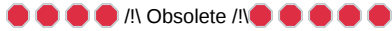


Raw Material SpP



Access latest documentation in the below [SPP Make or Buy](#) part.

The logic is the same, but BW objects changed (ABCOPC17 and ABCOPC18 ABCOPC20 and ABCOPC21) with a different granularity.

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Objective

Provide "Make or Buy" information in the SpP Raw Material process to deliver a Manufacturing adjusted cost.

This information is provided by Finance or Controlling and based on several calculations on their side, and therefore not available in SAP.

The indicators "Usage factor" and "Mixing ratio" must be manually populated by the Business at BOM Component / Plant level.

A calculation will be applied on each finished products concerned by these BOM Components.

Overall design

Concerned raw materials are identified in the ZCRIT transaction in PF1 with the critical flag "I" for internal and "E" for external.

A dedicated workbook allows users to fill "Usage factors" and "Mixing ratio" for those relevant Raw Materials.

A data flow push these Raw Materials information to the Manufacturing query, computing the "Adjusted Mixing Ratio" to apply to the Raw Material cost.

Roles & Access

Roles and access

List of application role + menu role and explanation if we have several applications role with specials rules.

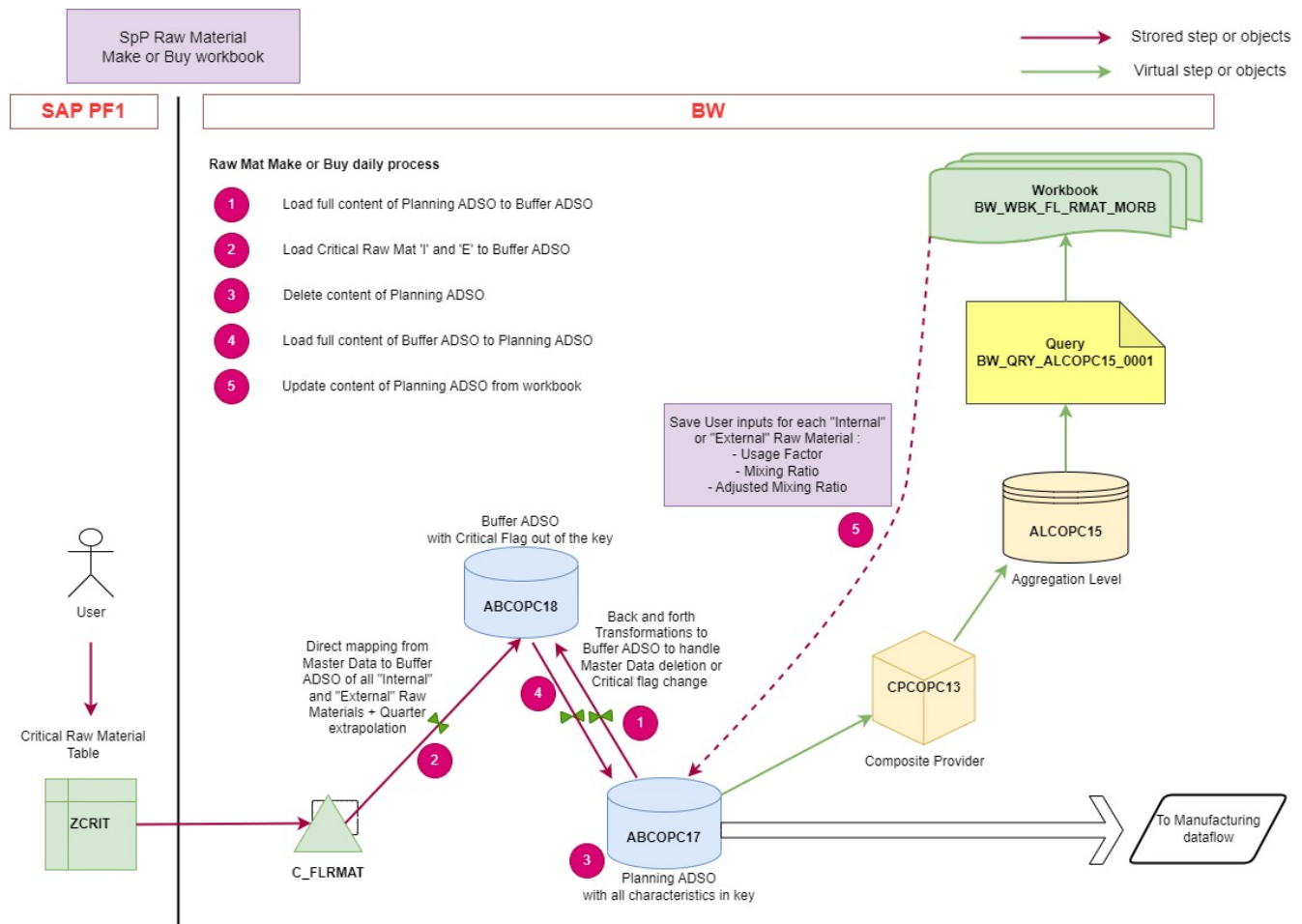
Role Code	Role Description	Explanation
ZR_RCS_CA_M78	Forward Looking ICM - Raw Material	Role Menu
ZBI_RCS_CO_A06	Forward Looking ICM - Raw Material	Authorization objects

