User Help Guide for EAM Solutions by Utopia for S/4HANA

Release EAM 9.2

Document History

The following tables provide an overview of the most important document changes and approvals.

Version	Date	Description	Name
1.0	13-11-2018	Updates from EAM 9.2	Ramesha Kalammanavar, Anil Basavaraj; Priyaranjan Dwibedi; Sireesha Cheemakurthi; Shabana Begum; Manjunath Gowda, Mani

Approval History

Version	Date	Description	Name
1.0	13-11-2018	Approved version	Lyle Snyder

Table of Contents

EAM Solutions by Utopia

EAM 9.2 Solutions by Utopia can be used to request, approve, and execute changes to the following Enterprise Asset Management objects as well as replicate those changes to decentralized systems by means of ALE and IDocs.

The following objects are discussed in this section:

- **uEQUIP for MDG**: Utopia Equipment Master for Master Data Governance
- **uFLOC for MDG**: Utopia Functional Location Master for Master Data Governance
- **uBOM for MDG**: Utopia Bill of Materials Master for Master Data Governance
    - **uMBOM for MDG**: Utopia Material BOM for Master Data Governance
    - **uFLBOM for MDG**: Utopia Functional Location BOM for Master Data Governance
    - **uEQBOM for MDG**: Utopia Equipment BOM for Master Data Governance
    - **uWBSBOM for MDG**: Utopia WBS BOM for Master Data Governance
- **uMSRPTS for MDG**: Utopia Measuring Point for Master Data Governance
- **uWRKCTR for MDG**: Utopia Work Center for Master Data Governance
- **uTSKLST for MDG**: Utopia Task List for Master Data Governance
    - **uGNTSKLST for MDG**: Utopia General Task List for Master Data Governance
    - **uEQTSKLST for MDG**: Utopia Equipment Task List for Master Data Governance
    - **uFLTSKLST for MDG**: Utopia Functional Location Task List for Master Data Governance
- **uMNTPLN for MDG**: Utopia Maintenance Plan for Master Data Governance
- **uOBJLNK for MDG**: Utopia Object Links for Master Data Governance
- **uOBJNTW for MDG**: Utopia Object Networks for Master Data Governance
- **uISU for MDG**: Utopia IS Utilities for Master Data Governance

MDG Features

The management of master data usually follows the following pattern:

- You can influence the flow of this process by selecting a workflow. The available workflow templates can be found under Workflow Templates.
- You create a Change Request (see Creation of a Change Request).
- The Change Request undergoes an approval procedure. You can use the function processing of a Change Request.
- You execute the master data change (see Master Data Processing)
- You replicate the changes (see Data Replication)
- Simple field mappings with field transformations and complex transformations (SMT Mapping/Extensibility)
- Source and Target Value mapping (Key Mapping)
- Data Import Framework (DIF)
- Data Replication Framework (DRF)
- Context Based Adaptation (CBA) for UI

Additional Enhancements

The following additional enhancements are discussed in this section:

- User/System Status
- Multi/Mixed CR Type
- Dismantle/Move Equipment

- Classification (Class and Characteristics Functionality)
- Creation and Replication of Delete/Inactive status
- Data Import Framework (DIF)
- Search
- Enhanced (additional) Search Attributes
- Enhanced Search Functionality – ALV
- Copy from Search Results
- Equipment
- Functional Location
- Bill of Material
- Work Center
- Task List (General, Equipment, and Functional Location)
- Maintenance Plan/Item
- Measuring Point
- Object Links
- Object Networks
- Data Replication Framework (DRF)
- File Upload and File Download
- Address Maintenance
- GEF (Geographical Enablement Framework) Integration
- AIN (Asset Intelligence Network) Integration
- DFPS (Defense Force and Public Security) Attributes
- Fleet Management System Attributes
- Configuration Control Attributes
- Material Serialization
- IS-U Industry Solution

User/System Status

The technical objects and the complete processing with notification and order are linked to SAP's general status management. You should distinguish between the system status and the user status. For certain business processes, the system sets the system status internally and automatically as a part of its general status management. In addition to the status of the predefined system, you can define user status that fulfill your requirements to extend or enhance the system status.

