

# BW EHS KPI

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## Products without composition requirements

### Objective

The composition of every raw material, semi finished and finished good has to be described in Composition Database. This is a pre-requisite in order to assess its regulatory compliance.

Raw materials may have a lower ratio comparing with the BU/Enterprises because it's often difficult to get the whole composition from the suppliers.

The KPI should measure:

1. - Number of products without a composition in Compo Database

B - Percentage of products without a composition in Compo Database.

### Calculation

1. a. - Number of products **without** composition

A2 - Number of products which have a composition **exclusively** made of the 'Unknown' or 'Undefined' components.  
"Undefined" corresponds to specification code "100000000000" and "Unknown" to "100000000001".

B - See A1 divided by the total number of products

Selections:



Remove from KPI data:

- Products which have a NAM PROD (language EN) with **OBS** are not taken into account.
- Authorizations group ALL.

### Frequency

Process chain is started monthly every 1st day.

## Target

<b>Target</b>	0%	This indicator is monitored per BU/Enterprise.
<b>Expected evolution</b>	decrease	 or 

## Product with composition at 100% requirements

### Objective

For a product, the sum of its components should be equal to 100 %.

Raw materials may have a lower ratio comparing with the BU/Enterprises because it's often difficult to get the whole composition from the suppliers.

The KPI should measure:

- Number of products which composition is fully described in Compo Database.  
B - Percentage of products which composition is fully described in Compo Database

### Calculation

- a. - Number of products **having a 100% composition**.  
A2 - Number of products **having a 99.9% composition**.  
A3 - Number of products **having 99.9% composition** \* ithout 'Unknown' or 'Undefined'\* component.



Remarks:

- In WP1, "Undefined" corresponds to specification code "100000000000" and "Unknown" to "100000000001".
- Products which have a NAM PROD (language EN) with **OBS** are not taken into account

B - See A divided by the total number of products.

### Selections :



Remove from KPI data:

- Products which have a NAM PROD (language EN) with \* BS\* are not taken into account.
- Authorizations group ALL.

### Frequency

Process Chain is started monthly every 1st day.

## Target

<b>Target</b>	100%	This indicator is monitored per BU/Enterprise.
<b>Expected evolution</b>	increase	 or 

# Number of 'GPP' Products without Dangerous Goods Master Data requirements

Extract from meeting minutes - 2009, 22 of september

- > W8.2.2 : Number of products without DG Master data
- > - Split by BU - Material being linked to commercial product
- > - Only active materials (criterion ?)

## How to access data

Get active materials (without deletion flag) with 'DG indicator profile' = 'GPP'. Then get the related PROD\_COM and BU.

**MM03 – Material Master Data, Basic Data 2 view:**

The screenshot shows the SAP MM03 interface for Material 21081. The title bar reads "Display Material 21081 (/Finished pdt & RM & SF)". Below the title bar are two buttons: "Additional data" and "Organizational levels". The main area is divided into several sections:

- Basic data 1** (selected): Material 21081, GERONOL FF/6 200 KG DRUM.
- Basic data 2** (selected): Other data section containing:
  - Prod./insp. memo: [ ] Ind. Std Desc. [ ]
  - Page format: [ ]  CAD indicator
  - Basic material: 90005292
- Environment**:
  - DG indicator profile: GPP  Environmentally rlv
  - Highly viscous  In bulk/liquid

For each of the materials, verify that a Dangerous Goods Master Data exists for IMDG regulation, and that this master data is released and active at time of extraction (control on validity period to be done).

