

Functional Template - Plant Maintenance Report

1.0 Overview

Business Context and Application Overview

Provide an overview of the app (e.g Domain, key processes, purpose of the app, etc)

The application loads data of the Plant Maintenance domain from RCS (system WP1 400) into BW (system WBP 400).

Data is extracted from PM module for Work Orders and Notifications, from CO-OPA module for Costs, and from CATS module (Cross-Application Time Sheet) for Times.

Data for Costs is also loaded from the systems RHO and PF1. The costs data from the three systems are used by FI application, but reporting on costs in WBP is done only for WP1 data.

Application User Profile

Roles and access

- Authorization role : ZR_RCS_PM_A02: Maintenance Orders Applications - End User role
- Role menu : ZR_RCS_CA_M08: PM - Plant Maintenance

Reference : [BW Catalog of Role](#)

Target Users:

Around 180 users on BW. The reports are used worldwide.

InfoProviders Used	Calendar Year	Distinct Users	Query Access Counter
Overall Result		179	49 165
MPRO/A/MPR_PM001	2015	137	24 877
	2016	85	13 487
MPRO/A/MPR_PM004	2015	23	3 861
	2016	7	1 523
MPRO/A/MPR_PM05	2015	13	2 802
	2016	5	518
MPRO/A/MPR_PM06	2015	7	740
	2016	6	394
MPRO/A/MPR_PM07	2015	5	441
	2016	3	96
MPRO/A/MPR_PMECO	2015	17	404
	2016	5	22

VERSION	DATE	MODIFIED BY	DESCRIPTION
0.01	05 Dec 2023	Abidemi Raji	Initial draft

2.0 Business Process

Capture the business process that the application supports . This can be describe through a process diagram or a business capability model

Key Reports:

Application Type

Data Product Type

- Dashboard
- Report
- Advanced analytics
- AI
- Others <specify which one>

Technologies

- BW
- Tableau
- QlikSense
- Talend
- Dataiku
- Others <specify which one>

Data Sources

Note: list of all applications and various environment

- SAP PF1 (Production environment)
- SAP WP1
- SAP PI1
- BW (versions)
- iCare CRM
- CORE CRM
- Others <specify the name of the source>

The BW PM Plant Maintenance application regroups all the reports useful to follow Plant Maintenance activities in weekly and monthly basis, mainly on :

- Cost
- Notifications
- Work orders

3.0 Application Feature Overview

Information about the existent Workbooks and the respective BW queries.

Query	Descriptions
BW_QRY_MPR_PM001_0001_BCAST	BW - PM Monthly Synthetic Expenses (BROADCAST)
BW_QRY_MPR_PM001_0030	BW - PM Cumulated (year) detailed costs (Core query)
BW_QRY_MPR_PM001_0030_2	BW - PM Cumulated (year) detailed costs (Core query)
BW_QRY_MPR_PM001_0031	BW - PM Monthly costs synthetic report (Core query)
BW_QRY_MPR_PM001_0031_MPI1	MPI 1 - Maintenance Costs per ton of production
BW_QRY_MPR_PM001_0031_MPI4	MPI 4 - Structure of Maintenance Costs
BW_QRY_MPR_PM001_0033	BW - PM Material consumptions per order (Core query)
BW_QRY_MPR_PM001_0034	BW - PM Orders list by vendor (Core query)
BW_QRY_MPR_PM001_BCAST_0001	BW_QRY_MPR_PM001_BCAST_0001
BW_QRY_MPR_PM001_BCAST_0001	Extraction Oracle 2019
BW_QRY_MPR_PMECO_0001	BW - Emergency WOs
BW_QRY_MPR_PMECO_0002	BW - Past Due PM
BW_QRY_MPR_PMECO_0003	BW - MTBF Rotating Equipment
BW_QRY_MPR_PMECO_0004	BW - MTBF
BW_QRY_MPR_PMECO_0005	BW - Backlog Maintenance Metrics
MPR_PM003_QRY005	General Control of Preventive Maintenance (Quantities)
QV_BW_QRY_MPR_PM001_0030	QV-BW-PM Cumulated (year) detailed costs (QV)
QV_BW_QRY_MPR_PM001_0031	QV-BW-PM Monthly costs synthetic report (QV)

