

# Enterprise Asset Management (EAM)

Curriculum: Introduction to S/4HANA using Global Bike



# Teaching material - Information

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## Teaching material - Version

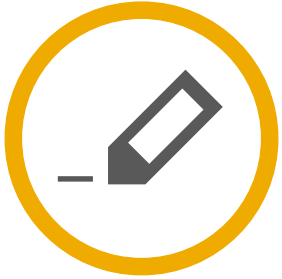
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- 4.3 (July 2025)
- Software used
  - SAP S/4HANA 2023
  - Fiori 3.0
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed



# Module Information

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## Authors

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## Target Audience

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- Beginner



# Module Information

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## Learning Objectives

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You are able to

- name some functionalities of the EAM module.
- define the central organizational structures of the EAM module.
- summarize the master data which is most important for the EAM module.
- explain a standard process of the Enterprise Asset Management.

# Functionality

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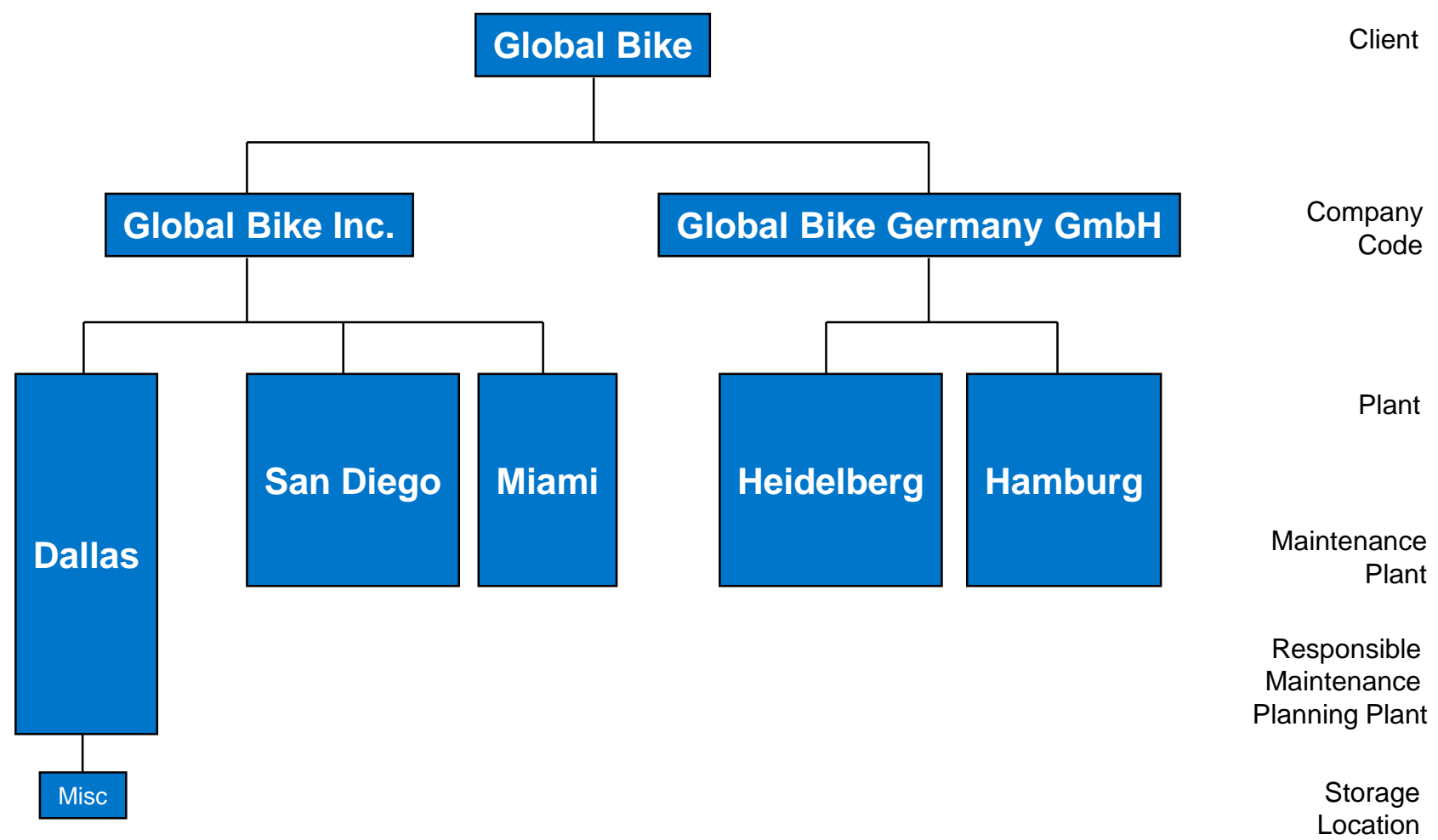
- Planned Repair
- Instant Repair
- External Assignment
- Refurbishment
- Preventive Plant Maintenance
- Project oriented Plant Maintenance
- Shift Reports and Shift Notes

