

# Raw Material Forecast

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## Objective

The objective is to display Raw Material Costs in a Manufacturing query. This query will be used in Qlik Sense Dashboards.

Raw Material Forecast prices are first proposed to the Business in a dedicated Workbook.

Business has to confirm those prices in the Workbook for each forecast period.

If a monthly forecast price is unconfirmed by Business, it is extrapolated from the first previous confirmed price, at the time of pushing the data into the Manufacturing data flow (monthly on 7th).

## Functional Logic

There are three key transactional sources supporting proposed Raw Material Unit Price:

Open Purchase Orders

For Raw Material and Plant combination : Purchase Orders with quantities and no Goods Receipt.

Scheduling delivery line date is used to allocate to relevant period.

#### Open Purchase Contracts

For Raw Material and Plant combination : Contracts quantity excluding quantities of Purchase Orders created in reference to Contract.

Validity dates at Header and Price Determination Date at line-item level

#### Material Standard Price

For Raw Material and Plant combination : Standard Price from Material Accounting information

Current date is used and extrapolated to allocate to all relevant periods.

The Forecast quantity for a Raw Material/Plant/Period is then consumed chronologically by relevant Purchase Orders and Contracts.

The proposed Unit Price is the weighted average price of the assigned documents.

In case of no document for Raw Material and Plant combination, the Material Standard Price is proposed.

#### Example :

For a Raw Material/Plant/Period a Forecast quantity of 50 KG is scheduled in Dynasys.

Looking for Purchase Orders :

This quantity can be partially consumed by a Purchase Order of 30 KG, with a unit price of 12 EUR.

Looking for Contracts :

The quantity left can be consumed by a Contract for 20 KG, with a unit price of 10 EUR.

Price Unit proposed :

The average price is the sum of the amounts, divided by the Forecast quantity to consume.

Purchase Order amount =  $30 \times 12 \text{ EUR} = 360 \text{ EUR}$

Contract amount =  $20 \times 10 \text{ EUR} = 200 \text{ EUR}$

Weighted Average Price =  $360 + 200 / 50 = 11,20 \text{ EUR}$

For the Raw Material/Plant/Period with a Forecast quantity of 50 KG, the proposed Unit Price is 11,20 EUR.

This price must be confirmed by Business on the relevant line in the Workbook.

The confirmed price will be populated in the Manufacturing data flow, and extracted to the Qlik dashboards.

## BW 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 |
|                |                                    |                       |

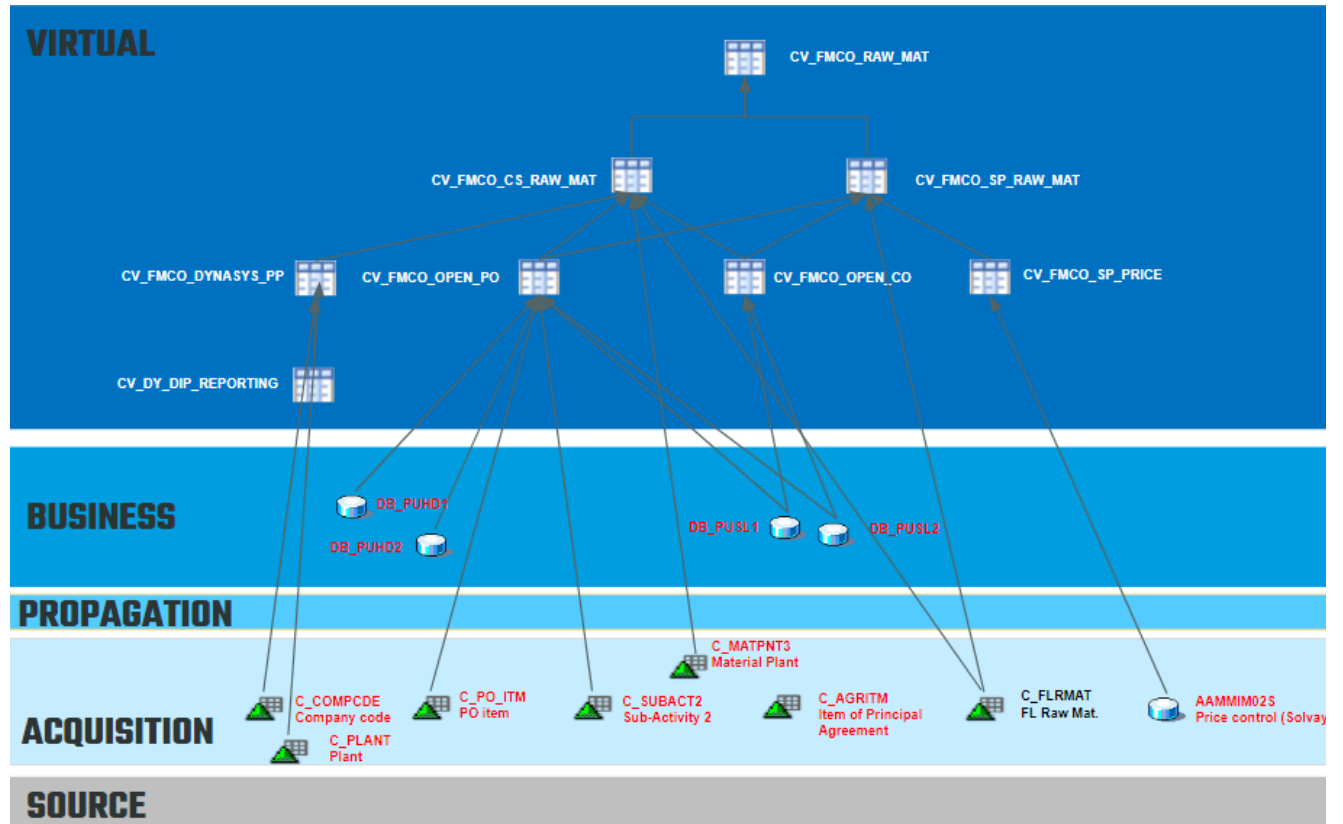
### Authorization variables

List of authorization variables mandatory for the application.

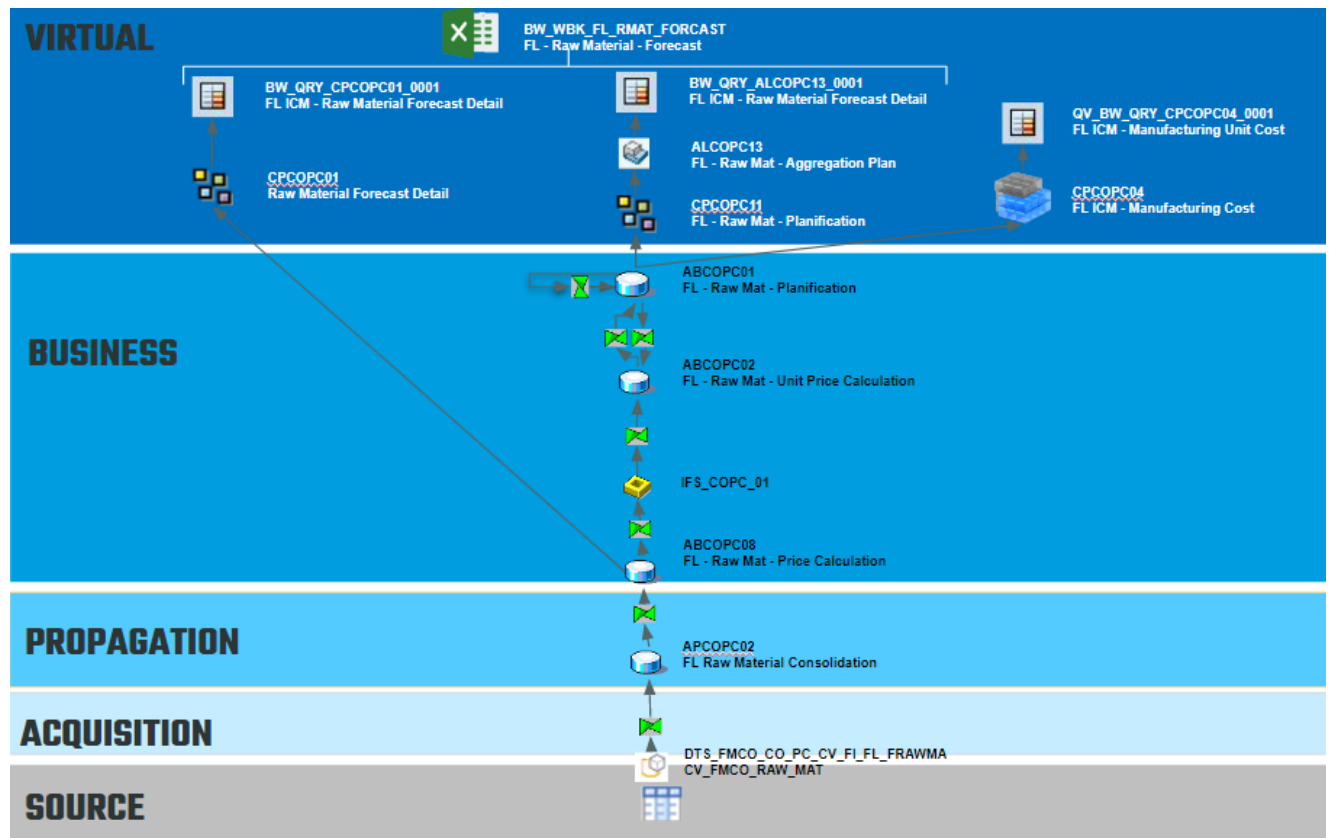
| Authorization variables | Object    |
|-------------------------|-----------|
| V_CPFCTR1_2_0006        | CPFCTR1_2 |
| V_C_PLANT_0012          | C_PLANT   |