Search		Folders
View		Role
Description	Technical Name	
PM - Plant Maintenance	ZR_RCS_CA_M08	
Brazil	0000001709	
GTBU	0000001769	
MECANO	0000001888	
BW - PM-MECANO - PM Costs (Core Query)	BW_QRY_MVPMCO01_0001	
BW-MECANO - PM - KPI Operation - BW SnapShot (Core Query)	BW_QRY_MVPMOP02_0002	
BW-MECANO - PM - KPI Operation - Capacity SnapShot (CQ)	BW_QRY_MVPMOP04_0004	
BW-MECANO - PM - KPI Operation - GWOS Daily SnapShot (CQ)	BW_QRY_MVPMOP02_0003	
BW-MECANO - PM - KPI Operation - GWOS Weekly SnapShot (CQ)	BW_QRY_MVPMOP02_0001	
BW-MECANO - PM - Maintenance Plan Calls - SnapShot (CQ)	BW_QRY_MVPMCL01_0001	
BW-MECANO - PM - Notification by Priority - SnapShot (CQ)	BW_QRY_MVPMNO02_0001	
BW-MECANO - PM - Notification by Priority - Up to Date (CQ)	BW_QRY_MVPMNO01_0001	
BW-MECANO - PM - Operation - Up to Date (Core Query)	BW_QRY_MVPMOP01_0001	
BW-MECANO - PM - Order by Status - SnapShot (Core Query)	BW_QRY_MVPMOR02_0001	
BW-MECANO - PM - Order by Status - Up to Date (Core Query)	BW_QRY_MVPMOR01_0001	
BW - Detail notifications items (Core Query)	BW_QRY_CUB_PM08_0001	
BW - Maintenance Orders Indicators (Core Query)	BW_QRY_CUB_PM004_0001	
BW - MTBF (Core query)	BW_QRY_MPR_PMECO_0004	
BW - Notification cause details (Core Query)	BW_QRY_CUB_PM08_0005	
BW - Notification item details (Core Query)	BW_QRY_CUB_PM08_0004	
BW - Notifications by status (Core Query)	BW_QRY_CUB_PM08_0002	
BW - Notifications details (Core Query)	BW_QRY_CUB_PM08_0003	
BW - PM Cumulated (year) detailed costs (Core query)	BW_QRY_MPR_PM001_0030	
BW - PM Cumulated (year) detailed costs (Core query)	BW_QRY_MPR_PM001_0030_2	
BW - PM Functional Location and Equipment Attributes (Core)	BW_QRY_IS_FUNLOC_0001	
BW - PM Hours (Core Query)	BW_QRY_CUB_PM004_0002	
BW - PM Material consumptions per order (Core query)	BW_QRY_MPR_PM001_0033	
BW - PM Monthly costs synthetic report (Core query)	BW_QRY_MPR_PM001_0031	
BW - PM Order and Operations User status list (Core Query)	BW_QRY_CUB_PM012_0001	
BW - PM Orders by status (Core query)	BW_QRY_CUB_PM003_0002	
BW - PM Orders list by vendor (Core query)	BW_QRY_MPR_PM001_0034	
BW - PM Orders numbers (Core query)	BW_QRY_CUB_PM001_0003	
BW - Priority analysis (Core query)	BW_QRY_MPR_PM001_0032	

Description	Technical Name
PM - Plant Maintenance	ZR_RCS_CA_M08
+ GTBU	ZR_RCS_CA_M08
- MECANO	ZR_RCS_CA_M08
BW - PM - MECANO - KPI Costs (Core Workbook)	BW_WBK_MECANO_0025
BW - PM - MECANO - KPI Effectivness (Core Workbook)	BW_WBK_MECANO_0026
BW - PM - MECANO - KPI Execution (Core Workbook)	BW_WBK_MECANO_0024
BW - PM - MECANO - KPI Gatekeeping (Core Workbook)	BW_WBK_MECANO_0021
BW - PM - MECANO - KPI Planning (Core Workbook)	BW_WBK_MECANO_0022
BW - PM - MECANO - KPI Scheduling (Core Workbook)	BW_WBK_MECANO_0023
BW - PM - MECANO - Up to Date - Maintenance Costs (Core Workb	BW_WBK_MECANO_0014
BW - PM - MECANO - Up to Date - Notifications (Core Workbook)	BW_WBK_MECANO_0011
BW - PM - MECANO - Up to Date - Operations (Core Workbook)	BW_WBK_MECANO_0013
BW - PM - MECANO - Up to Date - Work Orders (Core Workbook)	BW_WBK_MECANO_0012
+ North America	ZR_RCS_CA_M08
BW - PM Cumulated (year) detailed costs (Core Workbook)	BW_WBK_PM_0001
BW - PM Hours (Core Query)	BW_WBK_PM_0004
BW - PM Material consumptions per order (Core Workbook)	BW_WBK_PM_0005
BW - PM Orders list by vendor (Core Workbook)	BW_WBK_PM_0002
BW - Priority analysis (Core Workbook)	BW_WBK_PM_0003

4.0 Functional Specification

4.1 General Data/Calculations

This section will approach the concepts/definitions that will be used in all the reports and required to understand the data from the reports.

