MAXIMO/EAM VOCABULARY AND FUNDAMENTALS

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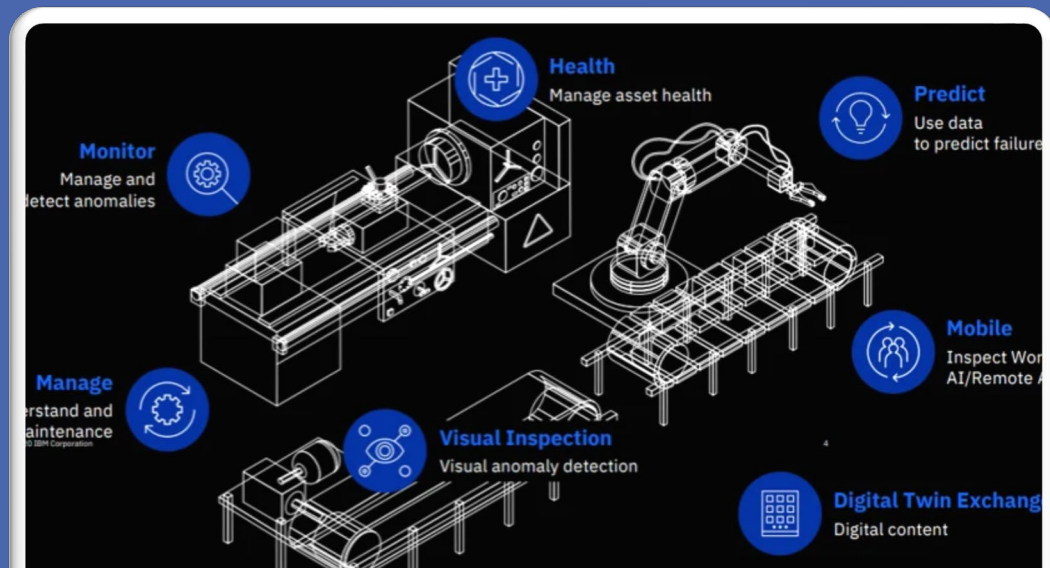
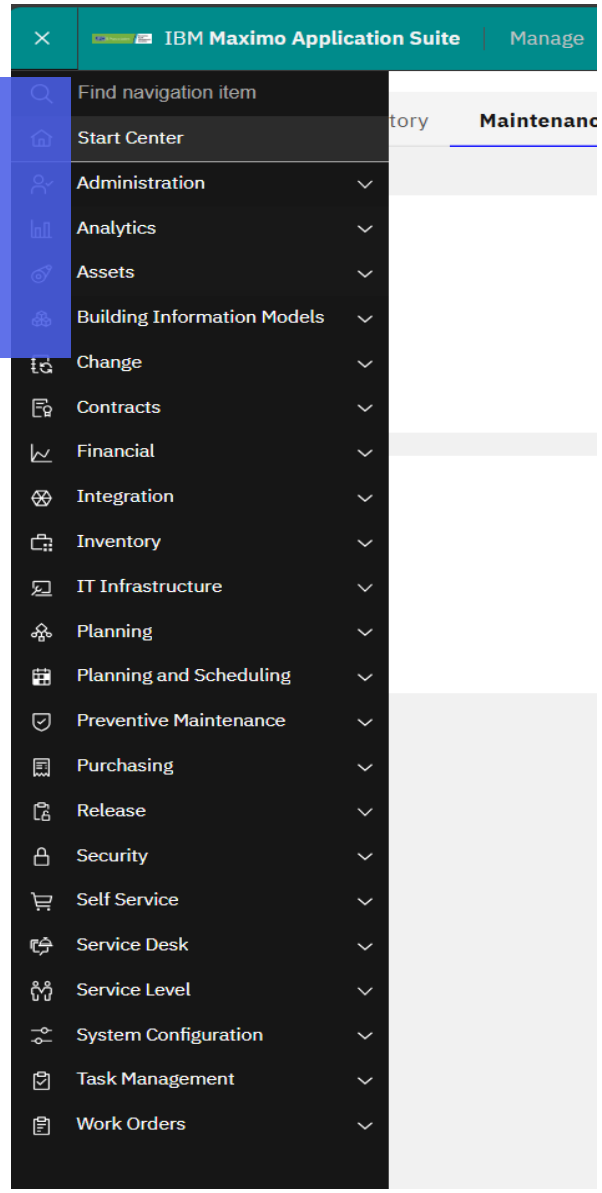




LEARNING OBJECTIVES

- ENABLE SYSTEM NAVIGATION MORE EFFECTIVELY IN MAXIMO BY UNDERSTANDING THE VOCABULARY FOR THE SYSTEM
- DRIVE WORKFLOW ACCURACY IN MAXIMO AND EAM BY USING SOME OF THE METHODOLOGIES IN THE PRESENTATION
- UNDERSTAND CLEAR DEFINITIONS TO FOSTER DATA QUALITY
- START USING THE RIGHT VOCABULARY TO PROMOTE AUTOMATION AND OPTIMIZATION

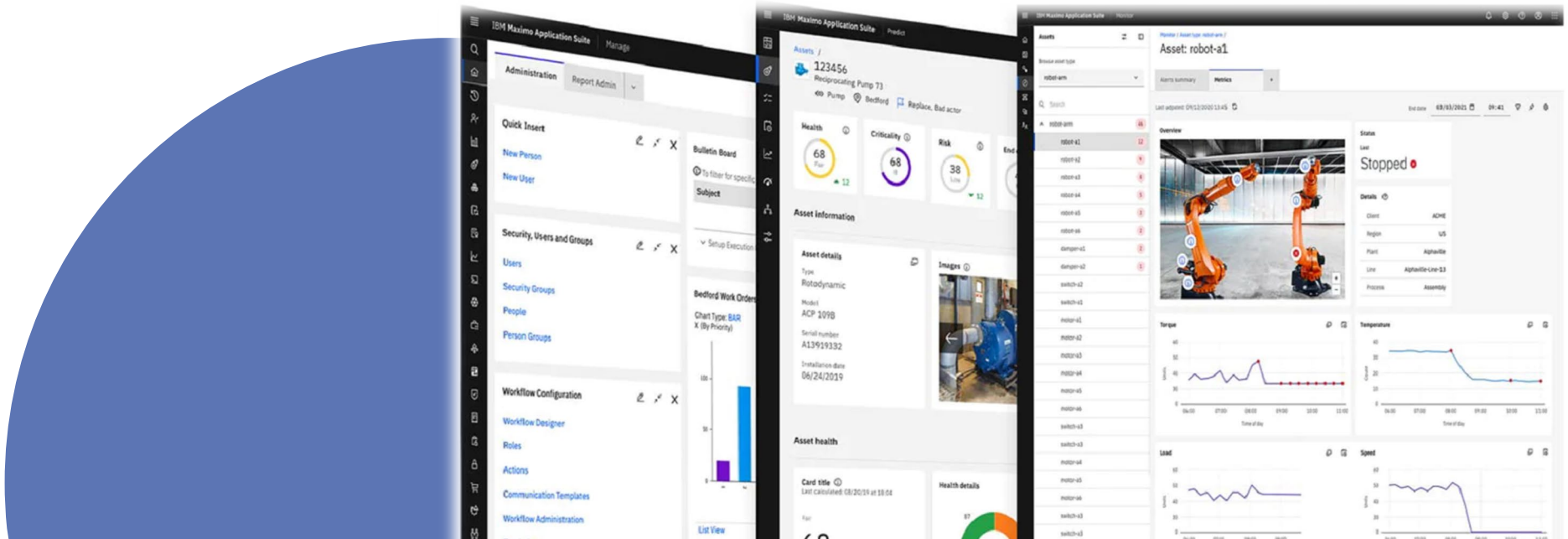
> IN ASSET MANAGEMENT, A GOOD **VOCABULARY** IS LIKE HAVING THE RIGHT SPARE PART IN MAXIMO–WITHOUT IT, YOU'RE JUST CLICKING AROUND, HOPING FOR A MIRACLE. KNOW YOUR TERMS, SAVE YOUR SYSTEMS AND HEARTBURN.