## Dataflow overview

**Data Flow 1:** HANA Calculation Views



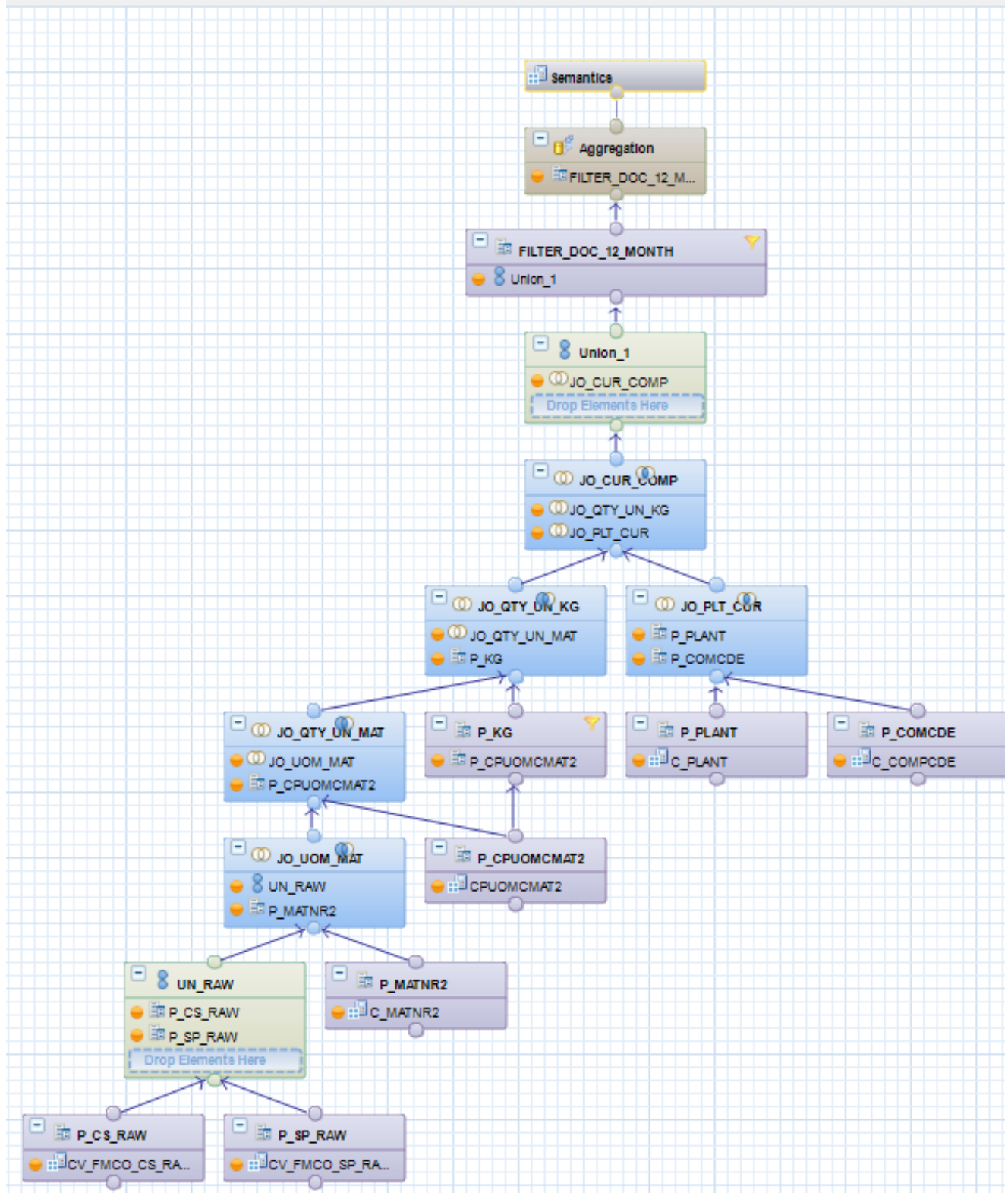
**Data Flow 2:** BW Stack



## Source Layer

As shown in the data flow above, the BW data source is the Main Calculation View **CV\_FMCO\_RAW\_MAT**:

## Scenario



## Calculation View Logic

Projection **P\_CS\_RAW** : Get Raw Material records for GBU NOVECARE (CS) from CV\_FMCO\_CS\_RAW\_MAT (see detail below).

Projection **P\_SP\_RAW** : Get Raw Material records for GBU SPECIALITY POLYMERE (SP) from CV\_FMCO\_SP\_RAW\_MAT (see detail below).

Further Projections are used in Joins to get unit and currency information from UOMCMAT2, C\_PLANT, and C\_COMPCODE.

`CC_QTY_MAT = "CC_QTY_DOC"*"CC_RATIO"` (Doc Qty converted in Material Base Unit of Measure with CC\_RATIO from UOMCMAT2)

`CC_QTY_KG = "CC_QTY_DOC"*"CC_RATIO"` (Doc Qty converted in KG with CC\_RATIO from UOMCMAT2)

Projection **FILTER\_DOC\_12\_MONTH** : Expression to exclude all lines on periods before current month of loading, except ones with null value representing Contract lines.

`( "CC_CALMONTH" >= "CC_ACTUAL_DATE" )  
OR  
("CC_CALMONTH" = '000000' OR isNull("CC_CALMONTH" ))`

Until 14th December 2022, this expression was also excluding lines on periods after current month of loading + 12.

This exclusion has been moved to ABAP stack in order to do a specific process for Material without any line in range Current Month -> Current Month + 12.

## Currency Conversion in HANA

At Semantic level, both values below are converted using CAR3 exchange rate type.

This Exchange Rate Type has been updated from 'M' to 'CAR3' on October 2022.

It uses an Input Parameter IP\_EXCHGE\_RT, reading from Master Data **C\_GLBFI**L (Global Filter) thanks to parameters below :

`C_STREAM = 'FMCO_COPC'`

`C_RULE = 'EXCHGE_RT'`

`C_GLBFI`L = '000'

`C_SIGN = 'I'`

`C_OPTION = 'EQ'`

`C_LOW = 'CAR3'`

`C_ACTIVE = 'Y'`

**CC\_VALUE\_EUR** : Conversion of Document Currency (CC\_VALUE\_DOC) in EUR :

**Assign Semantics**

Assign a suitable semantic type and maintain additional properties depending on the chosen semantic type

Semantic Type: Amount with Currency Code

Currency: € \$ € EUR

☒ Decimal shift ☒ Conversion ☐ Rounding ☐ Decimal shift back

Conversion

Schema for currency conversion:\* ABAP (SAPSR3)

Client for currency conversion:\* (Δ) IP\_BW\_CLIENT

Source Currency:\* ⓘ DOC\_CURRENCY

Target Currency:\* \$ € EUR

Exchange Type:\* (Δ) IP\_EXCHGE\_RT

Conversion Date:\* ⓘ CC\_DATE

Exchange Rate: ⓘ

☐ Generate result currency column:

Upon Conversion Failure: Ignore

**CC\_VALUE\_COMP** : Conversion of Document Currency (CC\_VALUE\_DOC) in Company Code Currency :

**Assign Semantics**

Assign a suitable semantic type and maintain additional properties depending on the chosen semantic type

Semantic Type: Amount with Currency Code ▾

Currency:  CC\_CUR\_COMP 

☒ Decimal shift ☒ Conversion ☐ Rounding ☐ Decimal shift back

Conversion

Schema for currency conversion:\* ABAP (SAPSR3) 

Client for currency conversion:\*  IP\_BW\_CLIENT 

Source Currency:\*  DOC\_CURRENCY 

Target Currency:\*  CC\_CUR\_COMP 

Exchange Type:\*  IP\_EXCHGE\_RT 

Conversion Date:\*  CC\_DATE 

Exchange Rate:  

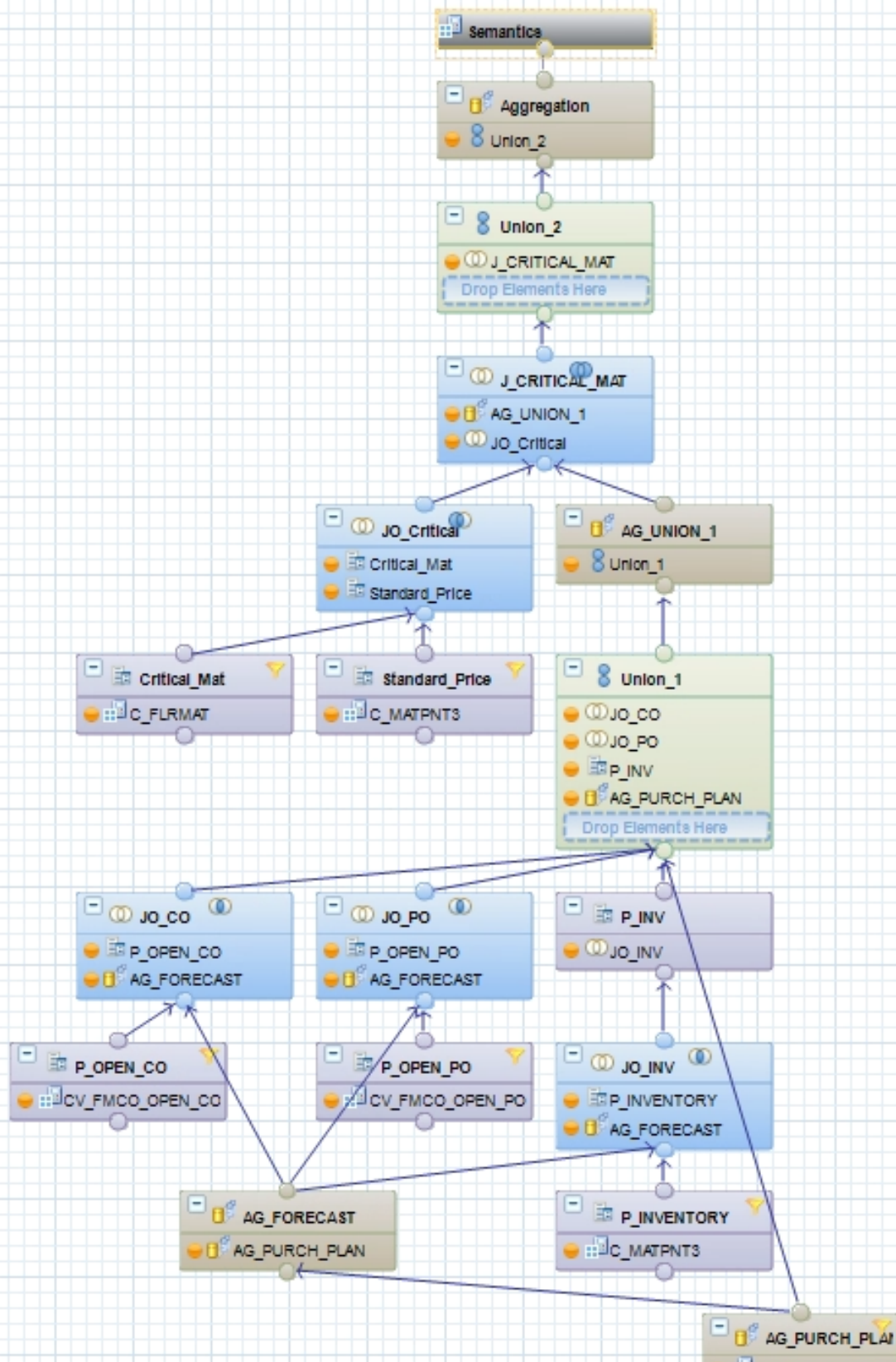
☐ Generate result currency column: 

Upon Conversion Failure: Ignore ▾

The Main Calculation View above is sourced on CV\_FMCO\_CS\_RAW\_MAT and CV\_FMCO\_SP\_RAW\_MAT :

[CV\\_FMCO\\_CS\\_RAW\\_MAT](#)

Scenario



Aggregation **AG\_PURCH\_PLAN** : Is the main Forecast source from Dynasys. Built on CV\_FMCO\_DYNASYS\_PP.