## Display Dangerous Goods Master: Hit Lists

Material	Regulation	Valid from	Valid to	Typ	ID n...	Dangerous goods descri...
21081	ADNR	08.05.2007	31.12.9999			
21081	ADR	08.05.2007	31.12.9999			
21081	ANTT	08.05.2007	31.12.9999			
21081	CFR	08.05.2007	31.12.9999			
21081	GGVE	08.05.2007	31.12.9999			
21081	GGVS	08.05.2007	31.12.9999			
21081	IATA_C	08.05.2007	31.12.9999			
21081	IATA_P	08.05.2007	31.12.9999			
21081	IMDG	08.05.2007	31.12.9999			
21081	RID	08.05.2007	31.12.9999			

### Technically

(Use Product Axis to get Material data (MM) and commercial product data (EH&S))

1. Get materials from MARA table with LVORM <> 'X' (Deletion flag) and PROFL = 'GPP' (DG Indicator Profile).
2. Get corresponding PRCO{{footnote}}PRCO is built by concatenating 'PRCO' and 'MARA-WRKST (Basic Material)/footnote and BU also : access to ESTRH with SUBID = PRCO number to get AUTHGRP (Authorisation – meaning : BU)
3. For each of these materials, verify that a Dangerous Goods Master Data exists in DGTMD table.  
There are two controls to do :
  - no DG Master data exists, whatever the regulation is
  - no DG Master data exists for IMDG regulation

Access to DGTMD should be done considering :

- o Material (MATNR) : come from material master data previously accessed
- o Deletion Flag (DELFLG) : should be blank
- o Valid-From Date (VALFR) : should be inferior to current date
- o Valid-To Date(VALTO) : should be superior to current data
- o Dangerous Goods Regulation (LWDG) : (according case – IMDG or others)
- o Processing Status for Basic Data and Master Data (DGWOS) = '10' (Released)

### Suggestion of BW dashboard



The DSO EHS01 is used to store all data loaded from RCS as snapshot, so monthly all data available in RCS is loaded in order to keep the history in BW.

**Transformation: RSDS 0EHS\_SPEC\_MAT WQ1\_260 -> TRCS IFS\_EHS\_SPEC\_MAT**

Material-Specification Mapping	DSO_EHS1
Transformation: DSO_EHS1 -> DSO_EHS1	0N4YBXWBFTDY0D...
Transformation: IFS_EHS_SPEC_MAT -> DSO_EHS1	0PPTQOPVC3HLW...
Specification	IFS_EHS_SPEC_MAT
RSDS 0EHS_SPEC_MAT WQ1_260 -> TRCS IFS_EHS_SPEC_MAT	0E306LP65H5021J...
Specification-to-Material Mapping	0EHS_SPEC_MAT

The transformation is used to convert all Fields into InfoObject and the only one business rule used is to get the current day and set it as "Last Change On".

**Transformation: IFS\_EHS\_SPEC\_MAT -> DSO\_EHS1**

Material-Specification Mapping	DSO_EHS1
Transformation: DSO_EHS1 -> DSO_EHS1	0N4YBXWBFTDY0D...
Transformation: IFS_EHS_SPEC_MAT -> DSO_EHS1	0PPTQOPVC3HLW...
Specification	IFS_EHS_SPEC_MAT
RSDS 0EHS_SPEC_MAT WQ1_260 -> TRCS IFS_EHS_SPEC_MAT	0E306LP65H5021J...
Specification-to-Material Mapping	0EHS_SPEC_MAT

The main business rules in this transformation are to consolidate all necessary data from Master Data and convert all data to the necessary formats.

In the start routine the code is getting below data in order to be used in the routines conversion:

- From Material Master Data the related Commercial product
- From Specification Master Data the related Authorization

In the conversion routines:

- Routines rules:
  - Specification routine is used to check in Material Master Data if the specification contains the correct code or is the commercial product. The commercial product begins with "PRCO". The idea is to clean unnecessary codes.
  - Commercial Product routine gets the Commercial Product from Material Master Data.
  - Authorization is get from Specification Master Data linked by Commercial Product from Material Master Data.
- Time Conversion rules:
  - Calendar Month is taken from Last Change On
- Direct Assignments:
  - For all other InfoObjects

**Transformation : DSO\_EHS1 -> DSO\_EHS1**

EHS Aggregated data	DSO_EHS2
ODSO DSO_EHS1 -> ODSO DSO_EHS2	0C89FZ6E2X4C5K...
Material-Specification Mapping	DSO_EHS1
Transformation: DSO_EHS1 -> DSO_EHS1	0N4YBXWBFTDY0D...
Material-Specification Mapping	DSO_EHS1
Transformation: IFS_EHS_SPEC_MAT -> DSO_EHS1	0PPTQOPVC3HLW...
Data Transfer Processes	DSO_EHS1

The main business rule in this transformation is to clean the Specification not assigned, so in the start routine the data is checked if there is no Specification and, if there is any other records with the same condition if yes, a new record is added with the option Delete assigned (Record Mode = "D").

