The Road Ahead with Maximo Application Suite

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Product Management

November 2021

Please note

Maximo Application Suite
Best of class capabilities to provide complete view of your assets

Manage	**Monitor**	**Health**	**Predict**	**Visual Inspection**	**Assist**	**Safety**
Intelligent Asset Management	Monitor and Detect Anomalies	360 View of Assets	Predictive Failures	AI-Powered Insights	Prescriptive Assistance	Actionable Insights for Worker Safety

IBM Cloud Pak for Data | IBM Watson Studio | IBM Watson ML | IBM Watson Discovery

Red Hat OpenShift — Infrastructure Independent Common Operating Environment

IBM Cloud · aws · Azure · Google Cloud · Edge · Private · Systems

Software that is Easier to Manage with OpenShift

We are entering a new chapter

Install
Automated provisioning &
configuration management

1. Installation

Horizontal / vertical scaling
Auto configuration tuning,
abnormal detection,
scheduling tuning

5. Auto Pilot

2. Upgrades

Patch and minor
upgrades supported

Metrics, alerts,
log processing and
workload analysis

4. Insights

3. Lifecycle

Application lifecycle
(backup, failure, recover)
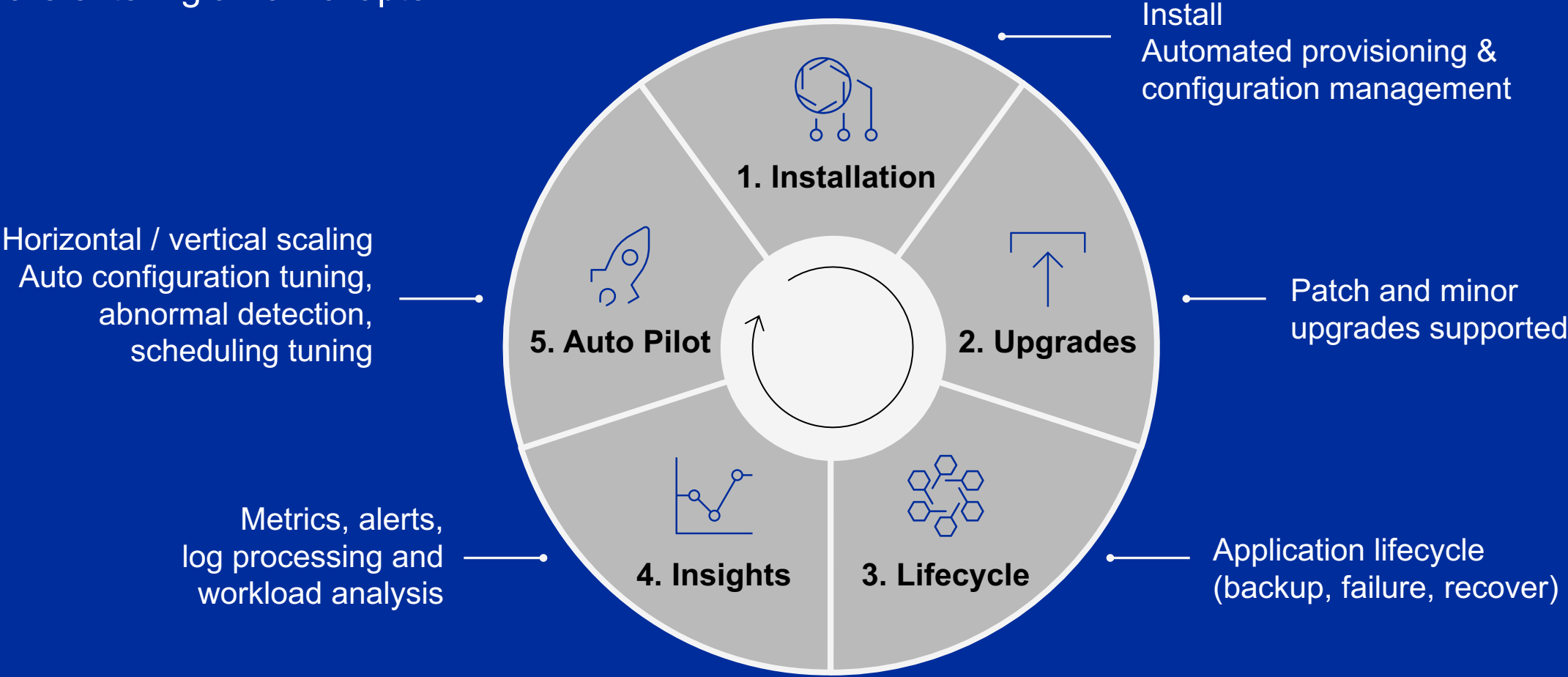
Manage Deployment Lifecycle through a single pane of glass

Software operations maturity model

Maximo Application Suite - Catalog

MAS Applications

Manage	Monitor	Health	Predict	Visual Inspection	Assist	Safety
Sch Linear Spatial Cal						

MAS Industry Solutions

Manage Transportation	**Manage** Nuclear	**Manage** Utilities	**Manage** Oil & Gas	**Manage** Aviation	**Manage** Civil Infrastructure	**Health & Predict** Utilities

MAS Add-on Solutions

Manage Asset Configuration Manager	**Manage** Health, Safety & Environment	**Manage** Service Provider	**Manage** Maximo Mobile Anywhere	**Manage** Spatial	**Manage** ERP Connector for SAP	**Manage** ERP Connector for Oracle

MAS Add-on Parts – separate part purchase

Parts Identifier	Omnio Edge	Willard Smart Exit Sign
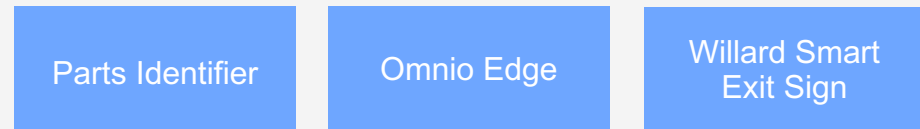
Integrations – separate part purchase

Maximo Scheduler Optimization	**Maximo** MRO Inventory Optimization	**IBM** Digital Twin Exchange
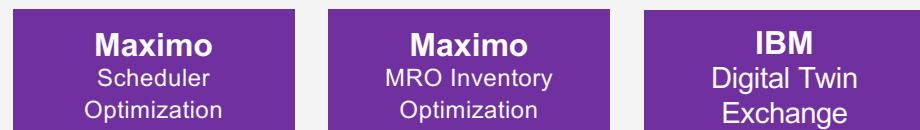
Maximo Application Suite
Catalog

- Customers only need to deploy what they are going to use.

- If customers only want Manage and Health, then only need to install those applications

Simplified Licensing and Usage

MAS AppPoints will be used across suite

Entitlement covers the whole suite. AppPoints are expended based primarily upon different active User types

Available as Subscription or Perpetual Licenses

1. Single license

One entitlement to entire Suite

2. Flexible consumption

Sharing of license through concurrent users

3. Simplified usage

Access applications without additional provisioning

Pool of AppPoints

units available for use

Manage

Monitor

Health

Predict

Visual Inspection

Assist

Safety

Future Capabilities
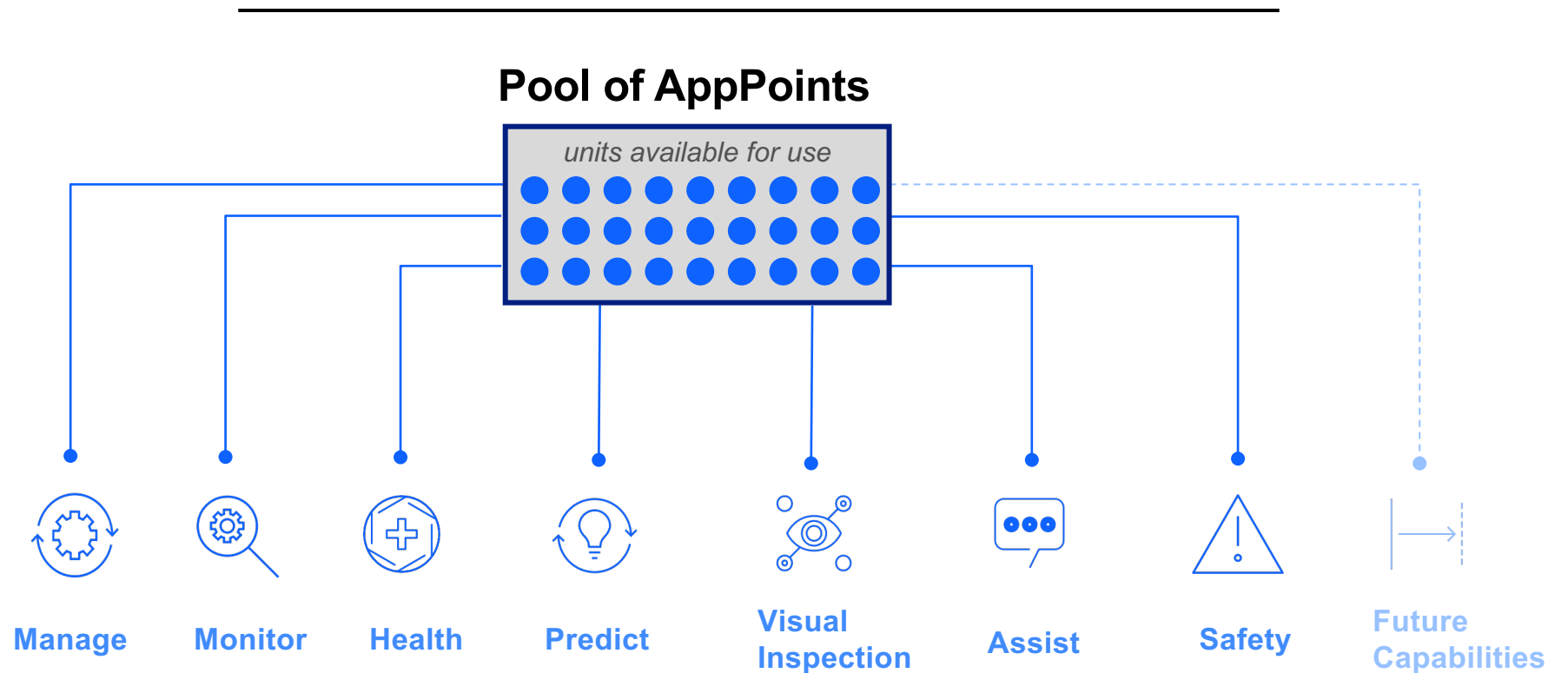
Shared Pool of AppPoints

Concurrent Application Users

Installs

These AppPoints are required for each MAS instance and are "reserved" on install of application.

Authorized Application Users and Administrators

Check in/out AppPoints on a regular occurrence as users' login/out of the Suite.

Always rotating the amount of AppPoints in the pool.
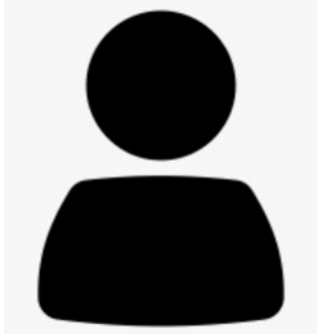
These AppPoints are "reserved" to ensure Admins and Authorized users always have access to the application suite.
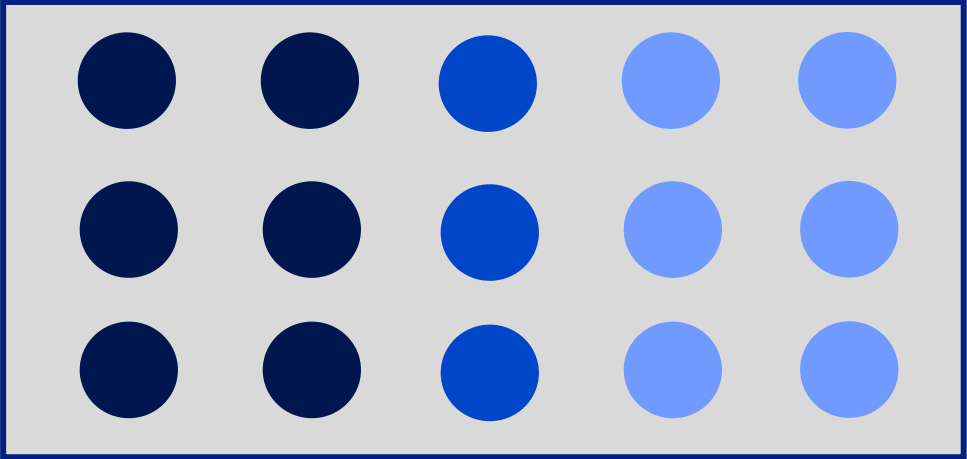
units available for use