Authorization variables

List of authorization variables mandatory for the application.

Authorization variables	Object
V_CPFCTR1_2_0006	CPFCTR1_2
V_C_PLANT_0012	C_PLANT
V_C_AUTHMA_0001	C_PLANT__C_AUTHMA

Dataflow overview



BW Logic

The Critical Raw Material Master Data **C_FLRMAT** is used to identify the “Make or Buy” Products.

This Master Data is already used to retrieve Raw Material information like Critical flag, Buyer name, Buyer currency, Buyer unit, Classification.

The source of this information is located in PF1 system for SpP, where the table **ZFI_ICM_CRITIC** is populated by Business through transaction **ZCRIT**.

The field “Critical flag” (C_FLRMATF) is used to identify “Make or Buy” Products.

Available values for the field are :

- “ ” : Not critical
- “X” : Critical
- “B” : Critical No BOM
- “I” : Critical Internal
- “E” : Critical External

The BW data flow logic is based on an intermediate buffer ADSO, allowing the save of the previously input value from Business, and the update from the latest data coming from the Critical Raw Material Master Data **C_FLRMAT**.

The chronology is the following (see red bullets in above graphic) :

1. Load full content of Planning ADSO to Buffer ADSO
2. Load Critical Raw Mat 'I' and 'E' to Buffer ADSO
3. Delete full content of Planning ADSO
4. Load full content of Buffer ADSO to Planning ADSO
5. Update “Usage factors” and “Mixing ratio” in Planning ADSO from workbook

The Planning ADSO is then source of the Manufacturing data flow, applying the “Adjusted Mixing Ratio” to the finished products price concerned by these Components.

Therefore, the Raw Material Forecast price must have been confirmed and sent to Manufacturing before the “Make or Buy” process ([Raw Material Forecast#Objective](#)).

Dependencies with other applications

There is a dependency with :

InfoObjects : C_FLRMAT, C_GLBFLT (Global Filters).

InfoProviders : ABCOPC01 (Raw Material Forecast).

Propagation Layer

N/A

Business Layer

InfoProvider : ABCOPC17 FL - Raw Mat Make or Buy

FL - Raw Mat Make or Buy	ABCOPC17	Manage
ADSO ABCOPC18 -> ADSO ABCOPC17	0LYTP836GXQYUU0FF	Change
FL - Raw Mat Make or Buy - Buffer	ABCOPC18	Manage InfoProviders
Data Transfer Processes	ABCOPC17	Create Data Trans
DTP: ABCOPC18 -> ABCOPC17 Full Internal / External	DTP_04B9BB0HZDMR7	Change

ADSO in write optimized mode, with all characteristics in key to allow planning functionalities.

The structure of the Planning ADSO is :

- [Source system \(0LOGSYS\)](#)

- Material (C_MATNR2)
- Plant (C_PLANT)
- Quarter (OCALQUARTER)
- GBU (CPFCTR1_2)
- Flag critical raw material (C_FLRMATF)
- Usage Factor (K_USGFACT)
- Mixing ratio (K_MIXRAT)
- Adjusted Mixing ratio (K_ADJRAT)

The OCALMONTH dimension will be extrapolated from Quarter in the Manufacturing data flow, at the time of loading the Planning ADSO into the Manufacturing one.