**Aggregated data : DSO\_EHS02**

The DSO EHS02 is used to store the aggregated data with respective flags and metrics to be used in the reports.

**Transformation: ODSO DSO\_EHS1 -> ODSO DSO\_EHS2**

▼ EHS Aggregated data	DSO_EHS2
▼ ODSO DSO_EHS1 -> ODSO DSO_EHS2	0C99FZ6E2X
▶ Material-Specification Mapping	DSO_EHS1
▶ ODSO DSO_EHS2 -> ODSO DSO_EHS2	03IYND3DUH
▶ Data Transfer Processes	DSO_EHS2

The transformation is used to aggregate the detailed data to the necessary level and delete unnecessary data from the report.

In the Start Routine the data deleted are:

- Authorization group = "ALL"
- Commercial Products with description like "\*\* BS\*" (Obsolete) for language "EN" (English).

In the routines:

- The Calendar month is set to previous one
- The flag for Commercial Product without Composition is set when the Specification is not assigned or start with "PRCO" with means that is value is the Commercial code, not the Specification (Composition).

### Transformation: ODSO DSO\_EHS2 -> ODSO DSO\_EHS2

▼ EHS Aggregated data	DSO_EHS2
▶ ODSO DSO_EHS1 -> ODSO DSO_EHS2	0C99FZ6E2X4
▼ ODSO DSO_EHS2 -> ODSO DSO_EHS2	03IYND3DUH
▶ EHS Aggregated data	DSO_EHS2

As the data is aggregated in DSO\_EHS2, the transformation is used to set all missing flags.

In the Start Routine the DSO\_EHS1 data is get to be used in the routines.

In the routines:

- The Flag for Specification at 100% (C\_SPEC100) check if the key figure EHS\_SPMA is 100 and if the Commercial product has composition, /BIC/C\_PRCWCOM assigned
- The Flag for Specification at 99,9 to 100% (C\_SPEC099) check if the key figure EHS\_SPMA is grater than 99,9 and if the Commercial product has composition, /BIC/C\_PRCWCOM assigned
- The Flag Unknown or Undefined (C\_UNKNOW) check in ODS\_EHS1 if the composition there is at least one record with these classification
- The Flag Only Unknown or Undefined (C\_UNKNOW2) check in ODS\_EHS1 if the composition there is only record with these classification

### Detailed data : DSO\_EHS3

In order to freeze the data related to KPI a DSO was created and snapshots from these data are stored.

### Transformation: RSDS DTS\_EHS\_GPPWP1\_400 --> ODSO DSO\_EHS3

▼ Environment, Health and Safety - Transactional Data	AREA_EHSTR
▼ EHS: BW: Mapping GPP-Materials	DSO_EHS3
▼ RSDS DTS_EHS_GPP WP1_400 -> ODSO DSO_EHS3	00HX8Z675DFL4G
▶ EHS - GPP Materials	DTS_EHS_GPP

The business in this transformation can be divided in groups:

- Replacement fields to InfoObjects, simple rule "from to".
- Commercial Product (C\_PROD) assignment using a populated table in Start Routine using C\_MATNR Master Data

### Detailed data : DSO\_EHS4

In order to frozen the data related to KPI, a DSO was created and Snapshots from these data is stored.

