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High Level Scope Document for SAP Asset Information Workbench by Utopia for S/4HANA

Release AIW 1909

Document History

The following table provides an overview of the most important document changes and approvals.

Version	Date	Description	Name
1.0	04-10-2019	Initial version	Mani Balakrishnan

Approval History

Version	Date	Description	Name
1.0	04-10-2019	Initial version	Lyle Snyder

Table of Contents

Introduction

This document contains the functionalities that are covered as part of SAP Asset Information Workbench 1909 (AIW 1909) by Utopia. This document also contains the functionality that are considered as out of scope.

Scope Overview

SAP AIW 1909 by Utopia provides an easy-to-use interactive governance platform for monitoring, tracking and managing structured and unstructured asset data among multiple systems-of-record in the digital core.

Enables hierarchy-based asset data visualization featuring drag-and-drop modification with enriched search and user experience (UX) utilizing NetWeaver Business Client.

The associated objects are hierarchically available along with the Functional Location if the objects are maintained in the system with proper integration. The hierarchy built-in FLOC can be displayed in the Search for Hierarchy as well as in the MOCR create hierarchy along with other objects.

AIW 1909 replicates fundamental features of UGI EAM 1909.

Based on SAP GUI Views

The following topics are discussed in this section:

- Functional Location
- Equipment
- Measuring Point
- Work Center
- Task List (General, Functional Location and Equipment)
- Maintenance Plan/Item
- Bill of Materials (MBOM, EQBOM, FLBOM, WBSBOM)
- Object Links
- Object Networks

Refer to UGI EAM 1909 High Level Scope document for more details.

Functional Location

Create Functional Location (List Editing) is possible by using the transaction code (t-code) IL04. Change Functional Location (List Editing) is possible by using the t-code IL05. In addition, the Equipment installed to FLOC can be displayed in the structure list with t-code IH01 or IH12.

The Equipment structure list also gives the FLOC structure with t-code IH03 or IH04. In the case of Equipment structure, the input is Equipment. Not all the Fields/buttons (additional functionalities) compared with t-code IL01 and IL02 are covered as a part of scope.

Hierarchal data transfer (inheritance and data origin) features are also supported in create and change scenarios.

Equipment

Create Equipment (List Editing) is possible by using the t-code IE10. Change Equipment (List Editing) is possible by using the t-code IE05.

The installed Equipment to FLOC can be displayed in the FLOC structure list with t-code IH01 or t-code IH12. Here, the input is FLOC.

Equipment structure list gives all the Equipment along with FLOC with t-code IH03 or t-code IH04. Not all the fields/buttons (additional functionalities) compared with t-code IE01 and IE02 are covered as part of scope.

Hierarchal data transfer (inheritance and data origin) features are also supported in create and change scenarios.

Measuring Point

The Measuring Point cannot bring the FLOC or Equipment structure. The measuring points list editing feature available by using the t-code IK08. Not all the fields/buttons (additional functionalities) compared with t-codes IK01 and IK02 are covered as part of scope.

Work Center

All the Work Centers can be listed by using t-code CR05. Not all the Fields/buttons (additional functionalities) compared with t-codes IR01 and IR02 are covered as part of scope.

Task List (General, Functional Location and Equipment)

The Task List editing (change) can be done using t-code IA08. Functionalities like multiple counters, maintenance strategy, classification, qualification, sub-operations, operation relationship, PRT, inspection characteristics and service packages are supported. Not all the Fields/buttons (additional functionalities) compared with General Task List with t-codes IA05, IA06, Equipment Task List with t-codes IA01, IA02 and Functional Location Task List with t-codes IA11, IA12 are covered as part of scope.

Maintenance Plan/Item

The Maintenance Plan list editing (change) can be done using t-code IP15. The Maintenance Item list editing (change) is listed by using t-code IP17. Not all the fields/buttons (additional functionalities) compared with t-codes IP01, IP41 and IP02 are covered as part of scope.

The following type of Maintenance Plans are supported:
- Single Cycle Maintenance Plans
- Performance-based Preventive Maintenance Plans
- Time based Preventive Maintenance Plans
- Multiple Counter Maintenance Plans
- Multiple Cycles Maintenance Plans reference to Cycle Sets

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

The following Bill of Materials topics are covered as part of scope.

- Material BOM (MBOM)
- Equipment BOM (EQBOM)
- Functional Location BOM (FLBOM)
- Work Breakdown Structure BOM (WBSBOM)

The Material/Equipment/Functional location structure list gives all the respective BOM details, if available with t-code IH05/IH03 and IH01. The multilevel BOM is displayed by using the t-code CS12.

The BOM structure is displayed in the FLOC structure list with t-code IH01 or t-code IH12 if the material BOM is assigned through the field construction type in the structure tab. In this case, the input is the FLOC.

The BOM structure is displayed in the Equipment structure list with t-code IH03 or t-code IH04 if the material BOM is assigned through the field construction type in the structure tab. In this case, the input is the Equipment. Not all the fields/buttons (additional functionalities) compared with MBOM t-code CS01 and CS02, EQBOM t-code IB01 and IB02, FLBOM t-code IB11 and IB12, and WBSBOM t-code CS71 and CS72 are covered as part of scope.

Standalone MBOM structure cannot be displayed, and it can be shown in the construction type with FLOC and Equipment only. WBS BOM cannot be displayed in AIW Hierarchy.

Object Links

The following Object Links topics are covered as part of scope.

- Create Object Link using t-codes IN01, IN04, and IN07
- Change Object Link using t-codes IN02, IN05 and IN08 is supported
- Hierarchical display of Object Link is supported
- Object Link with category "Functional Location" is displayed under "from", "to" and "link object" Functional Locations
- Object Link with category "Equipment" is displayed under "from", "to" and "link object" Equipment

Object Networks

The following Object Networks topics are covered as part of scope.

- Create Network ID using t-code OINI is supported
- For LAM enabled systems Create and Change of Network and creation, assignment and modification of object links within network using t-codes IN21 and IN22 is supported
- Create and change of network attributes using t-codes IN31 and IN32 is supported

AIW Functionalities

The AIW 1909 functionality is available for Create/Change Mixed Multi-Object Change Request (MOCR). With this change request, you can process all master objects (for example. Equipment Master, Functional Location, all supported BOM types, Measuring Point, Work Center, Task Lists, Maintenance Plans) in a single change request.

