

Technical Documentation - P&L by BU (SODA Ash)

- 1 [Access Management](#)
- 2 [DataFlow](#)
 - 2.1 [Overview](#)
 - 2.2 [General presentation](#)
 - 2.2.1 [Objective of the application](#)
 - 2.2.2 [History](#)
 - 2.3 [Technical Rules on Workbench](#)
 - 2.3.1 [Rules & Explanations](#)
 - 2.3.1.1 [Why a dedicated flow for Soda Ash P&L?](#)
 - 2.3.2 [Extraction explanations:](#)
 - 2.3.2.1 [Why a query as Infoprovder?](#)
 - 2.3.2.2 [Query as Infoprovder - encountered issues](#)
 - 2.3.2.3 [Extraction perimeter](#)
 - 2.3.2.4 [Quantity translation](#)
 - 2.3.3 [Technical company \(C_COMPTEC\)](#)
 - 2.3.4 [Type of flow \(C_FLOWTSD\)](#)
 - 2.3.5 [Type of flow \(display\) \(C_FLWTSD\)](#)
 - 2.3.6 [Business Rules:](#)
 - 2.3.6.1 [ELEM BW_QRY_MVCOPA01_0022 -> TRCS IB_COPA_05](#)
 - 2.3.6.2 [TRCS IB_COPA_05 -> CUBE CRCOPA27](#)
 - 2.3.7 [Rules maintenance \(table ZBW_PL_SD_RULES\)](#)
 - 2.3.8 [Integration rates exceptions maintenance \(table ZBW_CUSTCOM_INT\)](#)
 - 2.3.9 [Redetermination of navigational attributes stored in the cube](#)
 - 2.4 [Reporting](#)
 - 2.5 [Dependencies with other applications](#)
- 3 [Data Loading](#)
 - 3.1 [Info Providers and objects loaded](#)
- 4 [Data Quality Control](#)
- 5 [Operational Documentation](#)
 - 5.1 [Procedures](#)
 - 5.2 [Scheduling](#)
 - 5.3 [Monitoring](#)
 - 5.4 [Error Handling](#)
 - 5.5 [Known Bugs](#)
 - 5.6 [Roadmap](#)

Access Management

Roles & Access

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

Role Code	Role Description	Explanation
ZR_RC S_CA_ M66	PL - P&L by BU (Soda Ash)	Role menu for all PL - P&L by BU (Soda Ash) queries
ZR_RC S_CA_ M661	PL - Upload & Table Maint. (Soda Ash)	Give access to transaction ZPL_SD_RULES and ZPL_SD_TRFPRC. Not everybody with P&L by BU (Soda Ash) application has this role.
ZR_RC S_CA_ M662	PL - Update Customer / Company Integration Rates	This role is separated from other roles as it could concern other population than Soda Ash in the future.
ZBI_R CS_FI_ A37	Application role P & L – Profit and Loss by BU (Soda Ash) :	Application Role: • End User rights • gives access to infoproviders of Infoarea "IA_FMCO_COPA_SD_VIRTUAL" • BI Analysis Authorization "ZBI_PLSD" ("*" for authorization objects not relevant for the application)
		On going: P&L by BU (Soda Ash) is a separate application from P&L application however, a user with P&L by BU must also have access to the P&L application (some Workbooks include P&L queries), that is why a composite role is created in order to give the P&L infoproviders access along with P&L by BU infoproviders.