Multi/Mixed CR Type

This new Change Request type allows creating or changing multiple/mixed records of different objects through MDG in one session as opposed to separate Change Requests per entity type. As a restriction in the create case, the objects cannot be connected to each other. They can be linked in the change case. For example, it is not possible to create a Functional Location and to create an Equipment that references this location at the same time.

Dismantle/Move Equipment

This functionality allows for dismantling Equipment from a Functional Location, and if necessary, to install at a different location. It also allows for removing an assignment of Equipment from a Superordinate Equipment, and if necessary, reassigning to a different Superordinate Equipment.

In case of Dismantle and Installation Data Transfer (Inheritance) is supported.

Classification (Class and Characteristics Functionality)

- CRUD (Create/Read/Update/Delete) operation is supported with Change Request processing. These are dependent attributes of Equipment, Functional Location, Measuring Point, Task List, Object Links and Networks.
- An Equipment, Functional Location, and Measuring Point can be classified using the class and valuation functionality. Multiple classes with Equipment Class Type can be assigned to an Equipment.
- Once classes are assigned to the Equipment, Functional Location, or Measuring Point, values belonging to Characteristics can be assigned to the Equipment, Functional Location, or Measuring Point. By default, the UI loads all mandatory and Characteristics with default values and allows the user to Add and Delete. Required Class Assignment and assigned values to the Equipment Functional Location/Measuring Points, Task List, Object Links and Networks.
- The UI only displays the Characteristics that are assigned values, instead of showing all the characteristics of the assigned Classes like ECC does. It helps the user to maintain the required Characteristics and refines the search.
- Once a Class is assigned to Equipment, Functional Location, Measuring Point, Task List, Object Links and Networks the mandatory Characteristics and Characteristics with default values are automatically populated.
- Business Rules provided in the OOTB (Out of the Box) solution help in validating all the ERP Business Rules (as available in the backend ERP functionality).
- Provision for deletion of Class Assignments, Business Rules makes sure that all the corresponding values are also deleted.
- The Class Assignment is not deleted in the target SAP system under a hub scenario when deleting all Classes. A CLFMAS IDoc does not get triggered in the hub as there are no Classes assigned. A work around it is to create a placeholder Class with no Characteristics and assign that.

Creation and Replication of Delete/Inactive status

- Deletion status set or reset is supported on Equipment, Functional Location, Task List, Maintenance Plan / Item, Material Bill of Material, Functional Location Bill of Material, Equipment Bill of Material, WBS Bill of Material Work Center, Object Links and Networks.
- Active / Inactive status is supported on Equipment, Functional Location, Task List, Measuring Point, Maintenance Plan/Item, MRO Bill of Material.
- The replication of the status happens through IDocs and the status are accordingly adjusted in the backend ECC system, thus maintaining synchronization of the status.

Data Import Framework (DIF)

- Data Import menus are only available in the Data Exchange menu for the Specialist and Steward roles
- The DIF feature can be used to load the data into the system along with the Classification
- For the Data Creation with the internal number range, the upload of Classification and LAM Attribute data should be performed in the subsequent run of DIF
- Data Import functionality is available to create multiple records using xml and csv files with Key Mapping or without Key Mapping. Multiple options which includes manual and governance processes are available.
- While performing Data Import, the applicable fields for each unique Object Type / Category may be entered in the input file. You cannot dynamically restrict in the Framework, so the applicable field values are provided based on the Object Type / Category in the Input files that are being loaded.
    - Examples – Work Center Category, BOM Item Category, Equipment Category

Search

There are two types of search. The default search is Database (DB) Search and an optional one is SAP HANA Search. In both the search types you can search with various search criteria and search operators. DB Search is limited to a defined list of attributes to query, whereas SAP HANA Search supports dynamic attribute selection and duplicate check based on SAP HANA Search. SAP HANA also supports fuzzy search and full-text search.