In AIW 1909, Hierarchy can be built based on the FLOC entered in the system. It shows the current MOCR hierarchy and as well as Superior Functional Locations/Superior Equipment's that has been used for new Master data objects and their parent hierarchy. The feature like Drag and Drop helps making the planned hierarchy. Easy drag and drop shows the temporary objects of current MOCR with special sign "In Process" clock sign in right side column of the new master data.

The Hierarchy has personalization option for certain fields. For example, the user can display the fields in hierarchy and rearrange the columns using the personalization option.

The displayed column results can be sorted in ascending and descending order. In addition, user can filter the values for columns.

The following AIW 1909 functionalities are explained in this section:

- AIW Create Hierarchy
    - o View the Hierarchy by entering the FLOC Node in Hierarchy view
    - o Expand Hierarchy
    - o Collapse Hierarchy
    - o Full Hierarchy
    - o Create EAM Objects
    - o Copy-Create EAM Objects
    - o Change EAM Objects
    - o Find and Replace within an object
    - o Search
    - o Export to Spreadsheet
    - o Personalize
    - o Error handling

- AIW Search Hierarchy
    - o Search all EAM Objects
    - o View the Hierarchy by selecting the FLOC/Equipment.
    - o Add to Existing MOCR/Create new MOCR
    - o Cross Search across EAM Objects
    - o Multiple hierarchy display
    - o Hierarchy Display Levels
    - o Expand Hierarchy
    - o Collapse Hierarchy
    - o MBOM and Task list objects are displayed in collapsed mode as default.
    - o Filter Objects in Hierarchy display
    - o Copy Hierarchy Create
    - o Copy Hierarchy Create with different Maintenance Plant
    - o Mass Processing
    - o Mass Processing with Maintenance Plant change
    - o Export to Spreadsheet
    - o Personalize
    - o Error Handling

The related details for the object are available in the corresponding object button are listed in the following list:

- Functional Location
- Equipment
- Measuring Point
- Work Center
- Task List (GNTL, EQTL and FLTL)
- Maintenance Plan/Item
- Bill of Materials (MBOM, EQBOM, FLBOM and WBSBOM)
- Object Links
- Object Networks

Functional Location

The following functionalities are specified for the object:

- Create Hierarchy is built-in FLOC and can be displayed in the Search for Hierarchy
- Create Hierarchy with base as FLOC

- Copy Hierarchy with base as FLOC
- Drag and Drop in Hierarchy view
- Multiple FLOCs can be created or changed along with other objects like Equipment, Measuring Point, Work Center, Maintenance Plan and Bill of Materials.
- Assigned objects can be viewed in the Hierarchy
- Search in AIW staging area and in the active area
- Find and Replace options
- Search option
- Copy with Reference
- Error handling
- Remove Row

Equipment

The following functionalities are specified for the object:

- Create multiple Equipment along with FLOC which can be brought under the Hierarchy
- Copy Hierarchy along with FLOC
- Change multiple Equipment
- Drag and Drop in Hierarchy view
- Find and Replace options
- Search in AIW staging area and in the active area
- Search option
- Copy with Reference
- Error Handling
- Remove Row

Measuring Point

The following functionalities are specified for the object:

- Create multiple Measuring Points with FLOC and Equipment which can be brought under the Hierarchy.
- Change multiple Measuring Points
- Drag and Drop of Staging data in Hierarchy view
- Search in AIW staging area and in the active area
- Reading transfer with linking and de-linking
- Find and Replace option available
- Search option available
- Copy with Reference
- Active/Inactive indicator
- Error Handling
- Remove Row

Work Center

The following functionalities are specified for the object:

- Work Center is an attribute to other objects like FLOC, Equipment, Task List, Maintenance Plan, so the similar hierarchy is not applicable or displayed for Work Center.
- Create multiple Work Centers
- Change multiple Work Centers

- Find and Replace option
- Search in AIW staging area and in the active area
- Search option
- Copy with Reference
- Error handling
- Remove Row

Task List (General, Functional Location and Equipment)

The following functionalities are specified for the object:

- The FLOC Task List and Equipment Task List can be brought under the Hierarchy
- Create Task List (Multiple)
- Change Task List (Multiple)
- Find and Replace option
- Search in AIW staging area and in the active area
- Search option
- Copy with Reference and cross copy
- Error Handling
- Remove Row

Maintenance Plan/Item

The following functionalities are specified for the object:

- The Maintenance Plans can be brought under the Hierarchy based on the Reference objects (Equipment and FLOC) assigned
- Create Maintenance Plan
- Change Maintenance Plan
- Find and Replace option
- Search in AIW staging area and in the active area
- Search option
- Copy with Reference Maintenance Plan
- Error handling
- Active/Inactive Indicator
- Remove Row

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

The following functionalities are specified for the object:

- The Material BOM can be brought under the Hierarchy, based on the assignment to the technical object through the construction type field.
- Equipment BOM and Functional location BOM should display under respective technical object
- Create BOM (MBOM, EQBOM, FLBOM and WBSBOM)
- Change BOMs
- Drag and Drop in Hierarchy view
- Find and Replace option
- Search in AIW staging area and in the active area
- Search option
- Error handling

- Copy with Reference, and cross copy supported from MBOM to EQBOM/FLBOM/WBSBOM
- Remove Row

Object Links

The following functionalities are specified for the object:

- The Object Link can be brought under the Hierarchy based on the Reference objects (Equipment and FLOC) assigned.
- Create Object Link
- Change Object Link
- Find and Replace option
- Search in AIW staging area and in the active area
- Search option
- Copy with Reference
- Error handling
- Remove Row

Object Networks

The following functionalities are specified for the object:

- Object Network is an attribute to Object Link, so the similar hierarchy is not applicable or displayed for Object Network. But if Object Network is assigned to Object Link it will get added to MOCR during copy hierarchy or mass change.
- Create Object Network
- Change Object Network
- Find and Replace option
- Search in AIW staging area and in the active area
- Search option
- Copy with Reference
- Error handling
- Remove Row

Integration Services for AIW

Rest API is provided to support integration with third-party applications. This API supports CURD (Create, Update, Read, Delete) operations for MOCR (Multiple Object Change Request) Scenarios in MDG.