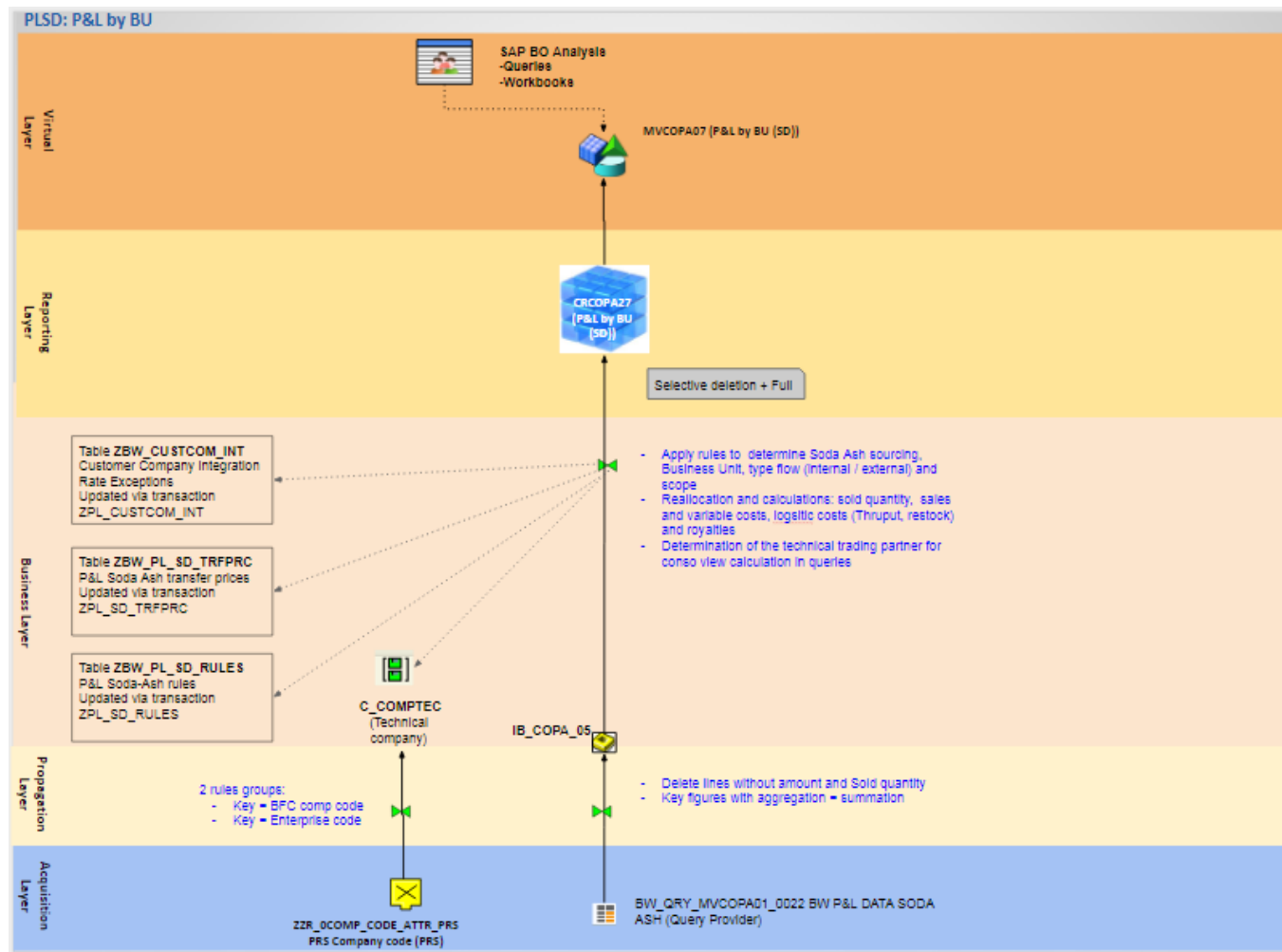
Authorization Objects

List of authorization objects mandatory for the application.

Authorization object	Explanation
C_COMPPRS	ZR_*_CA_P07
C_COMPCDE__C_AUTHMA	ZR_*_CA_P00
C_COMPCDE__C_MNGAREA	ZR_*_CA_P08

DataFlow

Overview



https://drive.google.com/file/d/1PvhXMJQbJeY7dEx7cxWLDaAeltS2iEKwggnsw_4OnBg/view

General presentation

Objective of the application

The aim of this application is to give a P&L reporting adapted to Soda Ash GBU requirements.

It is based on the corporated P&L query and offered special axis and calculation for Soda Ash.

Specifications: <https://drive.google.com/open?id=1Q-QjleNGzLF1tbhALtbjN0hdp9x9Y4zBrR2gURi3yw4>

Owner : Rtr reporting

IS Rtr Reporting coordinator is Charlotte Rollier.

History

The project was done in 2018.

Technical Rules on Workbench

Rules & Explanations

Why a dedicated flow for Soda Ash P&L?

Due to existing P&L flows complexity, to enhance all P&L flows with axis and calculations required by Soda Ash would have been more risky, more expensive and would have badly impacted corporate P&L flows complexity and performance.

Moreover, the reporting requirements could not be achieved directly in a BeX query on the multiprovider MVCOPA01 or very difficult to maintain and with uncertain performances.

Extraction explanations:

Why a query as Infoprovder?