The filter expression is getting Forecast Dynasys lines (PLANNED\_PURCH\_MAT), for Novecare, Technology Solutions, and Aroma data, on periods after current month of loading.

```
("CPFCTR1_2" = 'CS' or "CPFCTR1_2" = 'TS' or "CPFCTR1_2" = 'PA') AND
"C_DATATYP" = 'PLANNED_PURCH_MAT'
AND "0CALMONTH" >= "ZACTUALDATE"
```

In this Forecast source from DYNASYS, value is always in Euro (EUR).

The retrieved Company Code currency must not be associated to the value in EUR.

At the time of the Union (Union\_1), a constant EUR is used for this Forecast source.

Projection **P\_OPEN\_CO** : Extract all the Contracts with global quantity. Built on CV\_FMCO\_OPEN\_CO.

The filter expression is getting Novecare, Technology Solutions, and Aroma data only.

```
"CPFCTR1_2" = 'CS' or "CPFCTR1_2" = 'TS' or "CPFCTR1_2" = 'PA'
```

Projection **P\_OPEN\_PO** : Extract all the Purchase Orders with quantity left to deliver. Built on CV\_FMCO\_OPEN\_PO.

The filter expression is getting Novecare, Technology Solutions, and Aroma data only, and exclude orders without any quantity left to deliver.

```
("CPFCTR1_2" = 'CS' or "CPFCTR1_2" = 'TS' or "CPFCTR1_2" = 'PA')
and "CC_OPEN_PO">0
```

Projection **P\_INVENTORY** : Extract list of Material/Plant with Standard Price from Master Data C\_MATPNT3.

The filter expression is selecting lines with chart of accounts but without value type.

```
((("0CHRT_ACCTS" != ""))
AND (("C_VALTYPE" = ""))
```

Until 14th December 2022, the Projection P\_INVENTORY was built on CV\_FMCO\_DYNASYS\_PP to retrieve Inventory Price (INV).

From that date, the Projection P\_INVENTORY is built on Master Data C\_MATPNT3 to retrieve Material Standard Price instead.

For technical reason, the identification INV (Inventory) is kept to identify this source of data.

These projections are all Inner joined with the Forecast Dynasys lines coming from the Aggregation above.

Projection **C\_FLRMAT** : Extract list of Critical Raw Material.

The filter expression is getting Novecare, Technology Solutions, and Aroma data only.

```
"CPFCTR1_2" = 'CS' or "CPFCTR1_2" = 'TS' or "CPFCTR1_2" = 'PA'
```

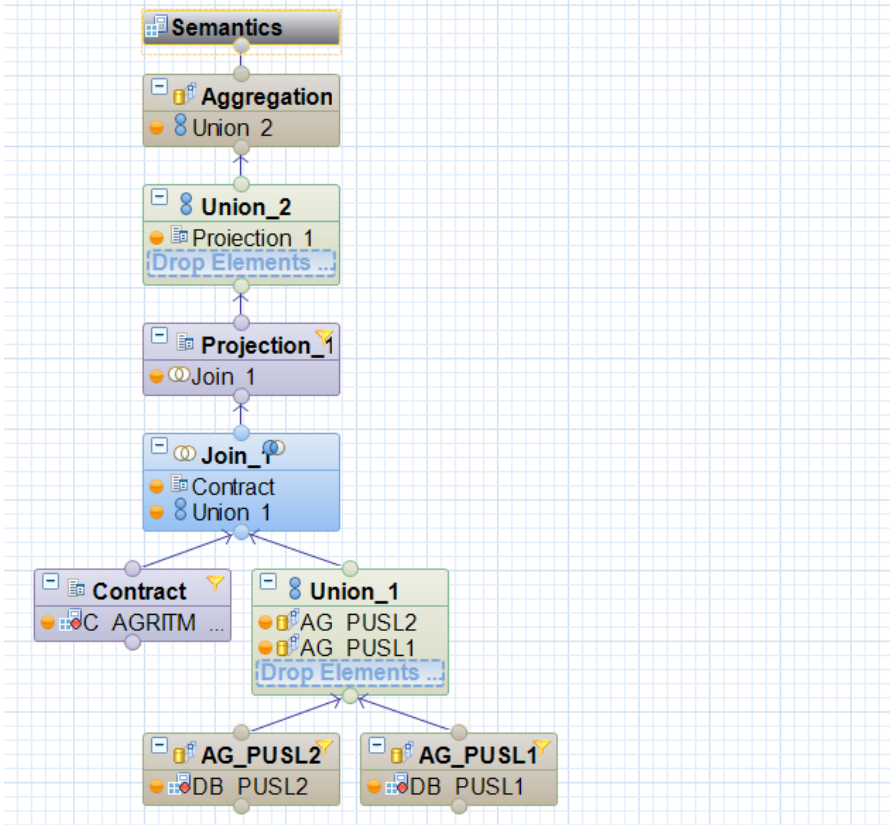
This projection is full outer joined in J\_CRITICAL\_MAT with the Union of previous lines from Dynasys Forecast, in order to display any Material without Forecast in the query.

A set of 11 calculated columns CC\_ is merging data from Critical Raw Mat or Dynasys Forecast, thanks to Formulas.

**Detail of CV\_FMCO\_OPEN\_CO :**

## ⚠ Solvay.IA\_FMCO.IA\_FMCO\_COPC::CV\_FMCO\_OPEN\_CO

Scenario



Aggregation **AG\_PUSL1** and **AG\_PUSL2** : Extraction of Purchase documents from Rhodia source system (DB\_PUSL1) and Solvay source system (DB\_PUSL2), with the PO quantity to use (CC\_PO\_QTY).

The filter expressions are getting Purchase documents not deleted with a Material code.

("C\_MATNR2" !=) AND ("C\_LOEKZ" =) AND ("C\_LOEKZK" =)

Projection **Contract** : Extraction of Contract Items from Master Data C\_AGRITM, with the Target Quantity to use (TARG\_QTY).

The filter expression is getting Contract Items not deleted with a Material code, and with a period not null.

("C\_MATNR2" !=) AND ("C\_LOEKZ" =)  
AND ( "CC\_CALMONTH" != '000000' OR not(isnull("CC\_CALMONTH" )))

This Projection is left joined with the Purchase information coming from above Aggregations.

Projection **Projection\_1** : Purpose is to filter the Contract with full quantity already consumed by Purchase Orders.

"CC\_OPEN\_CO\_KG" > 0

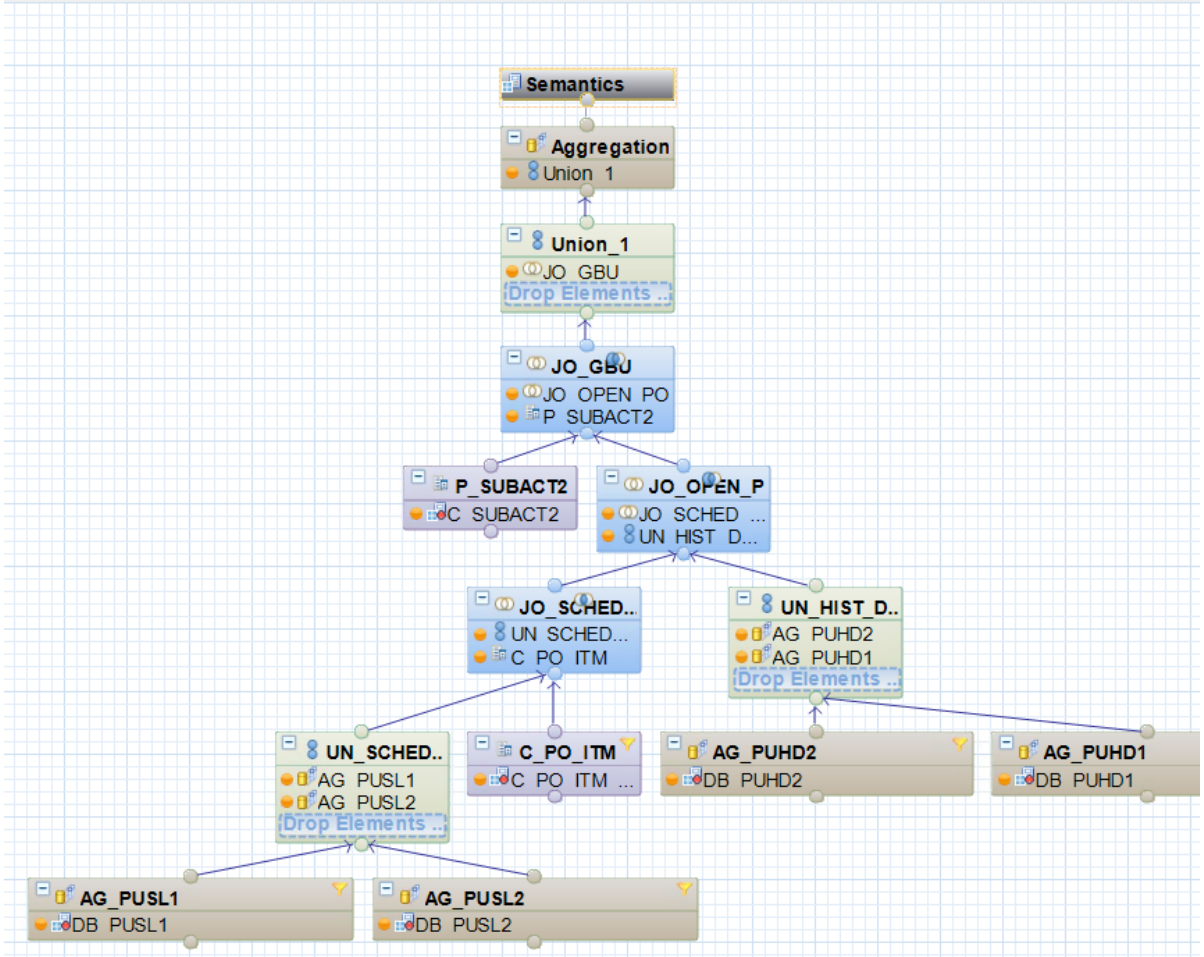
CC\_OPEN\_CO\_KG is computed as below:

CC\_PO\_QTY = "K\_QCDEUA"-"K\_QCDEUAR" (Order qty - Order qty Returned)

CC\_OPEN\_CO\_KG = CC\_CO\_QTY = "TARG\_QTY"-"CC\_PO\_QTY"

**Detail of CV\_FMCO\_OPEN\_PO :**

## Scenario



Aggregation **AG\_PUSL1** and **AG\_PUSL2** : Extraction of Purchase documents from Rhodia source system (DB\_PUSL1) and Solvay source system (DB\_PUSL2), with the PO quantity and amount to use (CC\_PO\_QTY / CC\_PO\_AMNT).

The filter expressions are getting Purchase documents not deleted with a Material code.

("C\_MATNR2" != "") AND ("C\_LOEKZ" = "") AND ("C\_LOEKZK" = "")

Aggregation **AG\_PUHD1** and **AG\_PUHD2** : Extraction of Good Receipts from Rhodia source system (DB\_PUHD1) and Solvay source system (DB\_PUHD2), with the GR quantity and amount to use (CC\_PO\_QTY / CC\_PO\_AMNT).