***Note*:** TREX Search is not supported.

Enhanced (additional) Search Attributes

Additional Search Criteria attributes have been added for each object to enhance the DB Search capabilities. The additional attributes allow users more options to refine the criteria used when performing a Search.

Enhanced Search Functionality – ALV

Users can save information about column structure, sort criteria, filter conditions, various display options, and so on, in an unlimited number of views. This implies that the users can always display the ALV output with their preferred properties. However, these views are only available to the user who created them. The views are not visible to other users. This form of modification of the ALV output is referred to as 'Personalization'.

Copy from Search Results

Create a new object with the Copy functionality by using an existing object. In the Search Results screen, select an existing object and click Copy. The values that were present in the existing object will be automatically copied into a new Change Request for that object.

***Note*:** In the pop-up window after clicking Copy.

- Equipment Master, Maintenance Plan, Task List, Object Links and Networks
  - Internal Number: The field should be left blank. A temporary key will be provided in the new Change Request generated.
  - External Number: Provide the new external number.
- Functional Location: The field should be left blank and enter the new Label in the generated Change Request.
- Material Bill of Material: Provide the new Material, Alternative BOM (must be = 1), BOM Usage, and Plant.
- Equipment Bill of Material: Provide the new Equipment, BOM Usage, and Plant.
- Functional Location Bill of Material: Provide the new Functional Location, BOM Usage, and Plant.
- WBS Bill of Material: Provide the new Material, WBS Element, BOM Usage, and Plant.
- Measuring Point: The field should be left blank. A temporary key will be provided in the new generated Change Request.
- Work Center: Provide the new Work Center, Plant, and Category.

Equipment

- Basic Data, General Data, System-User Status, Manufacturer Data, Location Data, Address, Organization Account Assignment, Organization – Responsibilities, Structure Data (Install and Dismantle), Serialization Data, Stock Information Display, Configuration Data, Sales and Distribution Data, Warranty Details, Sub Equipment Details, Measuring Points Display,

Partners, Permit Assignment, Permit Long Text Assignment at Equipment level, Production Resource Tools attributes, Data Origin Indicators, Class, Characteristics and Values, Linear Asset Management (LAM) Attributes and Characteristics are supported
- Document Create and Assignment
- Document Multilingual Text and Long Text are supported
- Multilingual short and Long Texts are supported
- Data Transfer (Inheritance) is supported
- Configuration Control – Maintenance Object
- Configuration Control – IPPE Access
- Defense and Public Security (DFPS)
- Fleet Management systems,
- Address Maintenance is supported
- AIN Data

Functional Location

- Basic Data, Functional Location with reference to a Reference Functional Location, default values based on Superior Functional Location, General Data, System-User Status, General-Reference Data, General – Manufacturer Data, Location Data, Address, Organization – Account Assignment, Organization – Responsibilities, Structure Data, Partners, Warranty Details (Master Warranty Assignment), Sales and Distribution (for Customer Location), Data Origin Indicators, Class, Characteristics and Values, Linear Asset Management (LAM) Attributes and Characteristics are supported
- Document Create and Assignment
- Document Multilingual Text and Long Text are supported
- Multilingual short and Long Texts are supported
- Maintain attribute FLOC_REF and leave attribute FUNCLOC blank when performing a file upload to create new Functional Locations.
- When Alternate Label is “Active”, the temporary key for the record in the Reporting tab is displayed until the CR is approved. The established Label is displayed in Reporting after the approval.
- Data Transfer (Inheritance) is supported.
- Address maintenance is supported.