Scope in detail for AIW

The detailed scope for the following objects in AIW 1909 are described in this section:

- Functional Location
- Equipment
- Measuring Point
- Work Center
- Task List (General, Functional Location and Equipment)
- Maintenance Plan

- [Bill of Materials (MBOM, EQBOM, FLBOM and WBSBOM)](#)
- [Object Links](#)
- [Object Networks](#)

Functional Location

The following topics are discussed in the section:

Create Hierarchy

- Should maintain mandatory fields and Basic data fields
- Maintain Structure along with Equipment, Measuring Point, Bill of Materials, Task List and Maintenance Plan

View Hierarchy

- View the complete hierarchical structure
- Hierarchy shows the temporary objects of current MOCR with special sign such as Clock sign in right-hand side "pending CR" column for the new master data.

Search Hierarchy

- New Hierarchy is based on selecting existing Hierarchy and renaming the FLOC.
- New FLOC, Equipment, Measuring Point, Task List except General Task List and Maintenance Plan are created
- Change BOM attributes.
- Copy-Create Hierarchy with different Maintenance plant.
- After copy, it is possible to add extra new objects, change/remove objects in the Change Request
- Deleted or inactive objects do not show in the hierarchy list

The following list of fields are applicable for inheritance on copy hierarchy pop-up screen when user clicks on Create MOCR. Once a user includes Copy hierarchy data into MOCR, fields can be changed by inheritance.

SL No	Description of Field	Remarks	Field Applicable for Inheritance
1	Category	Equipment/Floc Category	Yes
2	Maintenance Plant	Maintenance plant	Yes
3	Main Work Center	Main work center for maintenance tasks	Yes

Create Multiple Functional Location

- Maintain Basic Data
- Create Functional Location with reference to a Reference Functional Location
- Default values based on Superior Functional Location
- Maintain General Data
- Maintain System - User Status
- Maintain General - Reference Data
- Maintain General - Manufacturer Data
- Maintain Location Data
- Maintain Organization - Account Assignment
- Maintain Organization - Responsibilities
- Maintain Structure Data
- Maintain Partners
- Maintain Warranty Details (Master Warranty Assignment)
- Maintain Sales and Distribution (for Customer Location)
- Maintain Class Assignments
- Maintain Characteristics Assignment
- Maintain Linear Asset Management (LAM) Attributes and Characteristics (Optional)
  - Depending upon Functional Location Category, relevant sections/components will be displayed in the MDG UI. A Linear Object Functional Location Category will enable the LAM Attributes and Characteristics. The sections are otherwise hidden.
- Maintain Data Origin Indicators
- Maintain Floc with Alternative labels.
- Maintain Address maintenance with International versions.

Change Multiple Functional Location

- Change Basic Data
- Copy Reference Functional Location
- Default values based on Superior Functional Location
- Change General Data
- Change System - User Status
- Change General - Reference Data
- Change General - Manufacturer Data
- Change Location Data
- Change Organization - Account Assignment
- Change Organization - Responsibilities
- Change Structure Data
- Change Partners
- Change Warranty Details (Master Warranty Assignment)
- Change Sales and Distribution (for Customer Location)
- Change Class Assignments
- Change Characteristics Assignment
- Change Linear Asset Management (LAM) Attributes and Characteristics (Optional)
  - Depending upon Functional Location Category, relevant sections/components will be displayed in the MDG UI. A Linear Object Functional Location Category will enable the LAM Attributes and Characteristics. The sections are otherwise hidden.

- Change Data Origin Indicators
- Maintain Floc with Alternative labels.
- Maintain Address maintenance with International versions.
- Changing Maintenance Plant.

Copy Functionality

- Create new Functional Location with copy functionality using the existing Functional Location.
- Number of objects are copied based on the number entered in the field "Number of objects"

Data Transfer (Inheritance) and Data Origin

AIW 1909 supports Data Transfer (Inheritance) and Data Origin like Backend ERP.

- Data Transfer (for more information refer https://help.sap.com/erp2005_ehp_05/helpdata/EN/67/79bb53707db44ce10000000a174cb4/frameset.htm)
- Displaying and Changing Data Origin (for more information refer https://help.sap.com/erp2005_ehp_05/helpdata/EN/67/79bb53707db44ce10000000a174cb4/frameset.htm)

The list of fields applicable for inheritance are listed in the following table:

SL no	Process (Technical Objects Tab)	Field Description	Functional Location
1	General Data	Authorization group	Yes
2	Location Data	Maint.Plant	Yes
		Location	Yes
		Room	Yes
		Plant section	Yes
		PP work ctr	Yes
		ABC indic.	Yes
3	Address	Address maintenance with International version.	Yes
4	Organization	Company Code	Yes
		Business Area	Yes
		Asset	Yes
		Cost Center	Yes
		CO Area	Yes
		WBS Element	Yes
		StandgOrder	Yes
		Settlement Order	Yes
		Planning plant	Yes
		Planner group	Yes
		Work Center	Yes
		Catalog profile	Yes
5	Structure	EquipInstall.	Yes

Mass Processing

- Changing multiple FLOC possible along with other objects.

- Changing the Maintenance Plant for the Hierarchy within the company code and controlling area.

Drag and Drop in Hierarchy view

Drag and Drop feature is available in the Hierarchy tab. In case of wrong assignment of the object, user can correct the same via clicking on the "Description" hyperlink of the relevant object.

Equipment

The following topics are discussed in this section:

- Create Hierarchy
- Copy Hierarchy
- Create Multiple Equipment
- Change Multiple Equipment
- Copy Functionality
- Data Transfer (Inheritance) and Data Origin
- Mass Processing
- Drag and Drop in Hierarchy view

Create Hierarchy

- Should maintain mandatory fields and Basic data fields
- Equipment hierarchy is based on the Equipment entered and assigned to it in the Super Equipment
- Create hierarchy with FLOC if assigned to the Equipment
- Maintain Structure along with FLOC, Measuring Point, Bill of Materials, Task List, Maintenance Plan, and Object Links.