The filter expressions are getting Purchase documents type GR, not deleted with a Material code.

("C\_MATNR2" != "") AND ("C\_VGABE" = '1') AND ("C\_LOEKZ" = " ")

To filter the PO with full quantity already delivered, the expression is part of the main calling CV\_FMCO\_CS\_RAW\_MAT :

"CC\_OPEN\_PO\_KG" > 0

CC\_OPEN\_PO\_KG is computed as below:

CC\_PO\_QTY = "K\_QCDEUA" - "K\_QCDEUAR" (Order qty - Order qty Returned)

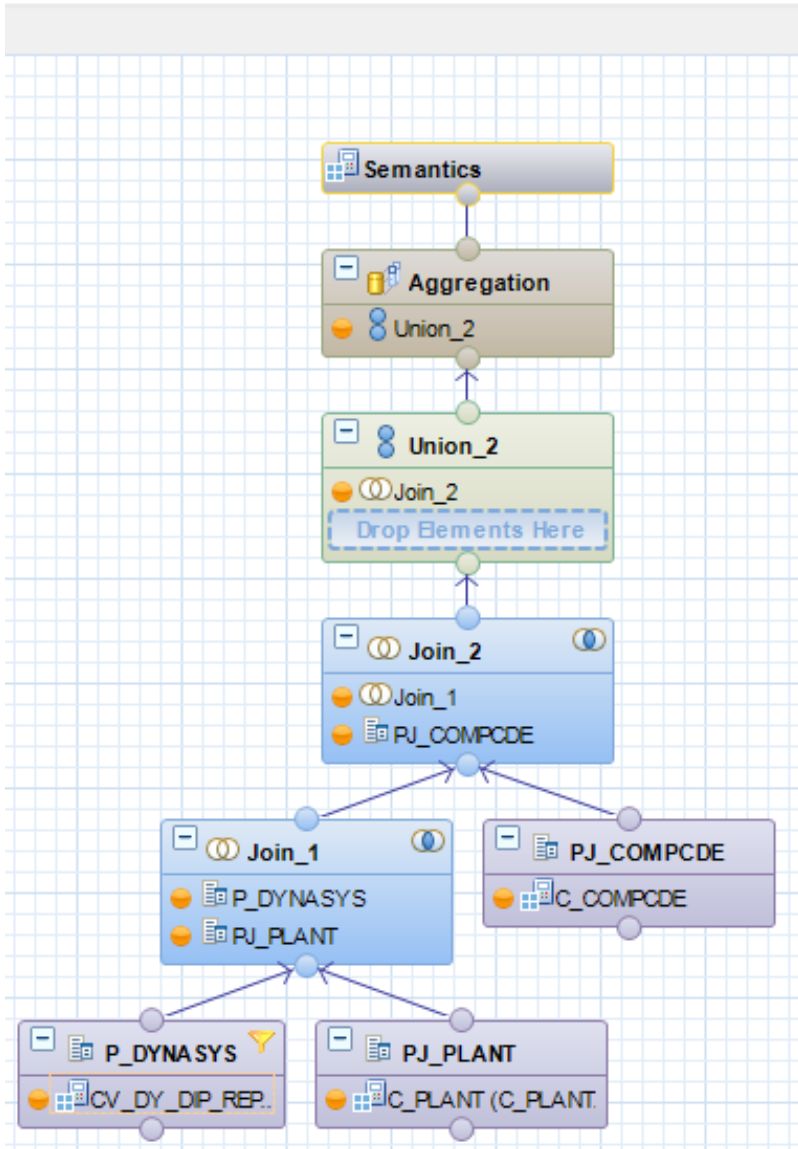
CC\_GR\_QTY = "K\_QEMUA" - "K\_QEMUAR" (Good Receipt qty - Good Receipt qty Returned)

CC\_OPEN\_PO\_KG = "CC\_PO\_QTY" - "CC\_GR\_QTY"

CC\_PO\_AMNT = "K\_VCDEDD"- "K\_VCDEDDR" (Order amount - Order amount Returned)

Detail of CV\_FMCO\_DYNASYS\_PP :

### .IA\_FMCO.IA\_FMCO\_COPC::CV\_FMCO\_DYNASYS\_PP



Projection **P\_DYNASYS** : Extraction of Forecast lines from DYNASYS Infoprovider

The filter expressions are filtering Forecast (PLANNED\_PURCH\_MAT) and Inventory (PROJECTED\_INVENTORY or ACTUAL\_PROJ\_INV) lines from Dynasys, with a period from current period.

```
"OCALMONTH" >= "CC_ACT_MONTH"  
AND ("C_DATATYP" = "PROJECTED_INVENTORY" OR "C_DATATYP" = "ACTUAL_PROJ_INV"  
OR "C_DATATYP" = "PLANNED_PURCH_MAT")
```

**Note** : Inventory data is not used anymore since 14th December 2022, date from which the Main CV\_FMCO\_CS\_RAW\_MAT is using Standard Price from C\_MATPNT3 and not Inventory price in Projection P\_INVENTORY.

In this CV\_FMCO\_DYNASYS\_PP used to retrieve Forecast (FOR) from DYNASYS, value is always in Euro (EUR).

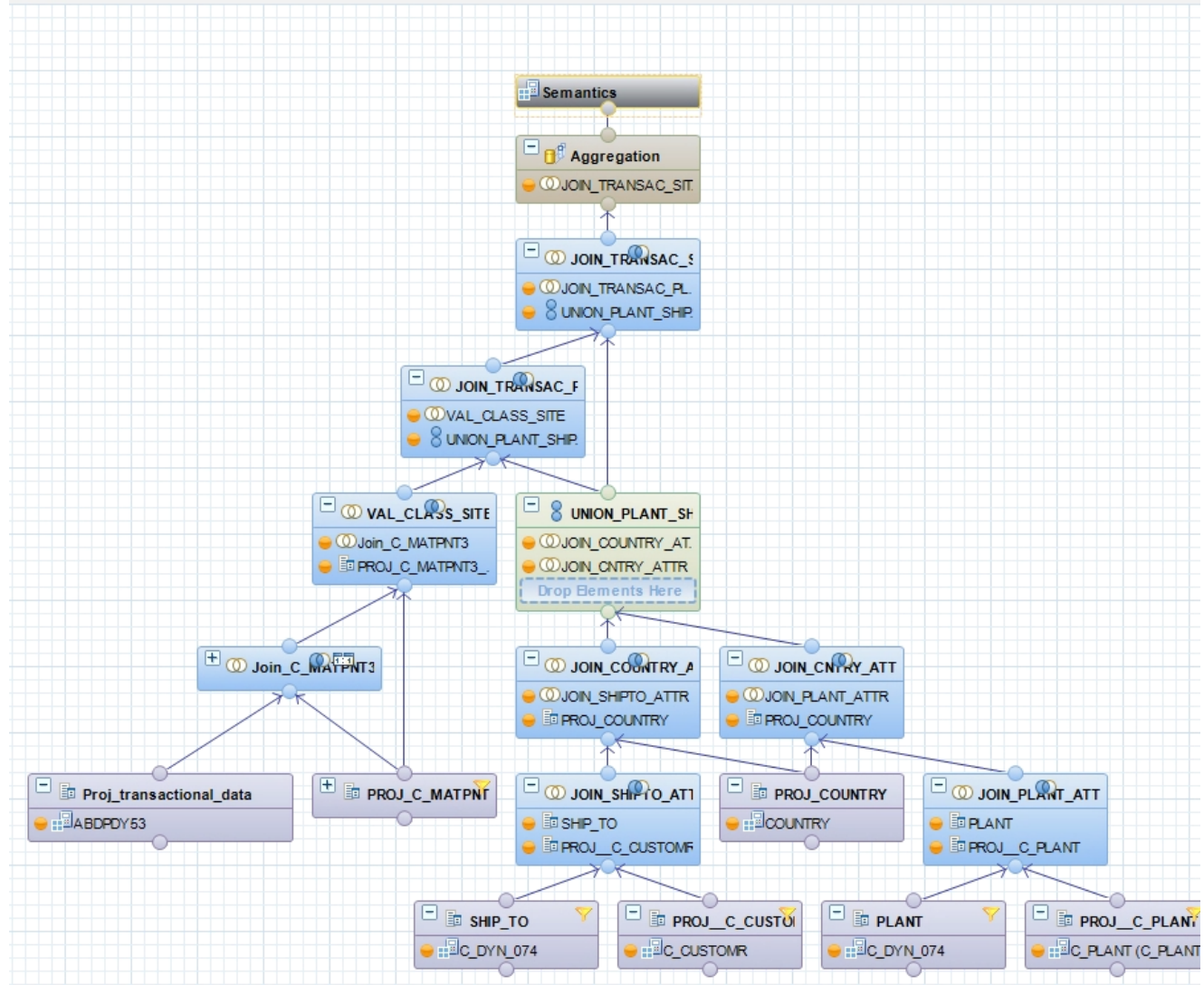
The join with C\_PLANT and C\_COMPCODE to retrieve the Company Code currency must no be used in association with the value in EUR.

In the calling CV\_FMCO\_CS\_RAW\_MAT, a constant EUR is used for source Forecast (AG\_PURCH) at the time of the Union (Union\_1).

The Calculation View CV\_FMCO\_DYNASYS\_PP is composed of CV\_DY\_DIP\_REPORTING below, which is the DYNASYS View built for DIP Reporting.