Transformation ADSO ABCOPC18 -> ADSO ABCOPC17

The ADSO is loaded with Make or Buy products only (Critical flag "I" or "E"), from Buffer ADSO ABCOPC18, in which the Planning ADSO was previously saved, and enhanced with a loading from MD Critical Raw Material.

A 1:1 mapping is done for all matching characteristics, except key figure K_ADJRAT which is computed from the 2 other key figures, according to Critical flag change (I or E).

Planning ADSO records are deleted and reloaded from buffer ADSO daily.

Transformation

ADSO ABCOPC18 -> ADSO ABCOPC17

Source

FL - Raw Mat Make or Buy - Buffer (ABCOPC18)

Target

FL - Raw Mat Make or Buy (ABCOPC17)

Version

Active

Active Version

Executable

Edited Version

100%

Rule Group

Rule

Runtime Status

ABAP and HANA runtime are supported

FL - Raw Mat Make or Buy - Buffer (ABCOPC18)

Pos	Key	InfoObject	Field	Icon	Descript.	Data t	Lngh
1	↕	OLOGSYS	LOGSYS	📁	Source System	CHAR	000010
2	↕	C_MATNR2	/BIC/C_MATNR2	📁	Material	CHAR	000018
3	↕	C_PLANT	/BIC/C_PLANT	📁	Plant	CHAR	000004
4	↕	OCALQUARTER	CALQUARTER	📅	Calendar Year/Quarter	NUMC	000005
5		ORECORDMODE	RECORDMODE	📁	BW Delta Process: Update Mode	CHAR	000001
6		CPFCCTR1_2	/BIC/CPFCCTR1_2	📁	BFC Global Business Unit	CHAR	000002
7		C_FLRMATF	/BIC/C_FLRMATF	📁	FL Raw Material Critical Flag	CHAR	000001
8		SAVE_FLRMATF		📁	FL Raw Material Critical Flag Save	CHAR	000001
9		K_MIXRAT	/BIC/K_MIXRAT	📁	Mixing ratio	QUAN	000017
10		K_USGFACT	/BIC/K_USGFACT	📁	Usage Factor	DEC	000017
11		K_ADJRAT	/BIC/K_ADJRAT	📁	Adjusted Mixing Ratio	DEC	000017

FL - Raw Mat Make or Buy (ABCOPC17) Rule Group: Standard Group

Rule	Rule Name	Pos	Key	InfoObject	Icon	Descript.	Data t	Lngh	Int
	OLOGSYS	1	↕	OLOGSYS	📁	Source System	CHAR	000010	
	C_MATNR2	2	↕	C_MATNR2	📁	Material	CHAR	000018	
	C_PLANT	3	↕	C_PLANT	📁	Plant	CHAR	000004	
	OCALQUARTER	4	↕	OCALQUARTER	📅	Calendar Year/Quarter	NUMC	000005	
	CPFCCTR1_2	5	↕	CPFCCTR1_2	📁	BFC Global Business Unit	CHAR	000002	
	C_FLRMATF	6	↕	C_FLRMATF	📁	FL Raw Material Critical Flag	CHAR	000001	
	ORECORDMODE	7		ORECORDMODE	📁	BW Delta Process: Update Mode	CHAR	000001	
	K_MIXRAT	8		K_MIXRAT	📁	Mixing ratio	QUAN	000017	
	K_USGFACT	9		K_USGFACT	📁	Usage Factor	DEC	000017	
	Formula	10		K_ADJRAT	📁	Adjusted Mixing Ratio	DEC	000017	

The Critical Raw Mat flag is cleared, and saved into an additional field SAVE_FLRMATF.

When a new load is done from the Critical Raw Material Master Data, the flag is populated with the refreshed value, and the "Adjusted Mixing Ratio" is computed with the relevant rule if the new flag is different from the saved one.