Modernized User Interface

Easy navigation, common controls and visualization
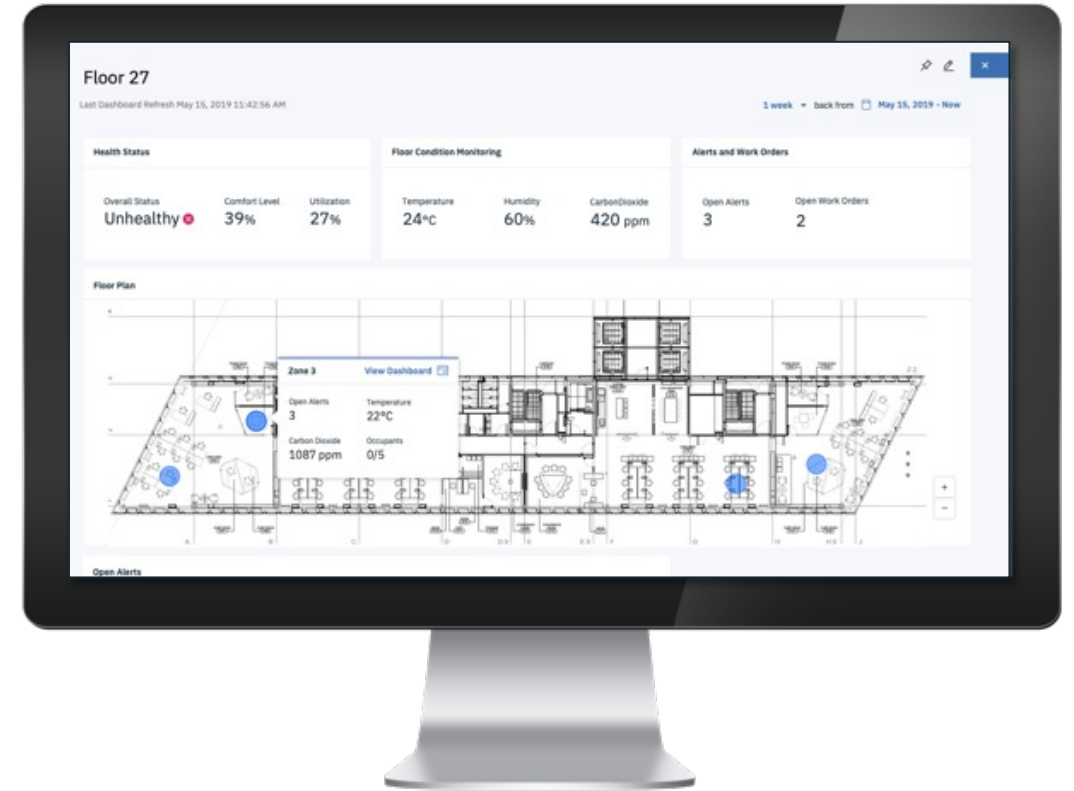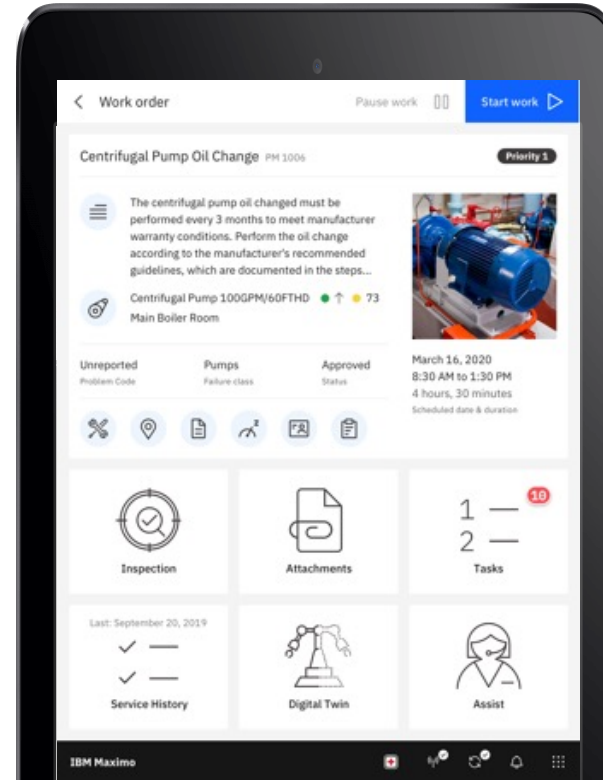
Updated Look and Feel
Manage

Collapsed Left side Navigation allows more screen real estate
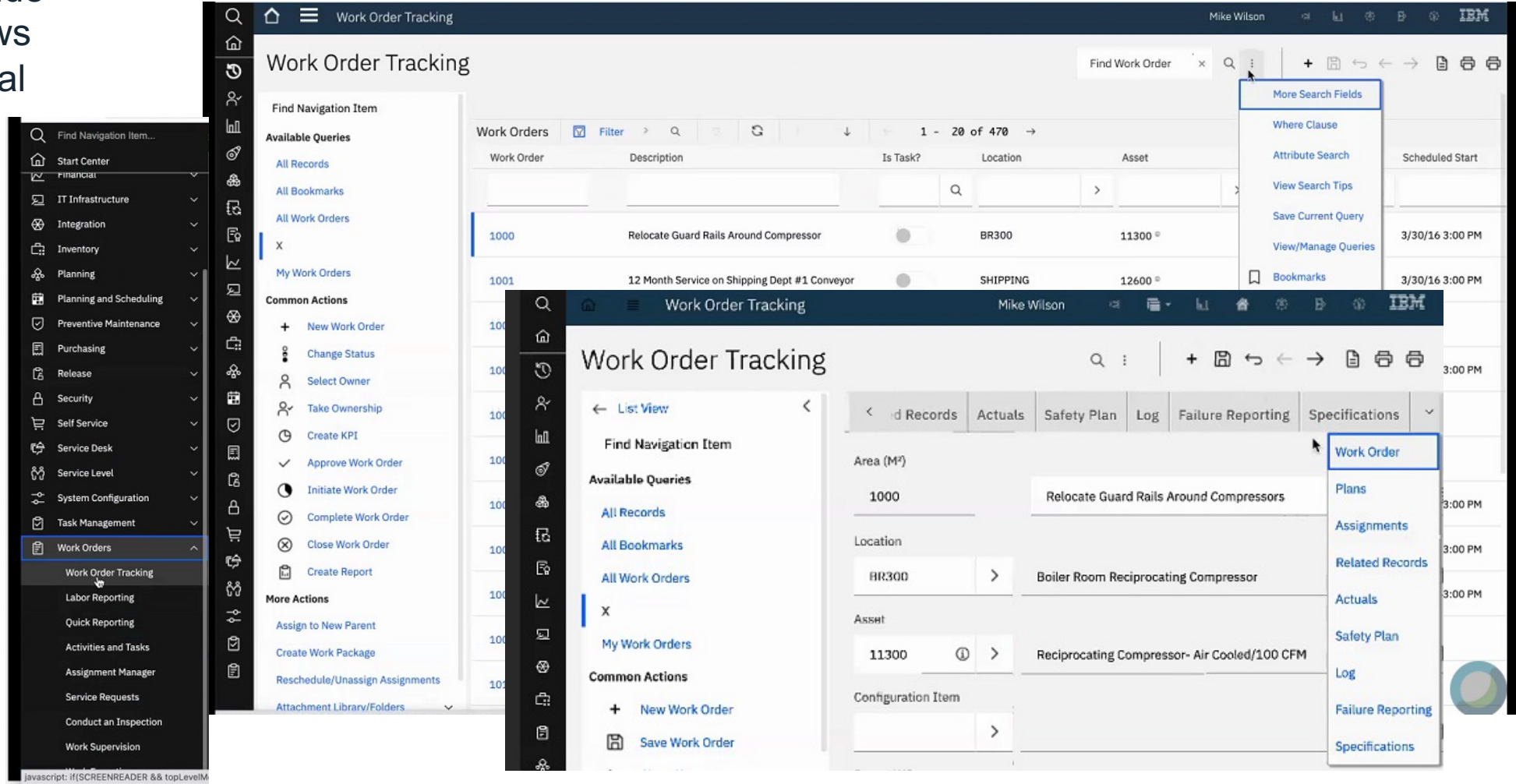
Updated Search Navigation

Tabs 'anchored' at top of page

AI Applications
Updated Look and Feel
Manage

New Capabilities:
Table Window details embedded

Continues to support previous features
• Application Designer
• Conditional UI

Removed properties file options

• Skin
• Dynamicfontsize
• Vericallabels
• showOnToolbar
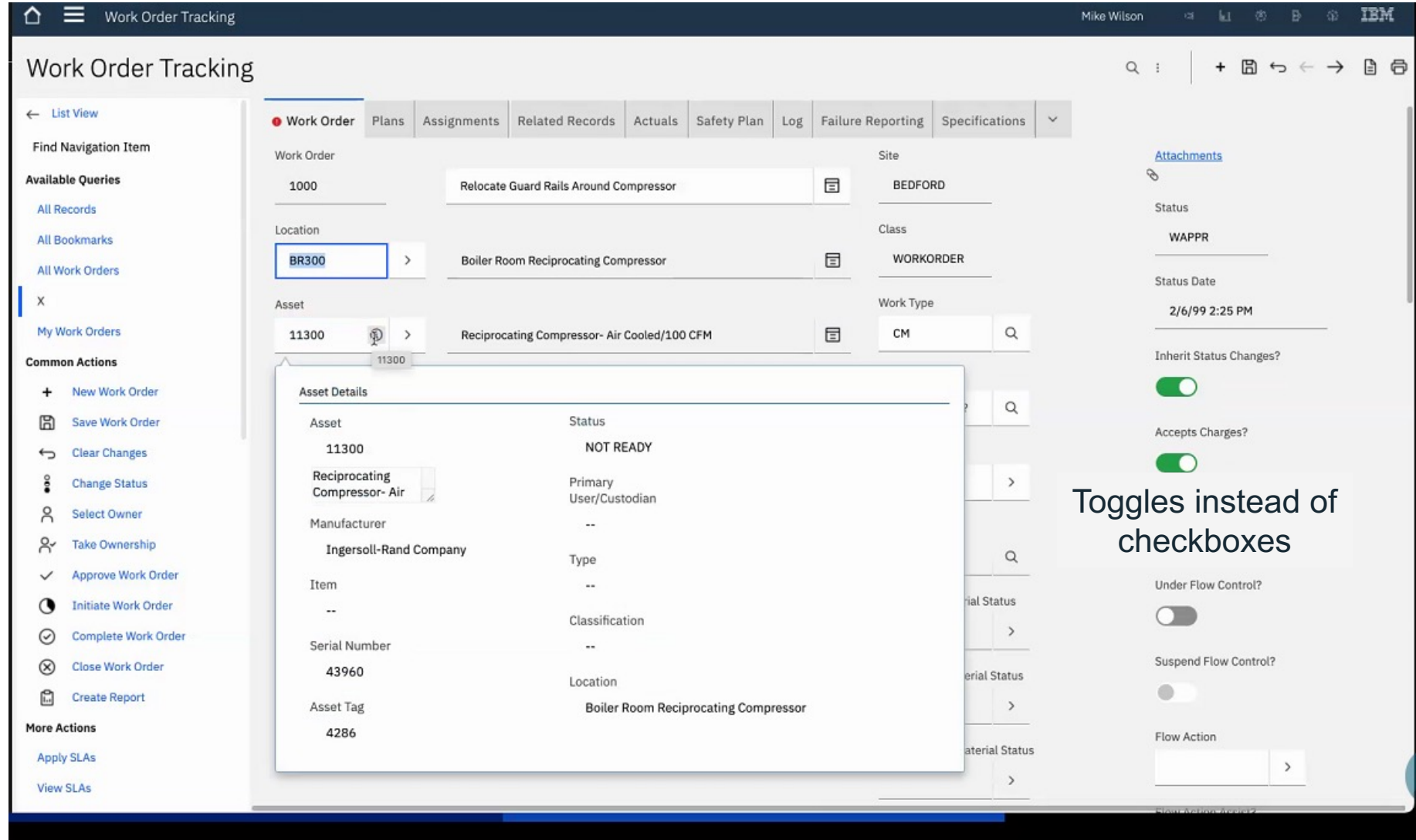
Maximo Manage - Maintenance Cost Roll-up

#1 Manage RFE request
- The asset manager wants to be able to roll up costs from the application, not a report, and have the option of applying costs (labor, materials, tools, services) to the top-level asset immediately on close of a work order in order to ensure accuracy of year-to-date and life-to-date costs.

- Costs can be rolled up manually or automatically. By default, cost rollups are manual. If you want costs to be calculated and rolled up automatically when a workorder is closed, you must set the mxe.workorder.rollupMaintenanceCosts system property to 1.

Maintenance Cost Rollup

ⓘ To process the roll up of total cost and year-to-date costs for the asset record and its respective hierarchy, click the Roll Up Costs icon.