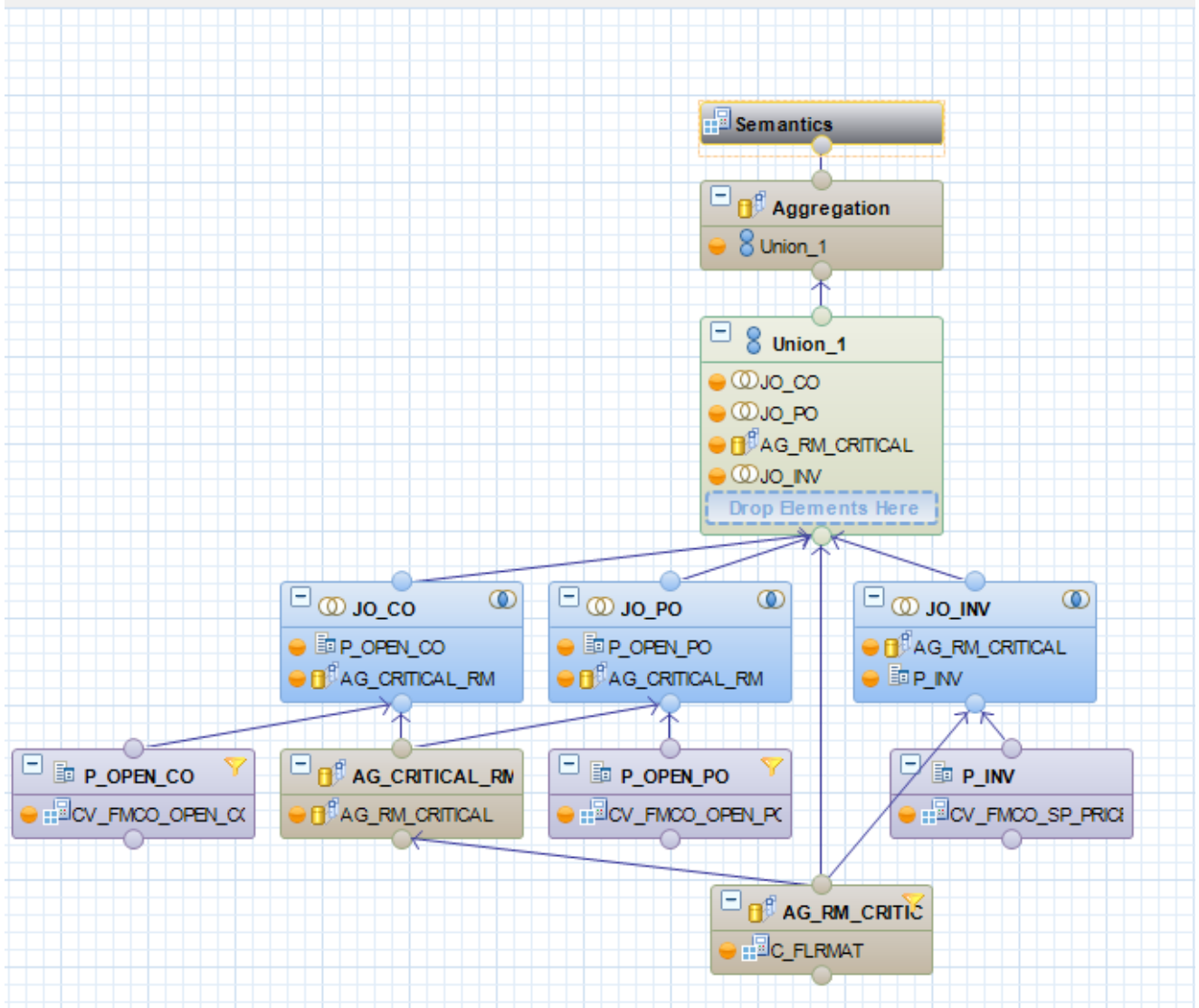
 **Solvay.IA\_DPS::CV\_DY\_DIP\_REPORTING WBP@WBP (GRAN7967)** [2 Warning\(s\) found.](#)

Scenario



The Main Calculation View CV\_FMCO\_CS\_RAW\_MAT is also composed of CV\_FMCO\_SP\_RAW\_MAT for Specialty Polymers GBU (SpP) data.

**CV\_FMCO\_SP\_RAW\_MAT**



Aggregation **AG\_RM\_CRITIC** : Extract list of Critical Raw Material.

The filter expression is getting SpP data only.

"CPFCTR1\_2" = 'SP'

Projection **P\_OPEN\_CO** : Extract all the Contracts with global quantity. Built on CV\_FMCO\_OPEN\_CO.

The filter expression is getting SpP data only.

"CPFCTR1\_2" = 'SP'

Projection **P\_OPEN\_PO** : Extract all the Purchase Orders with quantity left to deliver. Built on CV\_FMCO\_OPEN\_PO.

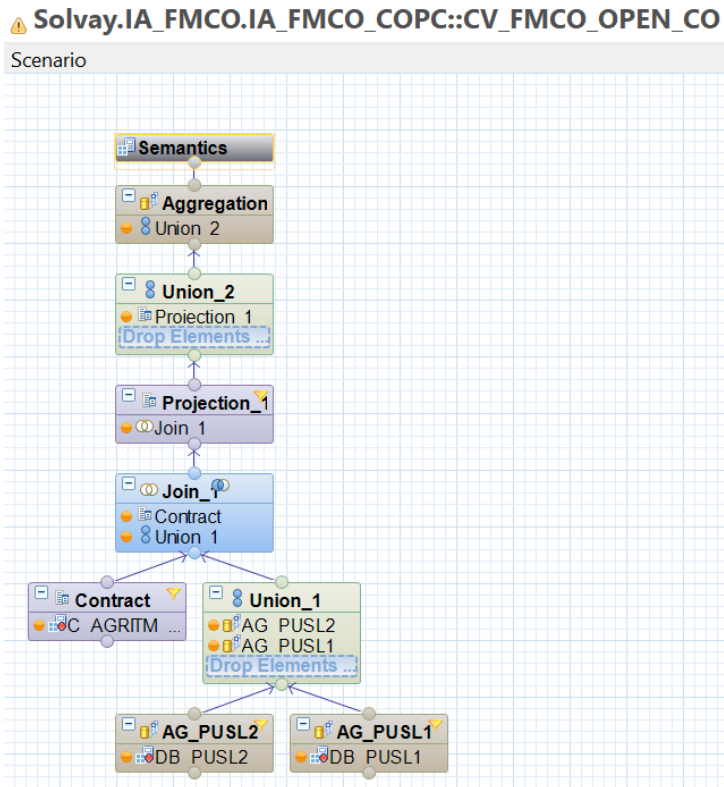
The filter expression is getting SpP data only, and exclude orders without any quantity left to deliver.

("CPFCTR1\_2" = 'SP')  
and "CC\_OPEN\_PO">0

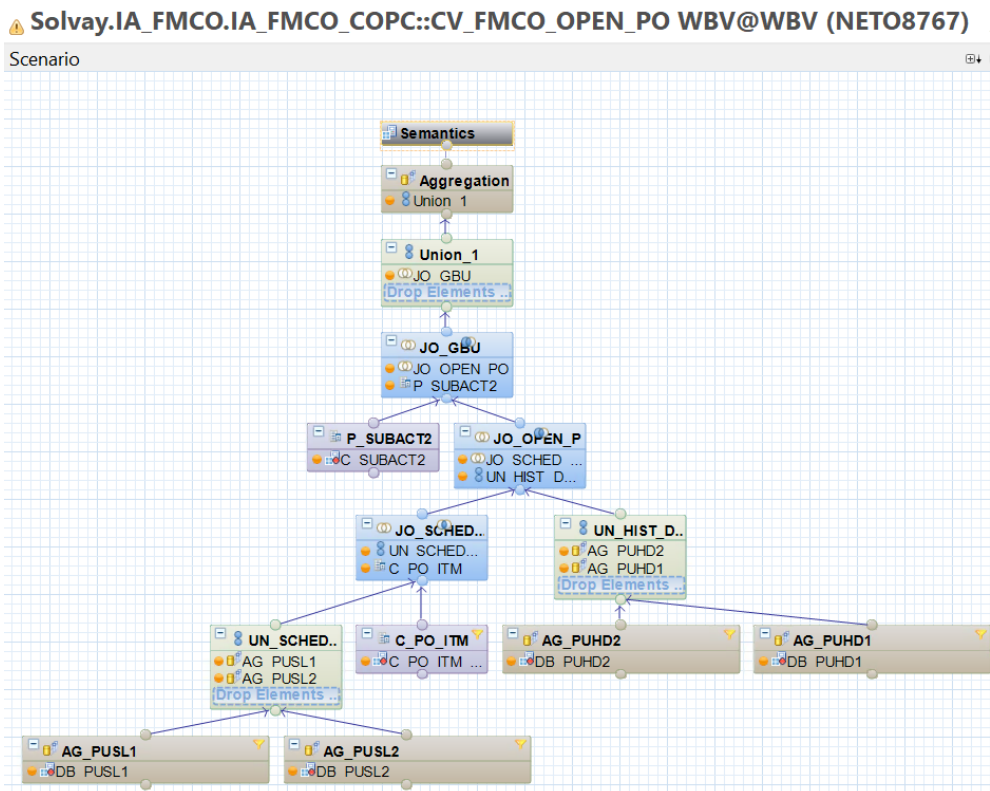
Projection **P\_INV** : Extract latest Inventory Price of Material. Built on CV\_FMCO\_SP\_PRICE.

These projections are all Inner joined with the list of Critical Raw Material coming from the Aggregation above.

The Calculation View CV\_FMCO\_SP\_RAW\_MAT is composed by:

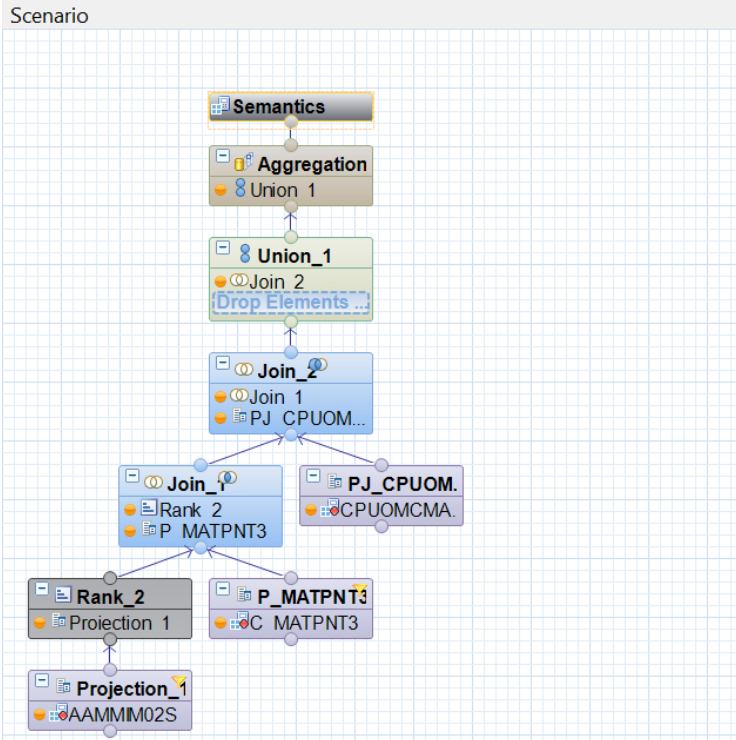


This CV is already detailed in the Novecare part above, in CV\_FMCO\_CS\_RAW\_MAT.



This CV is already detailed in the Novecare part above, in CV\_FMCO\_CS\_RAW\_MAT.

## ⚠ Solvay.IA\_FMCO.IA\_FMCO\_COPC::CV\_FMCO\_SP\_PRICE



Projection **Projection\_1** : Extract Inventory lines for Raw Material, from ADSO AAMMIM02S (Price control (Solvay)).

