

Functional Template - MEDEXIS 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 MEDEXIS application is used by physicians locally or globally across Solvay to manage Occupational health in Solvay's site

MEDEXIS = MED ical EX posure I nformation S ystem

The application covers:

- Industrial Hygiene - Controlling working conditions, evaluation of risk exposure (chemical, physical, biological or ergonomic risks)
- Medical Monitoring - Examination and preventive advice, medical history, personal file.

Application User Profile

Describe the key User profiles that exist for the application.

Roles and access

Role Code	Role Description	Explanation
ZR_RCS_EHS_A04		Annual Report and Data Management
ZR_RCS_EHS_A06		Occupational Diseases
ZR_RCS_CA_M43		Upload Transaction (ZMX_UPLOAD)

Authorization objects

Authorization object	Explanation
Z_OH	Based on C_HEALCTR

Target Users:

Used by industrial hygienists, occupational physicians and EHS managers of Solvay Group.

Around 77 users, 9 countries (28 sites in EU and LA).

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

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

--	--	--	--

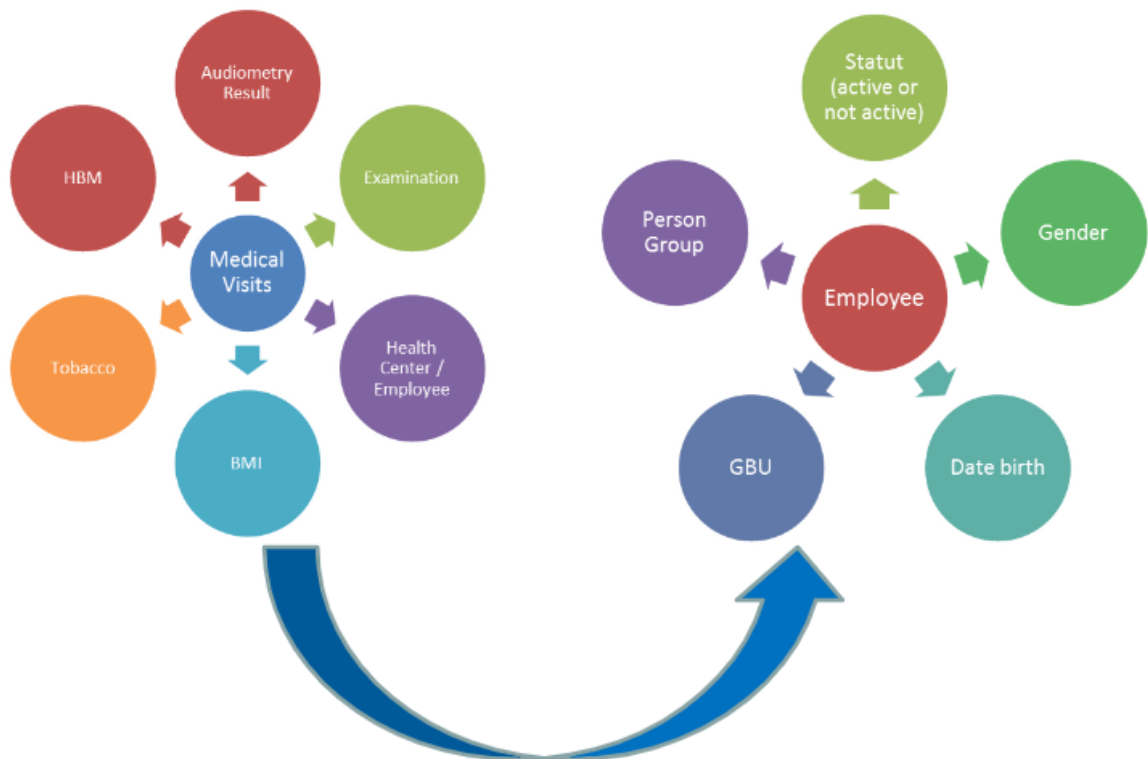
2.0 Business Process

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

The MEDEXIS report captures an assessment of each employees Occupational Health and Occupational Diseases across multiple countries/sites. This is reflected in the Annual Report, which each Solvay' site has to prepare regarding the health of their employees

- Report are available in different language
- Language of the health center (attribute of the health center)
- Accessible via Solia portal

Process Diagram



Occupational Health (OH) Annual reports are created manually for each country. There is no standardized OH Annual report for all countries but each country has its own layout.