Unprocessed Costs   ▼ Filter   >   🔍   ⯈   ↑   ↓   ←   1 – 2 of 2   →   ⭳   ◪

	Asset	Work Order	Site	Entered By	Cost Rollup Status	Total Cost	Change Date ▼		
>	7NLY7Q4	WORKORDER 1	BEDFORD	MAXADMIN	Unprocessed	89.49	6/9/21 10:46 AM	📄	📄
>	7NLY7Q2	3281668	BEDFORD	WILSON	Unprocessed	14.90	6/9/21 10:14 AM	📄	📄

Roll Up All Costs

◪   Costs   OK

Total Cost:
☰   139.45 ⓘ
   ⓘ Show all unprocessed maintenance costs
YTD Cost:
☰   139.45

*Budget   Maintenance Cost Rollup

Unprocessed Maintenance Costs   ↑   ↓   ←   1 – 1 of 1   →   ⭳   ◪

Asset	Work Order	Site	Entered By	Cost Rollup Status	Total Cost	Change Date
ASSET123	1203	BEDFORD	MAXADMIN	Unprocessed	14.90	7/15/21 12:51 PM

Close

New information icon on Asset Cost fields to inform an asset manager of unprocessed records

Maximo Mobile

Next Generation User Experience

 1 application, 1 role-based interface

 Intelligent workflows = blue button

 Intelligent forms = configurability

 Connected and disconnected

 Trustworthiness: data quality is higher, and real-time updates

 Downloadable from:

Apple App Store   Google Play Store

Strategic Direction for Maximo Mobile/Role Based Applications

Maximo Mobile/Role Based Applications

- ✓ Borrows from the Maximo Classic xml type of configuration (xml presentations)

- ✓ Uses the same REST APIs as Work Centers and Anywhere

- ✓ Expands beyond the Anywhere disconnected framework for offline capabilities

- ✓ Same Application can run in a browser or on a mobile device

- ✓ Same tool to configure an App to run on mobile and desktop

- ✓ Same development environment to create/build Apps for mobile and desktop

	Anywhere	Work Centers	Maximo Mobile and Role Based Applications
Platform	Mobile Device Only	Same app can run via desktop and mobile device	Same app can run via desktop and mobile device
Disconnected Capabilities	On or Offline	Online only	On or Offline
Development Scalability	Limited - deployment model had to be published to App Stores independently	Limited – no sharing of framework while developing Work Centers	Components, Application code, and Framework code is shared amongst the Applications
Configurable	xml and JavaScript	In App configurability required for each WC	Today - xml and JavaScript Future - Visual Configuration Tool
Data Access	REST APIs	REST APIs	REST APIs
Technology	Built around dojo	Built around polymer	Maximo Application Framework Vanilla JavaScript and xml (abstraction from the react runtime architecture)
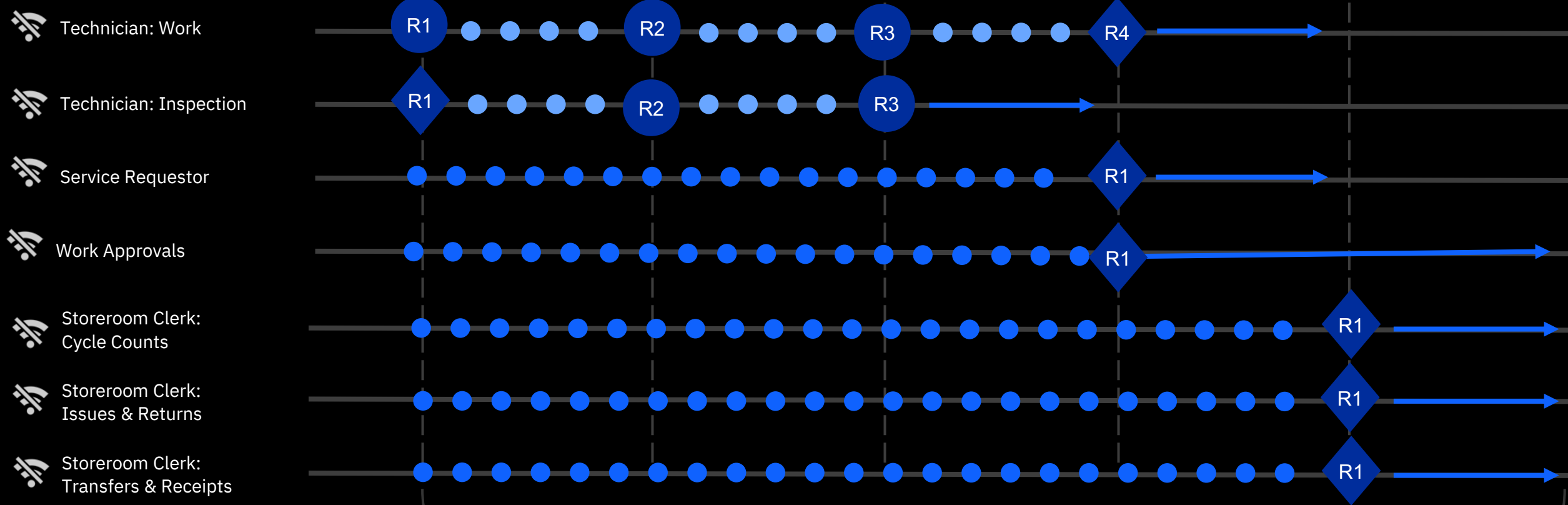
Inspections

Create forms based on legacy paper inspection requirements.

Ensure accuracy with visual indicators – icons and colors to match responses

Watson capabilities provide conversation interaction for hands-free capabilities
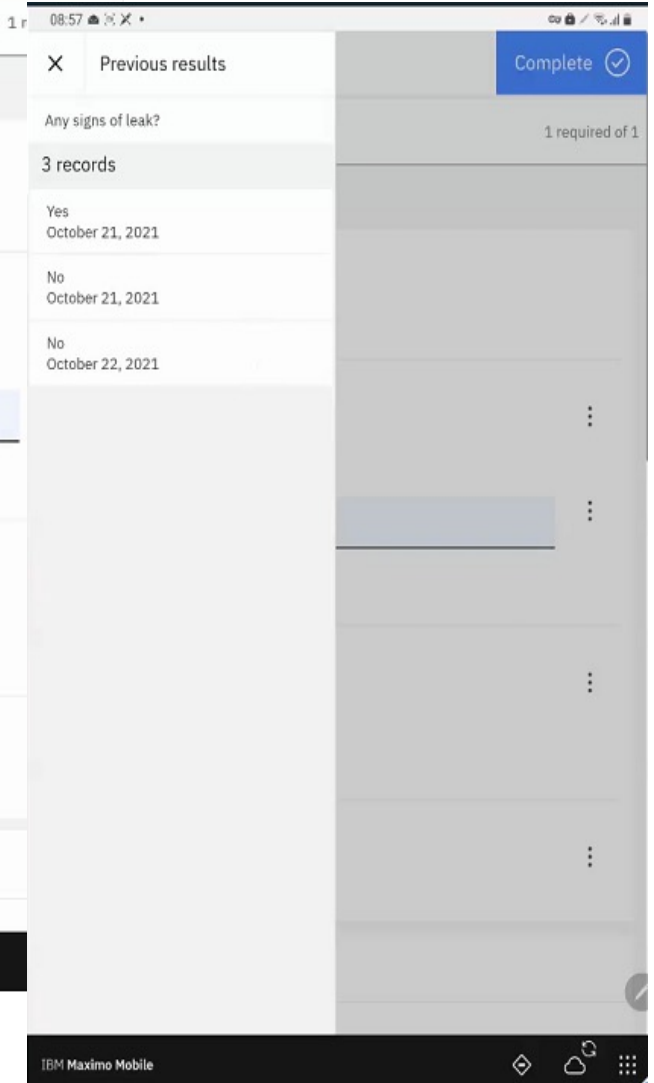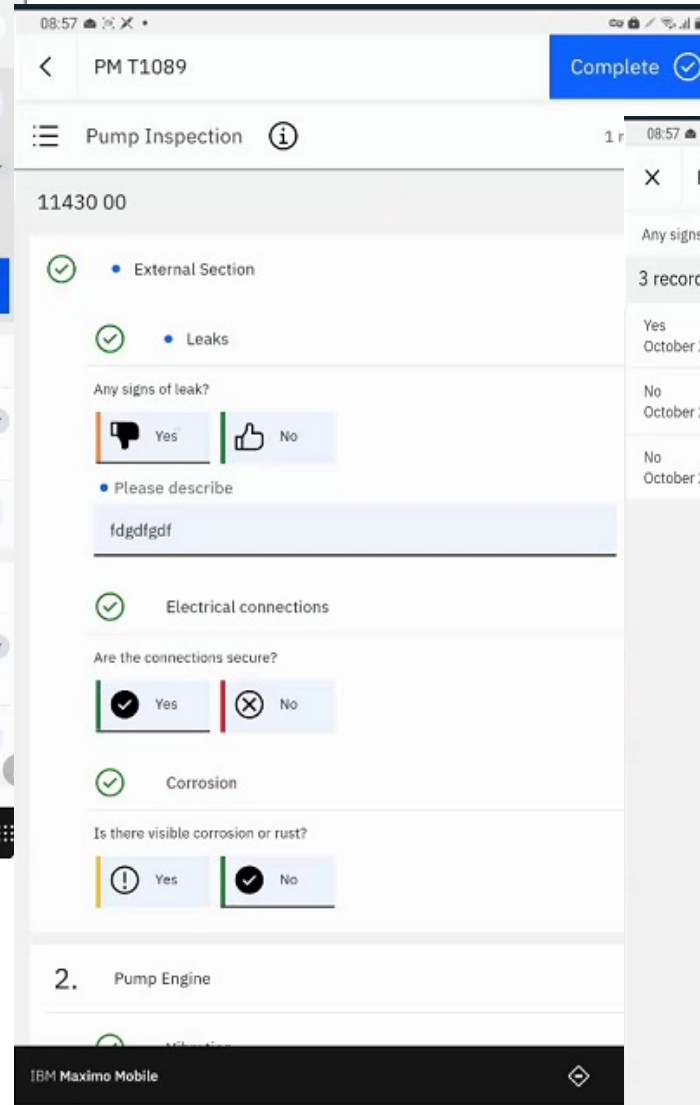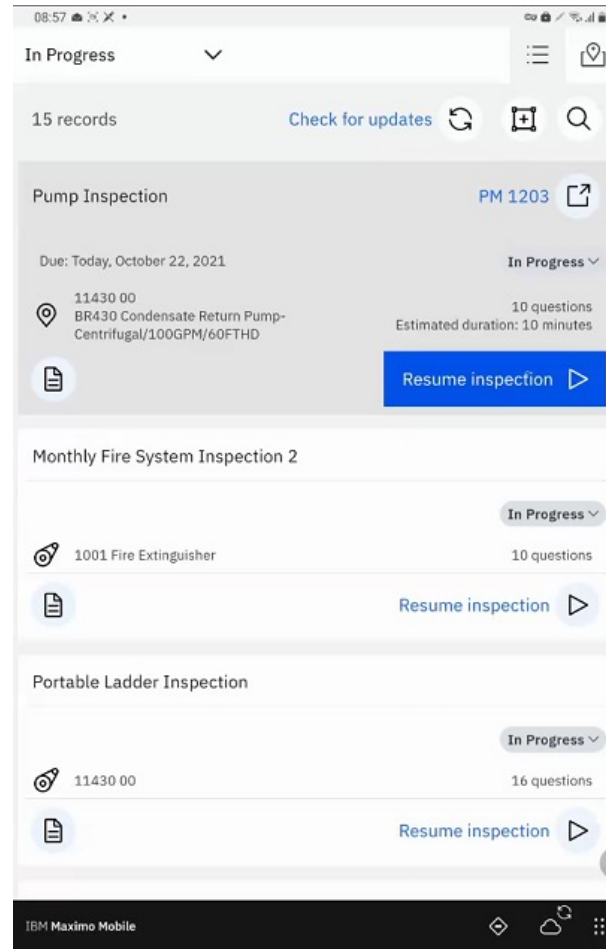
Technician - My Schedule
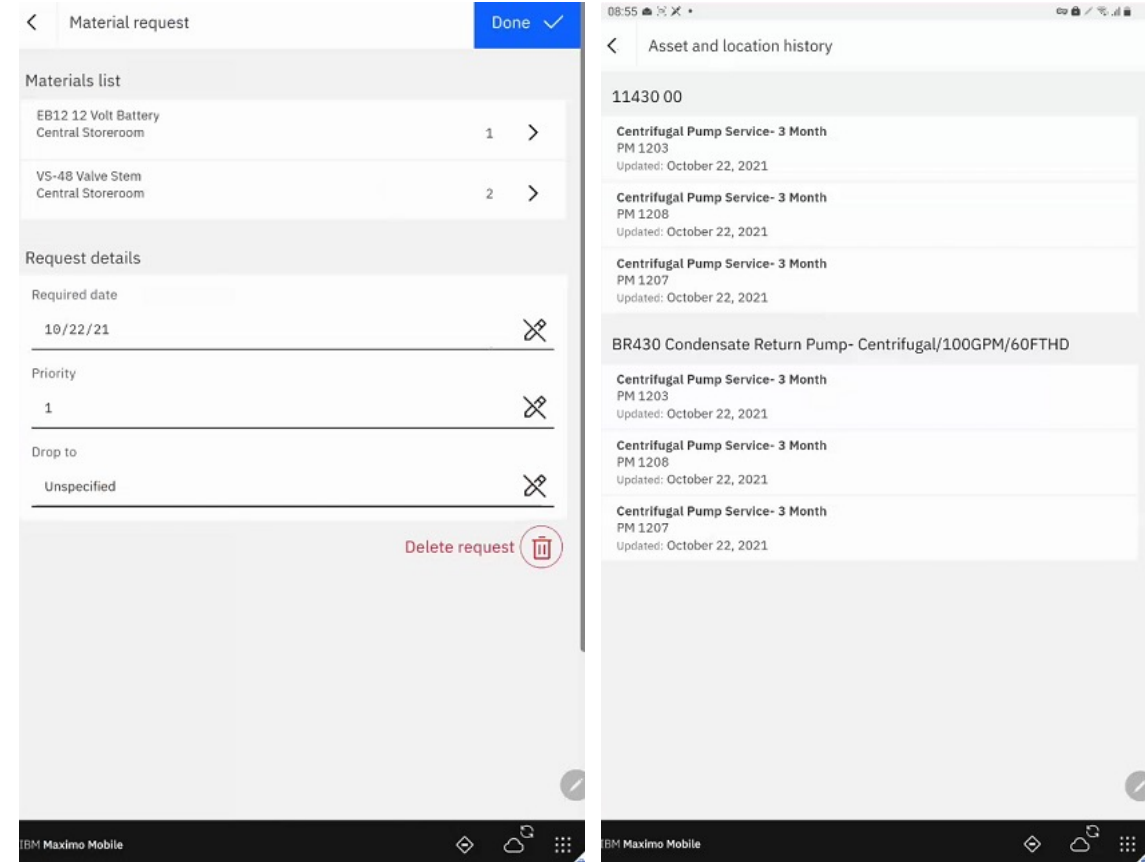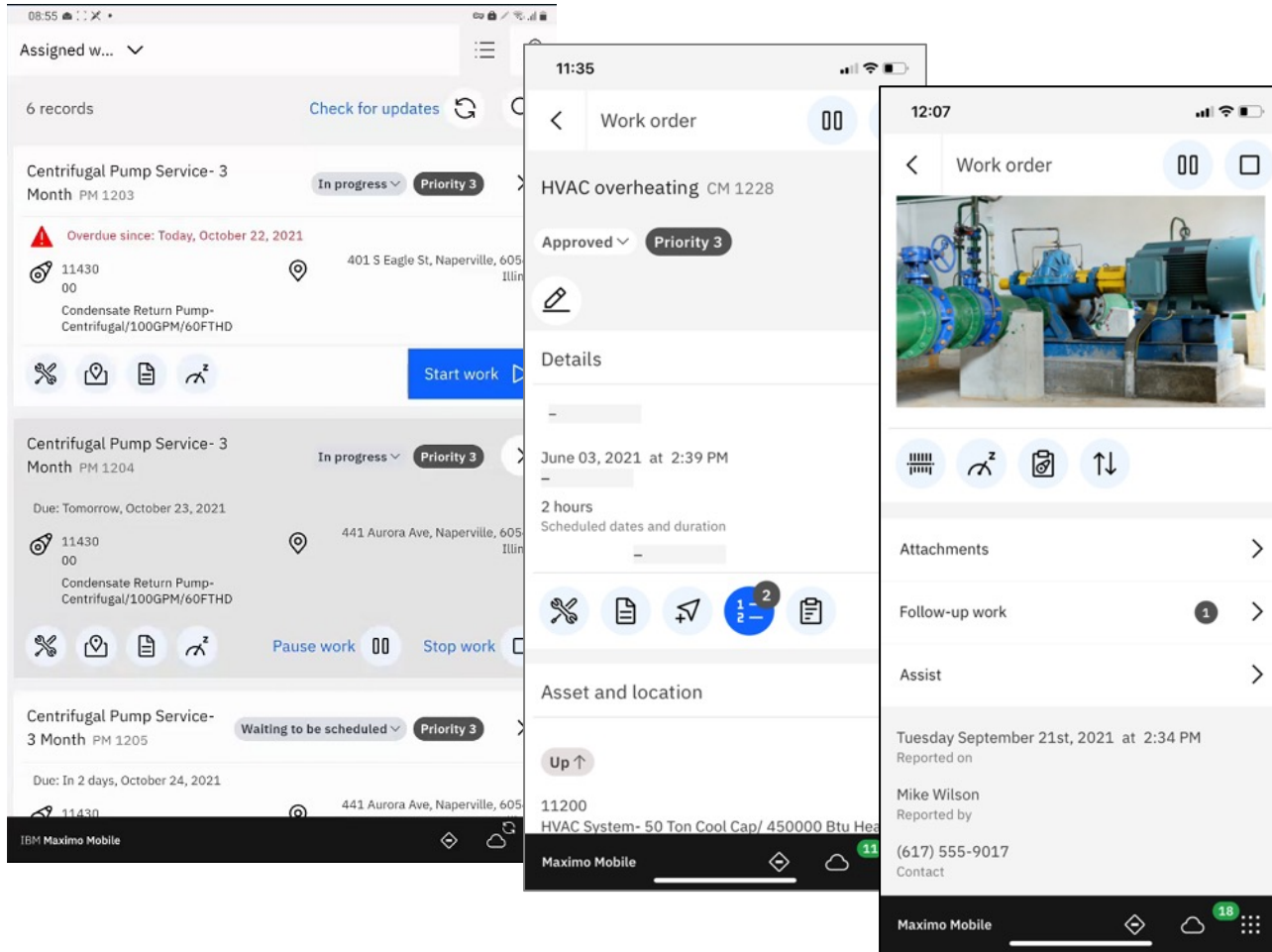
- Create material Requests with multiple materials
- Confirm the work is completed thru Physical Signature
- View history of location work orders
- Report tool actuals
- Scan RFIDs on the work order