Bill of Materials (MBOM, EQBOM, FLBOM and WBSBOM)

- Header Data
    - Quantity Data
    - BOM Text and Long Text
    - Alternative Text (only MBOM)
- BOM Item Overview
    - Item data
    - Quantity data
    - Class data (only MBOM)
    - Variable size data
    - Purchasing data
    - MRP data
    - Document data
    - BOM Sub-Items
- Document Create and Assignment
- Document Multilingual Text and Long Text

Work Center

- Default Value fields, Normal Capacity, Pooled Capacity Category and Capacity, Capacity Category which has assigned in Capacity List, Capacity Category and Capacity if it is a Pooled Capacity, Costing Data fields, Technology fields are supported
- Multilingual Short and Long Texts are supported
- Mark for Deletion set/reset functionality is available through Search results and Mass Change. In the search screen, you can select a Work Center and click Mark for Deletion button in the toolbar. You can create a separate Change Request for Deletion set or reset. Save, Submit and Approve the Change Request.
- Setting and resetting the lock indicator option is available in the Change Work Center. When you try to change an existing Work Center, all the fields should be enabled along with lock indicator flag
- For Mass Change of Work Center, the applicable fields for each Work Center category only may be entered. You cannot dynamically restrict the Mass Change UI, based on data input. You should provide the applicable Field values based on the Work Center Category.
- Based on the Work Center Category, if any field is entered which does not belong to that category, an error is displayed. Hence, it is suggested to do Mass Change based on Work Center category values.
- For File Upload or performing Data Import with Work Center, the applicable fields for each Work Center category only may be entered in the input file. You cannot dynamically restrict in the Framework, so the applicable Field values should be provided based on the Work Center Category in the Input files that are being loaded.
- Based on the Work Center Category, if any field is entered which does not belong to that category, it displays an error.
- Multilingual short and Long texts are supported

Task List (General, Equipment, and Functional Location)

- Task List with Internal and External number range Group and Counter, with reference to Profile – User defaults, Multiple Counter, Strategy, QM Data – Inspection Point, Operations with Long Text, Standard Text Key, User Field key, Qualification, Sub-Operation, Summarize standard values, Sub-Operation usage dates, Maintenance Packages, Components, Relationships, Production Resources/Tools (PRT), Service Packages, Inspection Characteristics, Class, Characteristics and Values are supported
- Document Create and Assignment
- Document Multilingual Text and Long Text are supported
- Fully created Equipment and functional location can be used to create Equipment Task List and Functional Task List. MDG solution will validate and allow to create further Task List.
- Provision for deletion flags allows to mark task list as deleted one
- The search UI has been introduced to support all task list types. This also included cross copy functionality to copy one type of Task List to a different type of Task List.

Maintenance Plan/Item

- Single Cycle, Performance-based Preventive, Time-based Preventive, Multiple Counter, Multiple Cycles Maintenance Plans reference to Cycle Sets are supported
- Maintenance Item during Maintenance Plan Creation, Multiple Items (Create and Assign Maintenance Items), Maintenance Plan with Object List Items (Functional Location, Equipment, Assembly, Material and Serial Number) and Linear Asset Management (LAM) Attributes are supported
- Can assign an existing Maintenance Item which hasn’t assigned to any Maintenance Plan
- Provision for deletion flags allows to mark task list as deleted one
- Planning data is derived from reference object

Measuring Point

- Assignment of a Measuring Point Category, with Counter, without Counter, Basic Data, General Data, Target Limits and Counter Data, Additional Data – Measurement Range Limits, General Class Assignment and Characteristics, and Linear Asset Management (LAM) Attributes are supported
- Document Create and Assignment
- Document Multilingual Text and Long Text are supported
- While downloading LAM attributes, it also downloads Measuring Points other than LAM category where the reference object is of LAM category.