Copy Hierarchy

- New Hierarchy is based on the new FLOC entered
- New FLOC, Equipment, Measuring Point, Bill of Materials, Task List, Maintenance Plan, and Object Links are created
- Create new objects if required
- Deleted or inactive objects that does not show in the hierarchy list

Create Multiple Equipment

- Maintain Basic Data
- Maintain General Data
- Maintain System - User Status
- Maintain General - Manufacturer Data
- Maintain Location Data
- Maintain Organization Account Assignment
- Maintain Organization - Responsibilities
- Maintain Structure Data (Install and Dismantle)
- Maintain Serialization Data
- Display Stock Information
- Maintain Configuration Data
- Maintain Sales and Distribution Data

- Maintain Warranty Details
- Maintain Multilingual Description and Long Text
- Maintain Partners
- Permit Assignment
- Maintain Permit Long Text assignment at Equipment Level
- Maintain Document Create and assignment
- Maintain Document Description Multilingual Text and Long Text
- Maintain Supporting Production Resource Tools attributes
- Maintain Class
- Maintain Characteristics and Values
- Maintain Linear Asset Management (LAM) Attributes and Characteristics (Optional)
  - Depending upon Equipment Category, relevant sections/components will be displayed in the MDG UI. A Linear Object Equipment Category will enable the LAM Attributes and Characteristics. The sections are otherwise hidden.
- Maintain Data Origin Indicators
- Maintain Address maintenance with International versions.

Change Multiple Equipment

- Change Basic Data
- Change General Data
- Change/Display System - User Status
- Change General - Manufacturer Data
- Change Location Data
- Change Organization Account Assignment
- Change Organization - Responsibilities
- Change Structure Data (Install and Dismantle)
- Change Serialization Data
- Display Stock Information
- Change Configuration Data
- Change Sales and Distribution Data
- Change Warranty Details
- Display Sub Equipment details
- Display Measuring Points
- Change Multilingual Equipment Description and Long Text
- Change Partners
- Permit Assignment
- Change Permit Long Text assignment at Equipment Level.
- Change Document Create and Assignment
- Change Document Description Multilingual Text and Long Text
- Change Supporting Production Resource Tools attributes
- Change Class
- Change Characteristics and Values
- Change Linear Asset Management (LAM) Attributes and Characteristics (Optional)
  - Depending upon Equipment Category, the mentioned Sections/Components will be displayed in the MDG UI. A Linear Object Equipment Category will enable the LAM Attributes and Characteristics. The sections are otherwise hidden.
- Change Data Origin Indicators.
- Maintain Address maintenance with International versions.

- Changing Maintenance Plant.

Copy Functionality

- Create new Equipment with copy functionality by using existing Equipment.
- Number of objects are copied based on the number entered in the field "Number of objects".

Data Transfer (Inheritance) and Data Origin

AIW 1909 supports Data Transfer (Inheritance) and Data Origin like Backend ERP.
- Data Transfer (for more information refer https://help.sap.com/erp2005_ehp_05/helpdata/EN/67/79bb53707db44ce10000000a174cb4/frameset.htm)

- Displaying and Changing Data Origin (for more information refer https://help.sap.com/erp2005_ehp_05/helpdata/EN/67/79bb53707db44ce10000000a174cb4/frameset.htm)

SL no	Process (Technical Objects Tab)	Field Description	Equipment
1	General Data	Authorization group	Yes
2	Location Data	Maint.Plant	Yes
		Location	Yes
		Room	Yes
		Plant section	Yes
		PP work ctr	Yes
		ABC indic.	Yes
		Sort Field	Yes
3	Address	Address maintenance with International version.	yes
4	Organization	Company Code	Yes
		Business Area	Yes
		Cost Center	Yes
		CO Area	Yes
		WBS Element	Yes
		StandgOrder	Yes
		Settlement Order	Yes
		Planning plant	Yes
		Planner group	Yes
		Work Center	Yes
		Catalog profile	Yes

Mass Processing

Changing multiple Equipment possible along with other objects.

Drag and Drop in Hierarchy view

Drag and Drop feature is available in the Hierarchy tab. In case of wrong assignment of the object, user can correct the same via clicking on the "Description" hyperlink of the relevant object.

Measuring Point

In AIW, Measuring Point (MSPT) supports create and change of multiple Measuring Points along with FLOC and Equipment. The Measuring Points builds the Hierarchy along with FLOC and Equipment. Almost all fields are included in AIW 1909 - MSPT as compared to t-code IK01.

The following topics are discussed in the section:

- Create Hierarchy
- Copy Hierarchy
- Create Equipment Measuring Point (Multiple)
- Create Functional Location Measuring Point (Multiple)
- Change Equipment Measuring Point
- Change Functional Location Measuring Point
- Copy Functionality
- Active/Inactive functionality
- Mass Processing
- Drag and Drop in Hierarchy view

Create Hierarchy

- Should maintain mandatory fields and Basic data fields
- Measuring Point hierarchy based on the FLOC assigned to it
- Maintain Structure along with FLOC, Equipment, Bill of Materials, Task List and Maintenance Plan

Copy Hierarchy

- New Hierarchy is based on the new FLOC entered
- New FLOC, Equipment, Measuring Point, Bill of Materials, Task List and Maintenance Plan are created
- Create new objects if required

Create Equipment Measuring Point (Multiple)

- Assignment of a Measuring Point Category
- With Counter
- Without Counter
- Maintain Basic Data
- Maintain General Data
- Maintain Target Limits and Counter Data
- Maintain Additional Data - Measurement Range Limits
- Maintain Reading Transfer Linking
- Maintain General Class Assignment and Characteristics
- Maintain Linear Asset Management (LAM) Attributes (optional)

- Depending upon Measuring Point Category, the relevant sections/components will be displayed in the MDG UI. A Linear Object Measuring Point Category will enable the LAM Attributes. The section is otherwise hidden.