Transformation: ADSO ABCOPC17 -> ADSO ABCOPC18 Runtime Status: ABAP and HANA runtime are supported

Source: FL - Raw Mat Make or Buy (ABCOPC17) Target: FL - Raw Mat Make or Buy - Buffer (ABCOPC18) Version: Active Active Version: Executable Edited Version

100% Rule Group Rule Group Rule

Pos	Key	InfoObject	Icon	Descript.	Data t	Length
1		OLOGSYS		Source System	CHAR	000010
2		C_MATNR2		Material	CHAR	000018
3		C_PLANT		Plant	CHAR	000004
4		0CALQUARTER		Calendar Year/Quarter	NUMC	000005
5		CPFCTR1_2		BFC Global Business Unit	CHAR	000002
6		C_FLRMATF		FL Raw Material Critical Flag	CHAR	000001
7		0RECORDMODE		BIW Delta Process: Update Mode	CHAR	000001
8		K_MIXRAT		Mixing ratio	QUAN	000017
9		K_USGFACT		Usage Factor	DEC	000017
10		K_ADJRAT		Adjusted Mixing Ratio	DEC	000017

Rule	Rule Name	Pos	Key	InfoObject	Field	Icon	Descript.	Data t	Length	Int
=	OLOGSYS	1		OLOGSYS	LOGSYS		Source System	CHAR	000010	
=	C_MATNR2	2		C_MATNR2	/BIC/C_MATNR2		Material	CHAR	000018	
=	C_PLANT	3		C_PLANT	/BIC/C_PLANT		Plant	CHAR	000004	
=	0CALQUARTER	4		0CALQUARTER	CALQUARTER		Calendar Year/Quarter	NUMC	000005	
=	CPFCTR1_2	6		CPFCTR1_2	/BIC/CPFCTR1_2		BFC Global Business Unit	CHAR	000002	
=	Clear	7		C_FLRMATF	/BIC/C_FLRMATF		FL Raw Material Critical Flag	CHAR	000001	
=	SAVE_FLRMATF	8			SAVE_FLRMATF		FL Raw Material Critical Flag Save	CHAR	000001	
=	K_MIXRAT	9		K_MIXRAT	/BIC/K_MIXRAT		Mixing ratio	QUAN	000017	
=	K_USGFACT	10		K_USGFACT	/BIC/K_USGFACT		Usage Factor	DEC	000017	
=	K_ADJRAT	11		K_ADJRAT	/BIC/K_ADJRAT		Adjusted Mixing Ratio	DEC	000017	

Transformation TRSF: C_FLRMAT -> ABCOPC18

Extraction of the updated Critical Raw Materials from source system PF1 ('I' and 'E').

A 1:1 mapping is done for all matching characteristics, except 0CALQUARTER which is determined by a formula.

The 3 key figures are not populated from the Master Data, but only by the loading from Planning ADSO.

4 different rule groups are created, each one with the same mappings, except the Quarter formula sliding by 1 quarter to cover the 4 coming quarters.

Transformation: TRSF: C_FLRMAT -> ABCOPC18 Runtime Status: Only ABAP runtime is supported

Source: FL Raw Material Filter (C_FLRMAT) Target: FL - Raw Mat Make or Buy - Buffer (ABCOPC18) Version: Active Active Version: Executable Edited Version

100% Rule Group Rule Group Rule

Pos	Key	InfoObject	Icon	Descript.	Data t	Length
1		OLOGSYS		Source System	CHAR	000010
2		C_PLANT		Plant	CHAR	000004
3		C_FLRMAT		FL Raw Material Filter	CHAR	000001
4		C_BUYID		Buyer	CHAR	000004
5		C_FLRMATF		FL Raw Material Critical Flag	CHAR	000001
6		C_FLRMATC		FL Raw Mat Classification	CHAR	000006
7		C_BASUOM2		Base Unit of Measure	UNIT	000003
8		0LOC_CURR2		Second Local Currency	CURY	000005
9		CPFCTR1_2		BFC Global Business Unit	CHAR	000002