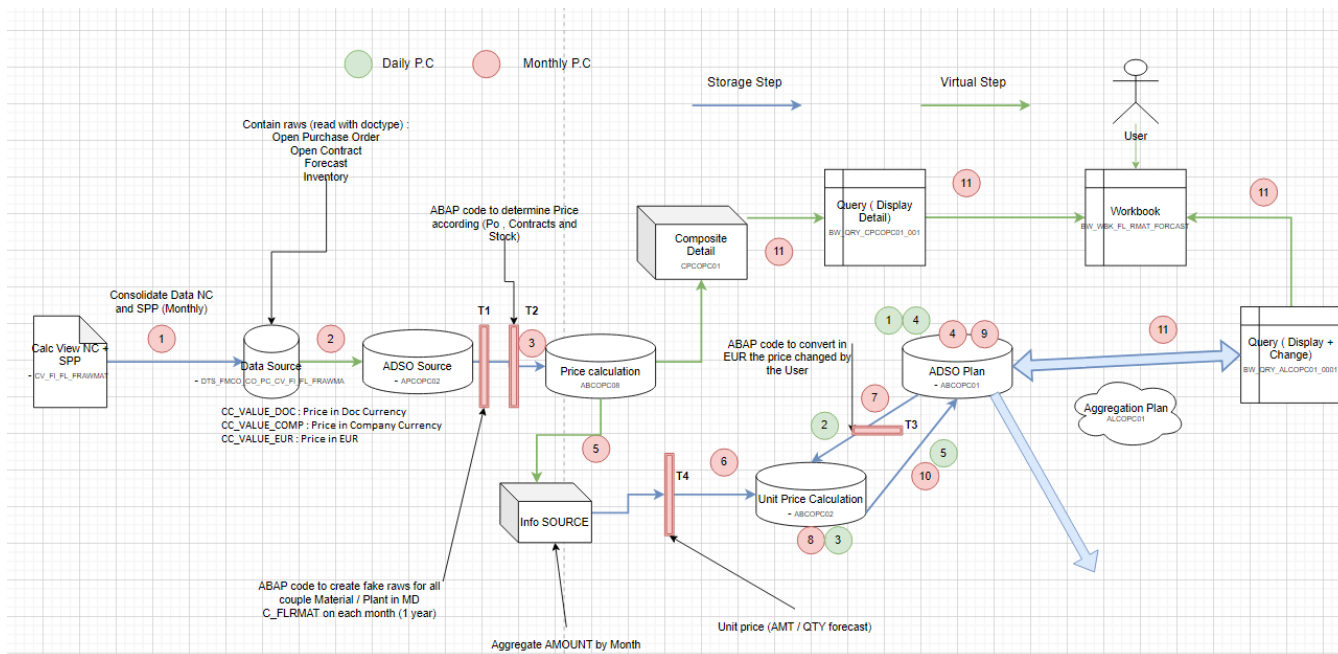
Filter expression is selecting Value Type initial only.

"C\_VALTYPE" = ''

Latest Inventory line is kept in the Rank Rank\_2 on 0CALDAY.

Further Projections are used in Joins to get Standard Price from C\_MATPNT3, and unit conversion ratio from UOMCANT2.

## BW Data Flow



## BW Logic

From HANA Datasource with all Purchase documents identified for Raw Material Forecast, data is handled in several BW layers to deliver a detailed view of Forecast in one hand, and an overall view in another hand.

The global logic is as follow (see ABAP code comments for detail) :

**Bullet 1 :** Datasource DTS\_FMCO\_CO\_PC\_CV\_FI\_FL\_FRAWMA built on HANA source CV\_FMCO\_RAW\_MAT.

**Bullet 2 :** Consolidation of data into APCOPC02

### Start Routine :

Creation of fake Raw Mat lines on current period, for Raw Mat without Forecast on any of the coming 12 months.

Deletion of all Forecast lines on period above current month + 12.

**Bullet 3 :** Price calculation of data into ABCOPC08

### End Routine :

Creation of internal tables for each type of incoming lines (Forecast FOR, Order ORD, Contract CON, Standard Price INV)

Extrapolation of each Raw Material / Plant combination on all missing periods from current to current + 12 (with Forecast quantity null).

Loop at all Forecast lines (FOR) for each Raw Material / Plant combination, and read corresponding documents (ORD, CON) to determine quantity consumption, and compute each price accordingly.

Price conversion in Buyer currency (CAR3)

## Path to the Overall view of data

**Bullet 5/6 :** Aggregation and distribution of fields into ABCOPC02

For each Raw Material / Plant combination, transposition of quantities and prices in columns, according to each type of source document (ORD, CON, INV, FOR).

### End Routine :

Compute Unit Forecast Price for each Raw Material / Plant combination

Force Standard Unit Price if no Forecast quantity on period

**Bullet 10 :** Adjust structure for Planning layout into ABCOPC01

This is the object with BI Planning functionalities, used as a source of query.

It is encapsulated in Composite Provider CPCOPC11, used in Aggregation Level ALCOPC13 on which the query is built.

This is the source of Manufacturing data flow, started monthly on 7th.

**Bullet Z** : Retrieve and adjust Business updates into ABCOPC02

Conversion of quantities and prices updated by Business in workbook, according to Buyer information from Critical Raw Material C\_FLRMAT.

#### Path to the Detail view of data

**Bullet 11** : Detailed structure of Price calculation ABCOPC08 (Bullet 3) is used as source in Composite Provider CPCOPC01, on which the detail query is built.

#### Reporting

A global workbook BW\_WBK\_FL\_RMAT\_FORCAST is built on 2 queries :

- Overall view query BW\_QRY\_ALCOPC13\_0001
- Detail view query BW\_QRY\_CPCOPC01\_001

See details in Reporting layer.

## Dependencies with other applications

There is a dependency from data flows:

**InfoObjects:** C\_COMPCDE, C\_PLANT, C\_PO\_ITM, C\_SUBACT2, C\_AGRITM and C\_FLRMAT, C\_GLBFLT, C\_MATPNT3.

**Infoproviders:** DB\_PUHD1, DB\_PUHD2, DB\_PUSL1, DB\_PUSL2, ABDPDY53 and AAMMIM02S.

## Critical Raw Material source in SAP

Master Data C\_FLRMAT is used in the data flow to get critical information for Raw Materials.

Information are extracted from SAP source systems PF1 and WP1.

Transactions and tables used in SAP to handle those data are :

Transaction **ZCRIT**

Table ZFI\_ICM\_CRITIC for Novecare data.

Transaction **ZCRIT\_TS**

Table ZFI\_ICM\_CRI\_TS for Technology Solutions data.

Transaction **ZCRIT\_PA**

Table ZFI\_ICM\_CRI\_PA for Aroma data.

## Currency Conversion in BW

BW Raw Material data flows are using function module 'CONVERT\_TO\_LOCAL\_CURRENCY' to convert currencies.

The exchange rate type used is read from Master Data **C\_GLBFLT** (Global Filter) thanks to parameters below :

C\_STREAM = 'FMCO\_COPC'

C\_RULE = 'EXCHGE\_RT'

C\_GLBFLT = '000'

C\_SIGN = 'I'

C\_OPTION = 'EQ'

C\_LOW = 'CAR3'

C\_ACTIVE = 'Y'

The Exchange Rate Type value was 'M' until October 2022.

# Propagation Layer

Data Loading from Datasource DTS\_FMCO\_CO\_PC\_CV\_FI\_FL\_FRAWMA built on CV\_FMCO\_CS\_RAW\_MAT.

Target Infoprovder APCOPC02

|                                       |                                  |
|---------------------------------------|----------------------------------|
| FL Raw Material Consolidation         | APCOPC02                         |
| RSDS DTS_FMCO_CO_PC_CV_FI_FL_FRAWMAWP | 02MNDTK16K79B0SBJ0Z4ORGYP0H10IVF |
| FL Raw Material Consolidation         | DTS_FMCO_CO_PC_CV_FI_FL_FRAWMA   |
| Data Transfer Processes               | APCOPC02                         |

## Transformation Logic

If a monthly forecast price is unconfirmed by Business, it is extrapolated from the first previous confirmed price at the time of pushing this Forecast into Manufacturing data flow.

This process takes place in the Transformation ABCOPC01 on itself.

## Loading frequency

Daily

# Business Layer

Data Loading:

Infoprovders ABCOPC01, ABCOPC02 and ABCOPC08:

|                                            |                                  |
|--------------------------------------------|----------------------------------|
| FL - Raw Mat - Planification               | ABCOPC01                         |
| ADSO ABCOPC02 -> ADSO ABCOPC01             | 0338Q8NSWR1OQQUOARCKV4MD62W1PMXL |
| FL - Raw Mat - Unit Price Calculation      | ABCOPC02                         |
| ADSO ABCOPC01 -> ADSO ABCOPC02             | 0SG46OJG8EGWDD8YQALN42TA18HCMC   |
| ADSO ABCOPC04 -> ADSO ABCOPC02             | 00LNWHHNXXNZP5QP8M0MQ9KC6358400V |
| TRCS IFS_COPC_01 -> ADSO ABCOPC02          | 0AWFVKB2MCLLSV1TLELN09K5BVJPET00 |
| Infosource FL - Raw Mat - Aggregation      | IFS_COPC_01                      |
| ADSO ABCOPC08 -> TRCS IFS_COPC_01          | 07TVNEFZXH8ZJMUQ970CN7V4UEMIFEYE |
| FL - Raw Mat - Price Calculation           | ABCOPC08                         |
| ADSO APCOPC02 -> ADSO ABCOPC08             | 0GWM5H9BQ26F35W27GWBG1L00W0E8DNY |
| FL Raw Material Consolidation              | APCOPC02                         |
| Data Transfer Processes                    | ABCOPC08                         |
| Data Transfer Processes                    | ABCOPC02                         |
| RSDS DTS_ABCOPC01 PC_FILE -> ADSO ABCOPC01 | 0N4WORUSYT6TTF6Z17QTMGN8TRX8BJYQ |
| Data Transfer Processes                    | ABCOPC01                         |

## Loading frequency

Daily

# Reporting

Two queries are available in the Workbook : the Query Overall and the Query Detail.

The first one allows to modify the value of the Forecasted Price and automatically filters the second one to a more detailed view.

- The Query Detail is the detailed view of the Raw Material per month with a Forecast quantity for a minimum of one year. All documents (Purchase Order, Contract, and Inventory) are available for each month as well as the forecast price calculated for the forecast quantity.

- The Query Overall is the global view of the Raw Material aggregated by month without the detail by documents. The Forecast price is calculated from the detail and aggregated by month and Raw Material. The Quantity Assigned for each document is available in columns. This is the view where Business must confirm the proposed prices.

Only Raw Materials flagged as Critical are displayed in the queries.

The field "Critical flag" (C\_FLRMATF) is used as global filter.

