production Data Collection.

5.1. Stop Job/Partial Job screen

After pressing the Stop or the Partial button, the user is prompted to the Stop Job/Partial Job screen. An additional Weigh button is displayed on the screen. Press this button to weigh the produced quantity instead of adding it manually for the main product.

If the main product is managed by batches and multiple batches were produced in this job, weigh every batch on this screen.

Mobile PDC & TEST_W	MSMF (PMX_BUDTOSH2) - John Doe		_ 5 10/12/17 0	
Server: 17.09.19004.18920 Client: 17.09.19004	Partial Job		*	()
Production Order	#136 pMP1101 (Main product)	UoM		g
Operation	136-1 (OPP1 - Operation)			
Started	10/11/17 01:38 PM Completed			
Bin Location	Fit fiz			
Duration	1,526 🚆 min This Day			
Quantity	200 🚆 Rejected Quantity			0
Done ^a (Cancel ^{er} Weigh			

5.2. Products screen

On the Products screen the main product and by-products can be received.

To add the produced quantity for the by-product by weighing, select the by-product and press the Weigh button. If the by- product is managed by batches and multiple batches were produced in this job, weigh every batch on this screen.

Please note: It is not possible to modify the produced quantity for the main product on this screen.

Mobile BDC TEST_WW	ISMF (PMX_BUDTOSH2) - John D	oe					_ &	
Server: 17.09.19004.18920 Client: 17.09.19004			[Products]				*	ſ
Production Order	#136 pMP1101 (Mair	product)				UoM		g
Operation	136-1 (OPP1 - Opera							9
Product		,	F12 SS	CC			F11	F12
Quantity			412 🚟					
Item	Name		SSC	C	Quantity			
pMP1101	Main pr				200 of 200 g			
pBP011	By-prod	luct (batch)			412 of 400 g			
Done [#] C	ancel 🔤 Serial / B	atch [*]	Wei	gh				•
	eigh result	Weigh	Uom	Work center	Uom for PDC	× □ _		
1 scak		425		wWC	q			
2 scale		0.412		wAS	kg			
2 scar		0.379		wCT		_		
	203	0.3/9		wei	kg			
4								
						-		
ОК	Cancel							

5.3. Product, by-product batch

If the (by)-product is managed by batches, select the (by)-product and press the Serial/Batch button in order to add the batch numbers. On the Product Batch screen scan the batch number then press the Weigh button to add the quantity by weighing.

Please note: The combined quantity of the batches must be equal to the (by)-product quantity specified on the previous screen.

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					03:24 P
		Product Batch Numbers		*	
#136 pMP1101 (Main product)			UoM	g
136-1 (OPP1 - Op	eration)				
pBP011 (By-prod	uct (batch))	SSCC		F	11 F12
		🚟 Batch Number			F12 F12 F12
		204 🚟 [Best Before]			F12
SSCC	Quantity 208	[Total Quantity] 208	Batch Number	[Best Before] 1/1/0001 12:00:00 AM	
	204	204		1/1/0001 12:00:00 AM	
412 g	Of 412 g				
	jected Reigh			Delete	F
	136-1 (OPP1 - Op pBP011 (By-produ	208 204 412 g Of 412 g 0 g Of 0 g	136-1 (OPP1 - Operation) SSCC pBP011 (By-product (batch)) SSCC Batch Number 204 204 [Best Before] SSCC Quantity SSCC Quantity 208 208 204 204 412 g Of 412 g Of 9 o g 0 g	136-1 (OPP1 - Operation) SSCC Image: Constraint of the second seco	136-1 (OPP1 - Operation) SSCC

5.4. Material

On the Materials screen materials to be consumed can be reported.

Select the material and press the Weigh button in order to add the quantity by weighing. If the material is managed by batches and multiple batches are going to be consumed in this job, weigh every batch on this screen.

