User Help Guide for SAP Asset Information Workbench by Utopia for S/4HANA

Release 1909

Document History

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

Version	Date	Description	Name
1.0	06-10-2019	Initial version	Kuldeep Singh/ Mani Balakrishnan
2.0	16-03-2020	IAM Integration – AIW 1909 SP01	Ramesha Kalammanavar, Abarna Shanmugam

Approval History

Version	Date	Description	Name
1.0	06-10-2019	Approved version	Lyle Snyder
2.0	23-03-2020	Approved – AIW 1909 SP01	Lyle Snyder

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SAP Asset Information Workbench by Utopia

SAP Asset Information Workbench (AIW) 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. It allows processing of structured and unstructured asset master data change management efficiently.

In addition, it can be used to request, approve, and execute changes to the following Enterprise Asset Management objects in Mixed Multi-Object scenario, and in a specific Change Request.

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

Features

AIW supports the following features:

- Create Hierarchy Mixed Multi-Object Change Request (MOCR)
- Search and Hierarchy Processing
- Copy of Functional Location Mixed Multi-Object hierarchy
- Mass processing of Functional Location Mixed Multi-Object hierarchy
- Hierarchy View
- Create AIW Model Hierarchy
- Copy Hierarchy Create AIW Model
- Mass Processing AIW Model Hierarchy

Mixed Multi-Object Change Request (MOCR)

The MOCR allows to create or change the mixed multiple records of different objects through Workbench in one session, as opposed to separate Change Requests per object in EAM 1909. This feature allows the handling of mixed multi-object hierarchy efficiently. In addition, Workbench allows to search data from the staging area (within change Request) and from the active area.

The group ID is used to link different MOCRs in a group. This concept supports sequential workflow. The parent Change Request number remains the Group ID for the active and the subsequent sequential Change Requests.

Inheritance is taken care of on the MOCR screen for Functional Location and Equipment for inherited fields.

Note:

a. It is recommended that a maximum of 100 records should be copied for any given object when using Copy option from the AIW MOCR screen.
b. DOI information will not be copied inside MOCR's "Copy-Create" for Functional location and Equipment.

Search and Hierarchy Processing

Multiple search options are provided to enable the users to choose Change Request types (Serial/Parallel/Hybrid) for copy Hierarchy and Mass processing execution. It will enable users to choose Change Request type before proceeding with execution. You can choose either of the following options available for “AIW: Search & Hierarchy Processing”:

- Choose “Search & AIW Hierarchy Processing” option to select a specific Change Request type from the list of Change Requests.
- Choose “Search & AIW Hierarchy Processing (Parallel Approval)” option to Select Change Request type for Parallel Approval workflow.
- Choose “Search & AIW Hierarchy Processing (Serial Approval)” option to Select Change Request type for Serial Approval workflow.
- Choose “Search & AIW Hierarchy Processing (Hybrid Approval)” option to Select Change Request type for Hybrid Approval workflow.

Also, it is possible to filter Objects in the Hierarchy.

Copy of Functional Location Mixed Multi-Object Hierarchy

The source hierarchy can be copied by providing target New Location for Functional Location hierarchy. User can copy the entire Functional Location hierarchy with its objects attached to this hierarchy like Equipment, Equipment BOM, Functional Location BOM, Measuring Point, Task List, Maintenance Plan, and Maintenance Item, Object Link to a new Functional Location hierarchy.

An option is provided to view the deleted or inactive objects in the hierarchy list.

- AIW Copy Hierarchy Create with different Maintenance Plant.
- AIW Copy Hierarchy Create with different Controlling Area - Maintenance Plant.

Note:

a. It is recommended that a maximum of 1000 records can be copied for any given hierarchy when using Copy option from the AIW search screen.
b. In case of changing Maintenance plant with different controlling area - User needs to implement BADI – “/UGI7/AIW_RETAIN_FIELD” to select the field by assigning value “X” to **retain that field values** for new Plant / Controlling Area (Optional).
c. Inheritance is taken care of in the Copy Hierarchy pop-up for inherited fields.

Mass Processing of Functional Location Mixed Multi-Object hierarchy

It allows the processing of Mass changes by selecting the Functional Location hierarchy. User can search for a FLOC hierarchy and perform Mass changes to the complete structure in a single Change Request.