# Agenda

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- EAM Organizational Structure
- EAM Master Data
- EAM Processes

# GBI Structure for Enterprise Asset Management



# EAM Organizational Structure

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- Client
  - An independent environment in the system
- Company Code
  - Smallest org unit for which you can maintain a legal set of books
- Plant
  - Operating area or branch within a company
    - Manufacturing, distribution, purchasing or maintenance facility
- Storage Location
  - An organizational unit allowing differentiation between the various stocks of material in a plant
  - Is required to store spare parts

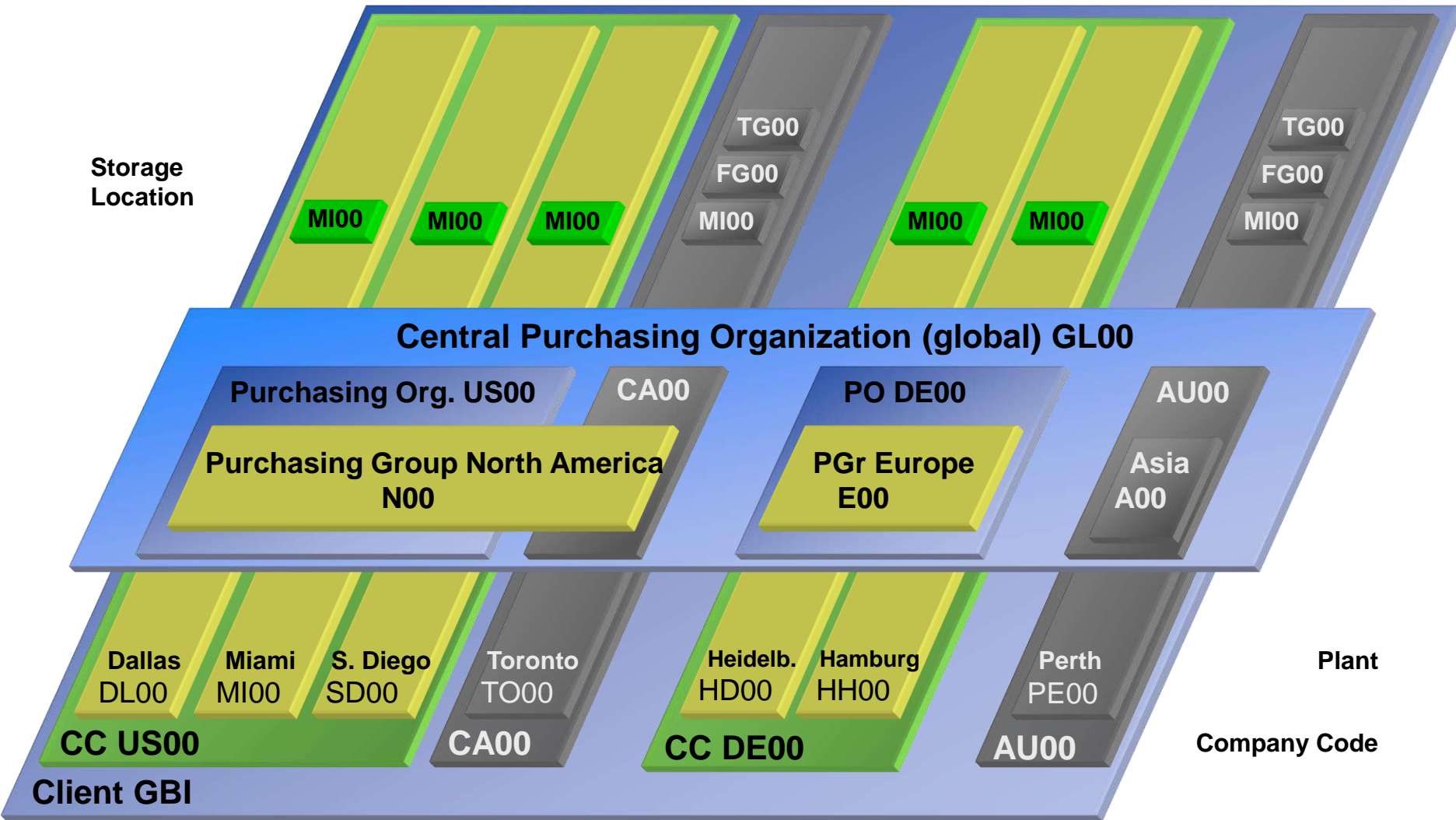


# EAM Organizational Structure

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- Maintenance Plant