Object Links

- Basic Data, System-User status, Objects Linked (supported for both Equipment and Functional Location), General Class Assignment and Characteristics, and Linear Asset Management (LAM) Attributes (Linear Reference Pattern and Geographical Information are in scope) are supported
- Document Create and Assignment
- Document Multilingual Text and Long Text are supported
- Multilingual Short and Long Texts are supported

Object Networks

- Network ID, Network Data (Network Group and Network Type), Network Linear Data, Object Links Creation within Network, Object Links Assignment within Network, De-Link Existing Object Links from Network, Links set or reset for Deletion are supported
- Document Create and Assignment
- Document Multilingual Text and Long Text are supported
- Multilingual Short and Long Texts are supported

Data Transfer (Inheritance) and Data Origin

- Data Transfer (Inheritance) and displaying and changing Data Origin Indicator are supported

Data Replication Framework (DRF)

- Data Replication Framework functionality is available to replicate the data to target SAP systems through manual replication, DRFOUT, and auto replication.
- Manual Data Replication menus are only available in the Data Exchange menu for the Specialist and Steward roles.

File Upload and File Download

- File Upload does not validate duplicate entries of the entities as standard framework does not support the same. A runtime error will occur under this circumstance.
- Object Links: During File Upload, Attribute KANXT should be used to update Object Links description. Field TXTMI should not be used.
- Object Networks: During File Upload, Attribute NETXT should be used to update Object Network description. Field TXTMI should not be used.
- Maintenance Plan / Item: During File Upload, Attribute WPTXT should be used to update Maintenance Plan description. Field TXTMI should not be used.
- While uploading a file, or performing Data Import, only the applicable fields for each unique object type / category may be entered in the input file. You cannot dynamically restrict the

fields in the Framework, so the applicable field values should be provided based on the object type /category in the Input files that are being loaded.
    - Examples – Work Center Category, BOM Item Category, Equipment Category

Address Maintenance

This functionality is available for Functional Location and Equipment object.

- CRU (Create/Read/Update) operation is supported with Change Request processing for Equipment and Functional Location objects.
- Supports Name, Search term, Street Address, PO Box Address, Communication and comments.
- Supports Communication types like E-mail, Fax, URL and Telephone.
- Address can be added but cannot be deleted from Equipment or Functional Location.
- IDoc ADRMAS is used for Address data transfer to target system.
- File Upload for Address creation and Address change for an existing Equipment or, Functional Location is supported. Use the following steps for File upload:
    - Upload Equipment File – Create CR.
    - Upload Address File with 00000 in address number in the same CR .
    - Activate the CR.
    - Download the EQ and Address Files.
    - Upload the EQ File – Create CR.
    - Upload the Address File in the same CR.
    - Upload the Email Address/Telephone /URL/FAX Files with the new Address number from the downloaded EQ/Address File - to the same CR.
    - Activate the CR.

Geographical Enablement Framework (GEF) Integration

This functionality is available for two objects viz. Equipment and Functional Location.

- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing for Equipment and Functional Location objects.
- Geometry Explorer has the ability now to display both Active and Staging Geometry Data.
- Geometry Editor and Geometry Explorer have the ability now to search for both the Active and Staging Data.
- In Geometry Explorer, Staging and Active data can be viewed as separate layers i.e. the planned and the already existing locations can be viewed separately.
- Integrated to Asset Information Workbench (AIW).
- Supports File Upload and File Download for Geometry Data.
- Supports Geometry Data Import through Data Import Framework (DIF).
- Geometry Data can be replicated through Data Replication Framework (DRF).

Asset Intelligence Network (AIN) Integration

This functionality is available for Equipment

- You would be able to connect to SAP cloud server AIN and get particular details related to Equipment like Basic Data, Class and characteristics data and document data based on model ID and add them to Equipment CR by synching.
- After fetching and adding data to CR it works similar to Equipment. CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing for Equipment.
- Search, File upload, File download, DRF and DIF are not supported for AIN Data

Defense Force and Public Security (DFPS) Attributes

This functionality is available for Equipment when DFPS Business function (EA-DFP) is activated.

- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing for Equipment for DFPS attributes.
- Integrated to Asset Information Workbench (AIW).
- Supports File Upload and File Download for DFPS Data.
- Search via attributes Tail No./ID, Model ID/WS, Site, Remark is supported
- Copy functionality is not supported and process is in sync with SAP ECC.
- Supports DFPS Data Import through Data Import Framework (DIF).
- DFPS Data can be replicated through Data Replication Framework (DRF).

Fleet Management System Attributes

This functionality is available for Equipment when object type of equipment is fleet enabled.

- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing for Equipment for Fleet attributes.
- Integrated to Asset Information Workbench (AIW).
- Copy functionality is supported.
- Search via attribute License Number is supported
- Supports File Upload and File Download for Fleet Data.
- Supports Fleet Data Import through Data Import Framework (DIF).
- Fleet Data can be replicated through Data Replication Framework (DRF).

Configuration Control Attributes

This functionality is available for Equipment with the relevant attributes (configuration data, functional identifier, Forced installation, Forced dismantling and iPPE GUID).

- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing for configuration control attributes.
- Integrated to Asset Information Workbench (AIW).
- Copy functionality is supported
- Search, File upload, File download, DRF and DIF are supported for configuration control Data
- We would be able to connect to target system and get particular details related to Equipment like iPPE access node information

Material Serialization

Governance of Equipment created through Serial number profile settings.

Equipment created automatically through serial number profile-procedures set as “Serials with equipment" can be governed through Utopia MDG EAM.

The following functionalities are supported:

- Support Co-Deployment and Hub System landscapes
- Support data enrichment of equipment data depends the process in which equipment gets created and the flag settings as noted below.

- Maintain configuration table /UGI3/EQU_SERCON through T-Code SM30

Origin Document	Document Type Description	Indicator
DELIVERY	Delivery documents	Set as desired
SALES	Sales Documents	Set as desired
MATERIAL	Material Master	Set as desired
MATMOVE	Material Movement	Set as desired
PURORDER	Purchase Order	Set as desired

- Based on the flags set in the configuration table above, the relevant fields listed below will be enriched in the hub.

Origin	Document Type	Mapped Fields
DELIVERY	**Delivery Documents**	**Equipment Fields**
	VBAK-VKORG	ITOB-VKORG
	VBAK-VTWEG	ITOB-VTWEG
	VBAK-SPART	ITOB-SPART
	VBAK-VKBUR	ITOB-VKBUR
	VBAK-VKGRP	ITOB-VKGRP
SALES	**Sales Documents**	**Equipment Fields**
	VBAK-VKORG	ITOB-VKORG
	VBAK-VTWEG	ITOB-VTWEG
	VBAK-SPART	ITOB-SPART
	VBAK-VKBUR	ITOB-VKBUR
	VBAK-VKGRP	ITOB-VKGRP
MATERIAL	**Material Master**	**Equipment Fields**
	MARA-MFRPN	ITOB-HERST
	MARA-MFRNR	ITOB-MAPAR
MATMOVE	**Goods Movement**	**Equipment Fields**
	MSEG-LIFNR	ITOB-ELIEF
	MSEG-BLDAT	ITOB-AULDT
PURORDER	**Purchase Order**	**Equipment Fields**
	MSEG-LIFNR	ITOB-ELIEF
	EKPO-NETPR	ITOB-ANSWT
	MSEG-BLDAT	ITOB-AULDT

- Governance supported for equipment created during goods movement, Asset, Inspection lot, Production order, Inventory count, Sales order, Sales delivery business processes and manual serial number creation.

Equipment Install/Dismantle/Exchange (uiE4N)

You can perform dismantle and exchange via Utopia MDG EAM equipment search functionality for Equipment with assigned material and serial number.

