

IAC.02.06. Slow turn inventory reserve

- Risk
- Objective
- Control description
- Scope:
- WP2 & PF2
- Frequency
- Control owner
- References
- Control evidences

General presentation

Objective of the application

i-MEP stands for Integrated **M**anufacturing & **E**nergy **P**erformance

The I-MEP application provides to business the possibility to analyze the production target cost / actual cost / variance for each cost item in process order / cost collector, and to determine energy consumption and CO2 emission during production process.

BI manufacturing reports will replace house solutions :

- on RCS (WP1) : programs ZWPP40A/B/C
- on Solvay (PF1) : program Z1K_MATCOST (Prix de Revient)
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Tool Leader + IT leader of the application:

Usage information

History

Roles & Access

Roles and access

Role Code	Role Description	Explanation
ZR_RCS_CA_M55	IMEP - Integrated Manufacturing & Energy Performance	Gives access to queries & workbooks IMEP (Manufacturing & Energy reports)
ZBI_RCS_IMEP_A01	IMEP - Integrated Manufacturing & Energy Performance	Gives access to InfoArea IA_FMCO_CO_IMEP* and all authorization relevant objects except <ul style="list-style-type: none">• GBU (CPFCTR1_2)• Plant (C_PLANT) Authorization object ZBI_IMEP
ZR_RCS_CA_Mxxx	IMEP - Upload Data - Non-SAP Plant ZIMEP_FILE	Gives access to transaction ZIMEP_FILE which allow Non SAP Plant Flat Files upload. (same logic than for P&L / role ZR_RCS_CA_M432)

Authorization objects

List of autorisation objects mandatory for the application.

Authorization object	Explanation
GBU (CPFCTR1_2)	ZR_*_CA_P05

Plant (C_PLANT)	ZR_*_CA_P02
	ZR_7866_CA_P02 => Plant 7866 - Chalampé (ex 7027) - (Cie ZFR9)
	ZR_TOUT_CA_P02 => All Plants "Solvay"

See also file maintained by Authorization team : BW Catalog of Roles / link: https://drive.google.com/open?id=10GEfKYqrT1eeTO_uHYAheL1GX7L5y_pvH0KQU64qh5l

Dataflow overview

<https://drive.google.com/open?id=18v4PEvS10Q4RmofZBDuuuTiyTqO9anDL3x-Bcxvvnv2s>

Functional and Technical rules on Workbench + Reporting

Rules & Explanations

Source tables

Table ZWPPMCKOST / i-MEP extraction table

This table exists on both systems PF1/WP1, but the structure is slightly different.

Following additional fields exists for PF1 table, but not for WP1 table : append ZWPPMCKOST_EXTRA

Process Chain	Code
Code établissement DSI	ETABL
Code édition	EDITI
Libellé de la ligne d'édition	LIBLI
Type: Fix/Var/Dep	FVD
Cost collector for production process PROCNR	PKOSA
Material Ledger Cost	MLWRT

This table is filled via program **XXX** and contains only the values for the previous period (The table is emptied before each loading)

to be completed

Table ZZX_CO2_COEFFS / Energy and CO2 Emission Coefficients

This table exists on both systems PF1/WP1, and is filled manually by Energy Carbon team

to be completed

At datasource level (PF1/WP1)

Datasource : DTS_ZBW_V_ZWPPMCKOST based on view ZBW_V_ZWPPMCKOST

Controlling Area (0CO_AREA)

The controlling area is unique on PF1 (value CHEF), but not on WP1 (Z006, Z025, Z026...)

The controlling Area is not available on ECC side specific tables, but, in order to match the BI referential, this information is necessary to get referential attribut and texts (example 'Cost Center' C_COSTCTR, 'Profit Center' C_PFT_CTR)

To get the information extractor are based on specific view with follow the business rule given :

- A plant belongs to a single company code (link found in table T001K where 'Valuation Area' (BWKEY) corresponds to the plant (WERKS)
- A company code belongs to a single controlling area (link found in table TKA02 / field 'Business Area' (GSBER) is always empty)

Cost Component Structure (0CCOMPSTRUC)

The Cost Component Structure id is not unique on PF1 (on WP1, only id Z1 is used), and the id is not part of source table ZWPPMCKOST.

The append ZEXTRA_FIELDS has been added to extract structure of the data source (ZOXDF10019). Fields belonging to the append are field within class ZDTS_ZBW_V_ZWPPMCKOST.