Hierarchy View

Single UI to view the complete hierarchy of the objects and movement of objects via Drag and Drop in a Change Request. Also, it is possible to manage Hierarchy via Manage Hierarchies option.

Create an AIW Model Hierarchy

All the AIW Create Hierarchy functionalities are applicable to AIW Model Hierarchy.

In addition, the following features are also applicable in the AIW Model Details tab:

- Maintain Model Name.
- Assign Root FLOC in the current MOCR available.
- Create/Update Model.
- Automatically maintained Version Control.
- Reference Model updated

Search Hierarchy Processing

All the AIW Search Hierarchy functionalities are applicable to AIW Model Hierarchy.

In addition, the following features are also applicable:

- User can select and maintain “Model Name” from the “Search Criteria” drop-down and search.
- From the results of Search Hierarchy, user can perform Copy Hierarchy Create or do Mass processing.

Copy Hierarchy Create AIW Model

All the AIW Copy Hierarchy Create functionalities are applicable to AIW Model Hierarchy.

In addition, the following features are also applicable:

- Maintain/Modify the Model Name.
- Assign Root FLOC in the current MOCR available.
- Automatically maintained Version Control.
- Reference Model updated

Mass Processing AIW Model Hierarchy

All the AIW Mass Processing functionalities are applicable to AIW Model Hierarchy.

In addition, the following features are also applicable:

- The system displays the Model Name and Root FLOC.
- The system generates an incremental version automatically.

Note: The following points are common to all the AIW model processes.

- User should have authorization role to process AIW Model (/UGI7/AIW_MODEL).
- User will be able to process objects only in MOCR, which is associated with AIW Model Hierarchy.
- Replication cannot be done for EAM Objects which is associated with AIW Model Hierarchy
- Root Functional location is mandatory to do Change process for AIW Model Objects in MOCR.

Model Role: “/UGI7/AIW_MODEL” contains Authorization object: “/UGI/AIW_M”

Case 1: Creating New Model : AIRCRAFT Model Name : AIRCRAFT Root Functional Location : AR01 Reference model : _____	Case 2: Changing Existing Model : AIRCRAFT Model Name : AIRCRAFT Root Functional Location : AR01 Reference model : _____
Case1: Creating Instance from Model: AIRCRAFT Model Name : _____ Root Functional Location : FL01 Reference model : AIRCRAFT	Case1: Create New Model (AIRBUS) from existing Model: AIRCRAFT Model Name : AIRBUS Root Functional Location : AR02 Reference model : AIRCRAFT

- Reference Model: i.e source model. It is a display field which will be populated when we try to create Instance or new model from the existing model.
- Model Name: It will be the name of the new Model which we are creating now. Need not to maintain if you are creating a model instance.

Inherited Objects

You can change data at a high level within a hierarchical object structure. The system will automatically transfer the data changes to the levels below that are affected. Inherited Objects option will show all the affected objects. It also provides the information whether objects are released or locked in another MOCR with the option to navigate to locked MOCR.

Additional Enhancements

The following additional enhancements are discussed in the following section:

- Additional Features
- Workflow
- E-mail Notifications
- Data Transfer (Inheritance) and Data Origin
- Copy Create MOCR from Group ID

Additional Features

- Install Equipment
  - Equipment plant data derived from the superior during equipment installation and the maintenance plant is blank, maintain the parameter /UGI/MAINT_PLANT_FROM_SUP with the value X.
- Dismantle Equipment
  - To change the FLOC hierarchy during dismantling the equipment from the superior hierarchy, maintain the parameter /UGI/FLOC_INS_ON_EQ_DISM with value X, instead of complete dismantling.

Workflow

Influence the approval process by selecting different types of workflow. It is also possible to select three types of workflow like

- Parallel: Workflow Tasks needs to be executed in parallel
- Serial: Workflow Tasks needs to be executed one by one
- Hybrid: Workflow Tasks needs to be executed in a Hybrid manner
- Sequential: Changes Requests is going to be processed Sequential. The Workflow for these Change Requests is going to be either Parallel or Serial.

E-mail Notifications

The Email functionality allows to execute and approve work items from the external mailbox. The work items will be delivered to an external mail out and the user can execute and approve work items by clicking to the hyperlink.