Rule	Rule Name	Pos	Key	InfoObject	Field	Icon	Descript.	Data t	Length	Int
=	OLOGSYS	1		OLOGSYS	LOGSYS		Source System	CHAR	000010	
=	C_MATNR2	2		C_MATNR2	/BIC/C_MATNR2		Material	CHAR	000018	
=	C_PLANT	3		C_PLANT	/BIC/C_PLANT		Plant	CHAR	000004	
=	DATE_QUARTER(SYST-DATUM)	4		0CALQUARTER	CALQUARTER		Calendar Year/Quarter	NUMC	000005	
=	CPFCTR1_2	6		CPFCTR1_2	/BIC/CPFCTR1_2		BFC Global Business Unit	CHAR	000002	
=	C_FLRMATF	7		C_FLRMATF	/BIC/C_FLRMATF		FL Raw Material Critical Flag	CHAR	000001	
=	SAVE_FLRMATF	8			SAVE_FLRMATF		FL Raw Material Critical Flag Save	CHAR	000001	
=	K_MIXRAT	9		K_MIXRAT	/BIC/K_MIXRAT		Mixing ratio	QUAN	000017	
=	K_USGFACT	10		K_USGFACT	/BIC/K_USGFACT		Usage Factor	DEC	000017	
=	K_ADJRAT	11		K_ADJRAT	/BIC/K_ADJRAT		Adjusted Mixing Ratio	DEC	000017	

Quarter formulas :

Standard Group : DATE_QUARTER(SYST-DATUM)

Month + 2 Group : DATE_QUARTER(ADD_TO_DATE(CONCATENATE(DATE_MONTH(Current Date), 15), 90))

Month + 3 Group : DATE_QUARTER(ADD_TO_DATE(CONCATENATE(DATE_MONTH(Current Date), 15), 180))

Month + 4 Group : DATE_QUARTER(ADD_TO_DATE(CONCATENATE(DATE_MONTH(Current Date), 15), 270))

Loading frequency

Daily

Reporting

Data is displayed in a Workbook built on a single query with Planning functionalities.

The query is built on an Aggregation Level, based on a Composite Provider encapsulating the Planning ADSO.

Reporting Layer

Aggregation Level

ALCOPC15 FL - Raw Mat Make or Buy

FL - Raw Mat Make or Buy	ALCOPC15	Change	
FLICM - SPP Raw Mat Make or Buy	F_ALCOPC15_0001	Change	InfoProviders
FL - Raw Mat Make or Buy	CPCOPC13	Change	InfoProviders
FL - Raw Mat Make or Buy	ABCOPC17	Manage	InfoProviders
FLICM - SPP Raw Mat Make or Buy compute	PF_ALCOPC15_0001	Change	InfoProviders

The Aggregation Level is encapsulating the Composite Provider, with the exact same output structure.

All characteristics and key figures of the ADSO are selected to guarantee the Planning functionalities in the query/workbook.

Planning Function

PF_ALCOPC15_0001 FLICM - SPP Raw Mat Make or Buy compute

The Planning Function is called from the workbook when saving data.

Key Figure "Adjusted Mixing Ratio" is computed according to the Critical Raw Mat flag ('I' or 'E')

Display Planning Function PF_ALCOPC15_0001

← →

Characteristic Usage

68

Create

Delete

Parameter

▼ ▲

Conditions

Option	Selections	Technical Information
	C_FLRMATF: I	C_FLRMATF: I
	C_FLRMATF: E	C_FLRMATF: E