The flow could have been based directly on the multiprovider MVCOPA01, however, tests reveal it was a lot slower than to retrieve the data from a query. Moreover, it permits to retrieve some shared restricted key figures and to manage the quantity translation (material dependent) in the BeX query.

Query as Infoprovder - encountered issues

- The unit linked to the key figure "N8110 - Qty Sold - VKG" is always empty after the extraction => it seems that query as infprovder don't provide the unit for restricted key figures. The workaround was to use the unit of the key figure "Qty invoice - VKG" which is not restricted. Another possibility would have been to manage the VKG conversion in the flow and not in the query.
- It was necessary to add the detail material and unit in the infosource, else, the extraction dumped. It must be due to the fact that without this level of detail, different units are aggregated. The dump occurs when the unit linked to the key figure "N8110 - Qty Sold - VKG" was not correctly filled, maybe the problem would not occur anymore at the moment the converted unit is in the key of the infosource.

Extraction perimeter

The global filters of the extraction are similar to the P&L query (BW_QRY_MVCOPA01_0002).

Except that the P&L by BU is not all GBU SD , but GBU SD for activities only

- 25
- 51
- 82

Also, we need only BFC lines until Contribution margin, so only necessary BFC accounts are extracted.

Filters on query BW_QRY_MVCOPA01_0022:

Filter: Fixed Values

- ▼  [OVTYPE] Value Type for Reporting
 -  [10] Actual
- ▼  [C_COMPCDE__C_AUTHMA] Authorization Scope
 -  [V_C_COMPCDE__C_AUTHMA_001] Auth Scope on Company
- ▼  [C_COMPCDE__C_MNGAREA] BFC Gestion Area
 -  [V_C_COMPCDE__C_MNGAREA_0004] PRS Comp. Mgt zone
- ▼  [C_VERSN2] Version
 -  [FC3] FC3
 -  [FC2] FC2
 -  [FC1] FC1
- ▼  [OINFOPROV] InfoProvider
 -  [CRCOPA03] BFC - P&L - Version 1: Total P&L
 -  [CRCOPA04] BFC - P&L - Version 2: Interco Sales
 -  [CRCOPA05] BFC - P&L - Version 3: Third Party
 -  [CRCOPA20] IM - NON-ERP - Data
 -  [CRCOPA19] IM - PQ1 - GM Data
 -  [CRCOPA15] IM - RCS - CDSA LER
 -  [CRCOPA13] IM - RCS - CDSA NO LER NO TP
 -  [CRCOPA14] IM - RCS - CDSA NO LER TP
 -  [CRCOPA18] IM - RCS - IECRA LER
 -  [CRCOPA16] IM - RCS - IECRA NO LER NO TP
 -  [CRCOPA17] IM - RCS - IECRA NO LER TP
 -  [CRCOPA26] IM - Solvay PF1 - GM Data - allocation of tran
- ▼  [C_COMPCDE__C_COMPPRS] PRS Company code
 -  [V_C_COMPCDE__C_COMPPRS_0004] PRS Company code (S
- ▼  [C_TECMAT__CPFCTR1_2] BFC Global Business Unit
 -  [SD] SODA ASH

- ▼  [C_TECMAT_C_MAGNITU] BFC Activity 1
 - ▢ [25] SODA ASH
 - ▢ [51] SU MANAGED BY SODA A
 - ▢ [82] CHLORINE
- ▼  [C_FIELDN_C_MGN_ACC] BFC Account
 - ▢ [N8110] Quantities sold
 - ▢ [R10000] Net sales
 - ▢ [R10600] Received royalties according to sales
 - ▢ [R11000] R11000
 - ▢ [R11200] Other revenues on activities - Industrial and Admini
 - ▢ [R11300] Other revenues on activities - Administrative & corr
 - ▢ [R11400] Other revenues on activities - Research
 - ▢ [R11500] Other revenues on activities - Management Fees
 - ▢ [R12600] Royalties paid according to sales
 - ▢ [R12700] Received royalties according to sales
 - ▢ [R12900] Other variable expenses on sales
 - ▢ [R12910] Logistics costs - variable
 - ▢ [R15400] Variable costs of sales
 - ▢ [R15410] Actual/Standard variance - Variable costs of sales
 - ▢ [R15430] R15430
 - ▢ [R26150] R26150
 - ▢ [R26152] Other costs on activities
 - ▢ [R26153] Other costs on activities - administrative and comm
 - ▢ [R26154] Other costs on activities - Research
 - ▢ [R26155] Other costs on activities - Management fees
 - ▢ [R26250] R26250
 - ▢ [R26252] Non variable costs on other activities - industrial
 - ▢ [R26253] Non variable costs on other activities-administrativ
 - ▢ [R26254] Non variable costs on other activities - research
 - ▢ [R26255] Non variable costs on other activities - managemer

Quantity translation

Quantities are needed in VKG unit for calculations done inside the flow. The translation is managed in the source query. Nevertheless, if the quantity translation could have not been done, then the quantity is considered as VKG in the transformation (calculations are done in scenarii where there are few risks this case happen).