Create Functional Location Measuring Point (Multiple)

- Assignment of a Measuring Point Category
- With Counter
- Without Counter
- Maintain Basic Data
- Maintain General Data
- Maintain Target Limits and Counter Data
- Maintain Additional Data - Measurement Range Limits
- Maintain Reading Transfer Linking
- Maintain General Class Assignment and Characteristics
- Maintain Linear Asset Management (LAM) Attributes (Optional)
- Depending upon Measuring Point Category, the relevant sections/components will be displayed in the MDG UI. A Linear Object Measuring Point Category will enable the LAM Attributes. The section is otherwise hidden

Change Equipment Measuring Point

- Change the values of informative Characteristics
- Change Basic Data
- Change General Data
- Change Target Limits and Counter Data
- Change Additional Data - Measurement Range Limits
- Maintain Reading Transfer Linking and De-Linking
- Change General Class Assignment and Characteristics
- Change Linear Asset Management (LAM) Attributes (optional)
- Depending upon Measuring Point Category, the relevant sections/components will be displayed in the MDG UI. A Linear Object Measuring Point Category will enable the LAM Attributes. The section is otherwise hidden.

Change Functional Location Measuring Point

- Changing the values of informative Characteristics
- Change Basic Data
- Change General Data
- Change Target Limits and Counter Data
- Change Additional Data - Measurement Range Limits
- Maintain Reading Transfer Linking and De-Linking
- Change General Class Assignment and Characteristics
- Change Linear Asset Management (LAM) Attributes (optional)
  - Depending upon Measuring Point Category, the relevant sections/components will be displayed in the MDG UI. A Linear Object Measuring Point Category will enable the LAM Attributes. The section is otherwise hidden.

Copy Functionality

Create new Measuring Point with copy functionality by using existing Measuring Point as reference.

Active/Inactive Functionality

Active/inactive functionality is available through Mass process.

Mass Processing

Changing multiple Measuring Points possible along with other objects.

Drag and Drop in Hierarchy view

- Drag and Drop feature is available in the Hierarchy
- Drag and Drop is supported for Staging data

Work Center

Based on Work Center Category, you can configure the Work Center Screen group and field selection by using t-code OPFA.

The following topics are discussed in the section:
- Create Work Center
- Change Work Center
- Copy Functionality
- Mass Processing

Create Work Center

- Maintain Default Value fields
- Maintain Normal Capacity
- Maintain Pooled Capacity Category and Capacity
- Maintain Capacity Category which has assigned in Capacity List
- Maintain Capacity Category and Capacity if it is a Pooled Capacity
- Maintain Costing Data fields
- Maintain Technology fields
- Maintain Class Assignments
- Maintain Characteristics Assignment

Change Work Center

- Change Basic Data fields
- Change Default Value fields
- Change Normal Capacity
- Change Pooled Capacity Category and Capacity
- Change Capacity Category which has assigned in Capacity List
- Change Capacity Category and Capacity if it is a Pooled Capacity
- Change Costing Data fields
- Change Technology fields
- Maintain Class Assignments
- Maintain Characteristics Assignment

Copy Functionality

Create new Work Center with copy functionality by using existing Work Center

Mass Processing

Changing multiple Work Centers possible along with other objects

Task List (General, Functional Location and Equipment)

The Hierarchy can be built for FLOC Task List and Equipment Task List.

The following topics are discussed in the section:

- Create Task List
- Change Task List
- Copy Functionality
- Mass Processing

Create Task List

- Create Task List with Internal and External number range Group and Counter
- Create Task List with reference to Profile – User defaults
- Create Task List with Multiple Counter
- Create Task List with Long Text
- Create Task List with Strategy
- Create Task List with QM Data - Inspection Point
- Create Task List with Classification
- Create Task List Operations
- Create Task List Operation with Long Text
- Create Task List Operation with Standard Text Key
- Create Task List Operation with User Field key
- Create Task List Operation with Qualification
- Create Task List Operation with Sub-Operation
- Create Task List Operation with Summarize standard values
- Create Task List Operation with Sub-Operation usage dates
- Create Task List Operation with Maintenance Packages
- Create Task List Operation with Components
- Create Task List Operation with Relationships
- Create Task List Operation with PRT
- Create Task List Operation with Service Packages
- Create Task List Operation with Inspection Characteristic

Change of Task List

- Change Task List Header details
- Change Task List with Multiple Group Counter
- Change Task List with Long Text
- Change Task List with Strategy
- Change Task List with QM Data - Inspection Point
- Change Task List with Classification

- Change Task List Operations
- Change Task List Operation with Long Text
- Change Task List Operation with Standard Text Key
- Change Task List Operation with User Field key
- Change Task List Operation with Qualification
- Change Task List Operation with Sub-Operation
- Change Task List Operation with Summarize standard values
- Change Task List Operation with Sub-Operation usage dates
- Change Task List Operation with Maintenance Packages
- Change Task List Operation with Components
- Change Task List Operation with Relationships
- Change Task List Operation with PRT
- Change Task List Operation with Service Packages
- Change Task List Operation with Inspection Characteristic

Copy Functionality

Create new Task List with copy functionality by using existing Task List (Cross Copy).

Mass Processing

Changing multiple Task Lists possible along with other objects.

Maintenance Plan

The Maintenance Plans can be brought under the Hierarchy based on the assigned Reference object.

The following topics are discussed in the section:

- Create Maintenance Plan
- Change Maintenance Plan
- Copy Functionality
- Mass Processing

Create Maintenance Plan

- Create Single Cycle Maintenance Plans
- Create Performance-based Preventive Maintenance Plans
- Create Time based Preventive Maintenance Plans
- Create Multiple Counter Maintenance Plans
- Create Multiple Cycles Maintenance Plans reference to Cycle Sets
- Create Maintenance Item during Maintenance Plan creation
- Create Multiple Items (Create and Assign Maintenance Items)
- Create Maintenance Plan with Object List Items (Functional Location, Equipment, Assembly, Material and Serial Number)
- Create Maintenance Plan with Linear Asset Management (LAM) Attributes (Optional)
- Depending upon Reference Object's (Equipment or Functional Location) Category, relevant sections/components will be displayed in the MDG UI. A Linear Object Equipment or Functional Location Category will enable the LAM Attributes. The section is otherwise hidden.

