The Road Ahead with Maximo
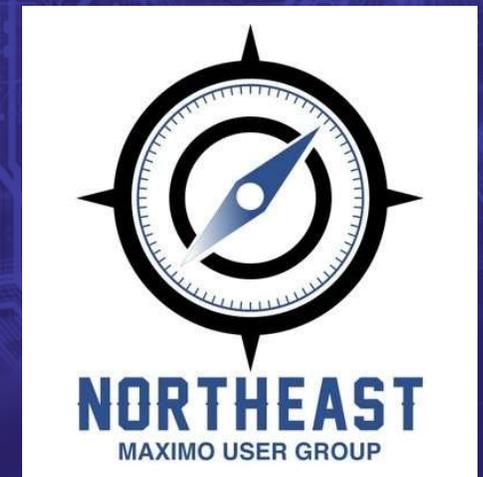## Maximo Application Suite 8.0

Kim Woodbury
Senior Product Manager
kwoodbur@us.ibm.com

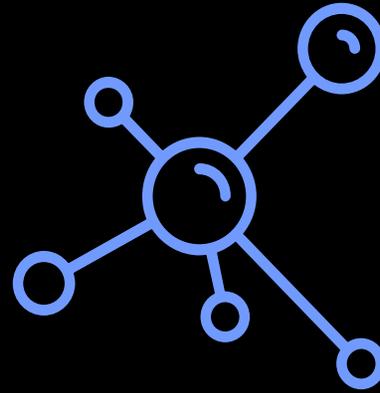May 2021

NORTHEAST
MAXIMO USER GROUP

Please note

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice 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.
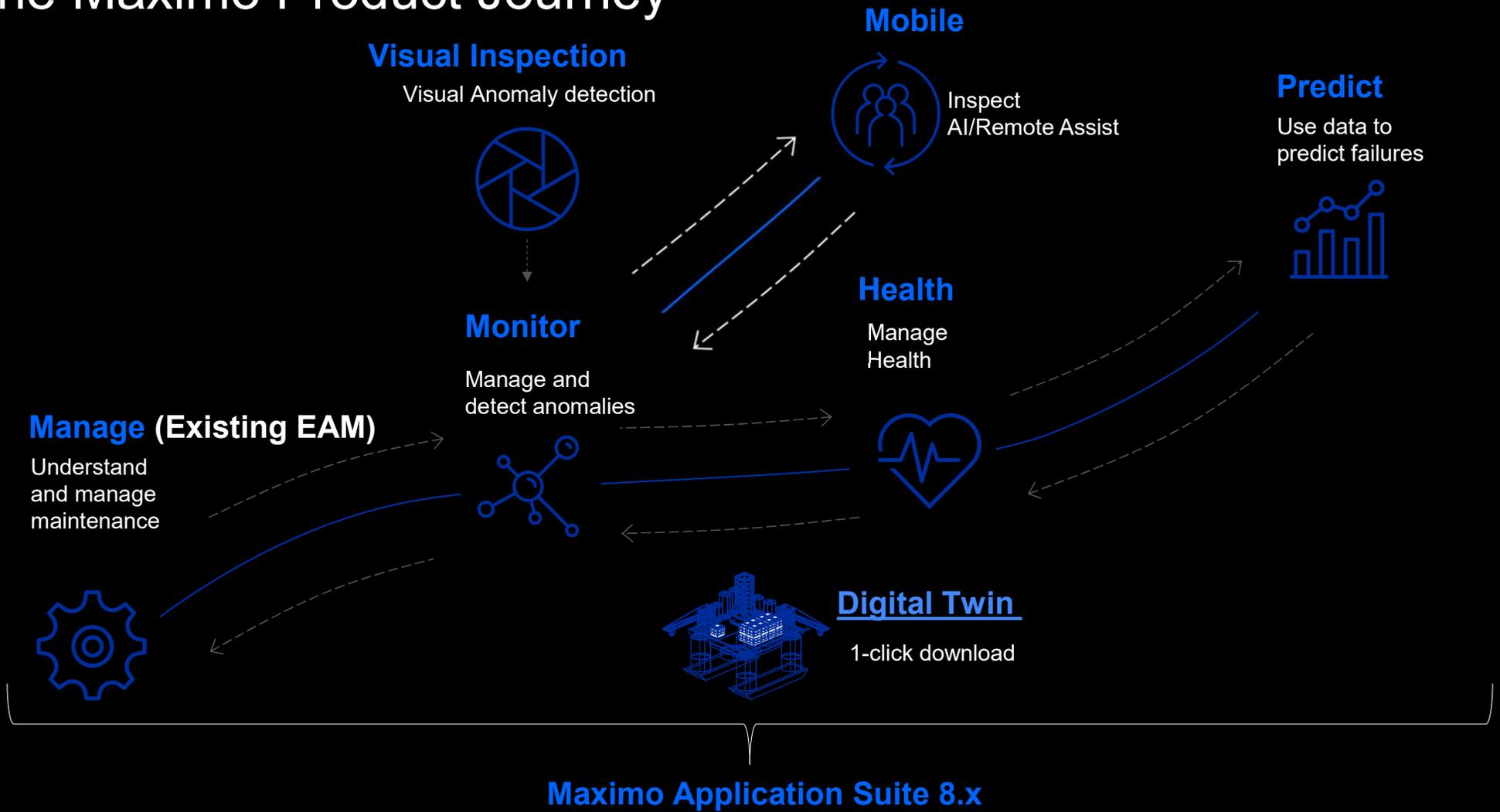
The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract.