Governance of Equipment movements are supported for both Co-deployment and Hub system landscapes. The following functionalities associated with Install, Dismantle and Exchange are supported:

- Equipment installation with Goods Movement
- Equipment dismantling with Goods Movement
- Equipment exchange within technical Object Structure
- Install dismantle and exchange supported for Split valuated material
- Simulation of configuration Checks if equipment activated for configuration control
- Automatic Notifications generation for the above actions

IS-U Industry Solution

The following topics are covered:

Connection Object

- Connection Object header
- System - User Status
- Address
- Class Assignment
- Characteristics Assignment
- Attributes
- Superior Functional Location
- Multilingual text
- Notes to Meter Reader
- Functional Location
- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing.
- Search, DIF and DRF are supported.
- Mark for Deletion process is carried out from EAM Functional Location.

Device Location

- Device Location Header
- System - User Status
- Address
- Class Assignment
- Characteristics Assignment
- Location
- Multilingual text
- Notes to Meter Reader
- Functional Location
- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing.
- Search, DIF and DRF are supported.
- Mark for Deletion process is carried out from EAM Functional Location.

Device

- Device Location Header
- General Data
- ISU Details
- System - User Status
- Multilingual text
- Long Text
- Partner
- Permit – Permit Long text

- PRT Information
- Address
- Class Assignment
- Characteristics Assignment
- CRUD (Create/Read/Update/Delete) operations are supported with Change Request processing.
- Search, DIF and DRF are supported.

Master Data Consolidation and Mass Processing for EAM Solutions

As part of this release, Master Data Consolidation and Mass Processing (MDC) for EAM Solutions has been extended for the following EAM objects:

- Equipment
- Functional Location
- Material BOM

This comes with the following Fiori applications separately for each of the three EAM objects:

- Import Data for Consolidation – MBOM
- Create Consolidation
- Manage Imports for Consolidation
- Manage Consolidation
- Start Mass Processing
- Manage Mass Processing
- Master App for Consolidation (Common application for all the EAM objects)

Import related applications can be used for Mass creation and Consolidation of data from multiple source files. Master data gets created in the backend system either though the MDG change requests or direct activation of cleansing cases based on the settings.

This data can further be subjected to Mass Change Scenarios for insert, update and delete operations.

The Matching and Best Record Calculations helps in bundling the data into separate match groups based on the matching rules configured. The match groups can be approved or rejected. Based on the user decision, it is decided whether the record has to be considered for an update or create or rejection.

Customers can configure the process templates having multiple steps using the adapters provided based on the business requirement. Each of these adapters brings out a certain functionality to the process. Below are the types of adapters that have been provided for use.

- Validation
- Update
- Standardization (Key Mapping, Value Mapping, BRF+)
- Matching
- Edit
- Filter and Remove
- Best Record Calculations
- Activation
- Replication

The process models have been provided with all the important data dictionary structures which hold the master data for a business object. The process model is linked to the BRFplus application generated and the validation BAdi in MDG to bring out additional validations based on business rules.

Once the data is activated, Data Replication framework of MDG is used to replicate the active data to all the connected source systems.

***Note*:** All the functionalities described above are subject to Release / Restriction notes dispatched along with the other technical documents for this release.

Linear Asset Management (LAM) Functionalities

The following topics are discussed in the section:

LAM Attributes

- CRUD operation is supported with Change Request processing. These are the dependent attributes of Equipment, Functional Location, Object Links, Object Networks and Network attributes.
- LAM attributes can be assigned to Measuring Point if the category is of type Linear and the reference object is also of Linear category.
- LAM attributes can be assigned to Maintenance Item, if reference object (Equipment or Functional Location) assigned is of Linear category
- LAM attributes can be assigned to Object Links, if linked objects (Equipment or Functional Location) assigned is of Linear category provided the Object Links is associated with an Object Networks
- LAM attributes can be assigned to Object Networks
- LAM attributes can be assigned to Object Networks attribute provided the network attribute category is of type Linear

Current LAM Functionality

Current LAM functionality supports the following attributes:

- LRP ID
- Start Point
- End Point
- Length
- Length UOM
- Start Marker
- End Marker
- Distance between Marker and Start Point
- Distance between Marker and End Point
- Offset1
    - Type of Offset1
    - UOM Offset1
    - Offset 1
- Offset2

- Type of Offset2
- UOM Offset2
- Offset 2

Derivations for all the above fields are performed as they normally happen in ECC as part of OOTB solution. LAM attributes can be added and deleted using single Create or Delete button provided in the UI.