Maximo Mobile - Approvals
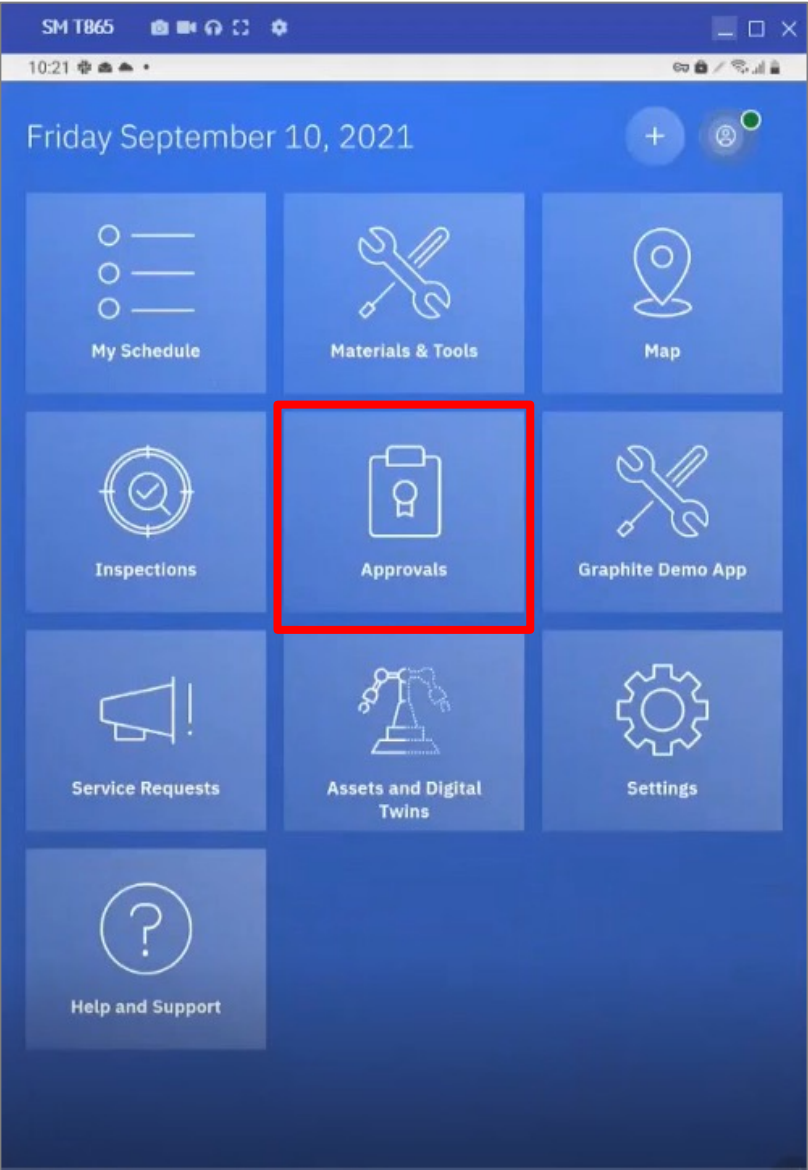
The new approval application allows users to easily review and approve work.
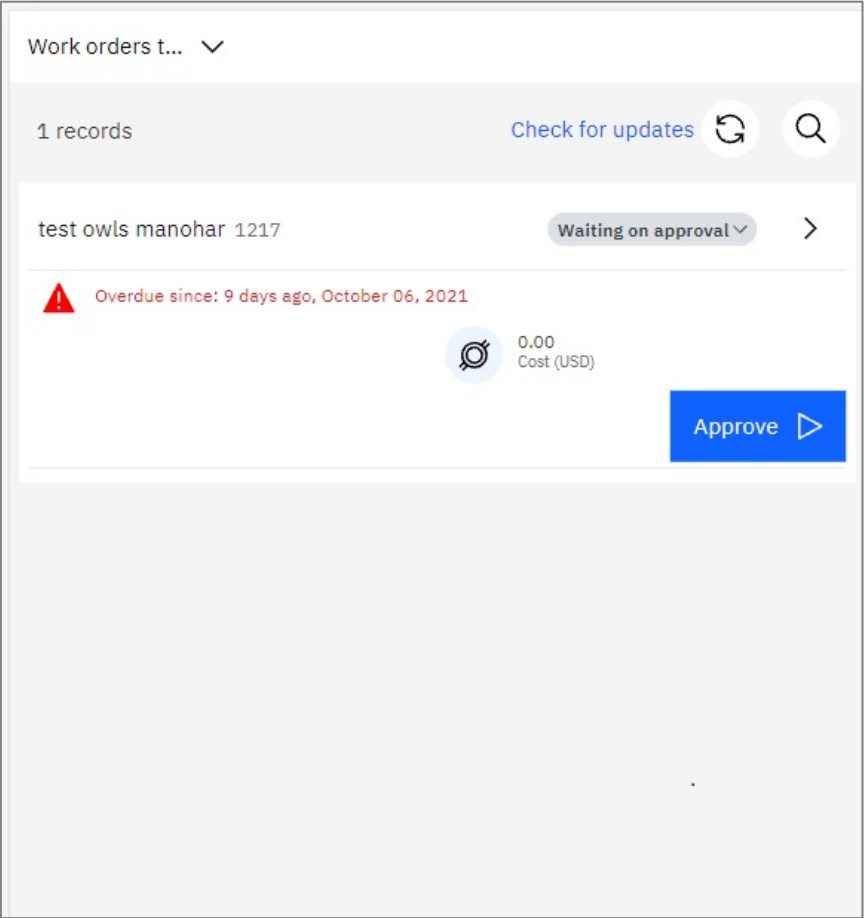
Maximo Mobile – Service Request