  - Plant in which the technical objects of a company are installed
- Maintenance Plant oriented organizational units:
  - Location (e.g. building number, coordinates)
  - Plant Section (responsibility for working assets)
  - Work Center (process measures of plant maintenance)
- Maintenance Planning Plant
  - Plant in which maintenance tasks are planned and prepared
- Planning Plant oriented organizational units :
  - Maintenance Planner Group (responsible for planning and processing maintenance tasks)
  - Work Center

# GBI Enterprise Structure in SAP ERP (EAM)



# Agenda

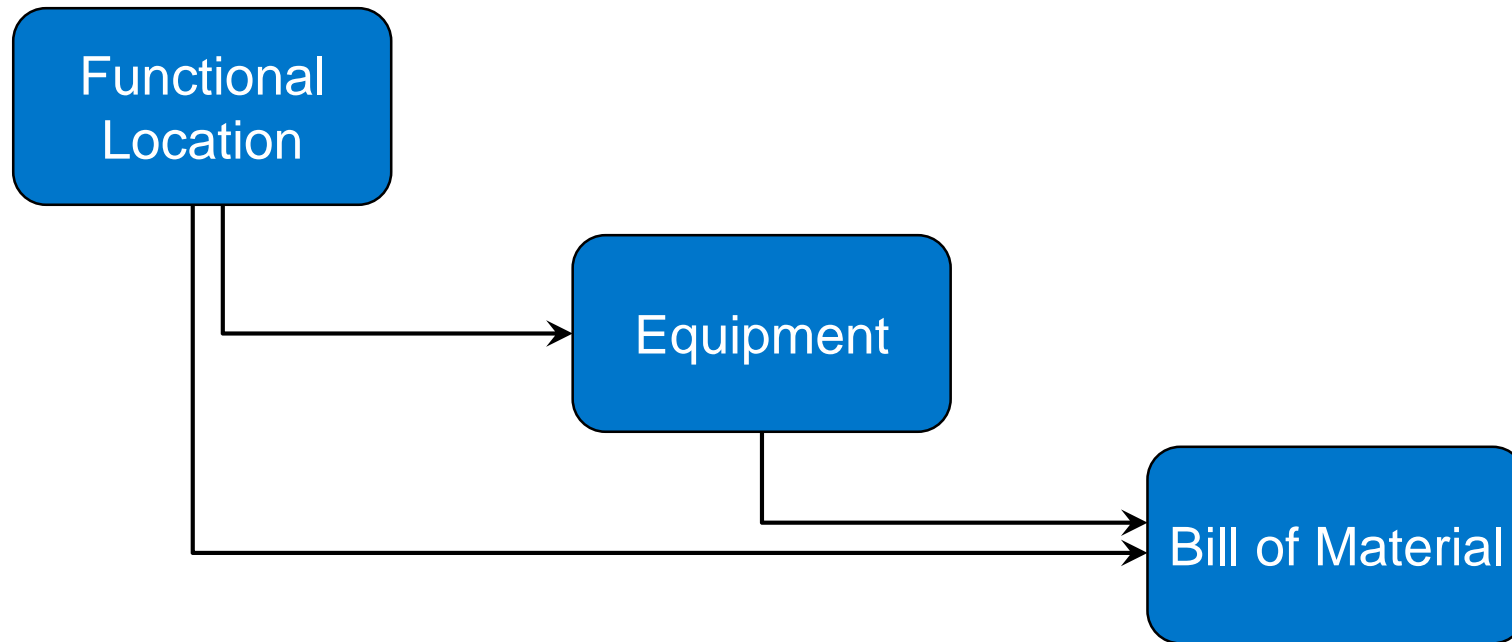
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- EAM Organizational Structure
- **EAM Master Data**
- EAM Processes