Columns

Key Figures

[0AMOUNT] Amount
[0G_QVVA01] Qty invoice - VKG
[RCS_RKF_MVCOPA01_0001] N8110 - Qty Sold - VKG
[RCS_RKF_MVCOPA01_0001] N8110 - Qty Sold

Properties

General
Conversion
Calculations

Currency Translation

Conversion Type: <value unknown>
Target Currency: = <value unknown>

Unit Conversion

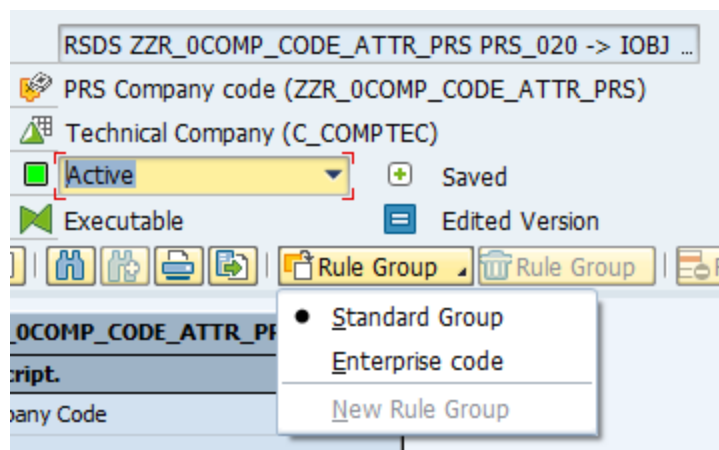
Conversion Type: CNV_MATNR5
Target Unit: = VKG

Technical company (C_COMPTEC)

The Master Data contains the percentage of integration by company. It is updated from PRS for actual companies but contains also fictive companies, created for BW calculations only (one by possible integration rate : ZJV100 => 100%, ZJV075 => 75%, ...)

The update from PRS is done along with c_company.

There are 2 rules groups in the transformation in order to generate two lines from one PRS company code: a line with key = the BFC company code and another key = Enterprise code:



In the transformation to the cube, the technical partner company is determined using the table ZBW_CUSTCOM_INT, if no entry it is equal to the trading partner.

This technical trading partner is then used for internal / external calculations in the queries.

The use of this technical master data simplifies internal / external calculations as only one Master Data is read in the formula in comparison to the P&L queries where c_company and c_custcom are read. It improves the understanding of the formulas and the queries performances.

Type of flow (C_FLOWTSD)

It can be #, internal or external.

The type of flow is used for internal / external calculation in Bex formulas: an external key figures has necessarily C_FLOWTSD = # or E, and an internal key figures has necessarily C_FLOWTSD = # or I.

It is used in order to be able to split a key figures internal and external part under different axis. For instance, for some scenarii, the internal part of the sales costs will be in BU Europe and the external part in the BU Seaborne.

Type of flow (display) (C_FLWTSD)

It can be #, internal or external (however, all amounts assigned to an identified Soda Ash scope should be either internal or external).

This type of flow is used for display only and not for the calculation of the internal / external part, which means that external part of a key figure could be displayed as internal in the report (for instance, for the scope E1, the internal sales are displayed as external).

Business Rules:

ELEM BW_QRY_MVCOPA01_0022 -> TRCS IB_COPA_05

Delete records with amount and qty invoice = 0.

TRCS IB_COPA_05 -> CUBE CRCOPA27

End routine:

Module function Z_WBW_SOURCE_SYSTEM_INV is used to determine the landscape (RCS, ERPSOLV...) in function of the log system.

Step 1:

The determination of Soda Ash axis is done using the rules in the table ZBW_PL_SD_RULES.

It consists of interval of values for several criteria : landscape, activity, partner activity, partner GBU, BFC management area, company, product hierarchy, division and GBU zone.