- Ability to create service request
- Choose from predefined problem types
- Attach images
- Quickly identify status on open active requests
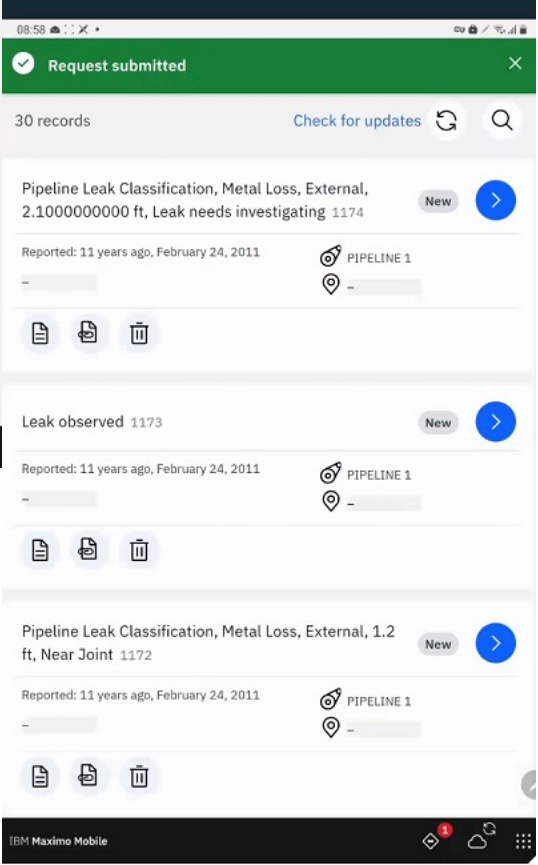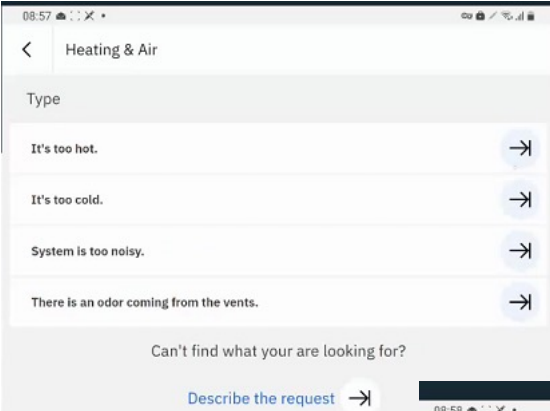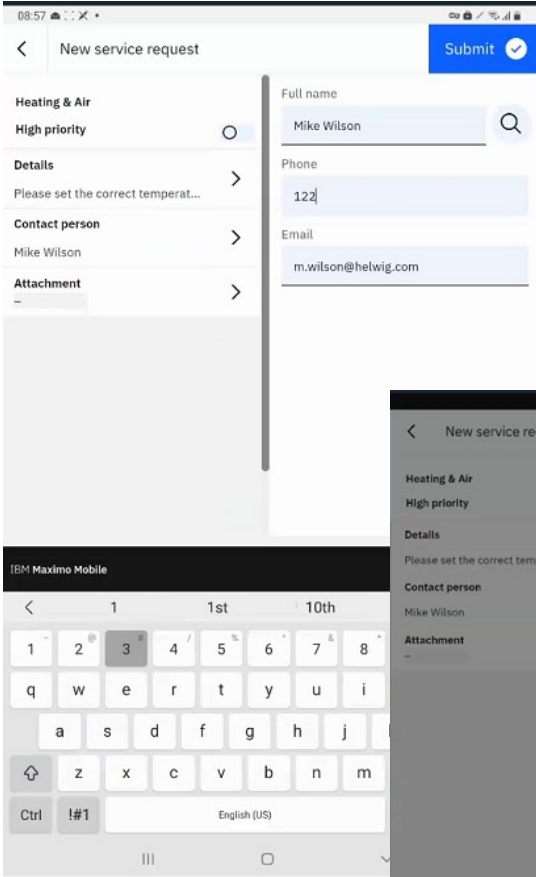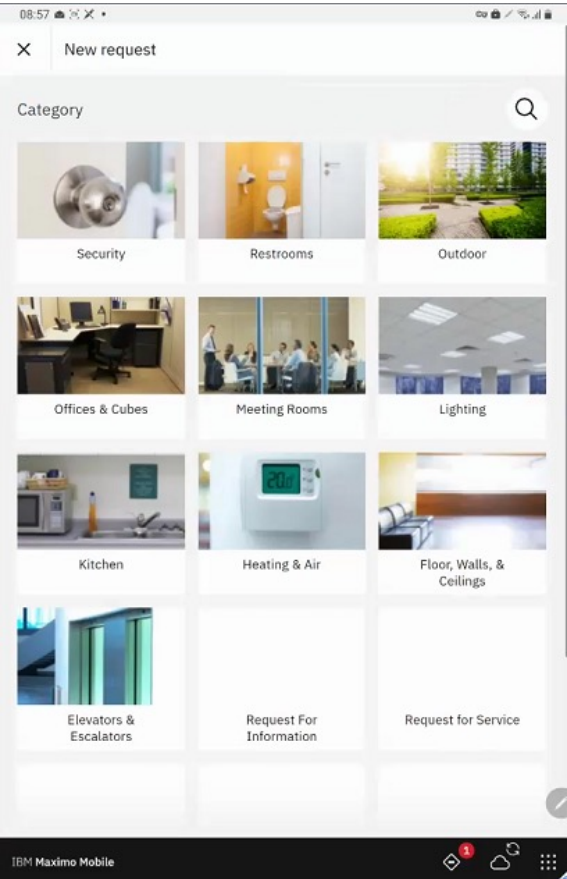
Maximo Mobile Configuration

Initial Configuration Capabilities:

- XML Editing Page

- Upgrade Tooling (XML Diff)

- Customization enablement

- Preview changes

- Duplicate Application and maintain Application specific properties

Maximo Mobile Configuration

MAS 8.6 Updates

- UI control property editor
- Application delete
- Serviceability improvement: system info for Configuration application
- Framework improvements

Role Based Application
Maintenance Manger

Overview dashboard and basic navigation

- Entry point for the Manager will be an overview dashboard. The Manager will be able to navigate to further more detailed screens for each main component of the overview dashboard.

- In general the Manager will be presented with summary information within the RBA, navigating to Classic for detail only when necessary.

- Existing Classic configuration applications will be utilised. These applications will normally be configured for the Manager by a Maximo administrator.

- Walk Me will be used to guide users through the screens.
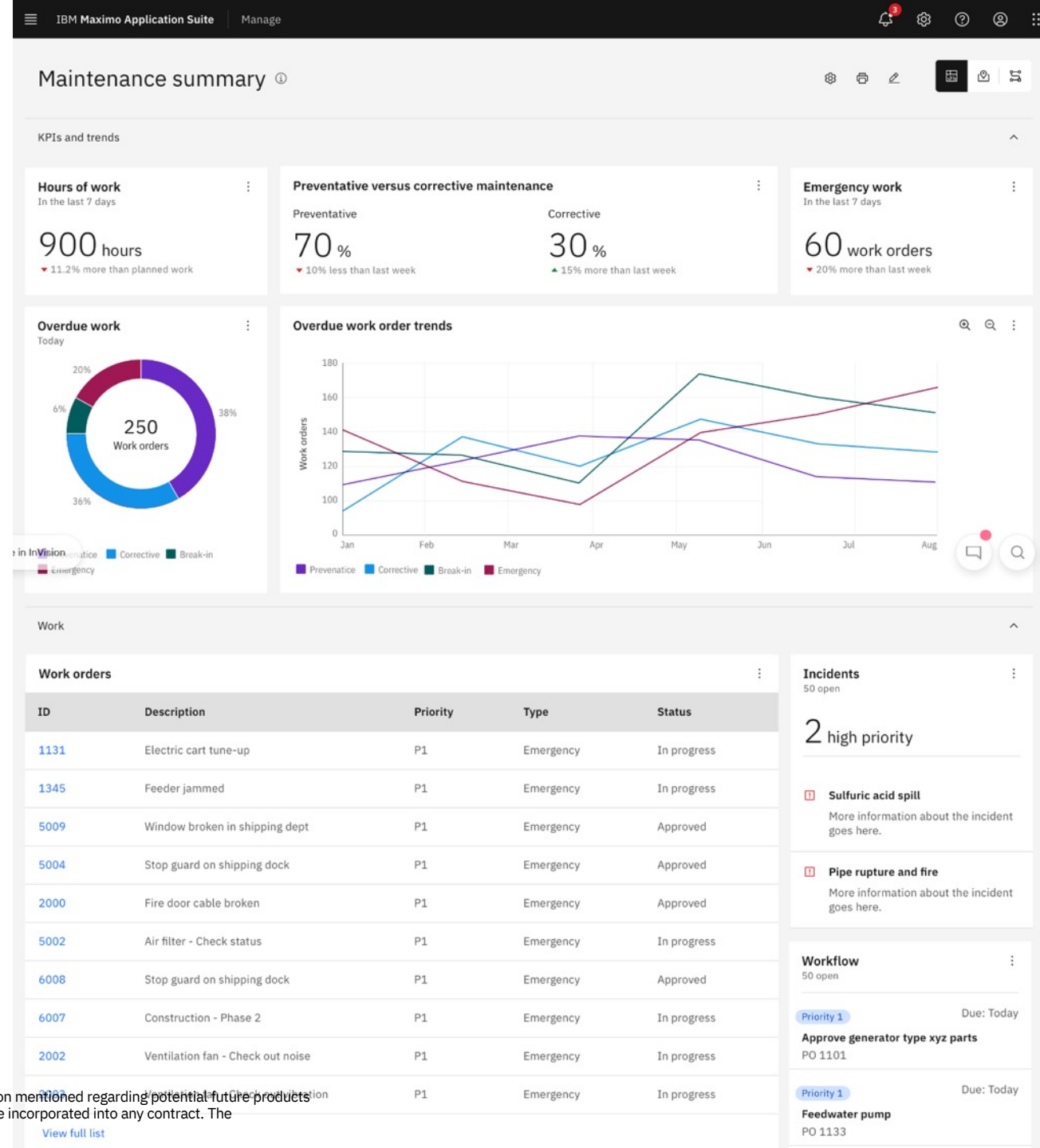
Maximo Assist

Empower technicians to work autonomously by enabling them to obtain AI guidance whenever they need it

Custom training repository

Engineering processes:
Root Cause Failure Analysis (RCFA)

Failure Modes Effects Analysis (FMEA)

Journals, magazines

Historical work orders (EAM data)

Customer service/ helpdesk data

Manufacturer and owner manuals, engineering manuals

Ask expert technician
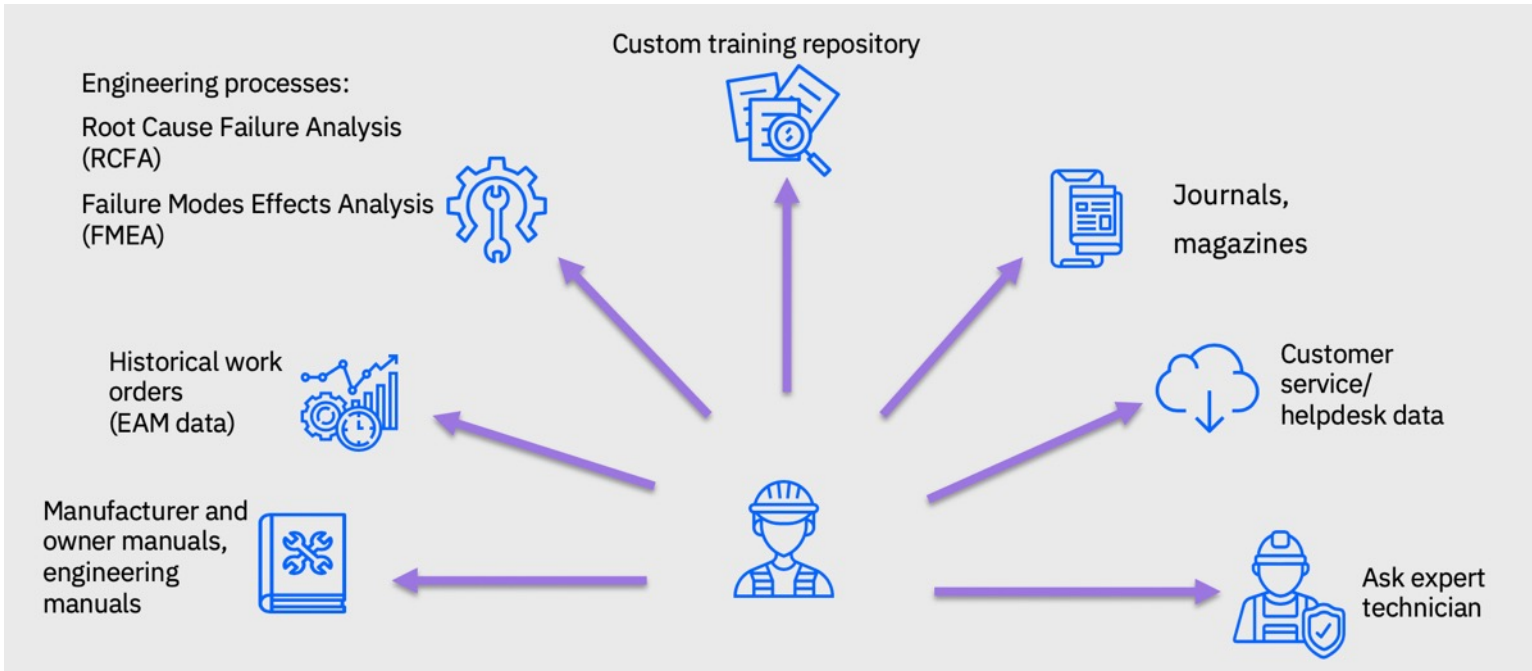
Benefits: Reduce mean time to repair, boost first time fix rates, improve technician productivity
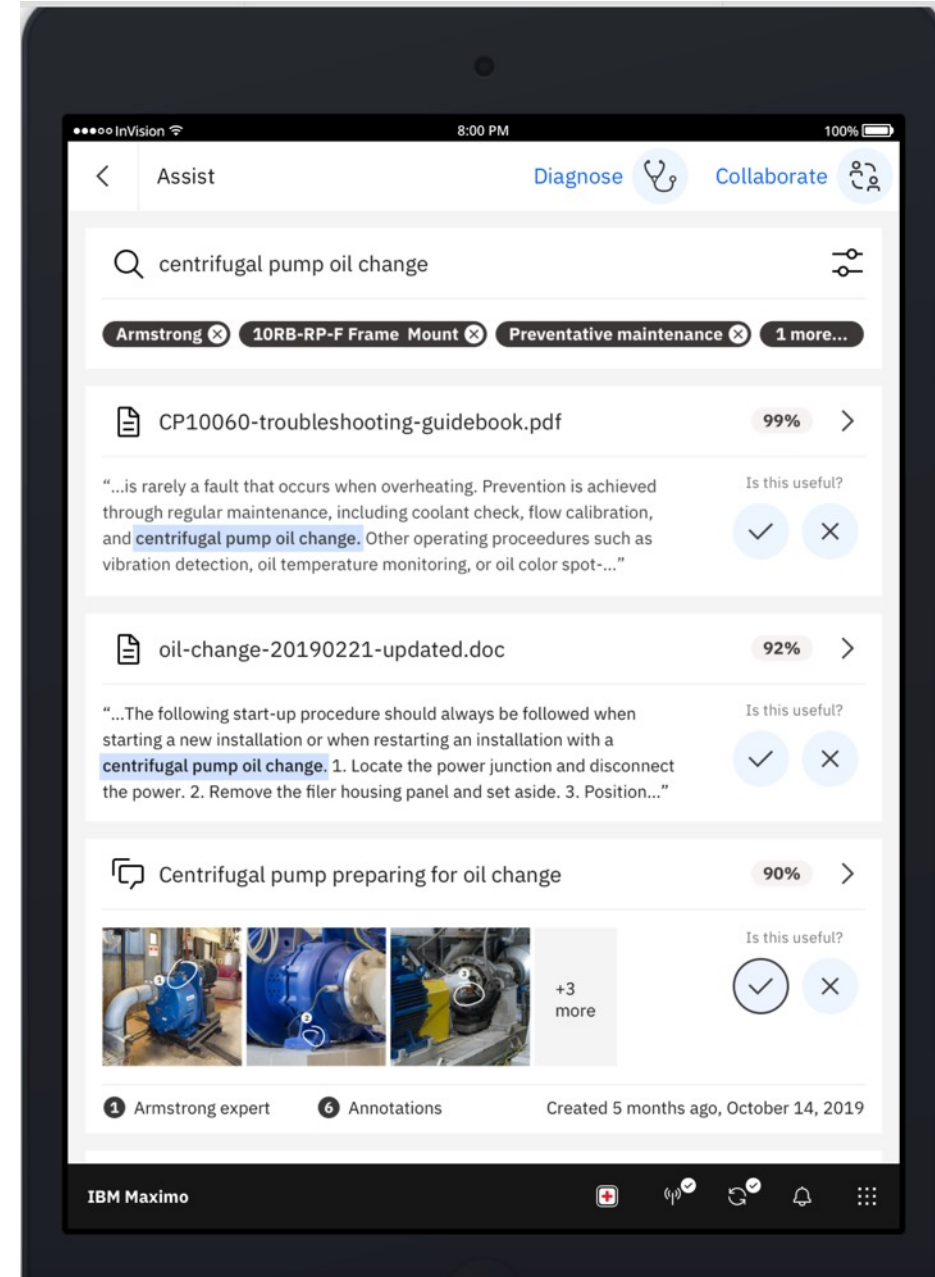
Assist Remote Guidance

