

Functional Template - EHS 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)

EHS stands for Environment, Health and Safety. The Goal of **EHS** is to protect employees, the public, the environment and to comply with applicable laws and protect the Company's reputation. EHS departments, of some companies are responsible for environmental protection, occupational health and safety.

This application offers a set of reports about EHS specifications and documents:

- Changes log on specifications
- Legal and Standard compositions
- Pure substances use in authorization groups
- Revision documents data
- List of EHS documents with a released status (SDSs but also labels, transport documents, composition report and certificates)
- SDS sending

Application User Profile

Describe the key User profiles that exist for the application.

General role/Viewer role:

Approver role:

Role Code	Role Description	Explanation
ZR_RC S_CA_ M51	EHS Reporting - ADMIN Reports	Role menu for EHS admin team reports
ZR_RC S_CA_ M45	EHS Reporting - SDS Reports	Role menu for EHS reports "documents generation" and "SDS shipping"
ZBI_RC S_EHS_ _A02	Environment, Health and Safety Analysis - End User Role	Application Role: • End User rights • gives access to infoproviders of Infoarea "AREA_EHSTR" (EHS - Transactional Data) • BI Analysis Authorization "ZBI_EHS" ("*" for authorization objects not relevant for the application)
ZR_RC S_EHS_ _A08	EHS - Convergence - End User Role	Application Role: • End User rights • gives access to infoproviders of Infoarea "IA_EHS_DOC_GEN*" (IA_EHS_DOC_GEN) and "IA_EHS_RS_*" (Report Shipping) • BI Analysis Authorization "Z_CONV" ("*" for authorization objects not relevant for the application)

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	<i>Note: list of all applications and various environment</i> ☒ SAP PF1 (Production environment) ☒ SAP WP1 ☐ SAP PI1 ☐ BW (versions) ☐ iCare CRM ☐ CORE CRM ☐ Others <specify the name of the source>

Target Users:

As examples: Controllers / Accountants

Around 50 users. Some reports are only for the use of the EHS Admin team (Role menu EHS - Admin) others also concerned product stewards.

VERSION	DATE	MODIFIED BY	DESCRIPTION
0.01	dd.mm.yyyy	<Insert name>	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

The BW EHS application regroupes all the reports related to SAP EHS module and more particularly :

- Assessment Report
- SVHC
- Pure Sub
- Document Generation
- SDS Shipping
- SVT
- Waste management

Reports are usually used by GBU's Product Stewardship, Supply Chain Manager, Buyers...

Access

You must request to add "EHS" role :

Core Queries	Core Workbooks
	 EHS - Admin Reports  Assesment Report  BW - Assesment Report - Workbook  SVHC Inventory  SVHC Reference List - Full Report  Pure Sub with Revision Document  Shared Pure Sub  EHS - SDS Reports  Documents Generation  SDS Shipping  EHS - Substance Volume Tracking  EHS - Waste Management ZR_RCS_CA_M51 ZR_RCS_CA_M51 BW_WB_EHS_0001 BW_WBK_SVHC_020 BW_WBK_SVHC_010 ZR_RCS_CA_M51 ZR_RCS_CA_M51 ZR_RCS_CA_M45 ZR_RCS_CA_M45 ZR_RCS_CA_M45 ZR_RCS_CA_M45 ZR_RCS_CA_M48 ZR_RCS_CA_M56

Perimeter

The application in WBP covers the data from **RCS (WP1)** and **PF1 System**.

Data update

Most data is updated **Weekly** (see information in each report / workbook

3.0 Application Feature Overview

Information about the existent Workbooks and the respective BW queries.

List of Reporting Queries

Reports	Definition	Prompts	BW Workbook Query	Query Technical Name
BW – EHS - Report Shipping details (Core Query)		Mandatory: - Geographie/Zone - Created On Optional: - Source System - Sales Organization - Division - Sales Group - Sales Office - Material - Substance` - Country - Communication Type - SDS Available - Generation Variant - Authorization Group - Shipping Status	BW_QRY_CREHRS01_002	
BW – EHS - Report Shipping dashboard (Core Query)		Mandatory: - Geographie/Zone - Created On Optional: - Source System - Sales Organization - Division - Sales Group - Sales Office - Material - Substance` - Country - Communication Type - SDS Available - Generation Variant - Authorization Group - Shipping Status	BW_QRY_CREHRS01_001	
BW - EHS - Spec & reports per GBU (Core Query)		Mandatory: - Release Date Optional: - Authorization Group - Generation Date - Report Type	BW_QRY_MVEHDG01_001	
BW - EHS - Report generation (Core Query)		Mandatory: - Release Date Optional: - Authorization Group - Generation Date - Report Type - Product Status - Report Category	BW_QRY_MVEHDG01_002	
EHS - Shared Pure Sub		Optional: - CAS Number - Commercial Product - Authorization Group - Substance - Specification Type - Composition Type	BW_QRY_MVEHAD01_0001	
BW - EHS - Report generation (Broadcast)		Mandatory: - Authorization Group Optional: - Report Type - Product Status	BW_QRY_MVEHDG01_003	