Change Maintenance Plan

- Change Single Cycle Maintenance Plans
- Change Performance-based Preventive Maintenance Plans
- Change Time based Preventive Maintenance Plans
- Change Multiple Counter Maintenance Plans
- Change Multiple Cycles Maintenance Plans reference to Cycle Sets
- Change Maintenance Item during Maintenance Plan creation
- Change Multiple Items (Change and assign Maintenance Items)
- Change Maintenance Plan with Object List Items (Functional Location, Equipment, Assembly, Material and Serial Number)
- Change Maintenance Plan with Linear Asset Management (LAM) Attributes (Optional)
- Depending upon Reference Object's (Equipment or Functional Location) Category, relevant sections/components will be displayed in the MDG UI. A Linear Object Equipment or Functional Location Category will enable the LAM Attributes. The section is otherwise hidden

Copy Functionality

- Create new Maintenance Plan with copy functionality by using existing Maintenance Plan as reference. The Maintenance Plan is assigned to FLOC or Equipment.
- Maintenance Item data is copied to new maintenance items. New items have temporary number (% as prefix) and final number is created on CR approval.

Mass Processing

Changing multiple Maintenance Plans possible along with other objects

Bill of Materials

The following topics are discussed in the section:

- Create BOM Header and Components
- Change BOM Header and Components
- Copy Functionality
- Mass Processing
- Drag and Drop in Hierarchy view

Create BOM Header and Components

- Maintain Header Data
- Maintain Quantity Data
- Maintain Item Overview
- Maintain BOM Text and Long Text
- Maintain Alternative Text for MBOM
- Sub-Items
- Maintain BOM Item Overview
- Maintain BOM Item Details
- Maintain Alternative BOM (Material BOM).

Change BOM Header and Components

- Change Header Data

- Change Quantity Data
- Change Item Overview
- Change BOM Text and Long Text
- Change Alternative Text for MBOM
- Sub-Items
- Change BOM Item Overview
- Change BOM Item Details

Object Links

The following topics are discussed in the section:

- Create Object Links
- Change Object Links
- Copy Functionality
- Mass Processing
- Drag and Drop in Hierarchy view

Create Object Links

- Maintain Basic Data
- Maintain System - User Status
- Maintain Objects Linked (supported for both Equipment and Functional Location)
- Maintain Multilingual Short Text and Long Text
- Classification Assignment (Assign Class, Characteristic and Values)
- Maintain Document Create and Assignment
- Maintain Document Description Multilingual Text and Long Text
- Maintain Linear Asset Management (LAM) Attributes (Linear Reference Pattern and Geographical Information are in scope) (optional)

Change Object Links

- Change Basic Data
- Change System - User Status
- Change Objects Linked (supported for both Equipment and Functional Location)
- Change Multi-Lingual Short Text and Long Text
- Classification assignment (Assign Class, Characteristic and Values)
- Change Document Create and Assignment
- Change Document Description Multilingual Text and Long Text
- Change Linear Asset Management (LAM) Attributes (Linear Reference Pattern and Geographical Information are in scope) (optional)

Copy Functionality

- Create new Object Link with copy functionality by using existing Object Link
- Number of objects are copied based on the number entered in the field "Number of objects"
- The hierarchy is displayed with respect to FLOC/Equipment to which Object Link is assigned.

Mass Processing

Changing multiple Object Links is possible along with other objects.

Drag and Drop in Hierarchy view

Drag and Drop feature is not available in the Hierarchy for Object Link.

Object Networks

The following topics are discussed in the section:

- Create Object Networks
- Change Object Networks
- Copy Functionality
- Mass Processing

Create Object Networks

- Maintain Network ID
- Maintain Multilingual Short Text and Long Text
- Maintain Network Data (Network Group and Network Type)
- Maintain Network Linear Data
- Object Links Creation within Network
- Object Links Assignment within Network
- De-Link Existing Object Links from Network
- Links mark and remove Mark for Deletion

Change Object Networks

- Network ID
- Change Multilingual Short Text and Long Text
- Change Network Data (Network Group and Network Type)
- Change Network Linear Data
- Object Links Creation within Network
- Object Links Assignment within Network
- De-Link Existing Object Links from Network
- Links mark and remove Mark for Deletion

Copy Functionality

- Create new Object Network with copy functionality by using existing Object Network.
- Number of objects are copied based on the number entered in the field "Number of objects"

Mass Processing

Changing multiple Object Networks is possible along with other objects.

AIW Model Hierarchy

All the AIW functionalities are applicable to AIW Model Hierarchy.

In addition, the following features are also applicable:

- Create AIW Model
- Maintain Model Name and assign Root FLOC.

- Automatically maintained Version Control
- If AIW model is used to create objects, the individual records cannot be modified in the EAM change request.
- If AIW model is used to create objects, the objects will not be replicated to operational systems.
- Reference Location Functionality not supported.

POWL Scope Overview

"Personal Object Worklist (POWL)" or "Power List", as the name suggest provides a business user, with a general overview of your work environment and all related business objects. POWL serves as a central point for accessing, managing, and tracking your object-related tasks.

The scope of this solution is to provide an option to process change requests (CR) created from Asset Information Workbench (AIW 1909) for all UGI EAM objects.

POWL Structure

POWL application is divided in the following sections:

- Work List
- Functional Location
- Equipment
- Bill of Materials (MBOM, EQBOM, FLBOM and WBSBOM)
- Measuring Point
- Work Center
- General Task List
- Equipment Task List
- Functional Location Task List
- Maintenance Plan
- Object Links
- Object Networks

Data informed while creation of CR are displayed in their respective tabs. If more than one record for any object is informed in the CR, all records of that object are available in POWL. The records are available in the object section as a separate line item in each tab under the same CR.

Multiple work items of same object, which belongs to different CRs can also be selected in Work List. In this case, all records of selected object are available in POWL in the object section as a separate line item in each tab under the same CR.

Work List

Based on the defined query, users get a list of all CR in their worklist which can be selected and processed further. If the CR is a multiple object CR, a separate work item is available in the list for each object. This provides user flexibility to process each work item separately.

If user selects even a single work item from a Mixed Multi-Object Change Request (MOCR), all objects created/updated in the MOCR are displayed in POWL screen in their respective sections with field level details.