### Transformation: IOJC C\_MATNR -> ODSO DSO\_EHS3

▼ EHS Material GPP History	DSO_EHS4
▼ [IOBJ] C_MATNR -> ODSO DSO_EHS4	067KBM9HIT5NHGRPTDW2SR2
▶ Material (Attribute)	ATTRIBUTES_C_MATNR
▶ Data Transfer Processes	DSO_EHS4

The business in this transformation can be divided in groups:

- Replacement fields to InfoObjects, simple rule "from to" for C\_MATNR and C\_PROD.
- 0CALMONTH is set to previous month
- EHS\_AUTH is got from Commercial Product Master Data
- C\_IMDG\_FG and C\_NORG\_FG is got from DSO\_EHS3

Summarized data: Infoprovder CUB\_EHS03

**Transformation: ODSO DSO\_EHS2 -> CUBE CUB\_EHS01**

▼ EHS KPI	CUB_EHS01
▼ [ODSO] DSO_EHS2 -> CUBE CUB_EHS01	0SA70BCS7TUOI
▶ EHS Aggregated data	DSO_EHS2

**Transformation: ODSO DSO\_EHS4 -> CUBE CUB\_EHS01**

▼ EHS KPI	CUB_EHS01
▶ [ODSO] DSO_EHS2 -> CUBE CUB_EHS01	0SA70BCS7TUOMHR
▼ [ODSO] DSO_EHS4 -> CUBE CUB_EHS01	00HL0YXVQZJHL43E
▶ EHS Material GPP History	DSO_EHS4
▶ Data Transfer Processes	CUB_EHS01

Reporting area : Multiprovder MPR\_EHS01

The MultiProvider MPR\_EHS01 was created to be used for all reports and to prepare the application to use extra InfoCubes or any other InfoProviders

## Exploitation

### Necessary objects to load EHS KPI

error  
 To be done : original document in Eroom has information about the PP Objects not EHS  
 /error

### Source system

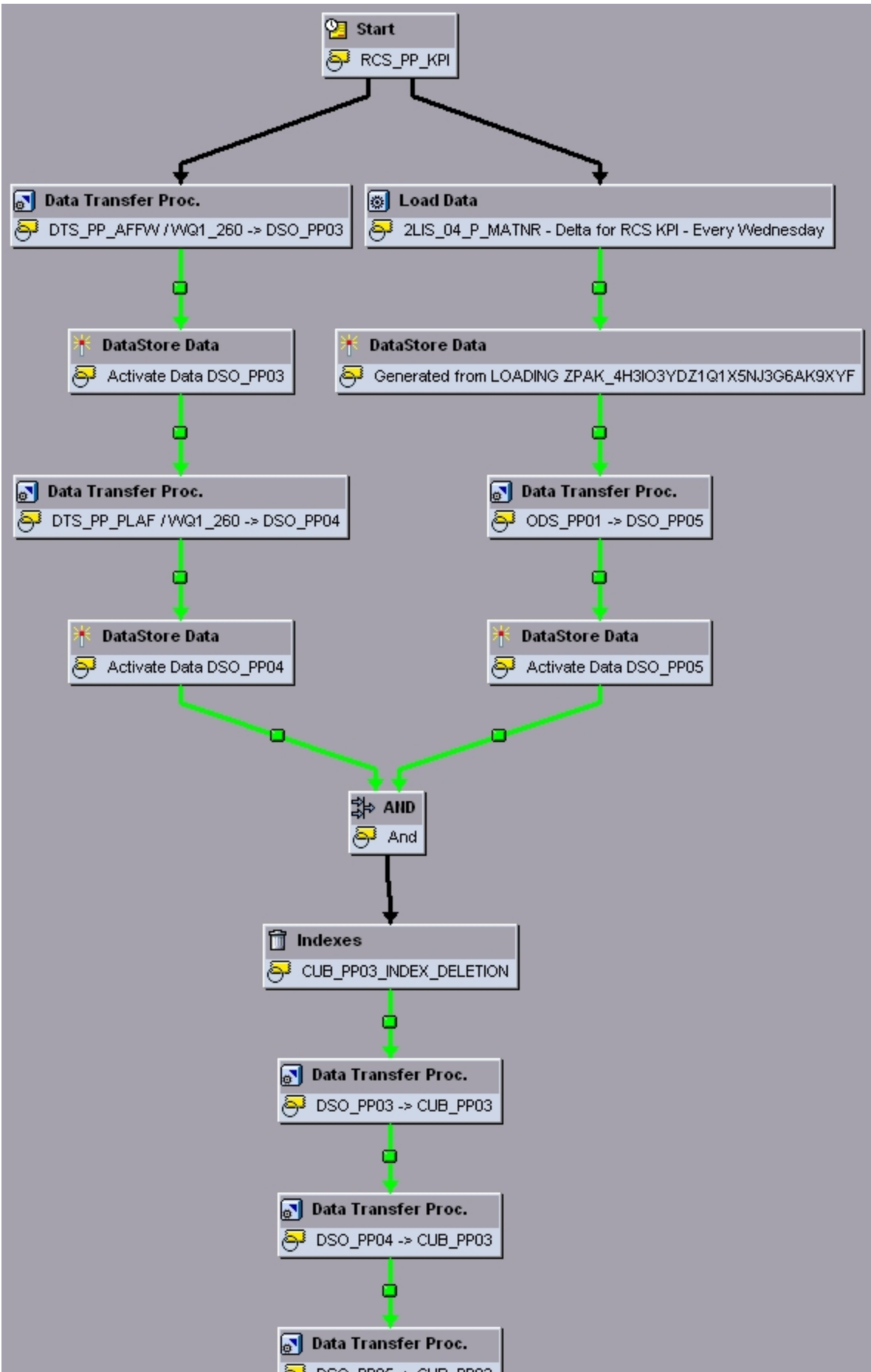
Only one source system is used in this application : RCS Production WP1\_400