EHS: Revision Documents		Optional: CAS Number	BW_QRY_MVEHAD03_0001	
BW-EHS-Shipping Report Details, 90 days (Core query)		Mandatory: - Geographie/Zone - Authorization Group Optional: - Source System - Sales Organization - Division - Sales Group - Sales Office - Material - Substance` - Country - Communication Type - SDS Available - Generation Variant - Shipping Status	BW_QRY_CREHRS01_004	
BW-EHS-Shipping Report Dashboard, 90 days, SalesOrg (Core query)		Mandatory: - Geographie/Zone - Authorization Group Optional: - Source System - Sales Organization - Sales Group - Sales Office - Country - Communication Type - Shipping Status	BW_QRY_CREHRS01_003	
BW-EHS-Shipping Report Dashbd, 30 days, SalesOffice (Core query)		Mandatory: - Geographie/Zone - Authorization Group Optional: - Source System - Sales Organization - Sales Group - Sales Office - Country - Communication Type - Shipping Status	BW_QRY_CREHRS01_005	
BW-EHS-Shipping Report Dashboard, 30 days (Core query)		Mandatory: - Geographie/Zone - Authorization Group Optional: - Source System - Sales Organization - Division - Sales Group - Sales Office - Material - Substance` - Country - Communication Type - SDS Available - Generation Variant - Shipping Status	BW_QRY_CREHRS01_006	

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.

Data Flow

[blocked URL](#)

Datasources :

- DTS_EHS_ESTDH (EHS: Report Header): extracts data from table ESTDH via the Function Module Z_WBW_DTS_EHS_ESTDH. The date of status change ZREPRDAT is obtained by look up in table DRAP.

4.2 Process Detail

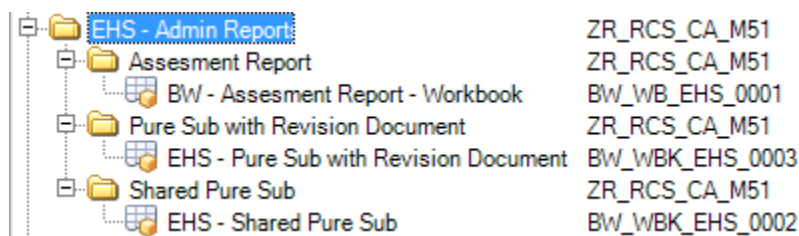
4.2.1. Report/Process Definition

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

Main queries

All reports are available via workbooks published in the Roles menu.

Role menu "EHS Reporting - ADMIN Reports" (ZR_RCS_CA_M51)



EHS - Admin Report	ZR_RCS_CA_M51
Assessment Report	ZR_RCS_CA_M51
BW - Assesment Report - Workbook	BW_WB_EHS_0001
Pure Sub with Revision Document	ZR_RCS_CA_M51
EHS - Pure Sub with Revision Document	BW_WBK_EHS_0003
Shared Pure Sub	ZR_RCS_CA_M51
EHS - Shared Pure Sub	BW_WBK_EHS_0002

- Assessment Report

When modifying data in the Pure Substances, it may have an impact on the Safety Data Sheet.

In order to simplify the communication process between the HazCom team and the SDS Writers, a report has been designed in BW that

- 1) lists in the first tab the changes made to the Pure Substances. A change can be a deletion, an insertion or an update (in which case the old and new value are displayed)
- 2) lists in the following tabs all the products that contain these Pure Substances and at which concentration AND that have a released SDS in the zone Then the Zone SDS Writer can easily identify which products may be impacted by the change and if the SDS needs to be revised accordingly. This report is only available to the Admin team, it will be sent to the SDS Writers when needed.

Tab 1:

BEx Query = BW - EHS - Assesment Report (Core Query) (BW_QRY_DBEHS001_0001)

List of EHS classes and characteristics displayed in the report are filtered using the attributes C_ATWRT__C_ASSRFLG and C_ESTCAT__C_ASSRFLG.

Tab 2:

BEx Query = BW - EHS - Product List (Core Query) (BW_QRY_DBEHS002_0001)

Exception aggregation "First value" for the ratio "Substance % in Material" for the Ref. Characteristic "C_SBGVID".

Filter on substances (C_SPEC2) : replacement path on query BW_QRY_DBEHS001_0001

- Shared Pure Sub

The aim of this report is to see which Authorization group are using which Pure Sub in their Prod com.

The report is based on the Legal and Standard compositions of the Prod com. The Pure substances in the compositions are displayed by the "general" authorization groups of the Prod com.

The ratio "NB Authorization Group" count the number of times that a distinct "General" Authorization group uses the Pure Sub.