Operand display { Key Figure Name }

Operands

Data Types

Info

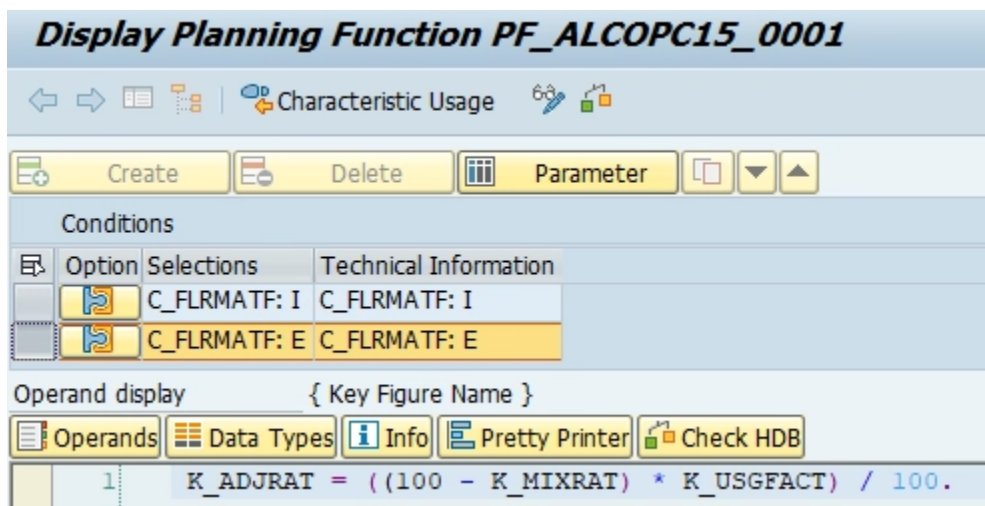
Pretty Printer

Check HDB

1

2

$$K_ADJRAT = (K_MIXRAT * K_USGFACT) / 100.$$



Virtual Layer

Composite Providers

CPCOPC13 FL - Raw Mat Make or Buy

FL - Raw Mat Make or Buy	CPCOPC13	Change
FL - Raw Mat Make or Buy	ABCOPC17	Manage InfoProviders
ADSO ABCOPC18 -> ADSO ABCOPC17	0LYTP836GXQYUU0FF	Change
Data Transfer Processes	ABCOPC17	Create Data Trans

The Composite Provider is encapsulating the Planning ADSO, with the exact same output structure.

The navigational attribute C_PLANT__C_AUTHMA is added to handle authorizations on Scope in the query.

Reporting

BW Query

Description	FL - Raw Material Make or Buy
Technical Name	BW_QRY_ALCOPC15_0001
Application	COPC
Info-provider	ALCOPC15
Usage type	Planning
Expected users	

Global properties

[WBD] BW_QRY_ALCOPC15_0001

General: BW_QRY_ALCOPC15_0001 - FL - Raw Material Make or Buy
Active Version

General

Technical Name: BW_QRY_ALCOPC15_0001
Description: FL - Raw Material Make or Buy
InfoProvider: ALCOPC15
Key Date: <default>

Output Settings

☒ Adjust Formatting after Refreshing
☐ Suppress Repeated Key Values
☐ Show Scaling for Measures
Sign Format: Before, for example -1
Zero Format: With Currency/Unit
Custom Zero Format:

Result Location

Rows: ☐ Above ☒ Below Columns: ☐ Left ☒ Right

Zero Suppression

Applies to: ☐ Rows ☐ Columns
Condition: Only result value must be zero

Remote Access

☐ By Easy Query
☐ By OLE DB for OLAP
☐ By OData
☐ External SAP HANA View

Universal Display Hierarchy

☐ Active on rows
Expand to Level: 0
☐ Active on columns
Expand to Level: 0

Variables Order

Planning

☒ Start Query in Input Mode
☐ Symmetrical Calculation Mode
☐ New Lines on Every Level
☐ Always Disaggregate to All Valid Combinations

Variables

Definitions

Variable Name	Info-object	Selection Type	Required	Description/Explanation
V_C_PLANT_0012	C_PLANT	Authorization with Input	No	Plant
V_CPFCTR1_2_0006	CPFCTR1_2	Authorization with Input	No	Global business Unit
V_C_MATNR2_0001	C_MATNR2	Select Option	No	Raw Material
V_C_AUTHMA_0001	C_PLANT__C_AUTHMA	Authorization	No	Authorization Scope

Variable Sequence

Variables Order

Variables

[V_CPFCTR1_2_0006] GBU (Select Optional, Optional, Auth)
 [V_C_PLANT_0012] Plant (Authorization with input select option)
 [V_C_MATNR2_0001] Material (Select option, Optional)

Filters

Filter: Fixed Values

- [0LOGSYS] Source System
- ▼ [C_MATNR2] Material
 - [V_C_MATNR2_0001] Material (Select option, Optional)
- ▼ [C_PLANT] Plant
 - [V_C_PLANT_0012] Plant (Authorization with input select option)
- ▼ [C_PLANT_C_AUTHMA] Authorization Scope
 - [V_C_AUTHMA_0001] Authorization Scope (Authorization, No input)
- ▼ [0INFOPROV] InfoProvider
 - [ABCOPC17] FL - Raw Mat Make or Buy
- ▼ [CPFCTR1_2] BFC Global Business Unit
 - [V_CPFCTR1_2_0006] GBU (Select Optional, Optional, Auth)