# EAM Master Data

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- Functional Location – Master Data
- Equipment – Master Data
- Bill of Material



# Functional Location – Definition

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- Hierarchically organized structure which represents e.g. a technical system, a building or a part of it
- Locations are normally fixed and do not move
- Structures maintenance objects according to following criteria:
  - spatial (e.g. buildings)
  - technical (e.g. pumping plant)
  - functional (e.g. production of bicycle frames)
- Functional locations can be used to sub-divide the objects into similar maintenance units
- Functional locations can contain different types of equipment

# Functional Location – Advantages

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- Structural depiction of a technical plant
  - Structure indicator makes hierarchy levels visible
- Planning and performing maintenance tasks
- Verification of maintenance tasks
- Data gathering for extended periods of time
- Cost monitoring
- Behavioral analysis individual areas under different conditions

# Functional Location – Master Record

- Functional Location Master Data
  - contains all information about the functional location
  - Could be required in order to perform maintenance activities

The screenshot displays the SAP Functional Location Master Record for object **DL00-S-SHFL1000**, identified as a **Shop Floor**. The interface includes a search bar at the top with the text "Search In: 'Apps'", a "Technical Object" dropdown, and a "Related Apps" button. Below the object name, a location icon is shown alongside metadata: Category (Technical system - standard (M)), System Status (CRTE), Type (—), User Status (—), Class (—), and Original Files (0). A navigation bar contains tabs for General Information, Status, Maintenance Notifications, Maintenance Orders, Service Orders, Service Contracts, Maintenance Items, Maintenance Items for Service, History, Original Files, and Classification. The main content area is divided into four sections: General Information, General Data, Installation Information, and Installation Location. The General Information section shows the Description as "Shop Floor" and Long Text as "—". The General Data section lists fields such as Class (—), Category (Technical system - standard (M)), Type (—), Manufacturer (—), Model number (—), Manufacturer Part Number (—), Manufacturer Serial Number (—), Serial Number (—), Material (—), and Construction Type (—). The Installation Information section includes Superior Technical Object (—), Technical Identification Number (—), Weight of object (0.000), and Size/dimension (—). The Installation Location section provides details on the Maintenance Plant (Plant Dallas (DL00)), Work Center (DL Maintenance (MANT1000)), Location (Global Bike Inc. MFG (DALLAS TX)), Room (—), Plant Section (1), and Plant Section Responsible (Hiro Abe (972-555-3000)).

**DL00-S-SHFL1000**  
Shop Floor

Category: Technical system - standard (M) System Status: CRTE Object Overview  
Type: — User Status: — Original Files: 0  
Class: —

General Information Status Maintenance Notifications Maintenance Orders Service Orders Service Contracts Maintenance Items Maintenance Items for Service History Original Files Classification

**General Information**  
Description: Shop Floor  
Long Text: —

**General Data**  
Class: —  
Category: Technical system - standard (M)  
Type: —  
Manufacturer: —  
Model number: —  
Manufacturer Part Number: —  
Manufacturer Serial Number: —  
Serial Number: —  
Material: —  
Construction Type: —

**Installation Information**  
Superior Technical Object: —  
Technical Identification Number: —  
Weight of object: 0.000  
Size/dimension: —

**Installation Location**  
Maintenance Plant: Plant Dallas (DL00)  
Work Center: DL Maintenance (MANT1000)  
Location: Global Bike Inc. MFG (DALLAS TX)  
Room: —  
Plant Section: 1  
Plant Section Responsible: Hiro Abe (972-555-3000)



# Equipment – Definition

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- Individual and autonomous technical unit
- Physical object for which maintenance tasks are planned and performed
- Mobile character
- Examples: pumps, personal computers, circulation fan, engines
- Equipments can be placed in functional locations