Michael Guns

IBM Professional Certified

Deployment

Maximo Manage v8.0



THE BACKBONE OF MAXIMO

Kubernetes
Platform

Red Hat Open Shift
Platform

Mongo DB
Database

Apache Kafka
Platform

DB2
Database

THE BACKBONE OF MAXIMO

Kubernetes
Platform

An open-source **container orchestration platform** used to deploy, manage, and scale containerized applications

Think of it like: An air traffic controller for containers – it makes sure each one gets to the right place and keeps running.

Apache Kafka
Platform

A **distributed streaming platform** that handles real-time data feeds by publishing, storing, and processing message streams

Think of it like: A super-fast postal service for data – constantly delivering messages between systems.

THE BACKBONE OF MAXIMO

A **NoSQL document-oriented database** that stores data in flexible, JSON-like documents rather than traditional rows and columns.

Think of it like: A digital filing cabinet that doesn't force you to use predefined folders.

Mongo DB
Database

a family of **relational database management systems (RDBMS)** developed by IBM.

Think of it like: A digital **filing cabinet** behind the scenes of Maximo

DB2
Database

THE BACKBONE OF MAXIMO

MAS is deployed and managed within OpenShift to provide scalability, resilience, and security.

An **enterprise Kubernetes platform** developed by Red Hat that adds security, management, and developer tools to Kubernetes

Red Hat Open Shift

Platform

Think of it like: Kubernetes with a dashboard, seatbelts, and a security guard – enterprise-grade management on top of raw Kubernetes.

MODULES VS APPLICATIONS

Module

A Module is a collection of applications that serve a functional area

Application

An Application is a specific interface within the module where the user performs tasks

Start Center

Static homepage or dashboard for users, showing their KPIs, assignments, and link

Operational Dashboard

Real-time, interactive visual tools designed to monitor and manage day-to-day business activities and processes

Modules are like rooms in a house, Applications are like tools in the rooms.

MODULES VS APPLICATIONS

Classification

organizes records into a **hierarchical** structure
(like equipment types)

Domain

defines a list of **valid values** for fields
(like WO statuses: WAPPR, INPRG, COMP or asset types like PMP, MTR, AHU).

Database Structures

the underlying physical schema of the Maximo database – the actual tables, columns, relationships, keys, and data types stored in the relational database (e.g., DB2, SQL Server, Oracle)

Objects Structures

logical data models used primarily for integration – they define how Maximo data is packaged, transferred, and understood between Maximo and external systems

Database Table: WORKORDER – stores the actual work order records.

Object Structure: MXWO – defines which fields and related records (e.g., labor, tasks) are included when sending or receiving work order data through an API

MODULES VS APPLICATIONS

Maximo Business Object (MBO)

the logic engine that handles the business rules and processing of records.

Attribute

single data field—like the asset number or location name—within the MBO.

System Configuration

where you configure the **behavior, rules, and setup** of the application – like workflows, domains, settings, and automation scripts

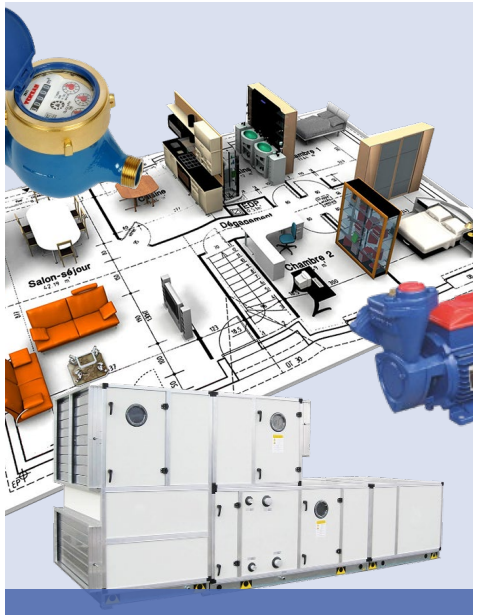
Database Configuration

The part of Maximo where you define and manage the **structure of the database** – including **tables (objects)**, **attributes (fields)**, **relationships**, and **indexes**

Think of System Configuration as setting the **rules of the game**, not changing the playing field.

Think of Database Configuration as **changing the blueprint** of the system.

THE EVERYDAY TOOLBOX



Asset vs Location

Work Order vs Service Request

Person vs Owner

Preventive Maintenance vs Corrective Maintenace

THE EVERYDAY TOOLBOX

Asset (What)

An Asset is a tangible or intangible entity that needs to be maintained—like a vehicle or a generator.