BEx Query = EHS - Shared Pure Sub (BW_QRY_MVEHAD01_0001)

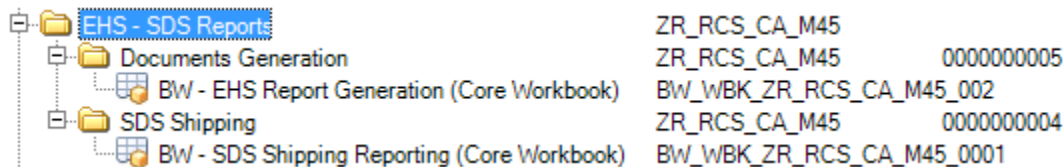
Exception Aggregation "Count for all detailed values" for the ratio "NB Authorization Group" for the Ref. Characteristic "C_EHSAUTG".

- Pure Sub with Revision Document

The aim of this report is to see which Pure Sub have a Revision document in SAP. When a substance has a revision document, some details on the document are displayed.

BEx Query = EHS: Revision Documents (BW_QRY_MVEHAD03_0001)

Role menu "EHS Reporting - SDS Reports" (ZR_RCS_CA_M45)



- EHS Report Generation

This report lists all the EHS documents with a released status: SDSs but also labels, transport documents, composition report and certificates.

The status of the product (obsolete or not) is also displayed, which is a good tool to check that we don't keep active documents for obsolete products.

The first tab is a dashboard that gives a summary and the second one provides the details of each document published: which language, created by whom and when. So it is also a good tool to check that there are no SDSs that were created more than 3 years ago.

Tab 1:

BEx Query = BW - EHS - Spec & reports per GBU (Core Query) (BW_QRY_MVEHDG01_001)

Type of reports is an attribute of the Report generation variant (C_SBGVID__C_DREPTYP).

Tab 2:

BEx Query = BW - EHS - Report generation (Core Query) (BW_QRY_MVEHDG01_002)

Ratio "Last validation" = current day - generation date.

- SDS Shipping Reporting

This report lists all the orders that triggered a successful SDS sending or an error. In case of error, the reason is clearly explained: "SDS missing", "Technical error", "Occasional customer".

It is similar to the transaction CVD1 but offers several advantages: search by GBU, easy export to Excel, additional data (order number, customer)

Another advantage of having the report in BW is that we included directly some data from the order: especially the order number and customer information. It therefore becomes very easy to check how many SDSs were sent to a particular customer in a given period of time for example.

First tab is an overview page and second tab is a detailed view, where each line corresponds to one sales order.

Tab 1:

BEx Query = BW – EHS - Report Shipping dashboard(Core Query) (BW_QRY_CREHRS01_001)

Tab 2:

BEx Query = BW – EHS - Report Shipping details(Core Query) (BW_QRY_CREHRS01_002)

Broadcast

IH report

- EHS - IH Report Weekly Broadcast (BD_EHS_001):

Technical name of object = BW_QRY_DBEHS001_0002

This query is similar to "BW - EHS - Assessment Report (Core Query)" (BW_QRY_DBEHS001_0001) (first tab of the workbook Assessment report) but restricted to some Value Assignment Types (flag c_ihflg = "X") and to the changes that occurred the previous week.

Format = XLS_XML

Variable Assignment = no filter in the broadcast settings

Scheduling = every monday at 8:00am

Destination = Sent by email to Nathalie Berne.

Documents generation

The documents generation report is split into 5 quarterly broadcasts sent by email to the product Stewards

- Quarterly SDS generation report to Product Stewards - HazCom (BD_EHS_DG_001).
- Quarterly SDS generation report to Product Stewards - SSP (BD_EHS_DG_002).
- Quarterly SDS generation report to Prod. Stewards - Polyamide (BD_EHS_DG_003).
- Quarterly SDS generation report to Prod. Stewards - Novecare (BD_EHS_DG_004).
- Quarterly SDS generation report to Prod. Stewards - Others (BD_EHS_DG_005).

Technical name of object = 7919WZ35DF7VENEQZTYBT0HBH (BW_WBK_EHS_0001).

It is an Analyser workbook similar to the Analysis workbook "EHS Report Generation", only the second tab is not based on the same query in order to filter on the reports that were generated before 2 years ago. The workbook is based on the queries "BW - EHS - Spec & reports per GBU (Core Query)" (BW_QRY_MVEHDG01_001) and "BW - EHS - Report generation (Broadcast)" (BW_QRY_MVEHDG01_003). An exception in the query BW_QRY_MVEHDG01_003 highlights the reports generated more than 3 years ago.

Format = XLS

Variable Assignment = filter on a list of Autorization groups (the list is different for each Broadcast)

Scheduling = every quarter, executed via the Process Chain PC_EHS_DG_BCAST_001.

Destination = Sent by email to EHS HazCom support and a list of product stewards (the list is different for each Broadcast)

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.