

Perfect data is perfectly possible with Utopia.



User Help Guide for Utopia Solutions for MDG™ on S4/HANA

Release 730

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Utopia EAM Solutions for MDG™

Utopia EAM Solutions for MDG™ can be used to request, approve, and execute changes to the following Enterprise Asset Management objects, as of Version 7.3, 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
- **uMROBOM™ for MDG:** Utopia MRO Bill of Material 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
- **uMNTPLN™ for MDG:** Utopia Maintenance Plan for Master Data Governance

In addition to standard functionalities described, this release provides the following enhancements for uEQUIP™ and uFLOC™ in the following sections:

- Classification - Class and Characteristics Functionality
- Creation and replication of delete status
- Linear Asset Management (LAM) Classification
- Linear Asset Management (LAM) attributes with GIS information

MDG Features

The management of master data usually follows the pattern below:

- 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](#))
- DIF ([Data Import Framework](#))
- DRF ([Data Replication Framework](#))
- Context Based Adaptation for UI

Additional Enhancements

The following additional enhancements are discussed in this section:

- User/System Status
- Enhanced (additional) Search Attributes

Enhanced (additional) Search Attributes

Additional search criteria attributes have been added for each object to [enhance the search capabilities](#). The [additional attributes](#) allow users more options to refine the criteria used when performing a search.

- Enhanced Search Functionality – ALV
- Multi/Mixed CR Type
- Dismantle/Move Equipment

- Classification (Class and Characteristics Functionality)
- Creation and replication of delete/inactive status
- Data Import Framework
- Search
- Copy from Search Results
- Task List (General Task List, Equipment Task List and Functional Location Task List)
- Work Center
- Maintenance Plan
- Functional Location
- Data Replication Framework
- Derivation for MPMI
- File Upload - All

User/System Status

The technical objects and the complete processing with notification and order are linked to SAP's general status management. Here, 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.

Enhanced (additional) Search Attributes

Additional search criteria attributes have been added for each object to enhance the 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'.

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.

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 (FLOC) and Measuring Point (MSPOINT).
- An equipment, a 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 or Functional Location or Measuring Point, values belonging to characteristics can be assigned to the Equipment, FLOC, and MSPOINT. 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.
- 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, 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 ECC Business Rules (as available in the SAP ECC functionality)
- Provision for deletion of class assignments, business rules makes sure that all the corresponding values are also deleted.
- The class assignment will not be 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

- Functionality has been added in this version to permit set/reset of the deletion status on Equipment Master, Functional Location, MRO BOM, Maintenance Plan, Measuring Point, and Work Center.
- Functionality has been added in this version to permit set/reset of the Active/Inactive status on Maintenance Plan and Measuring Point.
- 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 and, key mapping and value mapping. Multiple options which includes manual and governance process are present.
- 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 DB and an optional one is HANA Search. In both the search types you can search and with various search criteria and search operators. DB search is limited to a defined list of attributes to query whereas HANA search supports dynamic attribute selection.

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.

1. Equipment Master, Maintenance Plan, and Task List
 - 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.
2. Functional Location: The field should be left blank and enter the new Label in the generated Change Request.
3. Material BOM: Provide the new Material, Alternative BOM (must be = 1), BOM Usage, and Plant.
4. Measuring Point: The field should be left blank. A temporary key will be provided in the new generated Change Request.
5. Work Center: Provide the new Work Center and Plant.

Task List (General Task List, Equipment Task List and Functional Location Task List)

- CRUD (Create/Read/Update/Delete) operation is supported with Change request processing
- Every change request processed based on workflow approval. After all approvals, Task list group will be created in ECC
- For each task list type, standalone user interfaces are available
- In every task list, you can create task list with operations, internal and external processing functions
- In every task list UI, separate forms and overview screens are available as per ECC UI standards.
- 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.
- For Non MDG functions example. Components separate user interfaces.
- As of UGI730-SP01, the operation level 2 search results view has been removed

Work Center

Mark for deletion

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. A new screen is displayed with all the values disabled except deletion flag indicator. You can save, submit and approve the same.

Setting Lock Indicator

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.

Mass Change

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.

File Upload and Data Import Framework

Work Center: While uploading a file, 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.

Maintenance Plan

During File Upload, Attribute WPTXT should be used to update Maintenance Plan description. Field TXTMI is not supported.

Functional Location

- Maintain attribute FLOC_REF and leave attribute FUNCLOC blank when performing a file upload to create new Functional Locations.
- When Alternate Label is “Active”, you will only see the temporary key for the record in the Reporting tab until the CR is approved. The established Label will be displayed in Reporting after the approval.

Data Replication Framework

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

Derivation for MPMI

- Planning data is always derived from reference object in all the scenarios i.e. in Single Object Processing, File Upload and DIF.

File Upload - All

- 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.

- 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

Linear Asset Management (LAM) Functionalities

The following topics are discussed in the section:

- LAM Attributes
- Current LAM Functionality
- GIS Information
- LAM Classification

LAM Attributes

- CRUD operation is supported with Change request processing. These are the dependent attributes of Equipment and Floc
- 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.

Current LAM Functionality

Current LAM functionality supports the following attributes:

1. LRP ID
2. Start Point
3. End Point
4. Length
5. Length UOM
6. Start Marker
7. End Marker
8. Distance between Marker and Start Point
9. Distance between Marker and End Point
10. 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

1. CRUD operation is supported with Change Request processing. These are dependent attributes of Equipment and Floc
2. Geo Graphical information system in Utopia SAP MDG EAM720 supports the following attributes.

- Start Latitude
- Start Longitude
- End Latitude
- End Longitude
- Time Zone

The attributes are provided as standard solution in Utopia MDG EAM 720. 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 ECC. 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 SAP ECC [Backend].

The above fields perform the derivations that happen in ECC as part of OOTB solution.

LAM Classification

- CRUD operation is supported with Change request processing. These are dependent attributes of Equipment and FLOC classification.
- LAM classification can be added once Class and Values are added to Equipment or FLOC, Provided the Equipment or FLOC category is of type Linear (L).
- LAM classification can be added and Deleted from Equipment or Floc.
- 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 MSPOINT object. The above fields are subject to all validations and derivations that happen in standard SAP ECC and are part of OOTB solution.

Note: All the functionalities described above are subject to release / restriction notes circulated along with the other technical documents for this release.