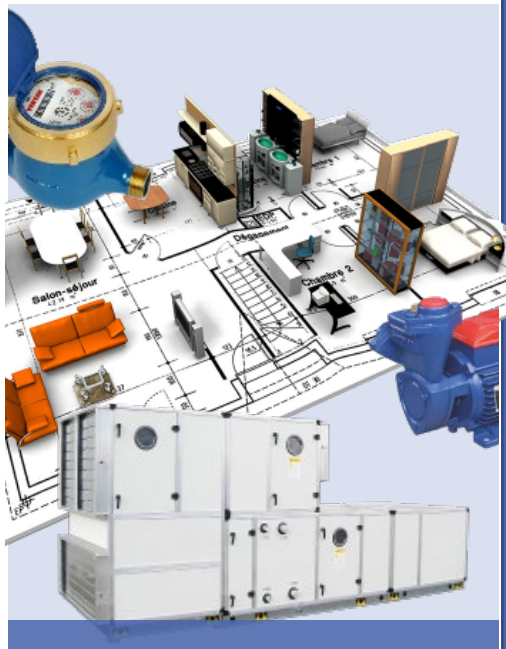
- Something that has potential or actual value to an organization.

vs

Location (Where)

A Location represents where the asset is installed or used.

- such as Building A or Zone 3.



Asset
vs
Location

THE EVERYDAY TOOLBOX

Service Request

A Service Request is typically the initial input from a user or stakeholder asking for help or reporting a problem.

- Often associated with a Ticket Template

vs

Work Order

A Work Order is a formal task assigned to a technician, often generated from planned maintenance.

- Often associated with a Job Plan

Work Order vs Service Request

THE EVERYDAY TOOLBOX

Person

A Person is an individual's record in Maximo, typically representing an employee, contractor, or technician.

- Can be linked to labor records, user profiles, or crews

vs

Owner

An Owner is a designated individual or group responsible for an asset, location, or record, often from an accountability or stewardship perspective.

- Can be linked to Asset, Location, or Work Order records to indicate responsibility

Person
vs
Owner

THE EVERYDAY TOOLBOX

Preventive Maintenance (PM)

Planned maintenance activities performed **before** failure occurs to extend asset life and prevent breakdowns.

vs

Corrective Maintenance (CM)

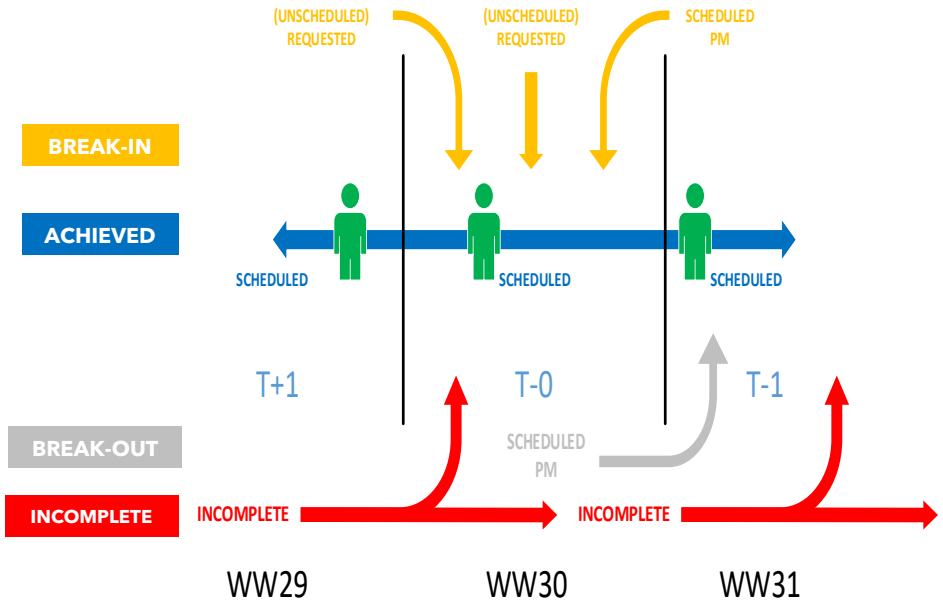
Reactive or planned maintenance performed **after** a failure or issue is detected.

Preventive Maintenance vs Corrective Maintenace

PLANNING AND SCHEDULING

PLANNING	SCHEDULING
The process of preparing for maintenance work by defining **what** needs to be done, **how**, and what resources are required.	The process of assigning **when** work will be performed and **who** will perform it, based on resource availability and priority

PLANNING AND SCHEDULING

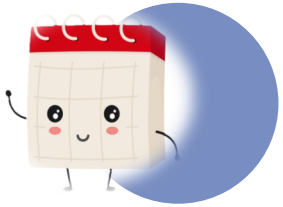


BREAK-IN	ACHIEVED	BREAK-OUT
Work completed within the work week that was not scheduled previously or within the work week	Work that was planned & scheduled for the current work week and completed in that work week	Work completed that was planned & scheduled in a particular work week and put into another work week without being rescheduled

PLANNING AND SCHEDULING

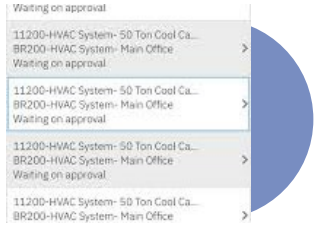
CRAFT VS LABOR

- Craft is a type of **skill**, such as Electrician or Plumber.
- Labor is an **individual** who has one or more craft skills and is available for assignment.



CALENDAR VS SHIFT

- A Calendar defines the **workdays** and holidays of a group or site
- A Shift defines specific **time blocks** within those days, such as 8:00 AM – 4:00 PM.



METER VS INSPECTION

- A Meter continuously tracks asset **condition or usage**, like runtime hours or cycle counts.
- An Inspection Form is a **manual** checklist completed by a technician during a walkthrough or audit.

PLANNING AND SCHEDULING

ASSIGNMENT MANAGER	PURPOSE	APPLICATIONS	PURPOSE	GRAPHICAL SCHEDULER
A real-time **labor assignment tool** used to assign work orders to individuals based on availability, craft, and location.	Best for fast, transactional, real-time labor assignment.	**VS**	Best for longer-term planning, coordination, and visual resource management	A **visual scheduling tool** that lets you plan, assign, and optimize work orders, tasks, and labor via a calendar-style Gantt chart