Reading the table ZBW_PL_SD_RULES the transformation will obtain a scope ID for which corresponds a value of each Soda ash axis: Sourcing (origin), BU Soda Ash (can be Europe, NAFTA or Seaborne), Type of Flow, Type of flow (display).

Step 2:

Then reassignments and new lines are created, each case is identified by a specific SD value type:

- When BFC account is "N8110" and BU SD is Seaborne:
 - SD value type = "N8110 destocking" :
 - the external part remained in Seaborne and displayed as external (c_flowtsd and c_flwtdsd = E)
 - A new line is also created for the external part under BU SD Europe or NAFTA and displayed as internal (BU SD = sourcing, c_flowtsd = E and c_flwtdsd = I)
 - SD value type = "N8110 stocking" :
 - the internal part is moved under BU SD Europe or NAFTA and displayed as internal (BU SD = sourcing, c_flowtsd = I and c_flwtdsd = I)
 - SD value type = "R10000 stocking" :
 - A new line is created under BU SD Europe or NAFTA and displayed as internal, with amount = qty **internal** * transfert price (**BFC account = R10000**, BU SD = sourcing, c_flowtsd = I and c_flwtdsd = I). The quantities are cleared.
 - SD value type = "R10000 destocking" :
 - A new line is created under BU SD Europe or NAFTA and displayed as internal, with amount = qty **external** * transfert price (**BFC account = R10000**, BU SD = sourcing, c_flowtsd = E and c_flwtdsd = I). The quantities are cleared.
 - SD value type = "R15400 destocking" :
 - A new line is created under BU Seaborne and displayed as external, with amount = - qty **external** * transfert price (**BFC account = R15400**, BU SD = SEA, c_flowtsd = E and c_flwtdsd = E). The quantities are cleared.
- When BFC account is "R10000" and BU SD is Seaborne:
 - SD value type = "R10000 to SEA":
 - the external part remained in Seaborne and displayed as external (c_flowtsd and c_flwtdsd = E)
 - The internal part is moved under BU SD Europe or NAFTA and displayed as internal (BU SD = sourcing, c_flowtsd = I and c_flwtdsd = I)
- When BFC account is "R15400" and BU SD is Seaborne:
 - SD value type = "R15400 to SEA":
 - the external and internal are moved under BU SD Europe or NAFTA and displayed as internal (BU SD = sourcing, c_flowtsd = # and c_flwtdsd = I)
- When BFC account is "R10600" and BU SD is Seaborne:
 - the external part remained in Seaborne and displayed as external (c_flowtsd and c_flwtdsd = E)
 - The internal part is moved under BU SD Europe or NAFTA and displayed as internal (BU SD = sourcing, c_flowtsd = I and c_flwtdsd = I) (may not have internal part for this BFC account)
- When BFC account is "R12900" or "R12910"
 - if plant = "52LB", "54PB" or "5B00" and ship-to party = "8820122" (values to maintain in c_glbfil PL_SD/THPT_PLT and PL_SD/THPT_SHIPT) :
 - SD value type = "Thruput to Seaborne", BU = Seaborne, c_flwtdsd = E
 - Else if plant = "GRM" and ship-to party = "2106497", "2107912" or "2108850" (values to maintain in c_glbfil PL_SD/ RSTK_PLT and PL_SD/ RSTK_SHIPT):
 - SD value type = "Restock to Seaborne", BU = Seaborne, c_flwtdsd = E
- When BFC account is "R12600"
 - if plant = "52LB", "54PB" or "5B00" (values to maintain in c_glbfil PL_SD/ ROYA_PLT):
 - SD value type = "Royalties to Seaborne", Sourcing = NAFTA, BU = Seaborne, c_flwtdsd = E

- Else
 - BU SD = Sourcing, c_flwtdsd= I (normal case, these key figures are not relevant in P&L Seaborne)

When new lines are created, the flag c_nwline is filled, so, to restrict key figures on c_nwline = # enable to retrieve the original P&L lines. Note that when a line is split in flow type I (Internal) and E (external), it is not considered as a new line because flow type I must be used in queries only for the internal part and flow type E only for the external part, so, in the reporting, the sum of the 2 lines is equivalent to one line with flow type #.

Rules maintenance (table ZBW_PL_SD_RULES)

The table is maintained by Reporting Plateform using the program ZBW_PL_BY_BU.