To get the information :

- by default set id to 'Z1' except for exception managed in table TCK07 'Costing Variants for Organizational Units'
- Exceptions for certain company codes (BUKRS)
 - ignore value '++++'
 - keep only one valid record by company code (the latest)

At business level (WBP)

At reporting level (WBP)

GBU (CPFCTR1_2)

The GBU available for reporting is BFC Global Business Unit (CPFCTR1_2) found on Cost Center

Dependencies with other applications

Data loadings

Info providers and objects loaded

Global Filters (C_GLBFLT) used in Chains

Stream	Rule	Explanation
IMEP	RCS_LOAD	Period (YYYYPPP) to load, RCS. NO_LOAD to avoid loadings Do not change active flag (Active = Y) This variable is used in decision block
IMEP	RCS_DEL	Period (YYYYPPP) to delete, RCS DSO/Cube. NO_DEL to avoid Do not change active flag (Active = Y)
IMEP	RCS_HISTO	Counter 1 = Number of Year to keep in all DSOs/Cubes RCS Counter 2 = Delete all data in all DSOs/Cubes RCS older than The counter 1 is entered manually, it is a number of years to keep in all DSOs and Cubes. If '3' is entered, 3 full years + current year are kept. The counter 2 is determined within program ZBW_IMEP001 depending of the loaded period and the counter 1. Example : we are the 01/08/2016, the period 007.2016 is loaded. As the counter 1 is '3', the calculated counter 2 is 001.2013. All period previous to 001.2013 will be deleted via the main process chain
IMEP	SOLV_LOAD	same explanation than for RCS'ones
IMEP	SOLV_DEL	same explanation than for RCS'ones
IMEP	SOLV_HISTO	same explanation than for RCS'ones
IMEP	FF_DATA	Counter 1 = Input filename for ZBW_IMEP002 program. Counter 2 = Store actual delta queue of running process chain PC_CO_IMEP_15. Counter 3 = Total counter for ZBW_IMEP002 program file loading.

ABAP Programs used in Chains

Program	Variant	Explanation
ZBW_DELDIM	ZVAR_IMEP_01 ZVAR_IMEP_02 ZVAR_IMEP_03 ZVAR_IMEP_04 ZVAR_IMEP_05 ZVAR_IMEP_06	Existing program, reused to clean cube dimensions. It delete unused dimension elements
ZBW_IMEP001	ZVAR_DEL_RCS ZVAR_DEL_SOLV ZVAR_OBS_RCS ZVAR_OBS_SOLV ZVAR_PER_RCS ZVAR_PER_SOLV	Program created for the projet to : <ul style="list-style-type: none"> ▪ Determine period to load from source system (and period to delete, obsolete periods) ▪ Delete exercise/period (previously to new load) ▪ Delete obsolete periods (to keep a constant perimeter of data)
ZBW_IMEP002		Program created for the project to allow users to load flat files to integrate Non-SAP plant data.

Further examplation for program ZBW_IMEP001

? Unknown Attachment

Further examplation for program ZBW_IMEP002

Interface

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The user can choose an Excel flat file from his local computer by using the "File to load" browser.

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Once the file is choosen, the user can preview the content to be uploaded from his selected file by clicking on "Preview" icon.

? Unknown Attachment

Once the file is choosen, the user can start the content checking of the file by clicking on "Check file" icon.

? Unknown Attachment

Once the file content is checked, the user can load the file to BW application server (AL11) and raise the event PC_CO_IMEP_15 by clicking on "Load file" icon.

The event PC_CO_IMEP_15 triggers the process chain PC_CO_IMEP_15 - "IMEP: META - T - Main (Non-SAP Plant Flat Files)".

This process chain load the Non-SAP Plant data from user's file into IMEP BW application.

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The user can view the history of loaded files by clicking on "History" icon.

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The user can exit the program by clicking on "Exit" icon.

Source Code

Report ZBW_IMEP002 contains several distinct parts:

Interface

Selection screen.

Import File

f200-import_file: Import the XLS file from user's workstation.

f210-upload_excel: Convert the XLS file in Internal table.

f220-check_file: Check content of the file as follow:

For more details, see file [ZWPPMCKOST_table structure & contents_QF1.xlsx](#).