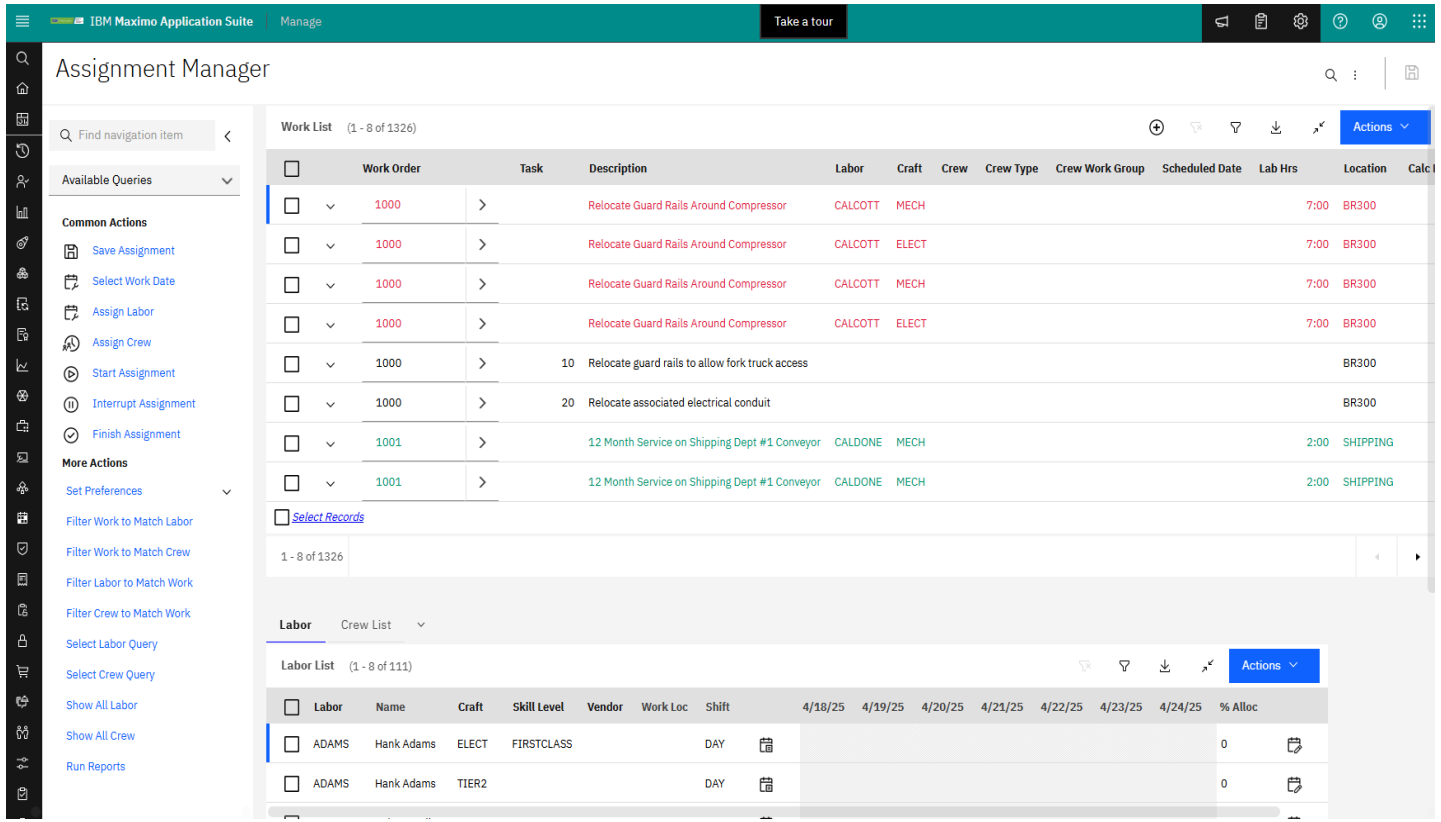
PLANNING AND SCHEDULING

ASSIGNMENT MANAGER

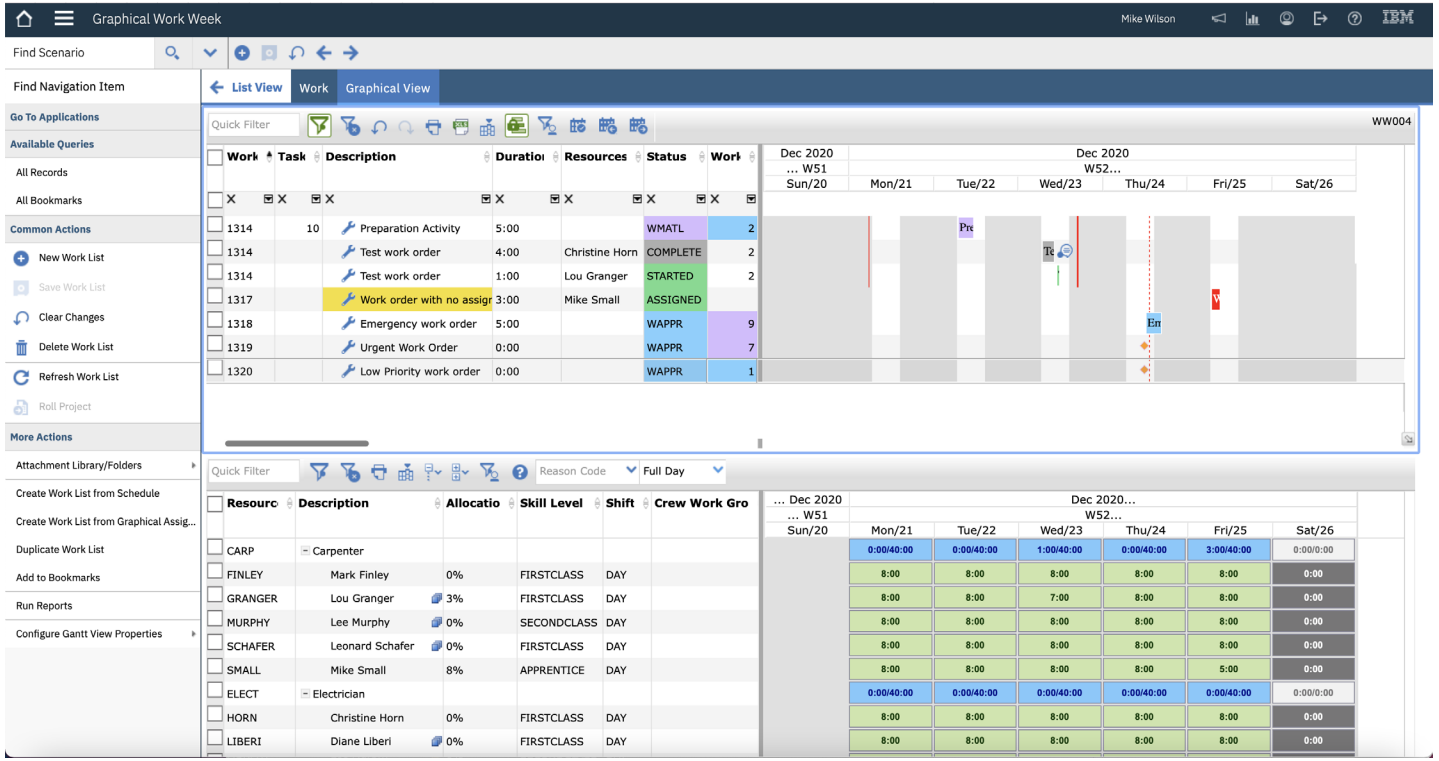
A real-time **labor assignment tool** used to assign work orders to individuals based on availability, craft, and location.