Functional Location

In Functional Location section, the attributes of Functional Location are divided into following tabs:

- Functional Location: General Data
- Functional Location: Multilingual text
- Functional Location: LAM Attributes
- Functional Location: Document Assignment
- Functional Location: Class Assignment
- Functional Location: Characteristics Assignment
- Functional Location: Partner
- Functional Location: Permit
- Functional Location: Alternative Label

Equipment

In Equipment section, all attributes of Equipment are divided into following tabs:

- Equipment: General Data
- Equipment: Multilingual text
- Equipment: LAM Attributes
- Equipment: Document Assignment
- Equipment: Class Assignment
- Equipment: Characteristics Assignment
- Equipment: Partner
- Equipment: Permit

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

In BOM section, all attributes of BOM are divided into following tabs:

- Bill of Materials: Header
- Bill of Materials: Item Overview
- Bill of Materials: Sub-Item
- Bill of Materials: Document Assignment

Measuring Point

In Measuring Point section, all attributes of Measuring Point are divided into following tabs:

- Measuring Point: General Data
- Measuring Point: LAM Attributes
- Measuring Point: Document Assignment
- Measuring Point: Class Assignment
- Measuring Point: Characteristics Assignment

Work Center

In Work Center section, all attributes of Work Center are divided into following tabs:

- Work Center: Basic Data
- Work Center: Multilingual text

- Work Center: Costing
- Work Center: Capacities Overview

General Task List

In General Task List section, all attributes of General Task List are divided into following tabs:

- General Task List: Header
- General Task List: List overview
- General Task List: Operations
- General Task List: Maintenance Package
- General Task List: Components
- General Task List: Operation Relationship
- General Task List: PRT
- General Task List: Service Package
- General Task List: Inspection Characteristics
- General Task List: Document Assignment
- General Task List: Class Assignment
- General Task List: Characteristics Assignment

Equipment Task List

In Equipment Task List section, all attributes of Equipment Task List are divided into following tabs:

- Equipment Task List: Header
- Equipment Task List: List overview
- Equipment Task List: Operations
- Equipment Task List: Maintenance Package
- Equipment Task List: Components
- Equipment Task List: Operation Relationship
- Equipment Task List: PRT
- Equipment Task List: Service Package
- Equipment Task List: Inspection Characteristics
- Equipment Task List: Document Assignment
- Equipment Task List: Class Assignment
- Equipment Task List: Characteristics Assignment

Functional Location Task List

In Functional Location Task List section, all attributes of Functional Location Task List are divided into following tabs:

- Functional Location Task List: Header
- Functional Location Task List: List overview
- Functional Location Task List: Operations
- Functional Location Task List: Maintenance Package
- Functional Location Task List: Components
- Functional Location Task List: Operation Relationship
- Functional Location Task List: PRT
- Functional Location Task List: Service Package
- Functional Location Task List: Inspection Characteristics

- Functional Location Task List: Document Assignment
- Functional Location Task List: Class Assignment
- Functional Location Task List: Characteristics Assignment

Maintenance Plan

In Maintenance Plan section, all attributes of Maintenance Plan are divided into following tabs:

- Maintenance Plan: Basic data
- Maintenance Plan: Cycle details
- Maintenance Plan: Item details
- Maintenance Plan: Object List Item

Object Links

In Object Link section, all attributes of Object Link are divided into following tabs:

- Object Link: Basic data
- Object Link: LAM Attributes
- Object Link: Document Assignment
- Object Link: Class Assignment
- Object Link: Characteristics Assignment

Object Networks

In Object Network section, all attributes of Object Network are divided into following tabs:

- Object Network: Header data
- Object Network: LAM Attributes
- Object Network: Attribute Values

POWL Functionalities

The following POWL functionalities are defined in scope:

- Define/Change or Personalize Query
- Approve
- Activate
- Activate and Launch New MOCR
- Reject
- Resubmit
- Withdraw
- Forward
- Resubmit On and End Resubmission
- Assign to Me and Cancel Assignment
- Maintain Substitution

Define/Change or Personalize Query

POWL provides you an option of to define your own query so that you can retrieve the desired work items in you work list. You can change or delete your query anytime or you can create a new query. Parameters to define query are provided in the following list:

- Query Criteria Maintenance
    - o New and In Progress Work Items
    - o Work Items for Resubmission
    - o Completed Work Items
- Task ID
- Status
- High Priority
- Sent Date
- Timeframe
- Subject

Approve

Once all the required information is maintained in CRs, the next step is to approve the CRs. POWL provides you an option to select work items and approve. The following approval scenarios can be handled in POWL.

- Approve a single work item of a CR at one time.
- Select all work items of a CR and approve them at once.
- Select multiple items of different CR and approve them at once.

Activate

Once the CRs are approved, the next step is to activate the CRs. Activate option are active in POWL worklist only when all work items of that CR are approved. For activate, there are only one worklist item for each CR. Once the CR is activated, all objects of that CR gets activated and gets created in the core tables of the host system.

Activate and Launch New MOCR

POWL also provides an option of "Activate & Launch new MOCR". Once the CRs are approved, user can choose the option to "Active & Launch new MOCR" in case further modification is required in that CR. Activate & Launch new MOCR option is active in POWL worklist only when all work items of that CR are approved. For this option, there is one worklist item for each CR only.

Once the CR is selected and "Activate & Launch new MOCR" button is clicked, all objects of that CR gets activated and gets created in the core tables of the host system. In addition, a new CR is created in AIW which has all the objects of previous CR included. User can update existing objects or can add new objects in this CR in AIW and process it further.

Once activated, this will update existing objects of previous CR in the host system and creates additional objects if added in the new CR.

Reject

POWL provides an option to reject work items. Once CR is submitted, all work items of the CR reflect in POWL. User can select work items and reject. On rejection, it is mandatory for user to provide a note specifying reason for rejection.

The following rejection scenarios can be handled in POWL.

- Reject a single work item of a CR at one time.
- Select all work items of a CR and reject them at once.
- Select multiple items of different CR and reject them at once.

Resubmit

POWL provides an option to resubmit work items. In case any work item is rejected, recommended changes could be performed through AIW as POWL does not support change/update functionality. But POWL provides an option to Resubmit updated work items for further processing. The following resubmit scenarios can be handled in POWL.

- Resubmit a single work item of a CR at one time.
- Select all work items of a CR and resubmit them at once.
- Select multiple items of different CR and resubmit them at once.

Withdraw

POWL also provides an option to withdraw a CR. Once withdrawn, a CR cannot be processed further.