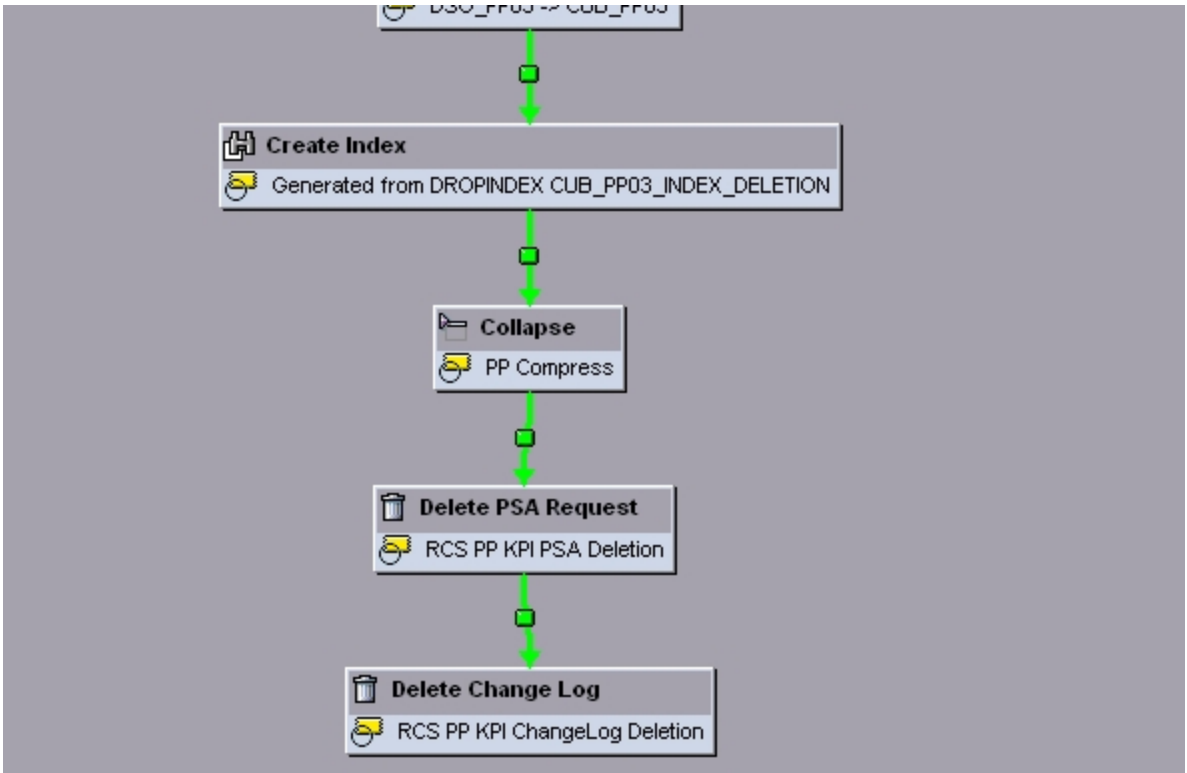
### Global filter

The global filter is used to filter out all unnecessary data, the load process check in this Master Data what is the Reference Date to clean the data. This process is to avoid unnecessary data in the Objects improving the load and report performance.