- BUSINESS RULE 1 : SOURCE SYSTEM
 - BUSINESS RULE 1.1 : SOURCE SYSTEM NOT FILLED
 - BUSINESS RULE 1.2 : SOURCE SYSTEM NOT AUTHORIZED
- BUSINESS RULE 2 : PLANT
- BUSINESS RULE 3 : FISCAL YEAR PERIOD
 - BUSINESS RULE 3.1 : FISCAL YEAR PERIOD NOT FILLED
 - BUSINESS RULE 3.2 : FISCAL YEAR PERIOD NOT EXISTING
- BUSINESS RULE 4 : PROFIT CENTER
 - BUSINESS RULE 4.1 : PROFIT CENTER NOT FILLED
 - BUSINESS RULE 4.2 : PROFIT CENTER NOT EXISTING
 - BUSINESS RULE 4.3 : PROFIT CENTER SHOULD HAVE 10 CHARACTERS
- BUSINESS RULE 5 : MATERIAL INCORRECT
 - BUSINESS RULE 5.1 : MATERIAL SHOULD HAVE 18 CHARACTERS
- BUSINESS RULE 6 : QTY UNIT
 - BUSINESS RULE 6.1 : QTY UNIT MISSING
 - BUSINESS RULE 6.2 : QTY UNIT NOT EXISTING
- BUSINESS RULE 7 : KEY FIGURE NOT IN THE GOOD FORMAT
- BUSINESS RULE 8 : DUPLICATED ENTRIES (NO ERROR BUT WARNING)

Program Output

f300-output_preview: Generate ALV grid to show Converted data from Excel.

f310-output_check: Generate ALV grid to show Converted data from Excel after check.

Program Load

f400-load_pchain: Check if process chain is already in progress.

f413-csv_file_data: Import Customer file in ALL11.

- Filename consumed by process chain PC_CO_IMEP_15 is hardcoded in this form: "/exploit/BW/IMEP/non-sap_plant.csv".
- Flat file integrated manually by user, is saved as follow: '/exploit/BW/IMEP/' w_file '_' sy-sysid '_' sy-uname '.csv'.
- Where w_file is the filename on user's local pc, sy-sysid is the BW environment and sy-uname is the user name which is running the program.

f423-filename_data: Update Global filter master data with new file name.

f433-savelog_data: Update log after loading (DSO DBCOPP09 - "IMEP - Log Import (Non-SAP Plant) (Direct Update)").

f440-finish_message: Pop-up message at the end.

f453-send_email_data: Send an email after data loading.

Program Log

f500-display_log: Display log.

Main Chains

Process Chain	Code	Type	Frequency	Comments
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IMEP: META - T - Main (Solvay)	PC_CO_IMEP_01	MAIN	D1 to D4	This chain is starting when event xxx is received from Solvay PF1. Global Filter IMEP/SOLV_LOAD is used in the decision bock.
IMEP: META - T - Main (RCS)	PC_CO_IMEP_08	MAIN	D1 to D4	This chain is starting when event xxx is received from RCS WP1. Global Filter IMEP/RCS_LOAD is used in the decision bock.
IMEP: META - T - Main (Non-SAP Plant Flat Files)	PC_CO_IMEP_15	MAIN	Manually	This chain is starting when event PC_CO_IMEP_15 is received from ZIMEP_002 Program.

Sub Chains

Process Chain	Code	Type	Frequency	Comments
IMEP: MD - Referential & Conversion factors (Solvay)	PC_CO_IMEP_02	subchain		Data requiered for Business Rules
IMEP: TD - Delete period in targets before loading (Solvay)	PC_CO_IMEP_03	subchain		Before loading a period, the same period has to be deleted from targets (DSO/Cubes) Global Filter IMEP/SOLV_DEL is used
IMEP: TD - Propagation (Solvay)	PC_CO_IMEP_04	subchain		Global Filter IMEP/SOLV_LOAD is used to limit the InfoPackage + C_ORIGIN (textes) loading
IMEP: TD - Business (Solvay)	PC_CO_IMEP_05	subchain		
IMEP: TD - Reporting (Solvay)	PC_CO_IMEP_06	subchain		
IMEP: MD - Texts (Solvay)	PC_CO_IMEP_07	subchain		This load could be done ones a week or ones a month
IMEP: MD - Referential & Conversion factors (RCS)	PC_CO_IMEP_09	subchain		Data requiered for Business Rules
IMEP: TD - Delete period in targets before loading (RCS)	PC_CO_IMEP_10	subchain		Before loading a period, the same period has to be deleted from targets (DSO/Cubes) Global Filter IMEP/RCS_DEL is used
IMEP: TD - Propagation (RCS)	PC_CO_IMEP_11	subchain		Global Filter IMEP/RCS_LOAD is used to limit the InfoPackage + C_ORIGIN (textes) loading
IMEP: TD - Business (RCS)	PC_CO_IMEP_12	subchain		
IMEP: TD - Reporting (RCS)	PC_CO_IMEP_13	subchain		
IMEP: MD - Texts (RCS)	PC_CO_IMEP_14	subchain		This load could be done ones a week or ones a month
IMEP: TD - Propagation (Non-SAP Plant Flat Files)	PC_CO_IMEP_16	subchain		
IMEP: TD - Business (Non-SAP Plant Flat Files)	PC_CO_IMEP_17	subchain		
IMEP: TD - Reporting (Non-SAP Plant Flat Files)	PC_CO_IMEP_18	subchain		