Key figures

Columns

- ▼ Key Figures
 - [K_MIXRAT] Mixing ratio
 - [K_USGFACT] Usage Factor
 - [0CALQUARTER] Calendar Year/Quarter

Properties

General Conversion Calculations **Planning**

Planning

Input-Ready: Input-Ready

Disaggregation: No Disaggregation

Distribution: Equally

Data Extension: <NONE>

Columns

- ▼ Key Figures
 - [K_MIXRAT] Mixing ratio
 - [K_USGFACT] Usage Factor
 - [0CALQUARTER] Calendar Year/Quarter

Properties

General Conversion Calculations **Planning**

Planning

Input-Ready: Input-Ready

Disaggregation: No Disaggregation

Distribution: Equally

Data Extension: <NONE>

Characteristics

Rows

- [0LOGSYS] Source System
- [C_MATNR2] Material
- [C_PLANT] Plant
- [CPFCTR1_2] BFC Global Business Unit
- [C_FLRMATF] FL Raw Material Critical Flag
- [C_PLANT_C_AUTHMA] Authorization Scope

Cells

N/A

Conditions

N/A

Exceptions

N/A

BW Workbook

Description	FL - Raw Material - Make or Buy
Technical Name	BW_WBK_FL_RMAT_MORB
Application	COPC

Open Document	
Search My Documents Role	
Description	Technical Name
+	ZR_RCS_CA_M10
+	ZR_RCS_CA_M72
+	ZR_RCS_CA_M17
+	ZR_RCS_CA_M79
+	ZR_RCS_CA_M78
+	ZR_RCS_CA_M78 0000000004
+	BW_WBK_FL_RMAT_FORCAST
+	BW_WBK_FL_RMAT_MORB
+	ZR_RCS_CA_M11
+	ZR_RCS_CA_M72

Prompt

Prompts

Use Variant  

Prompt Summary
Search variables...

GBU (Select Optional, Optional, Auth):

Plant (Authorization with input select option):

Material (Select option, Optional):

Specify Value for Prompts

[V_CPFCTR1_2_0006] GBU (Select Optional, Optional,...)

=









[V_C_PLANT_0012] Plant (Authorization with input se...

=









[V_C_MATNR2_0001] Material (Select option, Optional)

=









Display

Clear All

OK

Cancel

Layout

FL - Raw Material - Make or Buy														
Last Refreshed mardi, mars 7, 2023 11:30:09 AM Active Filter Planning: Key 07.03.2023 Confirm your new value and save in Database Confirm Plan Data (Save)														
							Mixing ratio				Usage factor			
							Mixing ratio				Usage Factor			
							Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Source System	Material		Plant		BFC Global Business Unit	Cal. Year/Quarter	%	%	%	%				
SF1 Client 020	32654	CI2 L	TAN	SLVFR-FR /TAVAU	(PVDC)	SPECIALTY POLYMERS	I	72	56	89	86	1,33	1,33	1,33
	33626	VCM	TAN	SLVFR-FR /TAVAU	(PVDC)	SPECIALTY POLYMERS	I	72	56	89	86	1,15	1,15	1,15
	35631	S142b *EXT	TAVF	SLVFR-FR /TAVAU	(VF2)	SPECIALTY POLYMERS	E	72	56	89	86	1,59	1,59	1,59
	54721	S142b ARKEMA *ARK	TAVF	SLVFR-FR /TAVAU	(VF2)	SPECIALTY POLYMERS	E	72	56	89	86	0,00	0,00	0,00
	103059	LIME WATER	TAVF	SLVFR-FR /TAVAU	(VF2)	SPECIALTY POLYMERS	I	72	56	89	86	0,61	0,61	0,61
	205573	HF 100 * PMP GR [BM]	TAVF	SLVFR-FR /TAVAU	(VF2)	SPECIALTY POLYMERS	I	72	56	89	86	0,70	0,70	0,70