A default e-mail will appear in the default e-mail sending the client of your computer. It is possible to adapt all content except the link before sending the e-mail.

Utopia has provided six predefined e-mail templates, which can be adapted by the user:

E-mail Template	Purpose
/UGI7/EAM_SWN_SUBJECT_PROCES	The subject of the e-mail notification used in workflow step type 'Process / Approve'
/UGI7/EAM_SWN_SUBJECT_PROCE_REJ	The subject of the e-mail notification used in workflow step type 'Revise'
/UGI7/EAM_SWN_SUBJECT_SEQCR	The subject of the e-mail notification used in Sequence launch of CR
/UGI7/EAM_SWN_BODY_PROCESS	Email content used in workflow step type 'Process / Approve'
/UGI7/EAM_SWN_BODY_PROCE_REJ	Email content used in workflow step type 'Revise'
/UGI7/EAM_SWN_BODY_SEQCR	Email content used in sequence launch of MOCR

The default templates are attached to the Change Request type and workflow steps.

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)

Copy Create MOCR from Group ID

Once MOCR is approved, the user gets two options to activate it, "Activate" and "Activate & Launch New MOCR". The "Activate" option creates data in SAP and "Activate & Launch New MOCR" option creates data in SAP as well as creates a new MOCR.

The new MOCR includes all the objects of the previous MOCR with all staging data being replaced with active data created by previous MOCR. Both previous MOCR and New MOCR are grouped under a "Group ID". This helps the user to fetch all MOCRs created under one "Group ID" and compare the changes after each iteration.

If user had created an MOCR and then selects “Activate”, but later wishes to create a new MOCR with the same data and wants it to be grouped with previous MOCR (same as the functionality of “Activate & Launch New MOCR”), the user can do it from “AIW Change Request” report. From the report output, the user must choose activated MOCR which has “Final Check Approved” status. On selecting it “Copy Create MOCR from Group ID” button becomes active. A new MOCR is created and grouped with the previous MOCR when the user clicks the “Copy Create MOCR from Group ID” button. In this manner, the user achieves the features of “Activate and Launch New MOCR”.

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 the user to access different applications specific to his assigned roles. POWL provides an easy-to-use interactive governance platform with query-driven worklist that contains object from the user’s work area.

POWL for AIW

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 Mixed Multi-Object Change Request (MOCR)
- Processing of objects linked with different Change Request (Multiple Change Request Processing)

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

- Approve
- Activate
- Activate and Launch New MOCR
- Reject
- Resubmit
- Withdraw
- Forward
- Resubmit On
- Assign to Me
- 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

Query-based Work List

POWL provides a predefined criterion for listing Work items. The need for user-defined work list has led to the development of POWL. It focuses on having a pre-defined query which user can change or adapt. Based on the query, objects are listed in the work items. This gives user the flexibility for repetitive work or periodic tasks. The following list is the query criteria supported by POWL:

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

Mixed Multi-Object Change Request (MOCR)

MOCR allows to create or change the mixed multiple records of different objects through AIW in one session, as opposed to separate Change Requests per object. This feature allows the handling of mixed multi-object hierarchy efficiently. Once the MOCR is created through AIW it can be processed further through POWL as well. All Objects of the MOCR will be available in POWL screen as a separate line item in each tab under the same Change Request.

If the user selects single work item from a MOCR, all objects created/updated in the MOCR are reflected in POWL screen in their respective sections from where it can be processed further.

Multiple Change Request

Work item of more than one Change Request can also be selected for processing. Each object is available in their respective object sections as a separate line item in each tab under different Change Request.

All objects that belong to different Change Requests should be in the same status for the processing of multiple objects. Otherwise, the system displays an error message “Work items do not belong to the same action”.

Object views in POWL window

Each Object supported by POWL is divided into different sections, which displays the details of respective work items selected in the worklist. Object attributes are further divided into different tabs based on their features. The following is a list of different objects and their sections.