Mobile & TEST_W	MSMF (PMX_BUDTOSH2) - John Doe				/17 03:34 PM
Server: 17.09.19004.18920 Client: 17.09.19004		Materials			* 🛈
Production Order	#136 pMP1101 (Main product)			UoM	g
Operation	136-1 (OPP1 - Operation)				
Item		🚆 Bin Location			F11 F12
Quantity		2,230 🚔			
Item	Name	Bin Location	Quantity		
mM3475	Material		2,230 of 3,000 g		
				Wareho	JSE: 02
					-
					▼
Done ^{F1} C	Cancel ^{EEE} Serial / Batch	Weigh			
5					

5.5. Material batch

If the material is managed by batches, select the material and press the Serial/Batch button in order to add the batch numbers. On the Material Batch screen scan the batch number then press the Weigh button is order to add the quantity by weighing.

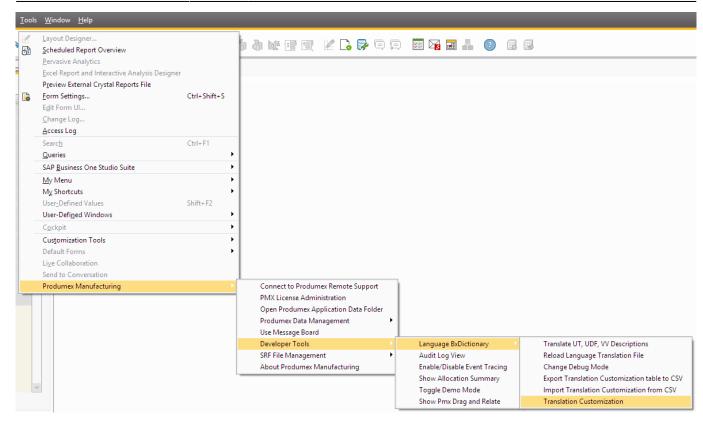
Please note: The combined quantity of the batches must be equal to the material quantity specified on the previous screen.

Mobile STEST_WI	NSMF (PMX_BUDTOSH2) - John Doe				1	_ ♂ X 0/12/17 03:42 PM
Server: 17.09.19004.18920 Client: 17.09.19004		Material B	Batch Number Picker			* (j)
Production Order	#136 pMP1101 (Main pr	oduct)			UoM	g
Operation	136-1 (OPP1 - Operation)				
Item	mM3475 (Material)					
Batch Number			🚆 Bin Location			F11 F12
Quantity		2,000				
[Batch] MM171010	Bin Location	Quantity 230	[Avail BL Qty] 2,500	[Avail WH Qty] 2,500	[Total Qty] 230	
02						
MM171011		2,000	2,500	2,500	2,000	
Quantity	2,230 g Of	2,230 g				
Done [₽] C	Cancel 🔤 Weigh				C)elete 🏾 🖻

Translation Customization

The translation customization feature can be used for creating custom translations. It is also possible to create custom translation for a given SBO user only.

Open the Translation customization via the following path: Tools > Produmex Manufacturing > Developer Tools > Language BxDictionary > Translation Customization



1. Change the value on the Translation Customization form

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1.1. Find the value

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Add the text you would like to customize as the 'Value'. Only the exact search text will be matched. To search based on partial text, use asterisk (*) as a wildcard.

Space characters will be considered. The filter is not case sensitive on MSSQL.

Example:

Search for 'allocation window'

(ey				Language		English		-	Find
/alue	alloc	ation window		Customized		Both		•	-1
Jser Code	📫 mana	iger	(3)	Resource File Name		-		*	Clear Filters
Display Original	\checkmark								
Kev									
Ney		Value			Comments	User Code	Language	Customized	Resource File Nam
AllocationWindow		Value Allocation Window			Comments	User Code *	Language en-US	Customized	Resource File Nam
					Comments	User Code * *		Customized	Resource File Nan L D
AllocationWindow		Allocation Window			Comments	User Code * * * *	en-US		L

Search for 'window'