Available values for the field are :

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

## Reporting Layer

### Aggregation Level

ALCOPC13

|                                 |          |
|---------------------------------|----------|
| FL - Raw Mat - Aggregation Plan | ALCOPC13 |
| FL - Raw Mat - Planification    | CPCOPC11 |
| FL - Raw Mat - Planification    | ABCOPC01 |

## Reporting (BW Query)

|                |                                  |
|----------------|----------------------------------|
| Description    | FL - Raw Mat - Query Input ready |
| Technical Name | BW_QRY_ALCOPC13_0001             |
| Application    | COPC                             |
| Info-provider  | CPCOPC11                         |
| Usage type     |                                  |
| Expected users |                                  |

### Global properties


**General: BW\_QRY\_ALCOPC13\_0001 - FL - Raw Mat - Query Input Ready**

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General

Technical Name:

BW\_QRY\_ALCOPC13\_0001

Description:

FL - Raw Mat - Query Input Ready

InfoProvider:

ALCOPC13

Key Date:

<default>

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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

Extended

Planning

# Variables

## Definitions

| Variable Name    | Info-object       | Selection Type           | Required | Description /Explanation                                   |
|------------------|-------------------|--------------------------|----------|------------------------------------------------------------|
| CALMONT2         | 0CALMONTH         | Interval                 | Yes      | Calendar Year/Month                                        |
| 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_FLRMATF_0001   | C_FLRMATF         | Single Value             | No       | Critical Raw Material Only.<br>'X', or 'B', or 'I', or 'E' |
| V_C_BNAME_0001   | C_BNAME           | Select Option            | No       | Buyer Name                                                 |
| V_C_AUTHMA_0001  | C_PLANT__C_AUTHMA | Authorization            | No       | Authorization Scope                                        |

## Variable Sequence

## Filters

| Filter: Fixed Values |                                                                 |
|----------------------|-----------------------------------------------------------------|
|                      | [0LOGSYS] Source System                                         |
| ▼                    | [0CALMONTH] Month                                               |
|                      | [CALMONT2] Calendar Month/Year (Interval, Mandatory)            |
| ▼                    | [C_FLRMATF] FL Raw Material Critical Flag                       |
|                      | [V_FLRMATF_0002] Only Critical Raw Material (X, I, E, B)        |
| ▼                    | [C_MATNR2] Material                                             |
|                      | [V_C_MATNR2_0001] Material (Select option, Optional)            |
| ▼                    | [C_PLANT] Plant                                                 |
|                      | [V_C_PLANT_0012] Plant (Authorization with input select option) |
| ▼                    | [CPFCTR1_2] BFC Global Business Unit                            |
|                      | [V_CPFCTR1_2_0006] GBU (Select Optional, Optional, Auth)        |
| ▼                    | [C_BNAME] Buyer                                                 |
|                      | [V_C_BNAME_0001] Buyer                                          |
| ▼                    | [C_PLANT_C_AUTHMA] Authorization Scope                          |
|                      | [V_C_AUTHMA_0001] Authorization Scope (Authorization, No input) |
| ▼                    | [0INFOPROV] InfoProvider                                        |
|                      | [ABCOPC01] FL - Raw Mat - Planification                         |

## Key figures

| Columns |                                                          |
|---------|----------------------------------------------------------|
| ▼       | Key Figures                                              |
|         | [0QUANTITY] Material Inventory Qty                       |
|         | [K_AMT_INV] Material Inventory Standard Unit Price       |
|         | [K_QTY_PO] Open Purchase Order Qty                       |
|         | [K_QTY_CON] Open Contract Qty                            |
|         | [K_QTY_MFC] Forecast Material Purchase Qty               |
|         | [K_SUBV] Previous Confirmed Material Purchase Unit Price |
|         | [K_AMT_PRO] Proposed Material Purchase Unit Price        |
|         | [0AMOUNT] Confirmed Material Purchase Unit Price         |
|         | [K_AMT_TMP] Confirmed Material Purchase Price (Buffer)   |
|         | [K_AMT_EUR] Confirmed Material Purchase Unit Price (EUR) |
|         | [0CALMONTH] Calendar Year/Month                          |

## 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_BNAME] Buyer                           |
|      | [0CURRENCY] RM Unit Price Currency        |
|      | [0UNIT] Material Unit of measure          |

Cells

N/A

Conditions

N/A

Exceptions

N/A

Virtual Layer

Composite Providers

CPCOPC01

|                                  |          |
|----------------------------------|----------|
| Raw Material Forecast Detail     | CPCOPC01 |
| FL - Raw Mat - Price Calculation | ABCOPC08 |

Reporting (BW Query)

|                |                                       |
|----------------|---------------------------------------|
| Description    | FL ICM - Raw Material Forecast Detail |
| Technical Name | BW_QRY_CPCOPC01_001                   |
| Application    | COPC                                  |
| Info-provider  | CPCOPC01                              |
| Usage type     |                                       |
| Expected users |                                       |

Global properties

## General: BW\_QRY\_CPCOPC01\_001 - FL ICM Raw Material Forecast Detail

|                                                                        |                                                                    |
|------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>General</b>                                                         |                                                                    |
| Technical Name:                                                        | BW_QRY_CPCOPC01_001                                                |
| Description:                                                           | FL ICM Raw Material Forecast Detail                                |
| InfoProvider:                                                          | CPCOPC01                                                           |
| Key Date:                                                              | < default >                                                        |
| <b>Output Settings</b>                                                 |                                                                    |
| <input checked="" type="checkbox"/> Adjust Formatting after Refreshing |                                                                    |
| <input type="checkbox"/> Suppress Repeated Key Values                  |                                                                    |
| <input type="checkbox"/> Show Scaling for Measures                     |                                                                    |
| Sign Format:                                                           | Before, for example -1                                             |
| Zero Format:                                                           | With Currency/Unit                                                 |
| Custom Zero Format:                                                    |                                                                    |
| <b>Remote Access</b>                                                   |                                                                    |
| <input type="checkbox"/> By Easy Query                                 |                                                                    |
| <input checked="" type="checkbox"/> By OLE DB for OLAP                 |                                                                    |
| <input type="checkbox"/> By OData                                      |                                                                    |
| <input type="checkbox"/> External SAP HANA View                        |                                                                    |
| <b>Result Location</b>                                                 |                                                                    |
| Rows:                                                                  | <input type="radio"/> Above <input checked="" type="radio"/> Below |
| Columns:                                                               | <input type="radio"/> Left <input checked="" type="radio"/> Right  |
| <b>Zero Suppression</b>                                                |                                                                    |
| Applies to:                                                            | <input type="checkbox"/> Rows <input type="checkbox"/> Columns     |
| Condition:                                                             | Only result value must                                             |
| <b>Universal Display Hierarchy</b>                                     |                                                                    |
| <input type="checkbox"/> Active on rows                                |                                                                    |
| Expand to Level: 0                                                     |                                                                    |
| <input type="checkbox"/> Active on columns                             |                                                                    |
| Expand to Level: 0                                                     |                                                                    |

## Variables

### Definitions

| Variable Name    | Info-object | Selection Type           | Required | Description /Explanation                                   |
|------------------|-------------|--------------------------|----------|------------------------------------------------------------|
| CALMONT2         | 0CALMONTH   | Interval                 | Yes      | Calendar Year/Month                                        |
| 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_FLRMATF_0002   | C_FLRMATF   | Select Option            | No       | Critical Raw Material Only.<br>'X', or 'B', or 'I', or 'E' |
| V_C_AUTHMA_0001  | C_AUTHMA    | Authorization            | No       | Authorization Scope                                        |

### Variable Sequence

### Filters

| Filter: Fixed Values |                                                                 |
|----------------------|-----------------------------------------------------------------|
|                      | [0CALDAY] Date of shedule line                                  |
|                      | [0LOGSYS] Source System                                         |
| ▼                    | [0CALMONTH] Calendar Year/Month                                 |
|                      | [CALMONT2] Calendar Month/Year (Interval, Mandatory)            |
| ▼                    | [C_FLRMATF] FL Raw Material Critical Flag                       |
|                      | [V_FLRMATF_0002] Only Critical Raw Material (X, I, E, B)        |
| ▼                    | [C_PLANT] Plant                                                 |
|                      | [V_C_PLANT_0012] Plant (Authorization with input select option) |
| ▼                    | [C_MATNR2] Material                                             |
|                      | [V_C_MATNR2_0001] Material (Select option, Optional)            |
| ▼                    | [CPFCTR1_2] BFC Global Business Unit                            |
|                      | [V_CPFCTR1_2_0006] GBU (Select Optional, Optional, Auth)        |
| ▼                    | [C_PLANT_C_AUTHMA] Authorization Scope                          |
|                      | [V_C_AUTHMA_0001] Authorization Scope (Authorization, No input) |

## Key figures

| Columns |                                                |
|---------|------------------------------------------------|
|         | [0CALMONTH] Calendar Year/Month                |
| ▼       | Key Figures                                    |
|         | [K_QTY_FOR] Forecast Quantity                  |
|         | [K_QTY_MFC] Document Quantity                  |
|         | [0QUANTITY] Assigned Document Quantity         |
|         | [0PRICE_VAL] Document Unit Price               |
|         | [K_AMTM] Document Unit Price in Buyer Currency |
|         | [K_AMT_PRO] Assigned Document Amount           |

## Characteristics

| Rows                                                                              |                                          |  |
|-----------------------------------------------------------------------------------|------------------------------------------|--|
|  | [0LOGSYS] Source System                  |  |
|  | [C_MATNR2] Material                      |  |
|  | [C_PLANT] Plant                          |  |
|  | [0COUNTRY] Plant Country                 |  |
|  | [CPFCTR1_2] BFC Global Business Unit     |  |
|  | [4CPCOPC01-DOC_SORT] Layout sort         |  |
|  | [4CPCOPC01-C_DATE] Date of schedule line |  |
|  | [0DOC_NUM] Document Number               |  |
|  | [C_PO_ITM] Document Item                 |  |
|  | [C_VENDID] Vendor                        |  |
|  | [C_VENDID__C_VENDPRS] PRS Vendor         |  |
|  | [4CPCOPC01-DOC_TYPE] Document Category   |  |
| Free                                                                              |                                          |  |
|  | [0UNIT] Unit of measure                  |  |
|  | [U_DYN_001] Forecast Unit                |  |
|  | [0CURRENCY] Currency key                 |  |
|  | [0LOC_CURRCY] Local currency             |  |