- Functional Location
  - Functional Location: General Data
  - Functional Location: Multilingual text
  - Functional Location: LAM Attributes
  - Functional Location: Document Assignment
  - Functional Location: Document Assignment text

    - Functional Location: Class Assignment
    - Functional Location: Characteristics Assignment
    - Functional Location: Partner
    - Functional Location: Permit
    - Functional Location: Address Maintenance

- Equipment
    - Equipment: General Data
    - Equipment: Multilingual text
    - Equipment: LAM Attributes
    - Equipment: Document Assignment
    - Equipment: Document Assignment text
    - Equipment: Class Assignment
    - Equipment: Characteristics Assignment
    - Equipment: Partner
    - Equipment: Permit
    - Equipment: PRT Data
    - Equipment: Configuration Control (CC)-iPPE Access Information
    - Equipment: Fleet Management system
    - Equipment: Defense and Public Security-Op. Equipment
    - Equipment: AIN Data
    - Equipment: Address Maintenance

- Bill of Materials (Material, Equipment, Functional Location, WBS)
    - Bill of Materials: Header
    - Bill of Materials: Item Overview
    - Bill of Materials: Subitems
    - Bill of Materials: Document Assignment

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

- Work Center
    - Work Center: Basic Data
    - Work Center: Multilingual text
    - Work Center: Costing
    - Work Center: Capacities Overview

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

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

- Object Network
    - Object Network: Header data

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

Note

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

Personal Object Work List (POWL) fo

Cross Entity Search Feature in AIW

Cross Search Functionality

Cross Search functionality is provided from AIW 1909 release where an attribute present across the objects will be searched. The existing functionality will remain the same as it was before the 1909 release.

The cross-search feature is provided to help our users to do cross-search based on common attribute present across the following objects.

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

Note

Refer to How-To Guide for more information on Cross Search functionality.

Cross Search Functionalities.pptx

AIW integration with IAM (Intelligent Asset Management)

Functional Location

SAP MDG→S4H→Asset Central Foundation

Replicate Functional locations (S4H) to Locations (ACF) in the below scenarios

- Multi Object Change request Create and change

- Multi Object Change request Mass change
- Multi Object Change request Copy Hierarchy

The below functionalities are supported

- Maintain Location Data
- Maintain Hierarchy (Install Dismantle technical objects)
- Maintain Address (Street, Street number, Postal Code and City, Country/Region , State / Region

Asset Central Foundation→SAP MDG→S4H

- Change Locations : When any change to Locations in Asset central foundation, A MDG change request will be created by the Utopia program /UGI7/ACF_QUEUE_MOCR_CREATE captures changes (Functional location and locations mapped fields only), refer SAP document “Setting up Integration with Asset Central Foundation” for complete details.
- Maintain Hierarchy (Install Dismantle technical objects)
- Maintain Address (Street, Street number, Postal Code and City , Country/Region , State / Region

Equipment

SAP MDG→S4H→Asset Central Foundation (ACF)

Replicate Equipment from MDG→S4H→ACF in the below scenarios

- Multi Object Change request Create and change
- Multi Object Change request Mass change
- Multi Object Change request Copy Hierarchy

The below functionalities are supported

- Maintain equipment data
- Maintain Hierarchy (Install Dismantle technical objects)
- Maintain Address (Street, Street number, Postal Code and City , Country/Region , State / Region

Asset Central Foundation→SAP MDG→S4H

An MDG change request will be created by the Utopia program /UGI7/ACF_QUEUE_MOCR_CREATE captures create and change (equipment mapped fields only), refer SAP document “Setting up integration with Asset Central Foundation” for complete details

- Create Equipment: for field mapping refer SAP document “Setting up Integration with Asset Central Foundation” for complete details
  - Classification of Equipment: Add, Change and delete equipment templates and change of attribute values
  - Add, Update and Remove Model
  - Maintain Sales Organization Data
  - Maintain Location
  - Maintain Hierarchy (Install Dismantle technical objects)
  - Add and remove Documents

- Change Equipment: When any change to Locations in Asset central foundation,
  - Classification of Equipment: Add, Change and delete equipment templates and change of attribute values
  - Add, Update and Remove Model
  - Maintain Location

- Maintain Hierarchy (Install Dismantle technical objects)
- Add and remove Documents

Note: A mail will be triggered upon withdrawal of change request to inform Asset Central Foundation user regarding withdrawal and is applicable for both Functional Location and Equipment.