Translation Customizati	ion for Produmex	Manufacturing							
Key Value User Code Display Original	win ➡ mar	dow ager)	Language Customized Resource File Name		English Both -		* *	Find Clear Filters
Кеу		Value			Comments	User Code	Language	Customized	Resource File Name

Search for 'allocation win*'

(ey				Language		English		•	Find
/alue	allocat	cation win* Customized		Both			•		
Jser Code 📥 📥		ger 📋 Resource File Name		-			•	Clear Filters	
Display Original	✓								
Key		Value			Comments	User Code	Language	Customized	Resource File Nan
AllocationWindow		Allocation Window			*	en-US		L	
AllocationWindowDeflength	cationWindowDeflength Allocation window def.			gth		*	en-US		L
AllocationWindowTimeCannotBeNegative	Allocation Window Time cannot be negative				8	en-US		L	
AllocationWindowTimeIsNegativeForOper	AllocationWindowTimeIsNegativeForOperation		Allocation Window Time is negative for operation {0}			8	en-US		L
AllocationWindowUOM		Allocation window UOM				*	en-US		L
AllocationWindowUoMHasNotBeenDefined	ForOperation	Allocation Window UoM has not been defined for operation {0}				*	en-US		L
AllocationWindowUoMNotDefined	AllocationWindowUoMNotDefined			Allocation Window UoM has not been defined			en-US		L
BXPMANUFOPER_BXPAlWnd	BXPMANUFOPER_BXPAlWnd Alk					*	en-US		D
BXPMANUFOPER_BXPWnUoM		Allocation Window UoM				*	en-US		D
BXPPRODORDEROPER_BXPAlWnd		Allocation Window				*	en-US		D
BXPPRODORDEROPER_BXPWnUoM		Allocation Window UoM				*	en-US		D
BXPPRODTREEOPER_BXPAlWnd		Allocation Window				*	en-US		D
BXPPRODTREEOPER_BXPWnUoM		Allocation Window UoM				*	en-US		D

• Search for '* window'

ey				Language		English		-	Find
alue	* w	ndow		Customized		Both		•	
User Code 📫		ager 🕘 Resource File Name		-			-	Clear Filters	
isplay Original	\checkmark								
Key		Value			Comments	User Code	Language	Customized	Resource File Nam
Key AllocationWindow		Value Allocation Window			Comments	User Code *	Language en-US	Customized	Resource File Nam
· ·					Comments	User Code * *		Customized	Resource File Nam L D
AllocationWindow		Allocation Window			Comments	User Code * * *	en-US	Customized	L

Select the language from the dropdown list. Supported languages:

- cs-CZ: Czech
- de-DE: German
- en-US: English
- es-MX: Spanish (MX)
- fr-FR: French
- hr-HR: Croatian
- hu-HU: Hungarian
- it-IT: Italian
- ja-JP: Japanese
- nl-NL: Dutch
- pt-BR: Portuguese (BR)
- pt-PT: Portuguese
- ru-RU: Russian

The list also can be filtered based on the following:

- Key
- User Code
- Customized (possible values: Yes, No, Both)
- Resource File Name

If you search for a value in a language other than English, and you would like to display the English value as well, check the 'Display Original' checkbox.

Press the 'Find' button to start the search.

Please note: The maximum number of rows to display is 500. If the specified filters add more than 500 lines as a result, only the first 500 lines will be displayed. It is recommended to select more restrictive filters.

To clear the specified filters, click on the 'Clear Filters' button.

Grid

Key

The localization key that will be used for translation.

Value

The translation value. The text that will be displayed on the interface.

User Code

The SBO user code. If a translation is applied for every user, the asterisk (*) is displayed.

Language

The language of the translation.

Customized

Marks whether the translation value is customized or not. If the checkbox is checked, the translation value is customized.

Resource File Name

Identifies the origin of the translation value.

- D & T stand for the translation of database values (eg. user tables, user fields, valid values)
- L & F stand for the translation of localization values (eg. buttons, functions, system messages)
- R stands for the translation of report values

To check the translation key and the resource file name code on the interface, enable 'Change Debug Mode' from Tools > Produmex Manufacturing > Developer Tools > Language BxDictionary.