Some indicators have to develop in order to get possibility to do prevention in each health center.

OH Annual Reports will be created using BW.

Process Documentation:

3.0 Application Feature Overview

Information about the existent Workbooks and the respective BW queries.

Reports are executed via Solia portal. Each IVIEW contains Web Application containing one or more queries (contact to modify Solia links is Jose Cervera).

The Language of the report depends on the language of the healthcenter (C_HEALTHCTR-LANGU).
This is defined in the customer exit (CMOD) of Bex variable V_HEALTHCTR_EXIT_0001.

Reports display data from current year to Current Year – 2.

List of queries

Query	Description
BW_QRY_MVEHOH01_0001	BW – EHS - Workers Examined by Medical Reason (Core Query)
BW_QRY_MVEHOH01_0003	BW – EHS - Aptitude Advice by Protocol(2.A)(Core Query)
BW_QRY_MVEHOH01_0004	BW – EHS - Aptitude Advice per Protocol(2.C)(Core Query)
BW_QRY_MVEHOH01_0005	BW – EHS - 2.2 Aptitude Advice by Medical Reason (2)(Core Q
BW_QRY_MVEHOH01_0007	BW – EHS - Maternity Protection(Core Query)
BW_QRY_MVEHOH01_0008	BW - EHS - Clinical Examination Report (French)(Core Query)
BW_QRY_MVEHOH01_0009	BW - EHS - Non periodical Examination Report(FR)(Core Query)
BW_QRY_MVEHOH01_0010	BW - EHS -Second Visit Report (France)(Core Query)
BW_QRY_MVEHOH01_0011	BW - EHS Professional conclusion per Reason(Fr)(Core Query)
BW_QRY_MVEHOH01_0012	BW - EHS -Professional Conclusion Reports (Fr)(Core Query)
BW_QRY_MVEHOH01_0013	BW - EHS -Consultations Report (France)(Core Query)
BW_QRY_MVEHOH01_0016	BW - EHS - Protocol Risk per medical Reason (Ge)(Core Query)
BW_QRY_MVEHOH01_0017	BW - EHS - Vaccinations Report (Germany)(Core Query)
BW_QRY_MVEHOH01_0018	BW - EHS - Protocols Report (Spain)(Core Query)
BW_QRY_MVEHOH01_0019	BW - EHS - Aptitude Advice Reports (Spain)(Core Query)
BW_QRY_MVEHOH01_0020	BW - EHS - Vaccination Report (Spain)(Core Query)
BW_QRY_MVEHOH01_0021	BW - EHS - Restriction Services by gender (Italy)(Core Query)
BW_QRY_MVEHOH01_0022	BW – EHS - Prolonged Medical Visits(Core Query)
BW_QRY_MVEHOH01_0023	BW – EHS -Extralegal medical examinations (Core Query)
BW_QRY_MVEHOH01_0024	BW - EHS- Clinical Examination Total (France)(Core Query)
BW_QRY_MVEHOH01_0025	BW - EHS - Non Periodical Medical Reason (Br)(Core Query)
BW_QRY_MVEHOH01_0026	BW – EHS - 2.2 Aptitude Advice by Medical Reason (1)(Core Qu
BW_QRY_MVEHOH01_0027	3.4 Maternity Protection (2)
BW_QRY_MVEHOH01_0028	BW - EHS - Medical Reason by Status(Spain)(Core Query)
BW_QRY_MVEHOH01_0029	BW - EHS - Protocol by Gender (Italy)(Core Query)
BW_QRY_MVEHOH01_0030	BW – EHS -Maternity Protection by Medical Reason(Core Query)
BW_QRY_MVEHOH01_0015	BW - EHS - Periodical Medical Reason Report (Br)(Core Query)
BW_QRYMVEHOH01_0006	BW – EHS – Vaccinations (Core Query)
BW_QRY_MVEHOH02_0001	BW – EHS –Examinations(Core Query)
BW_QRY_MVEHOH02_0002	BW - EHS - Complementary Examinations(France) (Core Query)
BW_QRY_MVEHOH02_0003	BW - EHS - Examinations per Protocol (France)(Core Query)
BW_QRY_MVEHOH02_0004	BW - EHS- Examinations Reports (Brazil)(Core Query)
BW_QRY_MVEHOH02_0005	BW - EHS - Examination per Medical Reason (Ge)(Core Query)
BW_QRY_MVEHOH02_0006	BW - EHS - Laboratory test by Medical Reason (Ge)(Core Query)
BW_QRY_MVEHOH02_0007	BW - EHS - Laboratory Reports (Brazil)(Core Query)