Forward

POWL provides an option to forward work items assigned in your name to a different user. When user selects work items and click on the "Forward" button, a pop-up appears to select user from the list of possible recipients. Following forward scenarios can be handled in POWL.

- Forward a single work item of a CR at one time.
- Select all work items of a CR and forward them at once.
- Select multiple items of different CR and forward them at once.

Resubmit On and End Resubmission

POWL provides an option to resubmit work items This function can be used to resubmit work items for processing at a later point in time or periodically. Once resubmitted, the work item is removed from the active worklist and reappears on the resubmitted date. These work items can also be displayed with a predefined query "Work Items for resubmission".

User also has an option to end the resubmission process by selecting the work item using predefined query "Work Items for resubmission" and clicking "End Resubmission". This brings back the work item in the active worklist.

Assign to Me and Cancel Assignment

POWL provides an option to user to pick up a work item and take the ownership by "Assign to Me" functionality, by selecting the work item and clicking on "Assign to Me" button.

User can also discard the ownership of assigned work items by selecting them and clicking on "Cancel Assignment".

Maintain Substitution

POWL provides an option to define a substitute when user is not available to perform his assigned action. The Substitute button can display and process user's work items for the duration of the substitution. When user clicks on the substitute button, it opens a new pop-up to maintain substitution. User can control whether his/her substitute can display and process all work items, or just specific work items.

Scope in Detail for AIW Fiori

The AIW Fiori 1909 functionality is available for Create/Change Mixed Multi-Object Change Request (MOCR). With this Change Request, you can process all master objects (for example. Equipment Master, Functional Location, all supported BOM types, Measuring Point, Work Center, Task Lists, Maintenance Plans) in a single Change Request.

In AIW Fiori 1909, Hierarchy can be created based on the FLOC entered in the system. It shows the current MOCR hierarchy. The feature like Drag and Drop helps making the planned hierarchy. Easy drag and drop shows the temporary objects of current MOCR with special sign "In Process" clock sign in right side column of the new master data.

The Hierarchy has personalization option for certain fields. For example, the user can display the fields in hierarchy and rearrange the columns using the personalization option.

The following AIW Fiori 1909 functionalities are listed in this section:

- **AIW Create**
  - Create EAM Objects
  - Copy/Create EAM Objects
  - Change EAM Objects
  - Expand Hierarchy
  - Collapse Hierarchy
  - Manage Hierarchies
  - Filter Objects in Hierarchy

- **AIW Search**
  - Search EAM Objects
  - Get Hierarchy by selecting the FLOC, Equipment, Measuring Point, Equipment BOM, FLOC BOM and Object link.
  - Copy Hierarchy Create
  - Mass Processing
  - Add to Existing MOCR/ Create new MOCR
  - Expand Hierarchy
  - Collapse Hierarchy
  - Filter Objects in Hierarchy
  - Error Handling
  - Multiple Hierarchy Display
  - Hierarchy Display Level

Activate AIW Change Request

With the transactional application, you can activate the AIW Change requests for a new or changed master data. Once a request is submitted by requestor, it should be activated by senior steward to create/change the master data in MDG. This app enables an approver to see the details of requested master data and activate or reject it accordingly. You can use this app for AIW hierarchy for EAM Objects.

- Activate or Reject AIW Change request.
- Display only fields which have data entered by the requestor
- Display only the changed data to approver for activation of Master Data
- Display all requests of step type 2 to activate in the SAP Inbox
- Display only relevant data based on Backend Roles assigned
- Download attachments that was uploaded by the Requestor.

Out of Scope for AIW

AIW 1909 replicates fundamental features of UGI EAM 1909.

The following topics are discussed in the section:

- Functional Location
- Equipment
- Measuring Point
- Work Center
- Task List (General, Functional Location and Equipment)
- Maintenance Plan/Item
- Bill of Materials (MBOM, EQBOM, FLBOM and WBSBOM)
- Object Links
- Object Networks

All functionalities which are out of scope or in restriction for UGI EAM 1909 is applicable to AIW 1909.

In AIW, system displays the current date Hierarchy and does not support previous date Hierarchy display.

Functional Location

- If the objects (FLOC structure) are created directly in host system without the generic structure, then the Hierarchies cannot be taken care for the deviated FLOC structure in AIW via copy Hierarchy.
- Mark for Deletion not possible via AIW
- File Upload not supported for Single and Multiple objects

Equipment

- Mark for Deletion not possible via AIW
- File Upload not supported for single and multiple objects

Measuring Point

- File Upload not supported for single and multiple objects

Work Center

- Mark for Deletion and Lock Indicator are not supported
- File Upload not supported for single and multiple objects

Task List (General, Functional Location and Equipment)

- General Task Lists are not within Hierarchy. Only Equipment and Functional Location Task Lists are within the Hierarchy structure.
- If a user tries to create Task List from copy function and copied Task List is created before the creation date of the current Equipment or FLOC, system will not support the operation.
- Mark for Deletion set/reset functionality is not supported
- File Upload is not supported for single and multiple objects

- Drag and Drop is not supported for Active data

Maintenance Plan/Item

- Mark for Deletion set/reset is not supported
- File Upload not supported for single and multiple objects
- Drag and Drop is not supported for Active data

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

- File Upload not supported for single and multiple objects
- WBS BOM is not displayed in hierarchy

Object Links

N/A

Object Networks

Creation of Object Links within Object Networks is not supported. Object Link needs to be created separately and Network ID can be assigned.

POWL Out of Scope

- All functionalities which are out of scope or in restriction for UGI EAM 1909 and AIW 1909 are out of scope for POWL as well
- Option to "Edit" work items of MOCRs is not provided in POWL, and changes in MOCR should be performed through AIW 1909.
- Draft MOCR is not displayed in POWL. MOCR is displayed in POWL only after Submit.
- Data Transfer (Inheritance) and display of Data Origin are out of scope
- POWL for Service Master is out of scope

Out of Scope for AIW Fiori

AIW Fiori 1909 replicates fundamental features of UGI EAM 1909 Fiori.

All functionalities which are out of scope or in restriction for UGI EAM 1909 Fiori is applicable to AIW Fiori 1909.

In addition,

- Does not support "IS-U objects"