for additional assistance, whenever you need it, wherever you need it

Remote Guidance session history **attached to the Maximo work order** for future reference and added to AI knowledge base

Capture your expert knowledge and make it searchable next time a similar incident occurs

Enhance experience for new technicians and help **every technician perform like your best technician**
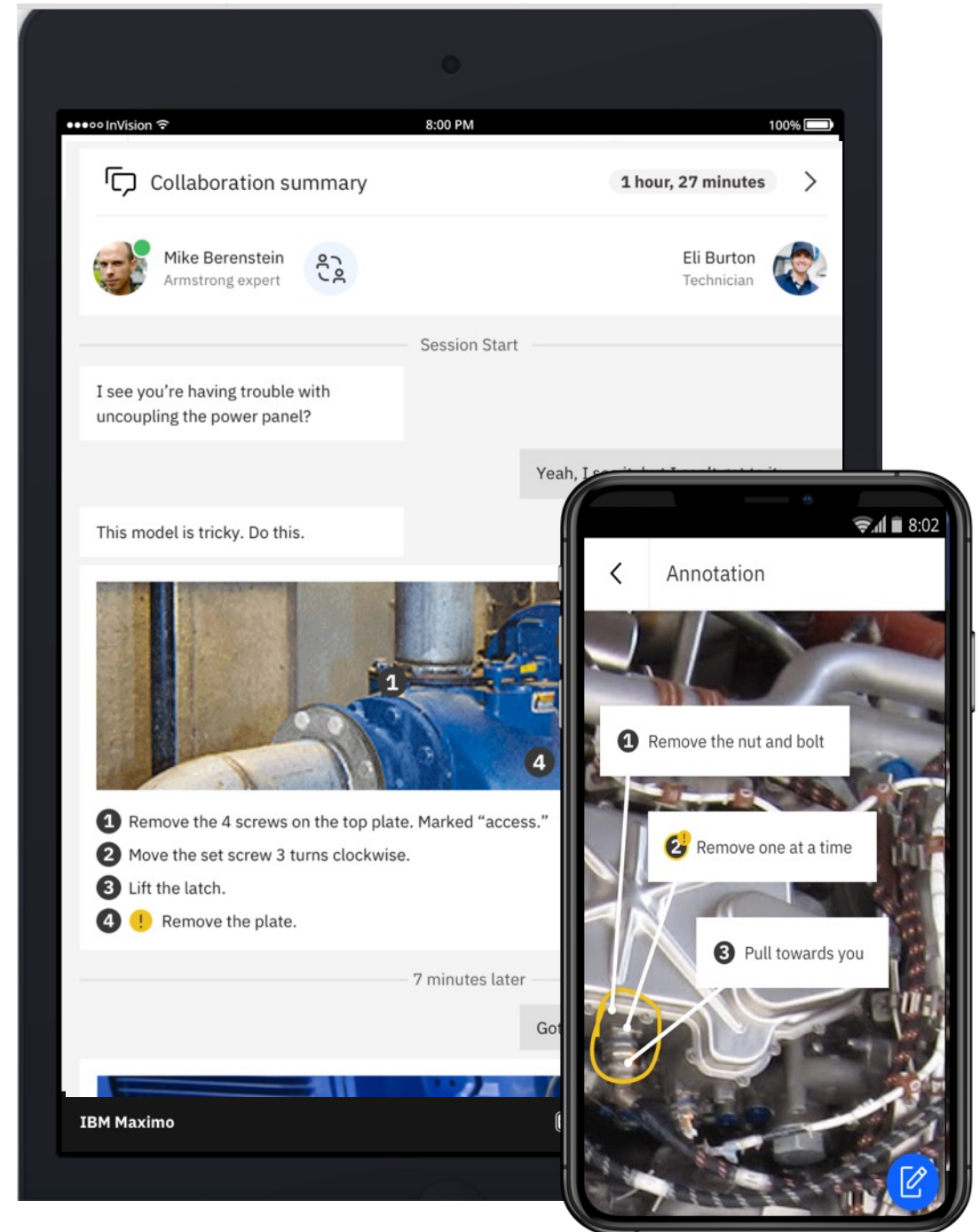
Maximo Application Suite – Parts Identifier

With Parts Identifier, technicians spend 90% less time searching for parts.

A unique integrated feature of Maximo Mobile that allows mobile workforces to precisely identify assets and components immediately and correctly using AI, on industrial environment.

- **Fast and reliable part search with focus on industrial parts**
- **Supports users of all experience levels**
- **Easy to use**
- **Fast implementation through IBM Maximo**
- **Seamless user experience**
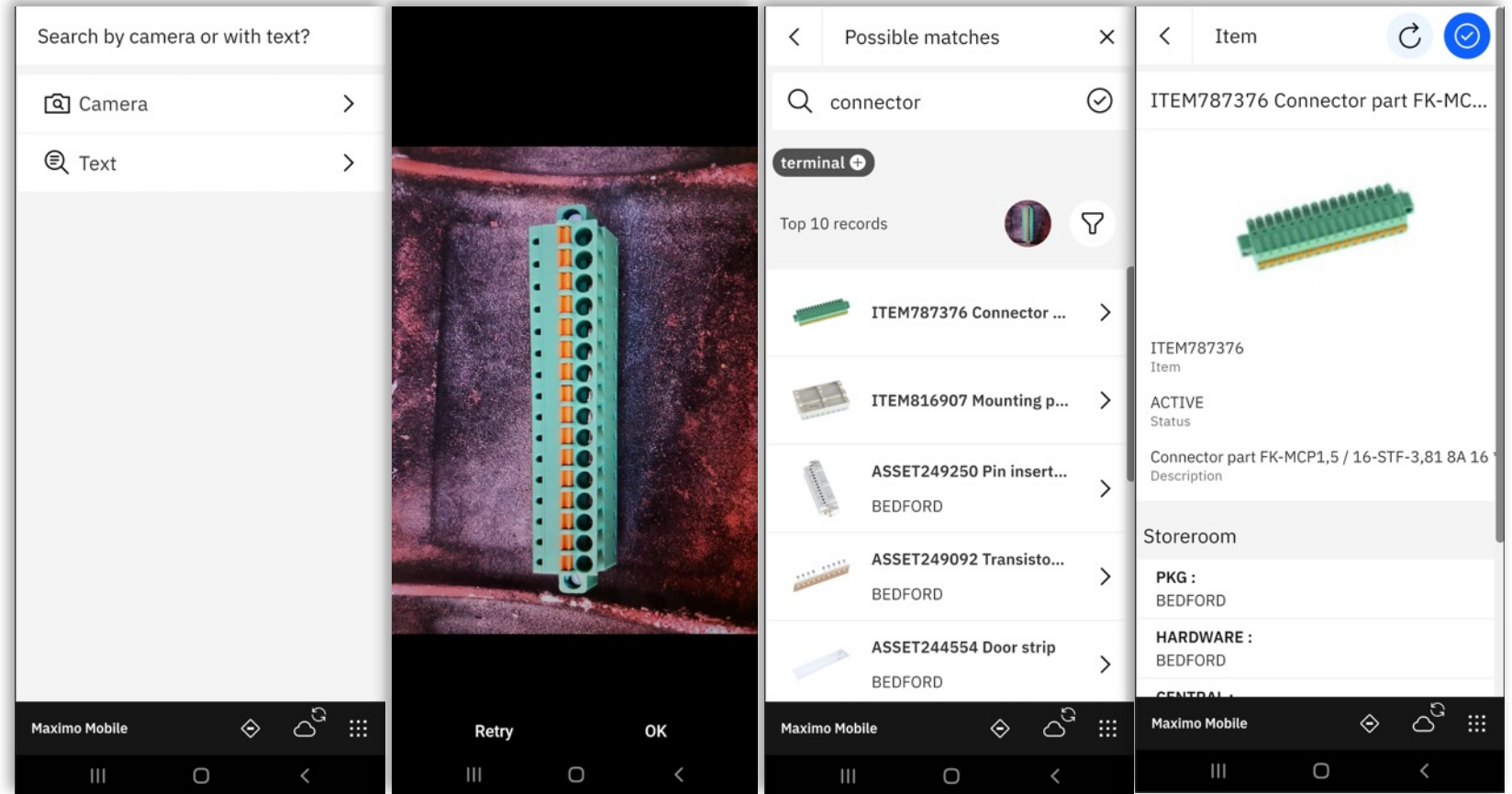
Maximo Application Suite – Parts Identifier

The Challenge:

Precisely recognizing parts in real-world settings is important, hard, error-prone and time consuming. Even for experts.