BW_QRY_MVEHOH02_0008	BW - EHS - Cloro Reports (spain)(Core Query)
BW_QRY_MVEHOH02_0009	BW - EHS - Respiratory Report (Spain)(Core Query)
BW_QRY_MVEHOH02_0010	BW - EHS - Audiometry Report (Spain)(Core Query)
BW_QRY_MVEHOH02_0011	BW - EHS - Vision Examination Report (Spain)(Core Query)
BW_QRY_MVEHOH02_0013	BW - EHS - IMC Report (Spain)(Core Query)
BW_QRY_MVEHOH02_0014	Laboratory report (Spain)
BW_QRY_MVEHOH02_0015	BW - EHS - Specific obligation by gender (Italy)(Core Query)
BW_QRY_MVEHOH02_0019	BW - EHS - Examination Reports (Spain)(Core Query)
BW_QRY_MVEHOH02_0020	BW - EHS - Arterial Tension Report (Spain)(Core Query)
BW_QRY_MVEHOH03_0001	BW – EHS - Occupational Diseases (Core Query)
BW_QRY_MVEHOH03_0002	BW - EHS - Diseases related to work (Fr)(Core Query)
BW_QRY_MVEHOH03_0003	BW - EHS - Notified OD Report (Spain)(Core Query)
BW_QRY_MVEHOH03_0004	BW - EHS - Recognized OD (Spain)(Core Query)
BW_QRY_MVEHOH03_0005	BW - EHS - Communes Disease Study(SP)(Core Query)
BW_QRY_MVEHOH03_0006	BW - EHS - absenteeism employee(SP) (Core Query)
BW_QRY_MVEHOH03_0007	BW - EHS - Occupational Disease by Gender (Italy)(Core Query)
BW_QRY_MVEHOH04_0003	BW - EHS - Medical Visits by Gender (Italy)(Core Query)
BW_QRY_MVEHOH4_0001	BW - EHS - Employees Effectifs Reports (France)(Core Query)
BW_QRY_MVEHOH4_0002	BW - EHS - Employee Real effectifs Report(Fr)(Core Query)
BW_QRY_MVEHOH05_0001	BMI Indicators - Current year (Core Query)
BW_QRY_MVEHOH05_0002	BW - EHS - BMI Indicators - Extended 2 years (Core Query)
BW_QRY_MVEHOH05_0002_WBP	BMI Indicators - Variant 2 (Core Query)
BW_QRY_MVEHOH05_0003	BW - EHS - BMI Indicators - Extended 2 years Grouped (Core Q
BW_QRY_MVEHOH05_0003_WBP	BMI Indicators - Variant 3 (Core Query)
BW_QRY_MVEHOH05_0004	BW - EHS Tobacco Indicator One Year (Core Query)
BW_QRY_MVEHOH05_0005	BW - EHS - Tobacco Indicator Extended 2 Year(Core Query)
BW_QRY_MVEHOH05_0006	BW - EHS - Audiometry Indicator (Core Query)
BW_QRY_MVEHOH05_0007	BMI Indicators - Variant2 (Core Query)
BW_QRY_MVEHOH05_0008	BW - EHS - HBM Indicator (Core Query)
BW_QRY_MVEHOH05_0009	BW - EHS - IPA Stat (Core Query)
BW_QRY_MVEHOH05_0013	BW - EHS - HBM Indicator HC level (Core query)
BW_QRY_MVEHOH05_0014	BW - WEB - HBM indicator Groups Level (Core Query)
BW_QRY_MVEHOD01_0001	Occupational Diseases of last 3 years (Core Query)
BW_QRY_MVEHOD01_0002	Occupational Diseases - Yearly Report by status (Core query)
BW_QRY_MVEHOD01_0003	Occ. Disease of last 10 years due to Agent (Core Query)
BW_QRY_MVEHOD01_0004	Occupational Diseases by Entity - Quaterly (Core Query)
BW_QRY_MVEHOD01_0005	Occupational Diseases of last 10 years - Entity (Core Query)
BW_QRY_MVEHOD01_0006	Occupational Diseases - Anomalies (Core Query)
BW_QRY_MVEHOD01_0007	Sustainable Development Report (Core Query)
BW_QRY_MVEHOD02_0002	Occupational Diseases - Yearly Report by status (Core query)