## Cells

N/A

## Conditions

N/A

## Exceptions

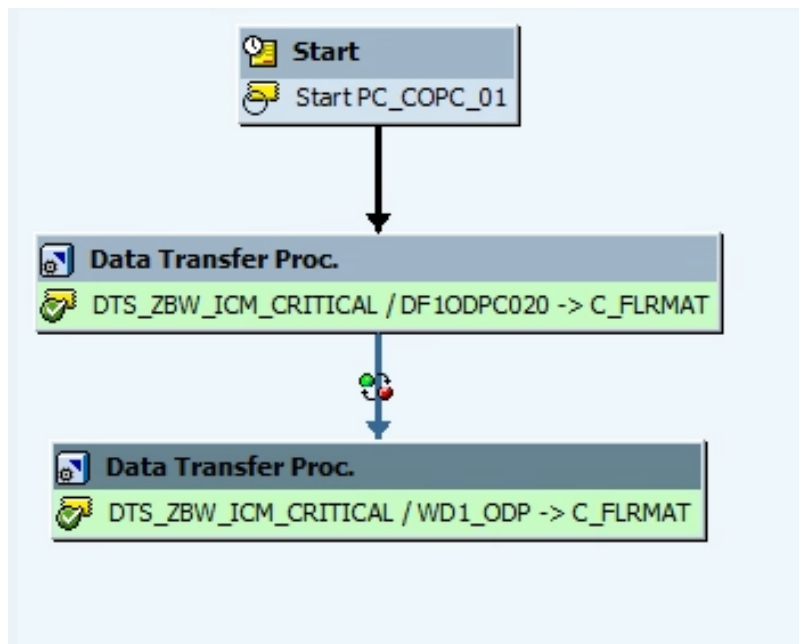
N/A

# Process Chains

## PC\_COPC\_01 COPC: MD - D - RMat Planning (Daily)

**PC\_COPC\_01** COPC: MD - D - RMat Planning (Daily)

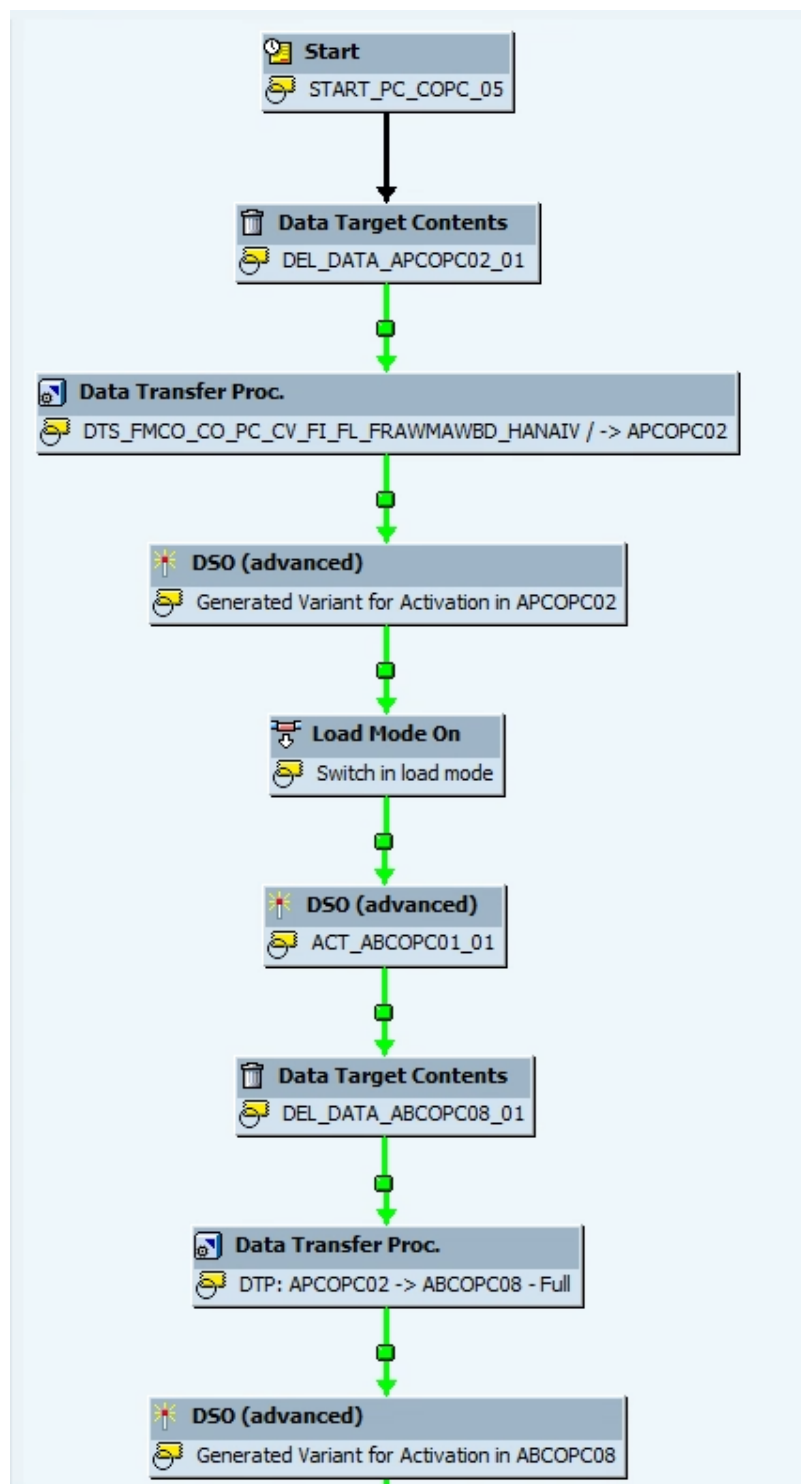
Loading of Master Data Critical Flag from WP1 and PF1 Datasources.

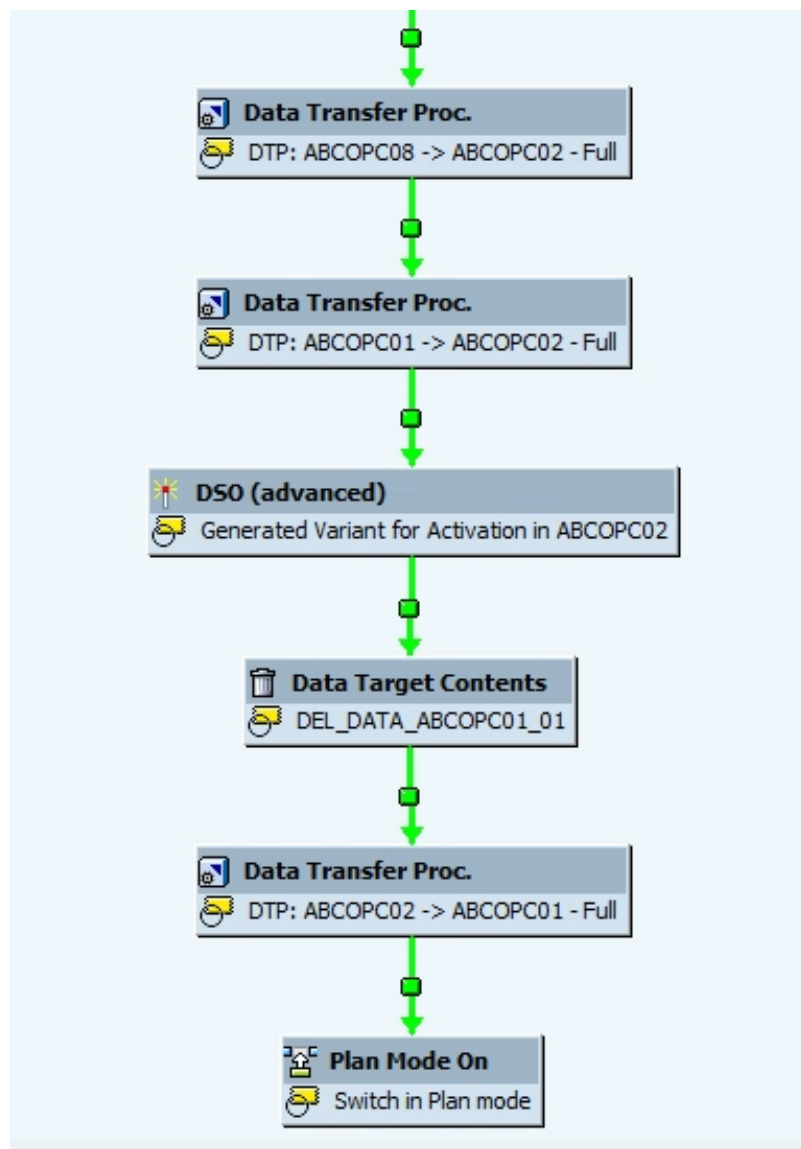


## PC\_COPC\_05 COPC: TD - D - RMAT Panning (Monthly)

**PC\_COPC\_05** COPC: TD - D - RMAT Panning (Monthly)

Loading of Transactional Forecast Price from Contract, Purchase Order, Inventory, and merge with already confirmed Forecast prices from Workbook.

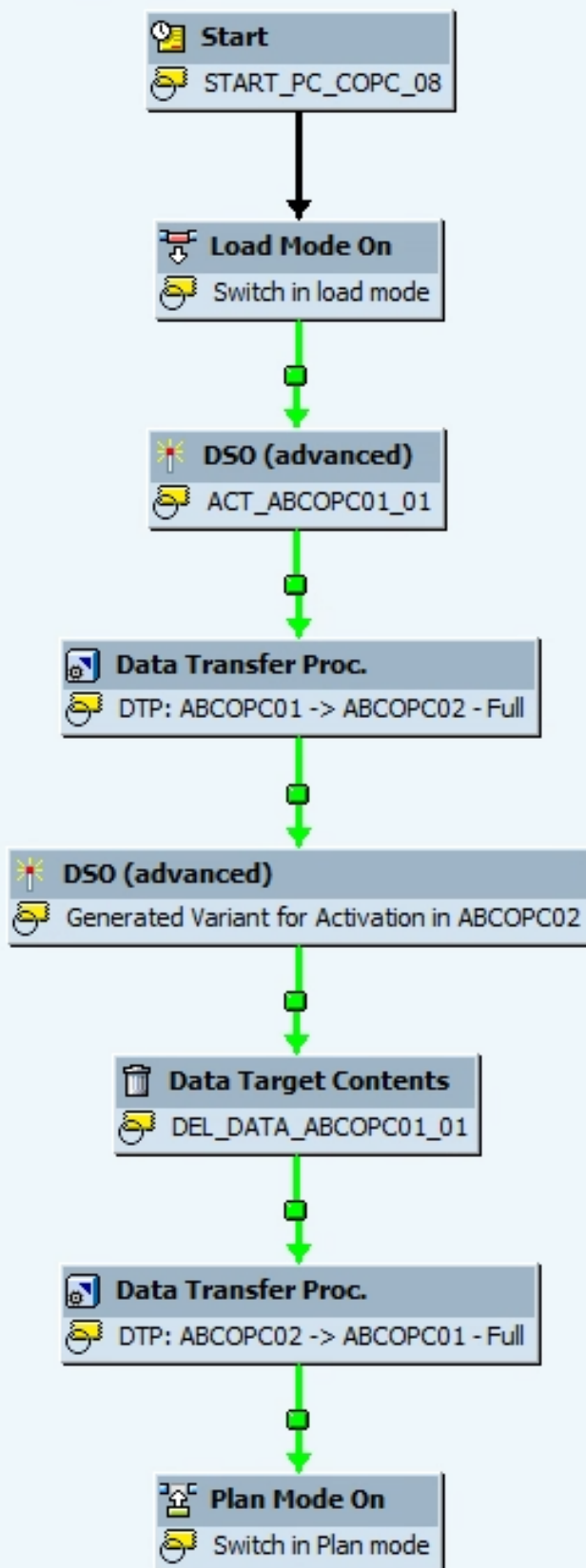




## PC\_COPC\_08 COPC: TD - D - RMAT Planning (Daily)

**PC\_COPC\_08** COPC: TD - D - RMAT Planning (Daily)

Loop logic to validate confirmed prices from Workbook (Currency conversion in EUR).



## PC\_COPC\_12 COPC: TD - M CD7- RMat Planning (CD7)

PC\_COPC\_12 COPC: TD - M CD7- RMat Planning (CD7)

Extrapolation logic of Forecast prices across months.

This Process Chain is called by main Manufacturing Process Chain PC\_COPC\_10.