PURPOSE

Best for fast, transactional, real-time labor assignment.



PLANNING AND SCHEDULING



PURPOSE

Best for longer-term planning, coordination, and visual resource management

GRAPHICAL SCHEDULER

A **visual scheduling tool** that lets you plan, assign, and optimize work orders, tasks, and labor via a calendar-style Gantt chart

REPORTING & AUTOMATION

IoT
Internet of Things

Definition: The connection between **Internet of Things (IoT)** devices and Maximo to enable real-time data exchange, remote monitoring, and predictive maintenance.

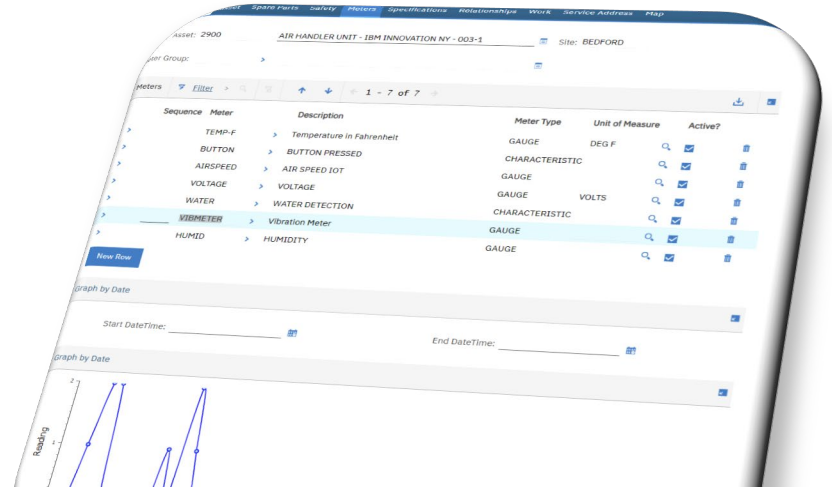
Purpose: To automatically trigger work orders, alerts, or condition-based maintenance using sensor data (e.g., temperature, vibration).

Common Use Cases:

A vibration sensor exceeds a threshold and auto-generates a corrective work order.

Meter readings from pumps are sent directly to Maximo for automated tracking.

IoT turns **assets into smart devices**, enabling Maximo to act **proactively** instead of reactively.



REPORTING & AUTOMATION

Workflow

Definition: A visual tool in Maximo for designing **business processes**, including approvals, escalations, notifications, and routing logic.

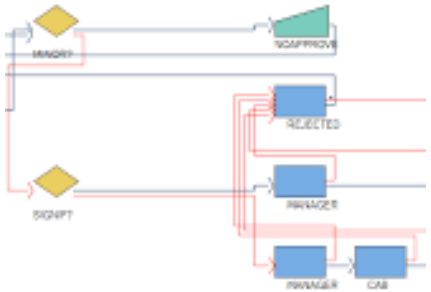
Purpose: To automate routine decisions and task assignments, ensuring consistency and compliance with organizational rules.

Common Use Cases:

Auto-routing service requests to the correct department based on asset location.

Requiring supervisor approval before high-cost work orders are released.

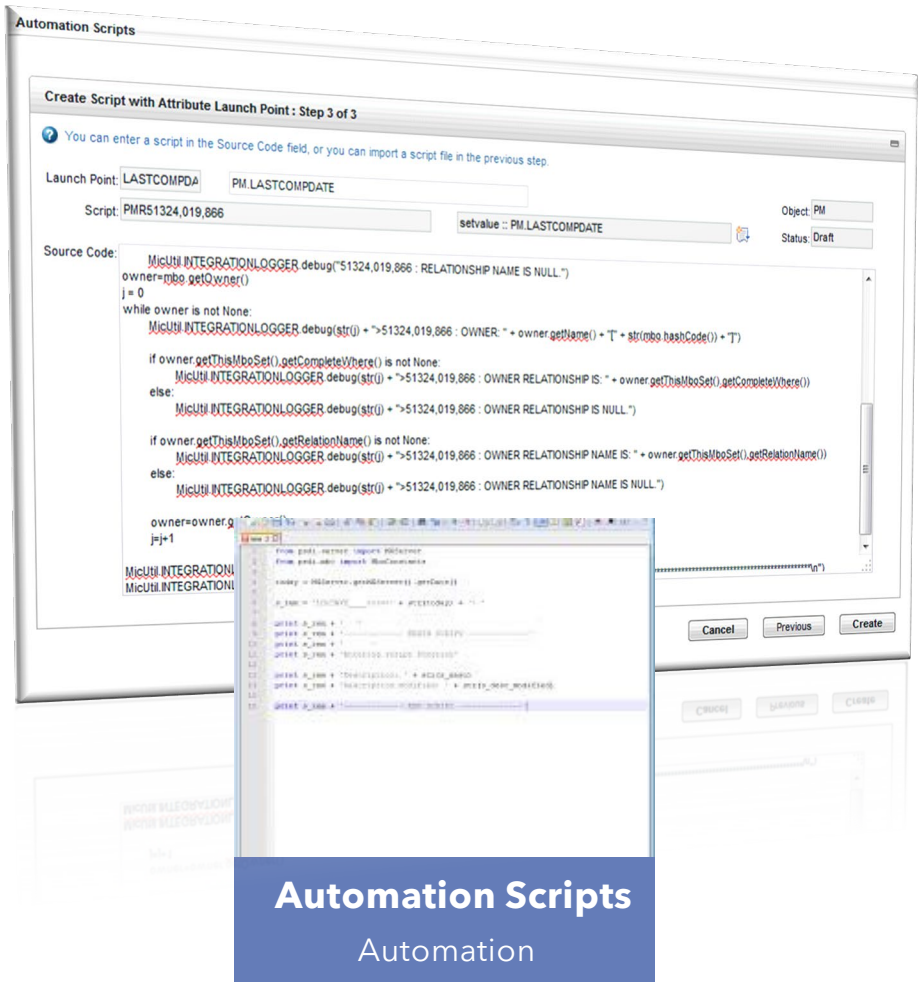
Workflows make Maximo **intelligent**, enforcing **your business rules** every time and help you identify your Service Delivery Model to end users.