Could be specific fields, closing activities, additional information to work and understand the reports.

4.2 Process Detail

4.2.1. Report/Process Definition

This section represents the process with detail information for the application. Can include specific or special cases, complex logics , calculations, flows, among others.

Main fonctionnalités

Several topics are covered by BEx reports :

- Work Orders with Maintenance Plan
- Work Orders with Equipment
- Notifications by Status and Causes
- Planned and Actual duration on Operations
- Work Orders and Operations by Status and Priority
- Monthly Costs
- Functional Location and Equipment Attributes
- Consumption of Materials on Work Orders
- Work Orders Costs by Vendor
- MTBF (Mean Time Between Failure)
- Backlog on Operations

5.0 Non-functional Descriptions

Please populate the relevant section and delete those that are not applicable.

5.1 Usability

Usability is about the ease with which a User can learn to start using the solution and the ease with which they can use the system. In addition to ease of learning and ease of use, usability also includes areas such as ease of recall, error avoidance and handling, accessibility among others e.g., 99% of metadata entry Users who have use the Maintenance Dashboard should be able to change filters, extract etc., when required. Maintenance data will be centrally stored in the Google Cloud platform, which will be available to other applications e.g., and Dashboards if needed.

5.2 Regulatory Compliance

Software systems must comply with legal and regulatory e.g., GDPR requirements, this can change depending on country, organisation industry and / or region. The software systems must be secure from unauthorized access. The Maintenance Dashboard will comply with Solvay's regulations and compliance e.g., access only granted to authorized Users.

5.3 Security

Security refers to essential aspects that assure a solution and its components will be protected against unauthorized access or malware attacks. Important considerations related to security aspects of a system are User authentication, User authorization or User access privileges, data theft, malware attacks, data encryption, and maintaining audit trails, e.g., only Users with administrator access shall be able to create new accounts and assign data access privileges to the new accounts e.g.,

- All data will be encrypted in the dashboard
- Only authorised Users / Administrative Users will be able to access data.
- Maintenance data will be split between either SCO or ECO, and Users will only have authority to one Entity data.

5.4 Performance

Performance defines how fast a software system or a particular section of it responds to certain User actions under a certain workload. In most cases, this metric explains how long a User must wait before the target operation happens e.g., the page renders, a transaction is processed, etc., given the overall number of Users now. Performance requirements may describe background processes invisible to Users, e.g., backup and speed of data transfers.

5.5 Reliability

Reliability is the ability of a solution or its component to perform its required functions without failure under predefined conditions for a specified time / period. Reliability can possibly be specified in terms of average time system runs before failure occurs, percentage of operations completed successfully within a time / period, maximum acceptable failure probability, or number of failures within a period. Reliability aspects are in reference to (but not limited to) evaluation of the system to be considered as reliable, classification of reliability defining failures vs. regular failures, and the impact of failure on business operations. The Maintenance Dashboard will display data from the previous refresh of data.

5.6 Scalability

Scalability refers to the degree to which a solution can evolve to handle increased amounts of work. The increased amount of work could be in terms of the user base, transactions, data, network traffic, or other factors e.g., the system should be able to handle an additional load of a maximum of 5,000 Users every month for the next 6 months without any noticeable performance impacts.

5.7 Compatibility

Interoperability is the degree to which the solution is compatible with other components. It is a measure of how effectively the system interoperates with other software systems and how easily it integrates with external hardware devices.

Interoperability aspects to be discussed during elicitation are in reference to (but not limited to) software systems to be interfaced with along with data / messages to be exchanged and any standard data formats, hardware components to be integrated with, and any standard communication protocols to be followed e.g., Order Management system will push the order file into a secured file transfer protocol server from where it will be loaded into the system through a daily job. To guarantee between Google Cloud platform and SAP BW Queries e.g., BW_QRY_MVPMOR01_0002, Solvay has introduced a new tool called Xtract ([Xtract](#)).

5.8 Availability

Availability is the degree to which the solution is operable and accessible when required. It is a measure of time during which the system is fully operational e.g., available for use and sometimes included as a Service Level Agreement (SLA) considering its criticality to the business, e.g., the system shall be at least 99% available on weekdays between 09:00 to 18:30 Central European Time (CET).

5.9 Refresh of the Data

Frequency, data, and time of the data refresh in the data product.