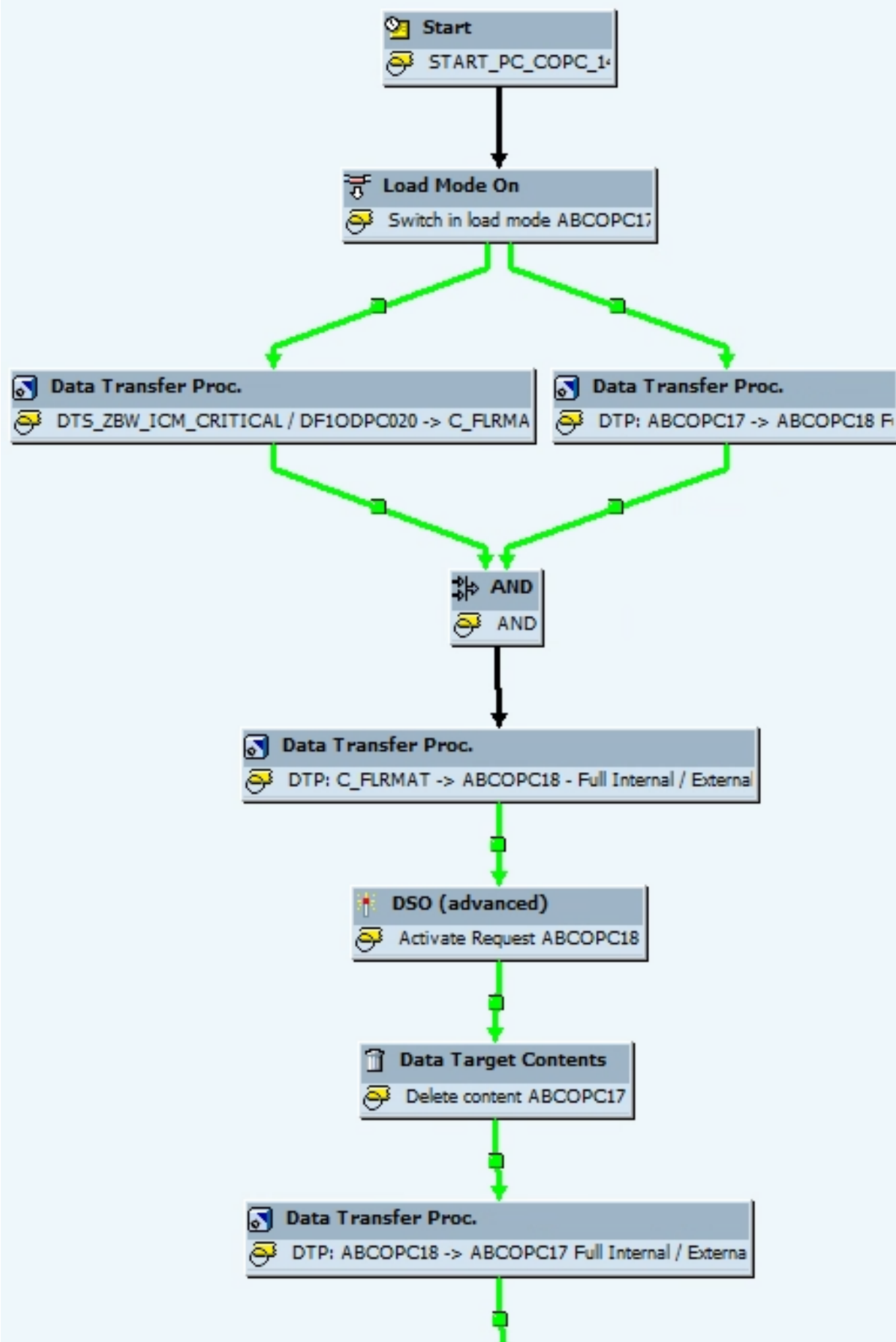
Macro VBA

(General)	(Declarations)
<pre> Private Sub Save_Click() Dim Var As Integer Dim auth As Variant Dim lResult As Long lResult = Application.Run("SAPEXecutePlanningFunction", "PF_1") If lResult = 0 Then MsgBox "Problem with Planning Function call" & vbCrLf, vbYesOnly + vbExclamation End If lResult = Application.Run("SAPEXecuteCommand", "PlanDataSave") If lResult = 0 Then MsgBox "No data has been saved." & vbCrLf & "Maybe no data has been modified or you are missing some authorizations.", vbYesOnly + vbExclamation End If End Sub </pre>	

Process Chains

PC_COPC_14 COPC: TD - D - RMAI Make or Buy Panning (Monthly)

Scheduled daily





Plan Mode On



Switch in Planning mode ABCOPC17