Workflow

Business Processing

REPORTING & AUTOMATION



Automation Scripts

Definition: Lightweight, **server-side scripts** written in Jython or JavaScript that automate tasks or enforce rules without custom Java code.

Purpose: To tailor Maximo behavior — such as auto-filling fields, validating inputs, or triggering workflows — in a flexible, low-code way.

Common Use Cases:

Auto-populating a “Supervisor” field based on asset location.
Blocking work order closure if required fields are missing.

Automation scripts make Maximo **adapt to your logic** — no developers needed. (But you will need some programming experience)

REPORTING & AUTOMATION

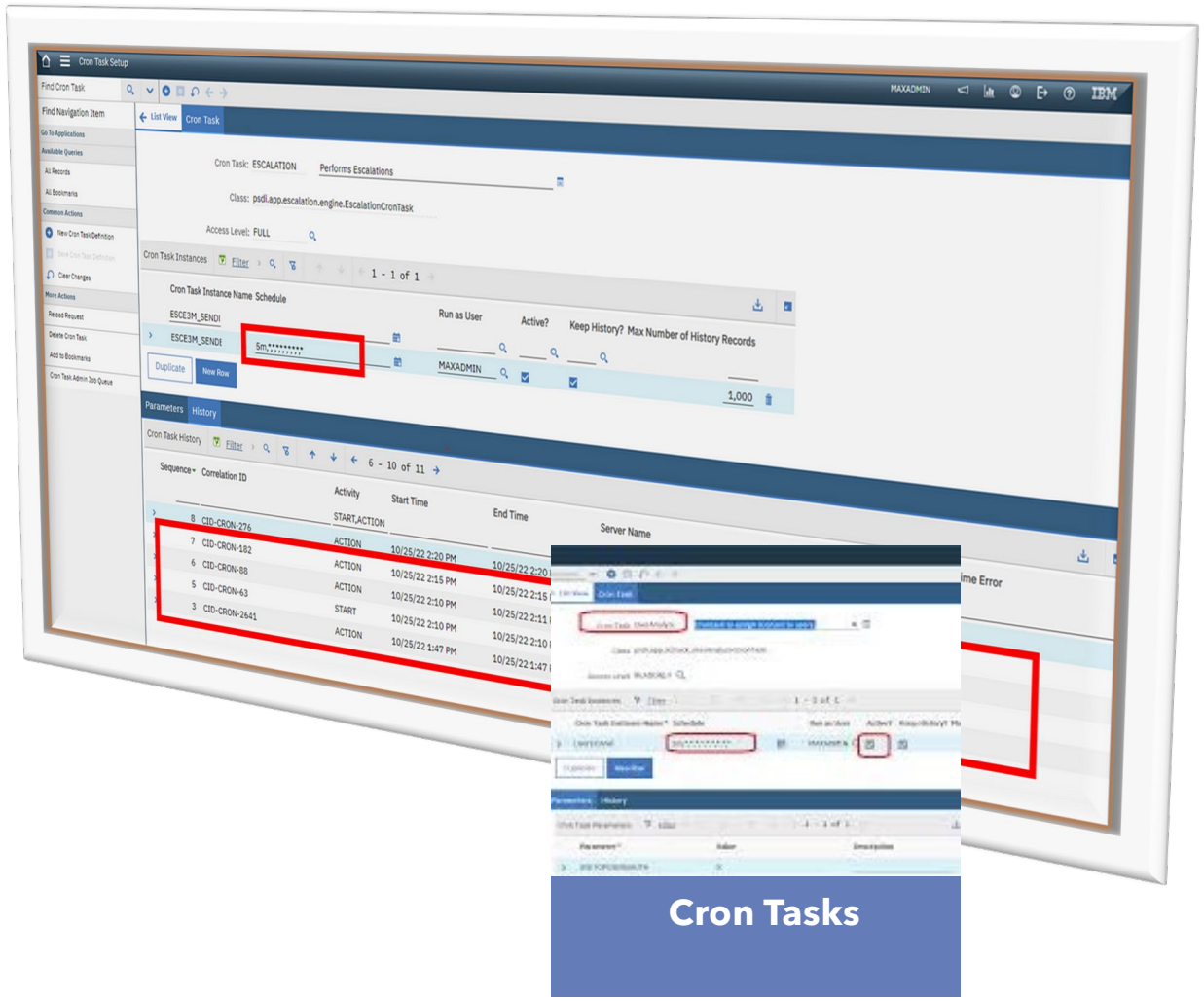
Cron Tasks (Scheduled Automation)

•**Definition**: Background jobs that run on a **recurring schedule** to process tasks such as data imports, escalations, or integrations.

•**Purpose**: To automate time-based processes — hourly, daily, or based on specific intervals.

•**Common Use Cases**:
- •Nightly sync of external asset data into Maximo.
- •Scheduled email alerts for overdue inspections.

Cron tasks let Maximo **run itself on a timer**, so nothing falls through the cracks.



REPORTING & AUTOMATION

BIRT Reports

•**Definition**: Maximo's out-of-the-box reporting engine, used to build **custom reports** and dashboards with charts, tables, and grouped data.

•**Purpose**: To generate static or parameter-driven reports for data analysis, performance tracking, and audits.