- [Occupational Diseases of last 3 years](#)
- [Annual reports](#)
- [List of Annual Reports](#)
- [Data Management](#)
- [Audiometry \(WHO\) report example](#)

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.

- Employee can have only one health center during the same time (T7EHS00_PERHAL)
- Employee can have one or more GBU during the same time (PA9907 -ZZENG)
- Employee can have one or more segment

during the same time (HRP1001)

GBU

Employee

Health center

SEG

Data Flow:

-
- Legend:**
- ← Lookup
 - transformation
 - DSO (Data Source Object)
 - Cube
 - MultiProvider
 - DSO to Look-up
 - Duplicates Entries
- Central Interface:** MVEHO05 connects to the SOLIA Portal.
- Four Main Data Flows:**
- HBM test:** DAEHOH06 (HBM test) → DAEHOH20 (Biological Values) → DBEHOH06 (HBM) → CREHOH11 (Cube).
 - Examination:** DAEHOH05 (Examination) → DAEHOH17 (Audiometry Result) → DBEHOH04 (Audiometry) → CREHOH09 (Cube).
 - Examination:** DAEHOH05 (Examination) → DAEHOH12 (BMI Result) → DBEHOH03 (Examination result) → CREHOH10 (Cube).
 - Health center assignment:** DAEHOH10 (Health center assignment) → DAEHOH05 (Personnel Assignment) → DBEHOH05 (Personnel Assignment) → CREHOH07 (Cube).
- Intermediate Data Objects and Relationships:**
- DAEHOH19 (Workarea Assignment):** Receives input from DAEHOH20 and DAEHOH14 (GBU Assignment).
 - DAEHOH14 (GBU Assignment):** Receives input from DAEHOH05 and DAEHOH17.
 - DAEHOH12 (BMI Result):** Receives input from DAEHOH05 and DAEHOH16 (Tobacco Result).
 - DAEHOH16 (Tobacco Result):** Receives input from DAEHOH05 and DAEHOH14.
 - DAEHOH14 (GBU Assignment):** Receives input from DAEHOH05 and DAEHOH17.
 - DAEHOH19 (Workarea Assignment):** Receives input from DAEHOH20 and DAEHOH14.

- Number of worker assigned to the health center
- Number of worker assigned to the GBU
- Number of worker assigned to the WorkArea

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.