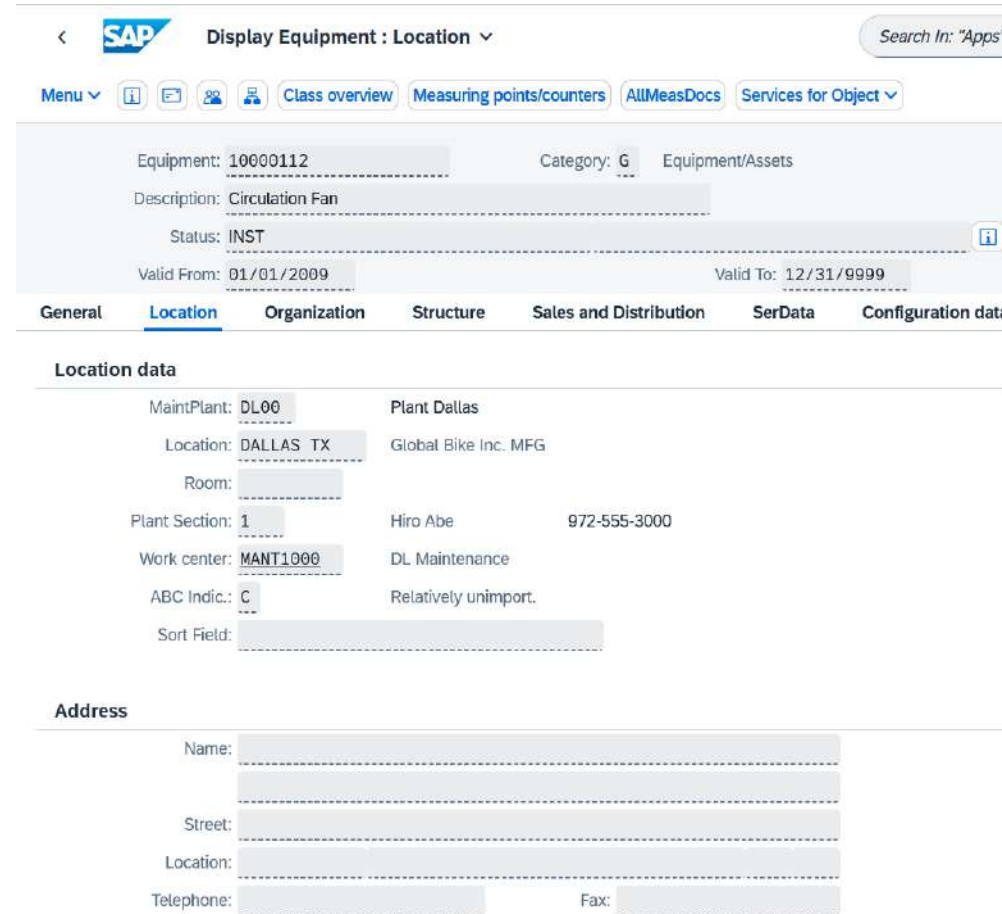
# Equipment – Advantages

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- Administration of individual objects and data
- Verification of maintenance tasks
- Object oriented cost monitoring
- Data gathering and analysis for extended periods of time

# Equipment – Master Record

- Equipment Master Data
  - contains all information around equipment
- Information in four views:
  - General
  - Location
  - Organization
  - Structure



The screenshot shows the SAP 'Display Equipment: Location' interface. At the top, there's a navigation bar with the SAP logo, a back arrow, and a search bar labeled 'Search In: "Apps"'. Below this is a menu bar with options: 'Menu', 'Class overview', 'Measuring points/counters', 'AllMeasDocs', and 'Services for Object'. The main data area displays equipment details: Equipment: 10000112, Category: G (Equipment/Assets), Description: Circulation Fan, Status: INST, Valid From: 01/01/2009, and Valid To: 12/31/9999. Below this is a tabbed interface with tabs for 'General', 'Location' (selected), 'Organization', 'Structure', 'Sales and Distribution', 'SerData', and 'Configuration data'. The 'Location data' section shows: MaintPlant: DL00 (Plant Dallas), Location: DALLAS TX (Global Bike Inc. MFG), Room: (empty), Plant Section: 1 (Hiro Abe, 972-555-3000), Work center: MANT1000 (DL Maintenance), ABC Indic.: C (Relatively unimport.), and Sort Field: (empty). The 'Address' section at the bottom has fields for Name, Street, Location, Telephone, and Fax, all of which are currently empty.