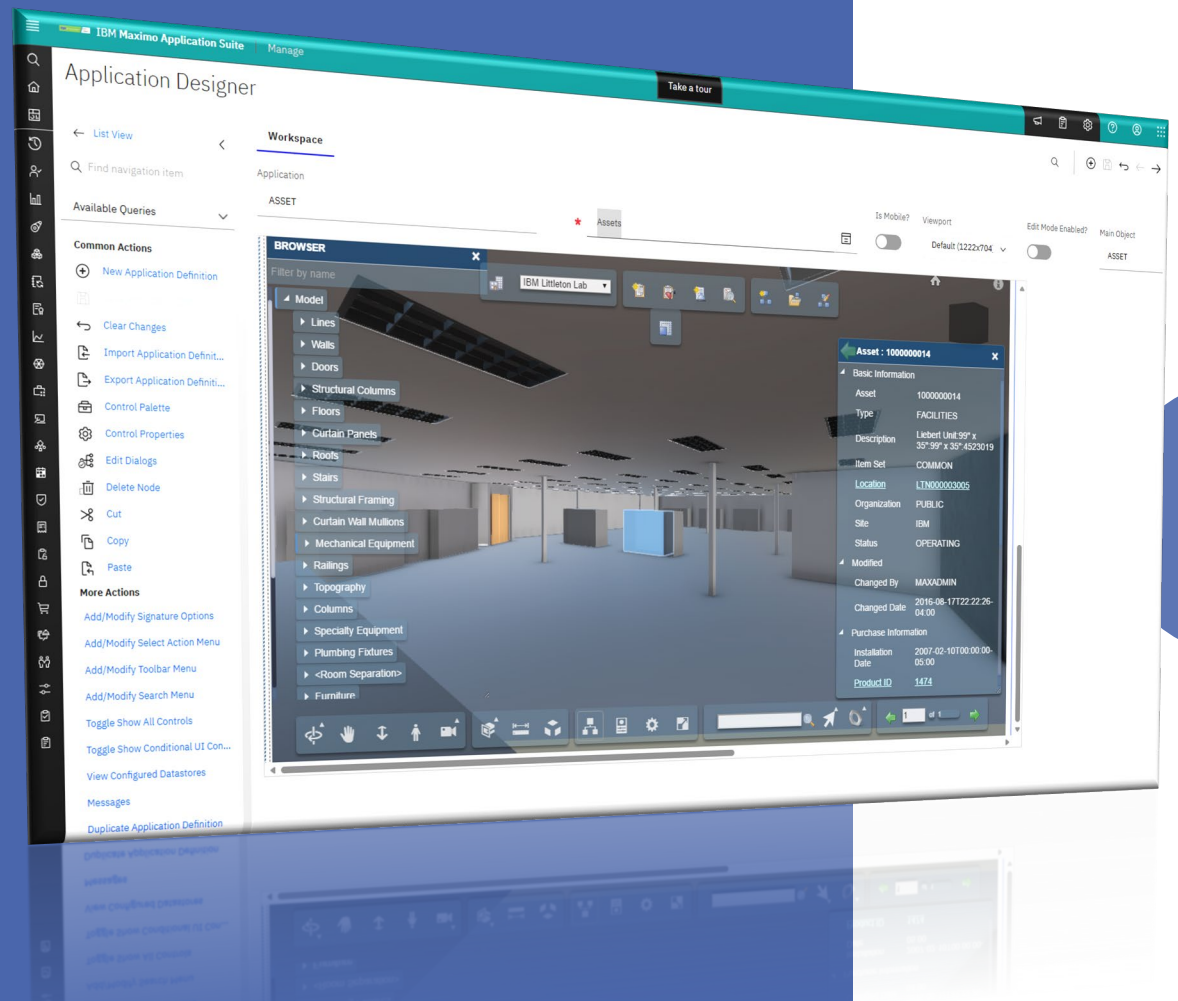
•**Common Use Cases**:
- •Monthly report of overdue PMs.
- •Report showing cost by asset or department.

BIRT provides **insight through data**, turning transactions into **strategic intelligence**.

(might want to use Operational Dashboards)

MODELING

BIM VS VIRTUAL



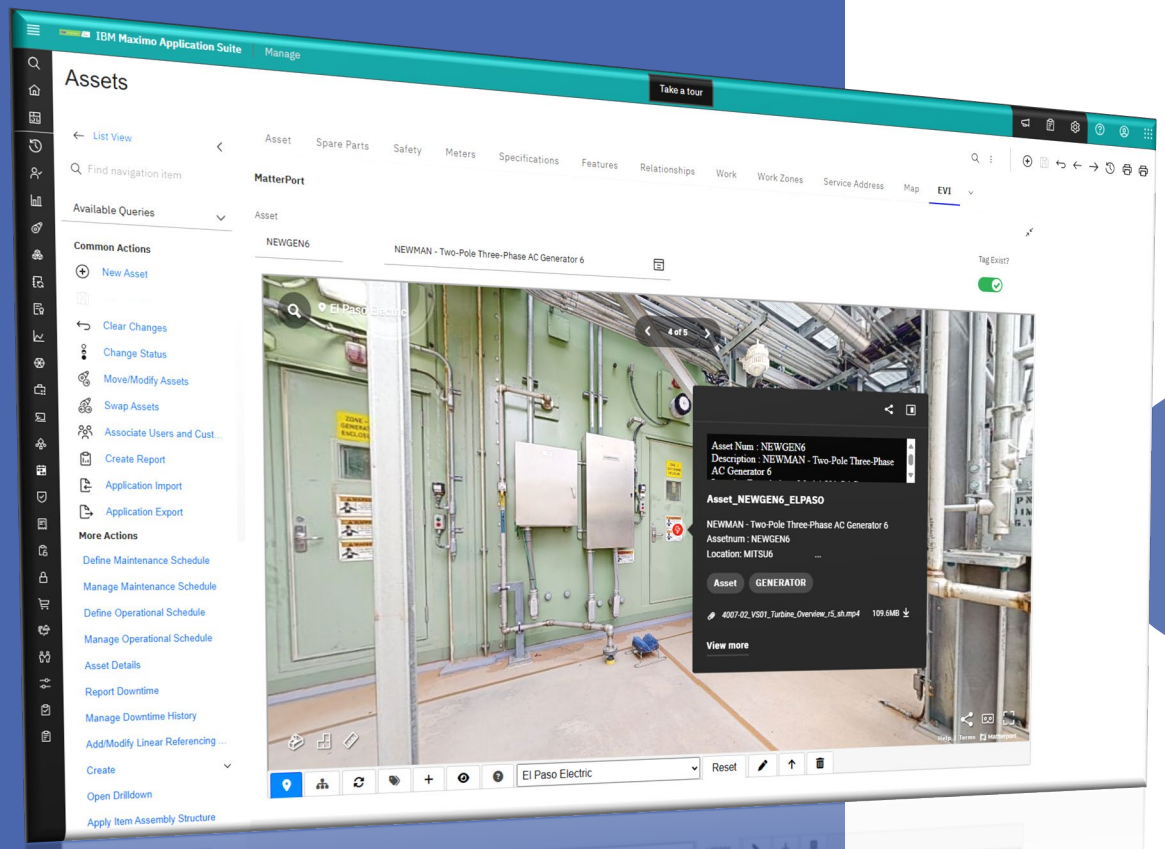
BIM (Building Information Modeling)

A data-rich 3D model that represents the design, construction, and operation of a physical building or infrastructure. BIM models are created in platforms like Revit or Navisworks and are built to industry stand

Think of BIM as the digital DNA of a building – highly structured, standardized, and rich in lifecycle data standards.

MODELING

BIM VS VIRTUAL



Virtual Representation (e.g., Matterport)

A **photogrammetric or 3D scan-based model** of a physical space, often created with cameras like Matterport, NavVis, or LiDAR. It provides a visual walkthrough rather than a detailed engineering model.

Think of virtual scans as a live tour of the facility, great for seeing what's really there – but not engineered for design precision.