Additional Challenges in Industrial Environments
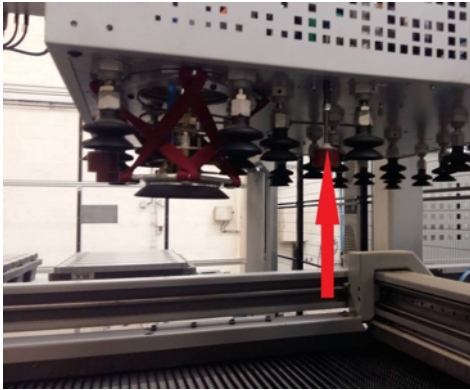
1 Parts are built in

2 Parts are not visible from the outside

3 Parts are dirty or broken

4 Labels are not always useful

... resulting in real business issues

Spare part search **consumes substantial time of expensive resources**

Longer **machine downtimes**

Expanded Asset Management Capabilities

Monitor

Monitoring with AI-based Anomaly Detection at Enterprise-Scale

- Easily Configurable dashboard: No-code widgets
- Enterprise-wide view of operation
- Generate work orders based on prioritized alerts
- Rapid data integration
- Scalable dashboard filtering and management

Health

Reduce fleetwide operational risk by focusing on the right assets

- Consolidated global view of assets
- Health Visibility and Analysis
- Flexible health scoring by asset type or groups
- Refurbish vs Replacement Planning
- Reduce unnecessary preventive maintenance

Predict

Identify asset failure and improve maintenance practices and reliability

- Templates provided to build common predictive models
- Determine factors that contribute to failure and build failure models
- Score predictive models using Watson ML
- View pre-built visualizations

Visual Inspections

Rapidly unleash the power of computer vision for inspection automation

- Perform a visual inspection of the line or asset using commercial, off-the-shelf devices such as iPads and iPhones
- Identify potential quality and performance issues in real time and configure to notify key stakeholders immediately
- Integrate with maintenance and quality workflows for a fast and prescriptive response

Upgrade - *What to expect from MANAGE in the Suite*

OVERALL CHANGE TO EAM

DATA – No database changes & no data model changes

APPLICATIONS – Changes to authentication & user repository

INFRASTRUCTURE – Red Hat OpenShift Deployment

TECHNOLOGY MIGRATIONS

OPENSHIFT OPERATORS – Install, deploy, config environment, customize deployment, upgrade

SECURITY & USER MGMT – Migrate to MAS Authentication

APP SERVER – WAS Liberty

INTEGRATION – Rest API replaces Remote Method Invocation

MESSAGE QUEUE – Kafka; JMS (MQ) BYOL

Design is not final

29

NEW OPTIONS AVAILABLE TO CLIENTS

MODERNIZED USER EXPERIENCE – Skin & Navigation

MOBILE – new Mobile experience

SERVICEABILITY – Improved logging options (Fluentd & Kibana) & monitoring options (Prometheus & Grafana)

TOP DEVELOPMENT CHANGES

OPERATOR CREATION – Rewriting Install & Configuration

USER MGMT – Moving users & LDAP control to MAS

CONFIGURATION – Rebuilding delivery & deploy for MAS

Playbook for Maximo EAM Upgrade to Maximo Application Suite: https://ibm-mas-manage.github.io/playbook/upgrade/overview

Roadmap by Release

2021   **2022**

Released July 27th, 2021

Released Oct 26th, 2021

MAS 8.5.0

AI Driven Asset Performance
- **Visualization** - Clustering of Asset on Map
- **Visualization** - Enhanced alert table; alert thresholds on line chart cards
- **Inspection** - Configure visual inspections at the Edge
- **Model Management** – Deploy and manage models
- **Performance** - Data ingestion and Analytic pipeline improvements

Mobile for technicians
- Cross-application support for Windows devices; multi-factor authentication
- **Technician** – Create and edit work; request and issue materials; report downtime; multi-asset/location; QR Codes
- **Inspections** – Batch inspections

Integrations & Digital Twin
- **Add-on** Humei – Parts identifier
- **Add-on** Omnio edge connector add-on

Hybrid cloud & Managed Service
- Support Openshift Operator Lifecycle Management

MAS 8.6.0

AI Driven Asset Performance
- **Visualization** – View asset hierarchy; Consolidated view of SCADA alerts/alarms
- **Visualization** – E&U substation transformer dissolved gas analysis; Manage asset performance based on functional locations
- **Inspection** – Support NVIDIA A100 for training/inference
- **Model support** – Integration of custom models into Monitor; Connectivity models w/ Cloudera for E&U; 6 new E&U asset models
- **Prediction**: Define and identify contextual anomalies; Data quality assessment for Predict Models
- **Replacement Planning** – Enhanced EOL views
- **Integration**: Connect inspection results data from the Edge
- **Configuration** - Create a new work queue; Import/Export site setup

Enterprise Asset Maintenance
- Technical updates to align with MAS

Industry Solutions
- **Civil Infra.** – AI Defect Detection Models for concrete

Mobile for technicians
- **Service Request** – Introduce ability to create service requests
- **Approvals** – Introduce ability to do work approvals
- **Technician** - View Asset Health information; Support of linear assets; task management; tool actuals; copy plans to actual materials
- **Inspections** – Voice enabled inspections; view historical data; photo markup and failure codes as responses
- Cross application support for Push Notifications; Physical Signatures; dynamic queries; RFID
- **Mobile GIS/Maps** – Additional map providers; expanded actions directly from map; markup and annotation on maps
- **Assist** –Increased precision and usability for annotations

Integrations & Digital Twin
- **Digital Twin**: Asset centric view supporting mapping artifacts to an asset

Hybrid cloud & Managed Service
- Common data dictionary service
- Authorized user license type support

MAS 8.y.0

AI Driven Asset Performance
- **Visualization** – Create/Edit hierarchy; Create and view trends; Analyze time spent in state
- **Visualization** – Hierarchical asset scoring and grid view; Analyze KPIs for groups of assets
- **Failure Analysis** - Automated failure mode extraction
- **Replacement Planning** – Asset replacement investment planning
- **Inspection** – Bar code and text recognition; Image pre-processing and model chaining at the Edge
- **Performance** – Ingest and visualize large volumes of data

Enterprise Asset Maintenance
- Maintenance Supervisor enhanced capabilities
- Modernized Dispatching and Scheduling function
- Asset Manager enhanced capabilities
- Scheduler and optimization functions

Industry Solutions
- **Nuclear** – Mobile, Clearance enhancement, Line-ups
- **Oil&Gas** – Initial Maintenance Manager Work Center mock-up
- **Transportation** – Mobile Part replacement mgmt

Mobile for technicians
- **Calibration** – Support for technicians doing equipment calibrations
- Visualization of Maximo Monitor data & Digital Twins
- **Technician** - Expanded support of Crews; asset details;
- **Inspections** – Asset status and single page responses
- **Mobile GIS/Maps** - Indoor maps; linear asset visualization; Search on a map
- **Safety** – Integration into Maximo Mobile to support technicians and inspectors

Integrations & Digital Twin
- **Connector**: OSI Pi Integration

Hybrid cloud & Managed Service
- **MAS as a SaaS offering - MVP**
- Support on Power Platform
- Support on ARO/ROSA

Maximo EAM Release Lifecycle Timeline

7.6.0 GA Announced December 2014 – EOS effective date September 2021

2010 2012 2014 2016 2018 2021 2022 2024 2026 2028 2030

R 7.5 — 4/11 | 4/17 | 4/18 | 9/21

R 7.6.0 — 12/14 | 9/20 | 9/21 | 9/24

End of Service dates for R7.6.0 Sept 2021

PROPOSED EOS dates for R7.6.1 Sept 2025

R 7.6.1 — 7/18 | 9/24 | 9/25 | 9/28
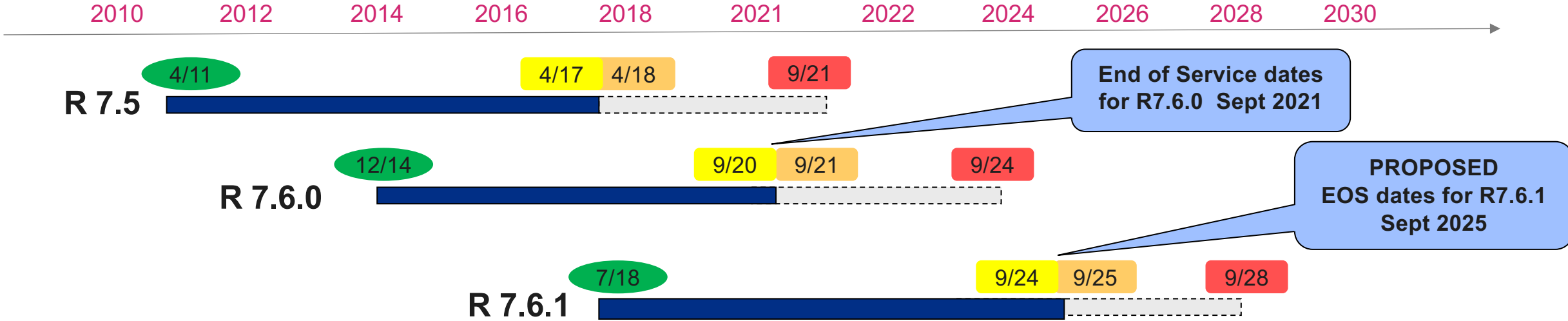
Legend:
- 🟢 Initial Release
- 🟨 EOS Announce
- 🟧 EOS Effective
- 🟥 Extended Support Ends

On September 8, 2020, 7.6.0 end of support was announced via IBM Announcement Letter # 920-136.

Notice: IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.
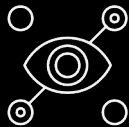
IBM Software Lifecycle : https://ibm.biz/BdidVf

Request for Enhancement migration to AHA

Aha!

AI Applications - Ideas Portal

Welcome to the idea portal for IBM AI Applications Customers

IBM Employees:

The correct URL for entering your ideas is: https://ibm-ai-apps-internal.ideas.aha.io/

Clients:

Shape the future of IBM!

We invite you to shape the future of IBM, including product roadmaps, by submitting ideas that matter to you the most. Here's how it works:

Post your ideas

Start by posting ideas and requests to enhance a product or service. Take a look at ideas others have posted and upvote them if they matter to you,

1. Post an idea
2. Upvote ideas that matter most to you
3. Get feedback from the IBM team to refine your idea

Help IBM prioritize your ideas and requests

The IBM team may need your help to refine the ideas so they may ask for more information or feedback. The offering manager team will then decide if they can begin working on your idea. If they can start during the next development cycle, they will put the idea on the priority list. Each team at IBM works on a different schedule, where some ideas can be implemented right away, others may be placed on a different schedule.

Receive notification on the decision

Some ideas can be implemented at IBM, while others may not fit within the development plans for the product. In either case, the team will let you know as soon as possible. In some cases, we may be able to find alternatives for ideas which cannot be implemented in a reasonable time.

https://ibm-ai-apps.ideas.ibm.com/

New IBM Documentation site
formerly Knowledge Center

https://www.ibm.com/docs/en

Questions

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Lisa Stuckless, Product Manager, Maximo
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Maximo EAM 761x to Manage on MAS

Manage 8.x	Other Note Worthy Items
- Maximo Calibration (Life Sciences) - Maximo Linear - Maximo Scheduler **Industry Solutions** - Maximo Civil Infrastructure (plus Install AppPoints) - Maximo Oil and Gas - Maximo Transportation - Maximo Utilities - Maximo Aviation - Maximo Nuclear **Add-ons:** - Maximo Health, Safety and Environment - Maximo Service Provider - Maximo Asset Configuration Manager - Maximo Anywhere - Maximo SAP Connector - Maximo Oracle Connector - Maximo Spatial	**Not part of Manage** - Maximo Life Sciences as an Industry Solution as Calibration is now part of Manage - Maximo Network on Blockchain - Maximo Optim Archiving parts (can still be purchased separately) - Cognos Entitlement - Maximo Scheduler Optimization is a tile within MAS catalog but must be purchased separately

Manage Platform Currency Support

Products	Supported Platforms	Not Supported
Operating Systems	Red Hat Linux 8.2, OCP 4.6	AIX, Solaris, HP-UX, Windows Server Roadmap item - IBM Power and zLinux
Application Server	Liberty 21.0.0.6	WebLogic, WebSphere
Java	IBM Java 8, JRE 1.8 – Roadmap item upgrade to IBM Java 11 but runs on compatibility mode for Java 8	
Databases	Oracle 19c, SQL Server 2019, DB2 Standard Edition 11.5, DB2 Warehouse	
Browsers	Latest releases of Firefox, Chrome, Safari, MS Edge	Internet Explorer
Reports	BIRT Reporting 4.3.1 - Roadmap item upgrade to 4.8	Roadmap Item Cognos (currently no entitlement in MAS)

Maximo Application Suite - System Requirements

https://www.ibm.com/docs/en/mas85/8.5.0?topic=installation-system-requirements

Maximo Manage – LA Fix/Emergency Fix/Patch Process

7.6   **8.x**

LA Fix =

LAFix (Dev Tested)
(contains one fix on customer request)
Component level fixes (Manage/IS/addons)
existing process + customization archive
for one customer

iFix =

Patch (QA Tested)
(30 – 90 days)
includes **Component** level
(Manage/IS/addons) and **Operator** level
cumulative fixes
for multiple customers

efix (Dev Tested)
(contains one fix - Need based)
Component level and **Operator level** fixes
for multiple customers

Emergency Fix

- An emergency fix (efix) is a pre-release build made available to specific customers.
- Emergency fixes will be included in the next patch or minor or major release, the name of the efix will be next patch version number-pre.efix<the name of the fix>
- Each efix can be created from the branch of the previous released major or minor or patch, or from a previous e-fix. In the case of a customer already obtained an e-fix, the efix they have will be used as a base and apply the efix on top of it if one-off fix is requested.

Patch Release example

Release	Patch Release
8.0.0	8.0.1 8.0.2 …
8.1.0	8.1.1 8.1.2 …

E-fix example   Issue #

Release	efix
8.0.0	8.0.1-pre.efix1234 8.0.1-pre.efix5678 ….
8.1.0	8.1.1-pre.efix7896 8.1.1-pre.efix3456 ….

Lifecycle Policy for MAS

- IBM Maximo Application Suite follows the IBM Standard Lifecycle Policy (3+2)

  - The standalone bundled product IBM Cloud Pak for Data follows the IBM Continuous Delivery Lifecycle Policy (2+1).
  - Red Hat OCP also follows a 2+1 policy.
    - The MAS team will ensure a suitable upgrade path is available for customers of IBM Maximo Application Suite such that bundled products can continue to comply with their respective support lifecycles.