< **SAP** Display Equipment : Location Search In: "Apps"

Menu Class overview Measuring points/counters AllMeasDocs Services for Object

Equipment: 10000112 Category: G Equipment/Assets  
Description: Circulation Fan  
Status: INST  
Valid From: 01/01/2009 Valid To: 12/31/9999

General **Location** Organization Structure Sales and Distribution SerData Configuration data

**Location data**

MaintPlant: DL00 Plant Dallas  
Location: DALLAS TX Global Bike Inc. MFG  
Room:   
Plant Section: 1 Hiro Abe 972-555-3000  
Work center: MANT1000 DL Maintenance  
ABC Indic.: C Relatively unimport.  
Sort Field:

**Address**

Name:   
Street:   
Location:   
Telephone: Fax:

# Bill of Material – Definition

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- Complete formally structured list of all components
- Material BOMs can be allocated to functional locations or equipment
- Three types of BOMs in Enterprise Asset Management:
  - Material BOMs
  - Equipment BOMs
  - Functional location BOMs

# Bill of Material – Advantages

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- Structuring of objects
- Service parts planning in maintenance orders and maintenance task lists
- Within plant maintenance BOMs are used if there are similar objects that can be maintained

# Agenda

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- EAM Organizational Structure
- EAM Master Data
- EAM Processes

# EAM Process (Planned Repair)

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1. Notification

2. Planning

3. Controlling

4. Implementation


5. Completion



# Notification

- Malfunctions and other requirements are gathered in notifications
- Content:
  - Technical object
  - Reported by
  - Effect
  - Description
  - Date
  - Breakdown

## Ventilator defekt 012

[Close Report](#) 

10000000

Overall Status: Work Completed

Reported By: Learn-012 Learn-012  
Reported On: 03/27/2025, 17:23:17

Processed By: Learn-012 Learn-012 (81)

[Edit Header](#)

[Malfunction](#) [Job Details](#) [Attachments](#)

### Malfunction

**Malfunction**

Effect:  
Production restricted (2)

Failure Mode:  
—

Long Text:  
03/27/2025 17:28:10 CET (LEARN-012)  
Ventilator arbeitet nicht mehr 100%, Filter austauschen

Current Location:  
—

**Technical Object Details**

Technical Object:  
Circulation Fan (10000012)  
[Details](#) [History](#)

**Malfunction Duration**

Malfunction Start:  
03/27/2025, 17:27

Malfunction End:  
—

Breakdown:  
No

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# Notification

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- Notifications are used to tell maintenance that something needs fixing
- They may or may not contain technical information
- They will often highlight a breakdown that needs to be actioned quickly
- Requirement of necessary maintenance measures
- Notifications can also be used to record works already carried out because a history needs to be maintained

# Planning

- Order creation and order planning is normally triggered from a notification
- Order planning can include:
  - The steps to be Performed (Work)
  - Required spare parts (Part)

**Ventilator defekt 012** 10000000 Close Report


Malfunction Job Details Attachments

### Job Details

**Work (2)** Standard

Work Item	Work Center	Assigned To	Planned Effort		Actual Effort		Finally Confirmed	Status
<a href="#">Filter sofort ersetzen</a> 0010	DL Maintenance (MANT1000)	Learn-012 Learn-012	2.0	H	2.000	H	Yes	Work Is Done
<a href="#">Funktionstest</a> 0020	DL Maintenance (MANT1000)	Learn-012 Learn-012	15.0	MIN	15.000	MIN	Yes	Work Is Done

### Parts (1) Standard

Image	Material	Planned Quantity		Quantity Issued	
	Circulation Fan Filter FLTR1012	1.000	EA	1.000	EA

### General Data

Order:  
[Ventilator defekt 012 \(4000020\)](#) Show Order Bar Code

# Planning

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- Maintenance orders can be created from maintenance plans, notifications or created without any reference document
- Responsibilities for external or internal work are defined
- Material reservations take place order upon release
- Production resources like protective clothing and specialist tooling can be listed
- Planned costs are calculated based on internal activity rates and external service costs

# Maintenance Order Control Functions

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- Control functions for maintenance orders can vary depending on the type of order
- Order release is carried out once planning has been completed
- Maintenance orders provide the following functions:
  - Mass change or mass editing
  - Availability check for spare parts
  - Capacity requirements planning
  - Printing work instruction papers

# Execution and Completion

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- Order Execution
- Planned and unplanned material withdrawals (goods issue) are possible
- Order Completion Steps:
  - Time confirmation
  - Technical completion confirmation
  - Technical completion
- Customer billing can be performed after successful technical completion