Data Browser: Table /BIC/PC_GLBFILT: 1 of 1 Hits										
Stream	Rule	Counter	V	CHANGED	Global Filter Descri	Sign	Option	Low	Hight	Active
RCS_KPI	PP	1	A		FILTER IN ORDER TO ELIMINATE PP UNCESSARY DATA	I	EQ	20090101		Y

### Global process chain



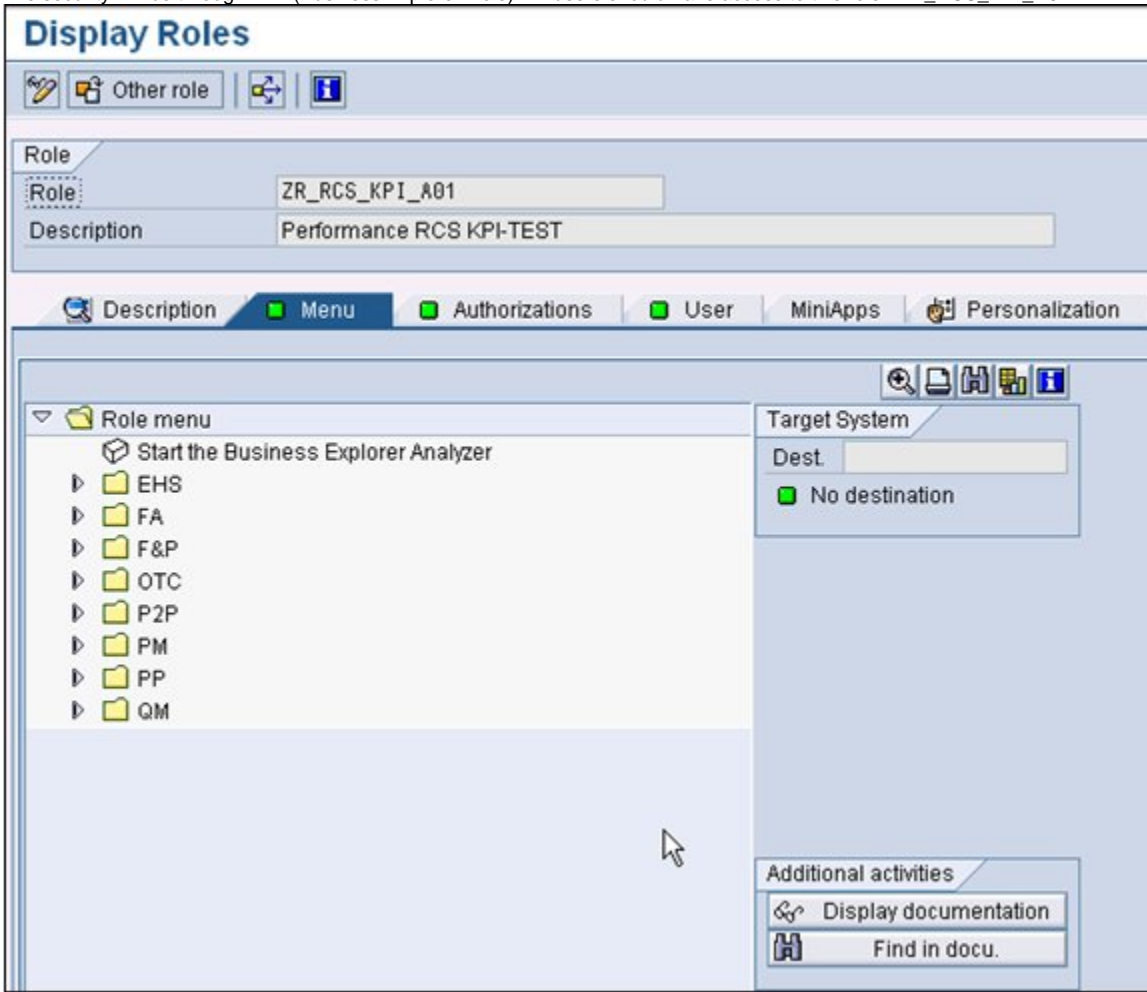


### In case of loading error

If there are errors in the process chain no special actions should be done. The procedures to correct are the standard ones.

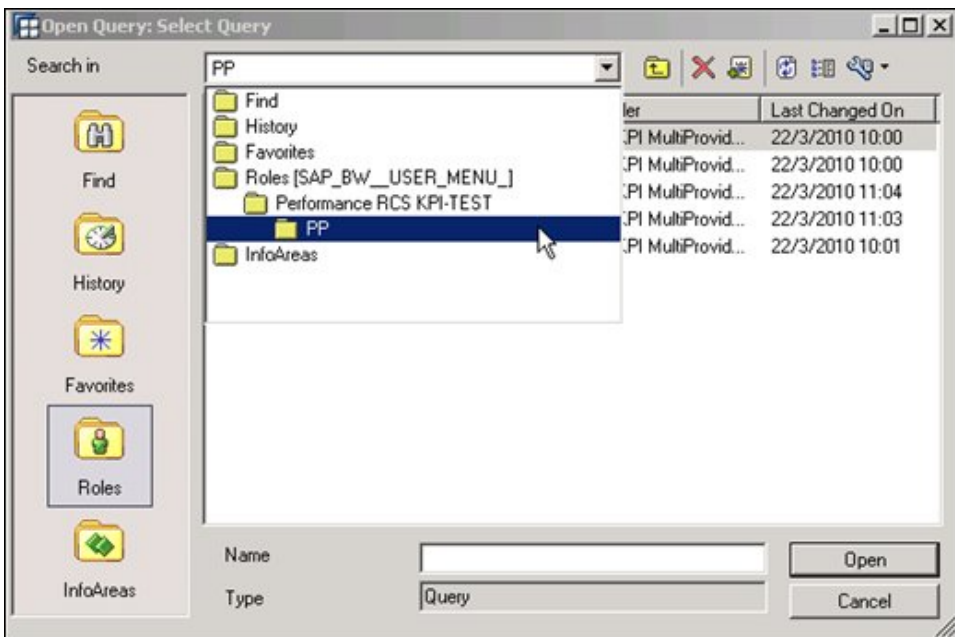
### Access authorizations

The security will be through BEx (Business Explorer Role). All users should have access to this role : **ZR\_RCS\_KPI\_A01**



## Queries

All queries can be found in the menu role **ZR\_RCS\_KPI\_A01**.



# Appendix

## Comments and essential facts

### Important tests

#### InfoCube Design

SAP recommends that all dimensions not line item for performance purposes should represent less than 20% of the fact table. In TCODE SE38, the ABAP report : SAP\_INFOCUBE\_DESIGNS show the design.

<b>Print a list of the cubes in the system and their layout</b>					
Print a list of the cubes in the system and their layout					
CUB_PP03	/BIC/DCUB_PP031	rows:	63	ratio:	0 %
CUB_PP03	/BIC/DCUB_PP034	rows:	677	ratio:	0 %
CUB_PP03	/BIC/DCUB_PP035	rows:	37.837	ratio:	3 %
CUB_PP03	/BIC/DCUB_PP036	rows:	7	ratio:	0 %
CUB_PP03	/BIC/DCUB_PP03P	rows:	13	ratio:	0 %
CUB_PP03	/BIC/DCUB_PP03T	rows:	5	ratio:	0 %
CUB_PP03	/BIC/ECUB_PP03	rows:	0	ratio:	0 %
CUB_PP03	/BIC/FCUB_PP03	rows:	1.155.900	ratio:	100 %