- MAS team investigating the concept of a Continuous Delivery model as well to keep in sync with underlying solutions with a dedicated Long Term Support Release (LTSR) on an annual basis.

MAS Support Lifecycle Policy statement: https://www.ibm.com/support/pages/ibm-maximo-application-suite-software-support-lifecycle-policy
Red Hat OCP Support Lifecycle statement: https://access.redhat.com/support/policy/updates/openshift
IBM Support Policy definitions: https://www.ibm.com/support/pages/node/718165

Maximo EAM (Manage) in Maximo Application Suite on OCP

Operator Hub

Maximo EAM Operator image

Entitled Registry

Maximo EAM Base image

Maximo EAM Add-on image

Maximo EAM Industry Solutions image

• • •

Customer Repo

Maximo EAM Config zip

• • •

Maximo Application Suite

Maximo EAM Cluster

Monitoring & Logging Agents

Work Centers Deployment

WAS Liberty

Monitoring & Logging Agents

Classic UI Deployment

WAS Liberty

Monitoring & Logging Agents

cron Deployment

WAS Liberty

Monitoring & Logging Agents

BIRT Reporting Deployment

WAS Liberty

Other Maximo Application Suite Clusters (Health, Predict, Assist, etc.)

Maximo EAM Operator Deployment

Maximo EAM CRD

Maximo EAM Database Cluster

Maximo Object Storage Cluster

IBM MQ Cluster

Kafka

Maximo EAM Dashboards (Monitoring, Logging)

Common Services
MONITORING | LOGGING | METERING

OpenShift
(Larger amount of capabilities used & extended)

Kubernetes

RHEL

Infrastructure
IBM & Expanded Partner Ecosystem

Image Registry

Maximo EAM configured images

Monitor

Monitoring with AI-based Anomaly Detection at Enterprise-Scale

Solution

– Enterprise scale Monitoring

– AI-based anomaly detection

– KPI/rules and custom models

Capabilities

– Easily Configurable dashboard: No-code widgets

– Enterprise wide view of operation

– Workflow to drive ownership of issues

– Auto-generation of work orders

– Rapid data integration

– Scalable dashboard filtering and management

Business Value

– Reduce unplanned downtime

– Shorten duration of outages

– Increase production output

– Decrease wasted time investigating false-positive alerts
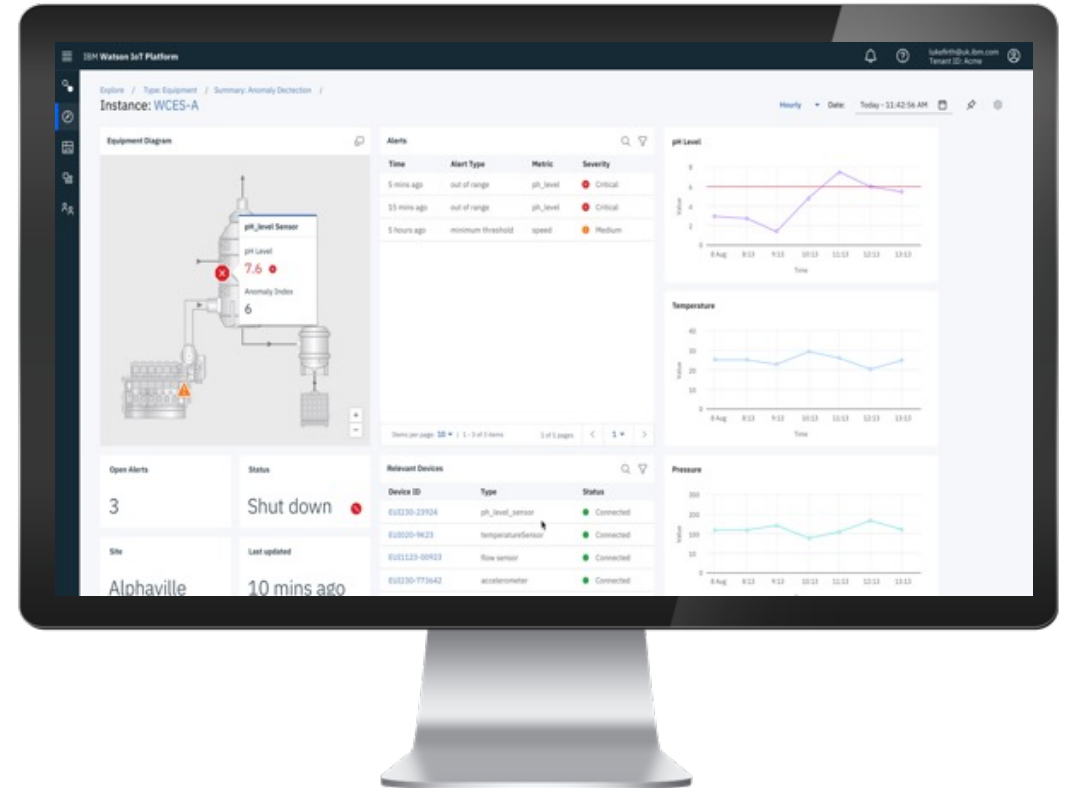
Health
IBM Maximo APM - Asset Health Insights

Solution
- Consolidated global view of assets
- Health Visibility and Analysis
- Condition based actions
- Replacement Planning

Capabilities
- Dashboard with cards, map view, spreadsheet view
- Fleet-wide view and health drilldown
- Health based notifications and actions
- Flexible health scoring by asset type or groups
- Sensor data integration
- Job plan efficacy analysis
- Refurbish / replace prioritization

Benefits
- Reduce fleetwide operational risk by focusing on the right assets
- Increase asset availability
- Reduce unnecessary preventive maintenance
- Reduce time to make capital replacement planning decisions
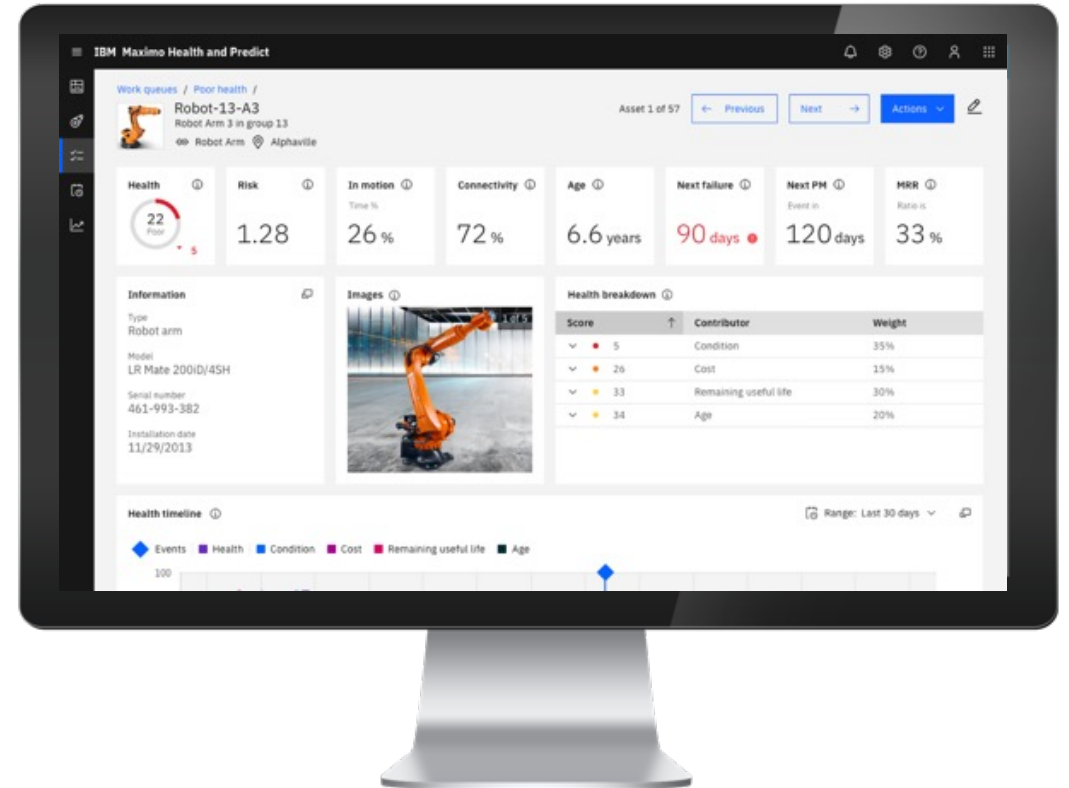
Predict
IBM Maximo APM - Predictive Maintenance Insights

Solution
- Build asset failure models
- Predict failures
- Determine factors that contribute to failure
- Incorporate sensor data into models

Capabilities
- Templates provided to build common predictive models
- Score predictive models using Watson ML
- View pre-built visualizations
- Workflow for managing assets
- Work queues for managing and tracking actions

Benefits
- Reduced failures
- Reduced maintenance costs
- Improved asset utilization
- Extended life of asset
- Increased production output
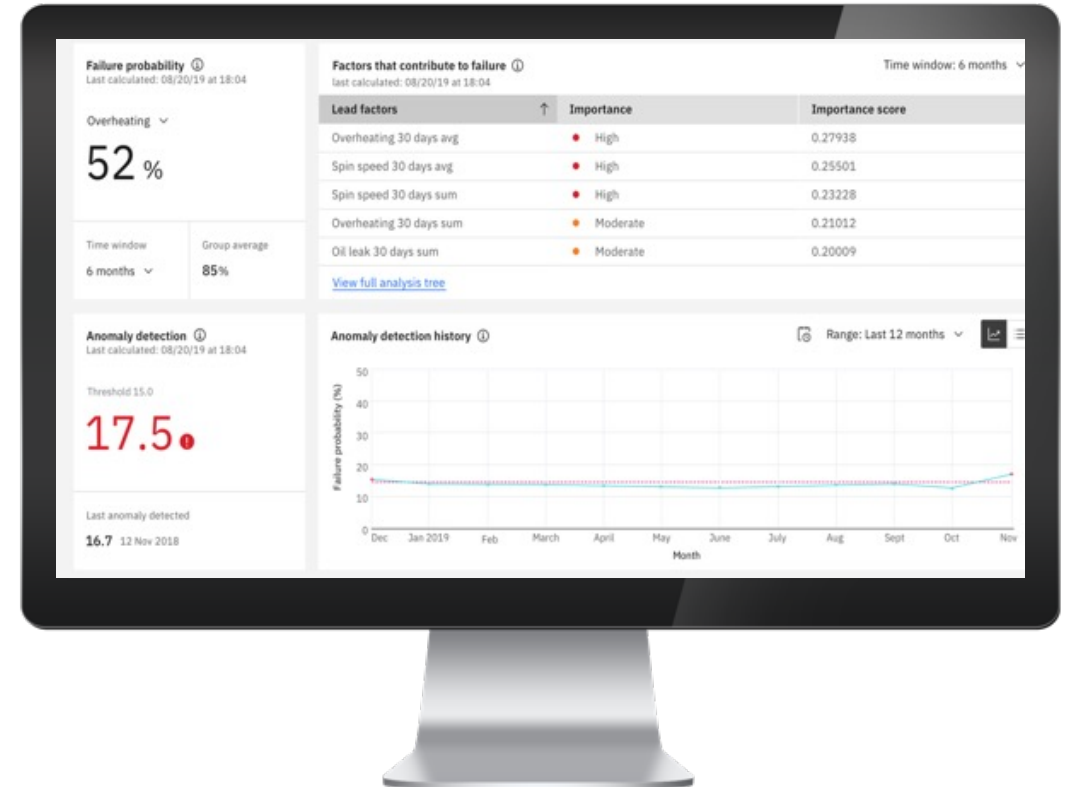
Visual Inspection
Point and Click AI Solution

Key Benefit

Time to Value
– Fast, Easy, Accurate

Detect and Correct
– At The Point of Installation

Asset Maintenance
– AI Powered Insights

Empower Subject Matter Experts
– AI Technology

IBM **Maximo Application Suite** | Visual Inspection   Data sets   Models   Custom assets   Deployed models   Projects   adminuser

Welcome to IBM Maximo Visual Inspection

Create data set
Start by adding images and video files to a data set.

Prepare data
Label objects in images and video frames, then use auto labeling to finish adding labels to the whole data set; assign categories to images or videos, or label actions in videos.

Train model
Select a few custom options to create your model.

Deploy model
Deploy the trained model and receive an API link for an inference device.

Get started

Now Available on Maximo Application Suite

Safety

Business Value
– Avoidance of injury claims
– Reduced Workforce disruption
– Compliance of worksite safety plan
– Increased employee availability

Application
– Analytics solution for workplace safety utilizing IoT devices
– Contextual incident detection (event and measurement data captured and processed in near real-time)
– Safety abnormalities leveraging Edge enabled Event Action Engine

Capabilities
– Mobile App and Dashboards for Worker, Supervisor, Safety Officer
– Pre-integrated devices for key use cases
– Pre-build analytics (KPIs) to determine safety events
– Pre-integration with Maximo HSE, Incident Management
– Flexible integration with 3rd party systems of engagement