MODELING

Other Terminology

BIM VS VIRTUAL

Digital Twin – visual (virtual) representation of a physical space or asset

Scan – camera capture of physical space to render into a model

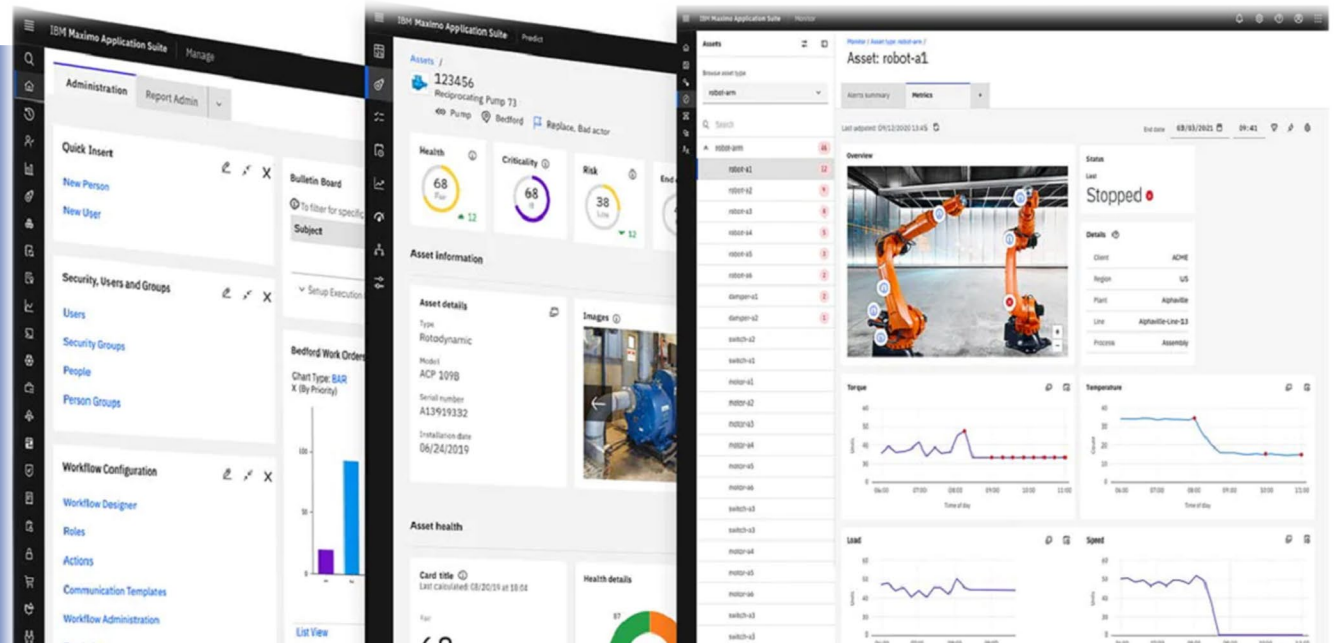
Model – final version of a scanned virtual space

Space – the physical location of where the scan takes place

QUIZ TIME

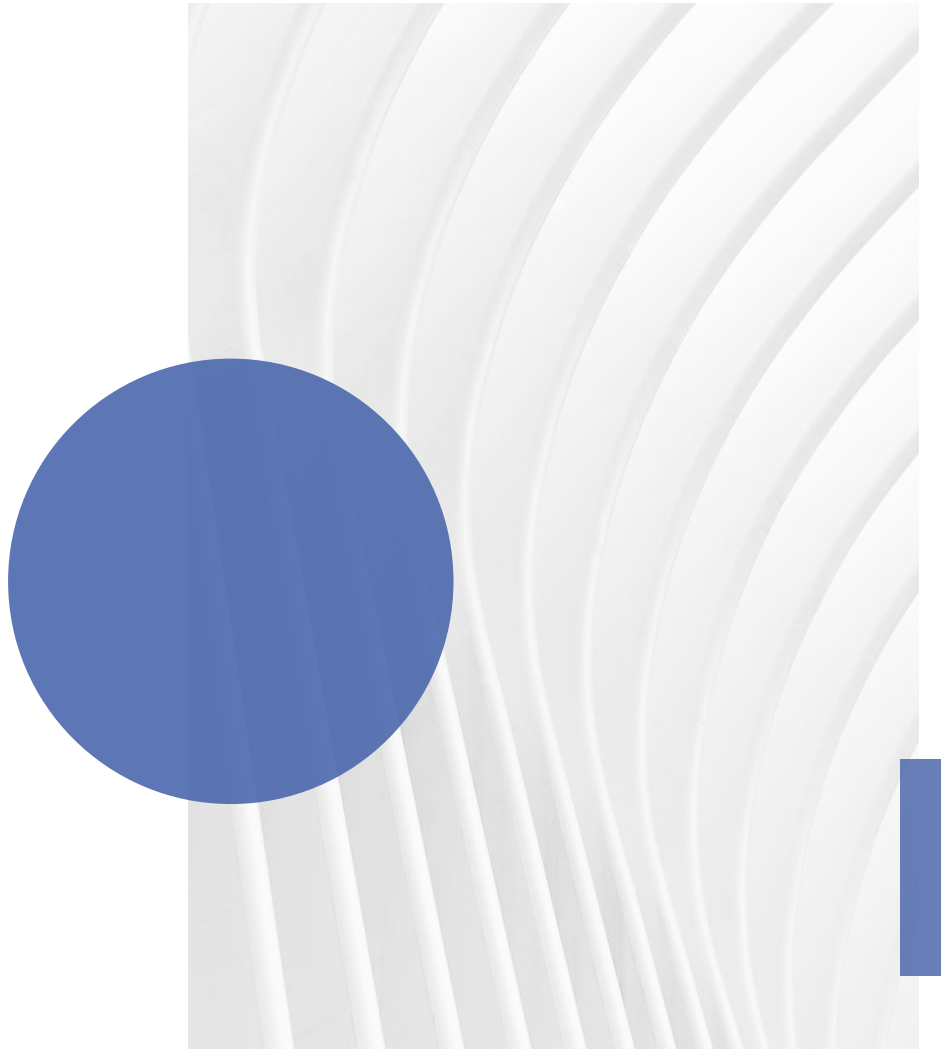
Test your skills for today's Presentation

NEMUG QUIZ



SUMMARY

- Enable system navigation more effectively in Maximo by understanding the vocabulary for the system
- Drive workflow accuracy in Maximo and EAM by using some of the methodologies in the presentation
- Understand Clear definitions to foster data quality
- Start using the right vocabulary to promote Automation and Optimization



THANK YOU

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