GIS Information

- CRUD operation is supported with Change Request processing. These are dependent attributes of Equipment, Functional Location, and Object Links
- Geo Graphical information system attributes
  - Start Latitude
  - Start Longitude
  - End Latitude
  - End Longitude
  - Time Zone

If customers prefer not to use / hide in UI, customizing can be performed on the Utopia delivered UI. Customers can add GIS information with LAM attribute. LAM attributes and GIS fields will work together. All derivations and validations will work as per backend SAP ERP. Additional validations and derivations can be added using BAdI/Enhancements and not offered as part of OOTB.

Customers can implement BAdI: EAML_LFE_SCREEN_CUST to have GIS fields visible in ERP Linear Data Screen. This Business Add-In (BAdI) is used in the *Technical Objects* (PM-EQM) component to add a customer-specific screen to the Linear data screen used in the detailed view of technical objects, notifications, notification items, (simplified) maintenance orders and operations, (overall completion) confirmations, measuring points, and measurement documents.

The above fields perform the derivations that happen in Backend ERP as part of out-of-the-box solution.

LAM Classification

- CRUD operation is supported with Change Request processing. These are dependent attributes of Equipment and Functional Location classification.
- LAM Classification can be added once Class and Characteristic Values are added to the Equipment or Functional Location, provided the Equipment or Functional Location Category is of type Linear (L).
- LAM Classification can be added and deleted from Equipment or Functional Location.
- General Value deletions will trigger LAM classification deletion. For example, once the General Value is deleted, LAM classification also gets deleted by itself.
- LAM Classification supports following attributes:
  - Characteristics Description
  - Characteristics Value
  - Start Point
  - End Point
  - Length
  - UoM

Note: The LAM Classification is not part of the Measuring Point, Object Link, and Object Network objects. The above fields are subject to all validations and derivations that happen in standard backend ERP and are part of out-of-the-box solution.

POWL

POWL is referred as Personal Object Work List or Personal Object Work Entity Repository List (POWER List). It is a Web Dynpro based portal window that allows user to access different applications specific to his assigned roles. POWL provides an easy-to-use interactive governance platform with query driven work list that contains object from user's work area.

POWL for EAM

As a business user, POWL provides a general overview of the work environment and all related business objects. POWL serves as a central point for accessing, managing, and tracking your object-related tasks.

POWL supports the following features:

- Query based Work List
- Processing of objects linked with different Change Request (Multiple Change Request Processing)

Multiple Change Request - All objects that belong to different Change Requests should be in the same status for processing of multiple objects. Otherwise, the system displays an error message "Work items does not belong to the same action".

The following functionalities are supported through POWL for each work items:

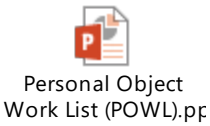
- Finalize Processing
- Send for Revision
- Approve
- Reject
- Resubmit
- Withdraw
- Forward
- Resubmit-On and End-Resubmission
- Assign to Me and Cancel Assignment
- Maintain Substitution

List of EAM Objects supported by POWL:

- Functional Location
- Equipment
- Bill of Materials (Material, Equipment, Functional Location, Work Breakdown Structure)
- Measuring Point
- Work Center
- Task List (General, Equipment, Functional Location)
- Maintenance Plan/Item
- Object Links
- Object Networks

Note

Refer to How-To Guide for more information on POWL for EAM features.



***Note*:** All the functionalities described above are subject to Release/Restriction notes dispatched along with the other technical documents for this release.