The file to import is maintained here: https://drive.google.com/drive/folders/1GA5rLH6_wgaYOFnWOrVCqrr-9xuqoLLy

In order to simply the maintenance of this file, there is only one line by scopes. All the criteria are defined as intervals of values, if a criteria is not relevant for a scope, an interval containing all values must be put in the cell and not an empty cell.

The program ZBW_PL_BY_BU will create a line for each interval combinations and a column "From" and "To" for each criteria and put it into the table ZBW_PL_SD_RULES with information of the user who executed the program and the timestamp of the update.

All the table content is deleted before the update.

The program checks there is not duplicated entries in the file.

The "Description" column of the file is used to update the text of the MD c_scopesd. To avoid any problem, only this file should be used for updating the text of the MD c_scopesd and not a manual update in the MD.

DO NOT USE SM30 in order to update the table ZBW_PL_SD_RULES, the manual change would be replaced at the next update using the program ZBW_PL_BY_BU if the file was not synchronised.

Transfer prices maintenance (table ZBW_PL_SD_TRFPRC)

The table contains the transfer prices for 1 **TON** for NAFTA and Europe, on a validity period.

The table is maintained in SM30 through the transaction ZPL_SD_TRFPRC by the Reporting Plateform.

Integration rates exceptions maintenance (table ZBW_CUSTCOM_INT)

The table contains the technical trading partner(C_PCOMTEC) to be used for internal / external calculations (currently, there is no trading partner in P&L for the concerned perimeter) for a given customer / company code.

There is a check on existing company code ship-to and technical trading partner values in the master datas. The percentage of calculation associated to the technical trading partner is automatically filled using c_comptec master data and stored for information purpose only (calculations in query will use the rate in c_comptec table).

The table is maintained in SM30 through the transaction ZPL_CUSTCOM_INT by Reporting Plateform.

Redetermination of navigational attributes stored in the cube

Because some navigational attributes are required for the Business Rules implemented in the flow or in order to keep the cube as small as possible for performance purposes, the following navigational attributes are stored in the cube and in consequence, the cube need to be reloaded regularly in case of reorganisation (currently, full perimeter is reloaded at each load):

- CPFCTR1_2 BFC Global Business Unit
- C_INTGBUF Intra GBU Flag
- C_PACTIV Partner activity
- C_PGBU Partner BFC GBU
- C_MNG_ACC Magnitude Account
- OPROD_HIER Product hierarchy
- C_ZONEH1 GBU zone (hierarchy 1)
- C_ZONEH2 GBU zone (hierarchy 2)
- C_DIVISN Division
- C_MNGAREA BFC Gestion Area
- C_COMPPRS PRS Company code

Reporting

BW_QRY_MVCOPA07_0001 - BW P&L by BU - Montly Query (Soda Ash) (Core Query)

Dependencies with other applications

Data comes from P&L application.

Data Loading

Info Providers and objects loaded

Detail of process chain, list + link between or special event done for the loading

Main Process Chain	Final Provider Loading	Frequency	Time start	Duration
COPA: PL - PL by BU - complete	PC_COPA_PL_44	MAIN	- launched by event Z_EVT_PLSD by P&L PC (PC_CO PA_PL_GLOBAL) - Around 3 am, daily not weekend. - Daily & extra loading - Whole chain lasts around 3 minutes	- From query to cube - Complete deletion and reload
COPA: PL - PL by BU - 2 months	PC_COPA_PL_43	MAIN	Not used	Before to tests the full loading in WBP, it was planned to execute daily a 2 months load PC and a full reload only on Saturday. However, as we observed the full reload PC lasts less than 5minutes, we decided to use it as a daily PC. That is the reason why PC_COPA_PL_43 is finally not used.

Data Quality Control

Data come from SAP system. To compare data between BW and sources systems, check propagation layers.

Operational Documentation

Procedures

<Describe the recurring procedures needed to operate the application (eg. start/pause/terminate/restart the app processes, data preparation, data ingestion, ETL, data visualization, data export, other manual activities)>

Scheduling

<Describe the scheduling in place for the application (eg. existing jobs, trigger time/event based, dependencies)>

Monitoring

<Describe the monitoring checks to confirm the application is performing well (eg. check the overall status, check performance metrics like runtime /data volume/memory/disk/CPU, maintain and react to alerts/notifications)>

Error Handling

<Describe how to handle errors (eg. error codes, description and respective resolution, alert users)>

Known Bugs

<List the existing bugs, its criticity, workarounds and resolution plan.>

Roadmap

<List past & future evolutions for the application (including links to MED/FSD/TSD)>