Translation values are displayed in the following format: (resource file name:key: value)

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:ShiftPlan: Shift Plan) 2018 :Years: Years) 2018			
[(D:BXP5HIFTPLANDAY_BXPDate_C: Date)]	(L:Month: Month)	(L:Week: Week)	(L:Day: Day)
01/01/18	(F:January: January)	1	(F:Monday: Monday)
01/02/18	(F:January: January)	1	(F:Tuesday: Tuesday)
01/03/18	(F:January: January)	1	(F:Wednesday: Wednesday
01/04/18	(F:January: January)	1	(F:Thursday: Thursday)
01/05/18	(F:January: January)	1	(F:Friday: Friday)
01/06/18	(F:January: January)	1	(F:Saturday: Saturday)
01/07/18	(F:January: January)	1	(F:Sunday: Sunday)
01/08/18	(F:January: January)	2	(F:Monday: Monday)
▲ ::::			•

Please note: the key and resource file name code is not displayed on standard SBO documents.

1.2. Add the custom value

Click in the value field and enter the custom value. You can specify the user code and add a comment as well.

Click on the 'Update' button.

In order to apply the changes, restart the Produmex Manufacturing add-on.

1.3. Remove values

Right-click on the row that you would like to remove and select the 'Delete row' option. Click on the 'Update' button to apply the changes.

2. Import custom values

Custom translation values can be imported from a .csv file. Click on 'Import Translation Customization from CSV' option from Tools > Produmex Manufacturing > Developer Tools > Language BxDictionary. Then browse the .csv file.

After a successful import, the system reloads the translation files and displays the following message:

"Translation files reloaded. Current language is en-US. "

File structure

- Resource File Name: Identifies the origin of the translation value.
- Key: The localization key.
- Language: The language code.
- Value: Add the custom translation value here.
- Comments: Remarks can be added here. It is possible to leave this field empty.
- Customized: Marks whether the translation value is customized or not. Possible values: True/False.
- User code: The SBO user code. To add a translation for every user, add $\ast.$
- Add-On: The identifier of the add-on. Add 'BXPPS'.

Use TAB as the separator between the columns in the .csv file.

Please note: Both the resource file name and the key are needed in order to identify the object. We recommend to check the resource file name and key on the Translation Customization for Produmex Manufacturing form or to export the Translation Customization table to a .csv file and customize the values in the exported .csv file.

Example .csv file:

Resource File Name Key	. Language V	alue Comme	nts Customi	ized
User Code Add On				
D BXPABSRSN en-US	AbsReason	True *	BXPPS	
L BoMTree en-US	Product structur	e For mana	ger only Tr	rue
manager BXPPS				

Franslation (Customization for	Produmex Manufa	cturing				
Key		BoMTree	Language			English 💌	Find
Value User Code 📫			Customized		Both		T
		📫 manager	manager 🕘 Resource File Name				- Clear Filters
Display Original		\checkmark					
Key	Value	Comments	User Code	Language	Customized	Resource File Name	
BoMTree	BoM Tree		*	en-US		L	
BoMTree			manager	en-US	~	L	

Produmex Drag and Relate	Produmex Drag and Relate
. PmxMTO	. PmxMTO
BoM Tree	
BoM Tree without Operations	 -BoM Tree without Operations
BoM Usage	BoM Usage
 Production Material Requirements 	Production Material Requirements
Material Account Grid	Material Account Grid
Material Account Diagram	Material Account Diagram
 Operations Sequence Diagram 	 Operations Sequence Diagram
 -Job Requirements Report 	 -Job Requirements Report
Allocation Status	Allocation Status

3. Export Translation Customization table

To export the Translation Customization table to a .csv file, select 'Export Translation Customization table to CSV' from Tools > Produmex Manufacturing > Developer Tools > Language BxDictionary.

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The entire table will be exported. It is not possible to only export selected lines of the table.

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