Other Chains

Process Chain	Code	Type	Frequency	Comments

Loading frequency

IMEP is loaded daily from D1 to D4 only.

Events on Solvay ECC (PF1) and RCS (WP1) starts BW Process Chains.

In Process Chains we also check that we are between D1 and D4 (programme ZBW_IMEP001).

Average performance

Key Figure	Estimation
~ Average Process Chain Runtime	
~ Average nb of rows loaded per load	
~ Total nb of rows loaded (if full)	
~ Average Runtime for 10k lines	

Record Keeping

3 years plus current year is asked by business.

Older data are deleted from DSOs/Cubes at the end of the process chains RCS and Solvay.

The number of years to keep can be maintained in Global Filter masterdata (Stream IMEP / Rule RCS_HISTO or SOLV_HISTO/ Counter '001')

Reporting

Queries End User Documentation

IMEP Glossary :

Main queries

Report	Technical name	Type	Comment	Link to documentation
MANUFACTURING - Local Core Query	BW_QRY_M VCOPP01_0 002	QRY	Manufacturing report will be used to display all the characteristic and key figures loaded from the ZWPP40x program. This report will display key figures only on company code currencies and local base unit of measure.	https://drive.google.com/open?id=14wAf4AjUgq2jcQko5A2AyEYY_pd2evwVokizwSomUPQ
MANUFACTURING - Consolidation Core Query	BW_QRY_M VCOPP01_0 008	QRY	Manufacturing report will be used to display all the characteristic and key figures loaded from the ZWPP40x program. This report will provide the possibility to display unit of measure and currency in a consolidate target unit.	https://drive.google.com/open?id=1-UP2e782f6PX1huigJezl6_rLRnVWskAQp5YonjNG0
ENERGY: Consumption, Expenses and Carbon Footprints (Core Query)	BW_QRY_M VCOPP01_0 003	QRY	Report will display the energy purchase information	https://drive.google.com/open?id=1MbtEZhYOs87E_jcm9JXTqwfvbSNdjrMEliZ6JwDAkzl
DEPRECATED - ENERGY - Primary Energy and Emission report (Core Query)	BW_QRY_M VCOPP01_0 007	QRY	Report will display the primary energy consumption. DEPRECATED: Merged with BW_QRY_MVCOPP01_0003.	https://drive.google.com/open?id=1bDPL8PQk0xd7FJcVvjK78qx6ew_QOvJTWY5nkwqhLU
ENERGY - Interface Production Report (Core Query)	BW_QRY_M VCOPP01_0 006	QRY	3 reports will be used to provide source data to the EPS system. As this is a temporary solution, the reports will be executed manually by the users. No automation process will be implemented	https://drive.google.com/open?id=1H8vvrSJ01jwvmUvA4movkau8umTE-18rbV48Mb1tCmc
ENERGY - Interface Cost Production Report (Core Query)	BW_QRY_M VCOPP01_0 005	QRY	3 reports will be used to provide source data to the EPS system. As this is a temporary solution, the reports will be executed manually by the users. No automation process will be implemented	https://drive.google.com/open?id=1bT_alWdGYpmnMUqvvyfYGSwfHjNRcvtnrLhPeM6ckCLA
ENERGY - Interface Consumption Quantity Report (Core Query)	BW_QRY_M VCOPP01_0 004	QRY	3 reports will be used to provide source data to the EPS system. As this is a temporary solution, the reports will be executed manually by the users. No automation process will be implemented	https://drive.google.com/open?id=1Llajg9nEMubjjA8zhnEnoT3Bncjcp8ftVIQwbpcpl
MANUFACTURING - Reconciliation (Workbook)		WB	Manufacturing data reconciliation workbook will be created to compare VC, FC, DEP key figures between the P&L – legal view report and the manufacturing report.	

Main functionalities

Broadcast

No broadcast

Maintenance

Known bugs

Recurring procedure

Planned Evolution

PC_CO_IMEP_15