The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.
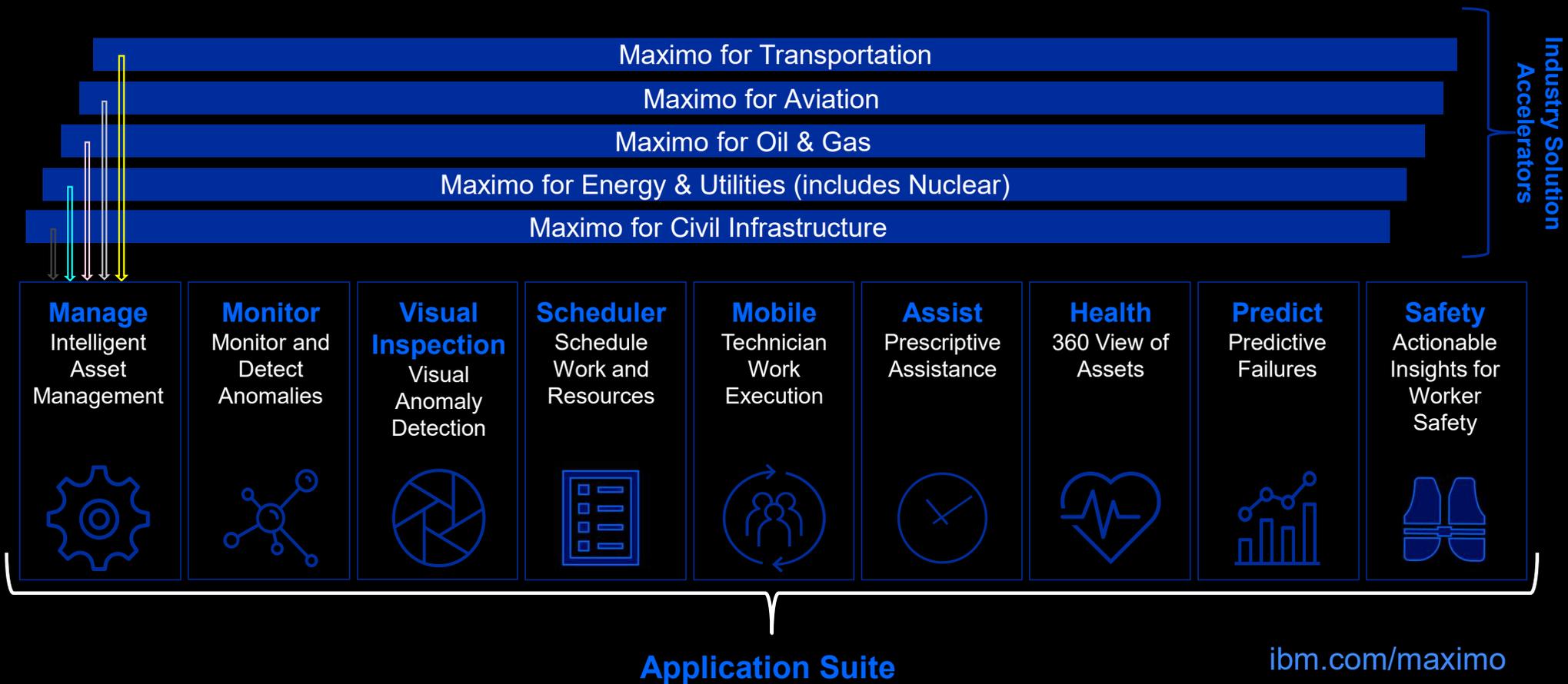
Maximo Application Suite

The Maximo Product Journey

Visual Inspection

Visual Anomaly detection

Mobile

Inspect
AI/Remote Assist

Predict

Use data to
predict failures

Monitor

Manage and
detect anomalies

Health

Manage
Health

Manage (Existing EAM)

Understand
and manage
maintenance

Digital Twin

1-click download

Maximo Application Suite 8.x

Maximo 8.0 Application Suite
designed for the new operating model

Maximo for Transportation

Maximo for Aviation

Maximo for Oil & Gas

Maximo for Energy & Utilities (includes Nuclear)

Maximo for Civil Infrastructure

Industry Solution Accelerators

Manage	**Monitor**	**Visual Inspection**	**Scheduler**	**Mobile**	**Assist**	**Health**	**Predict**	**Safety**
Intelligent Asset Management	Monitor and Detect Anomalies	Visual Anomaly Detection	Schedule Work and Resources	Technician Work Execution	Prescriptive Assistance	360 View of Assets	Predictive Failures	Actionable Insights for Worker Safety

Application Suite

ibm.com/maximo

IBM Maximo Application Suite

Remote asset monitoring, maintenance and reliability applications in a single platform

– **Integrated** solution

– Usage **Flexibility**

– **Multi-cloud** deployment

ibm.com/maximo
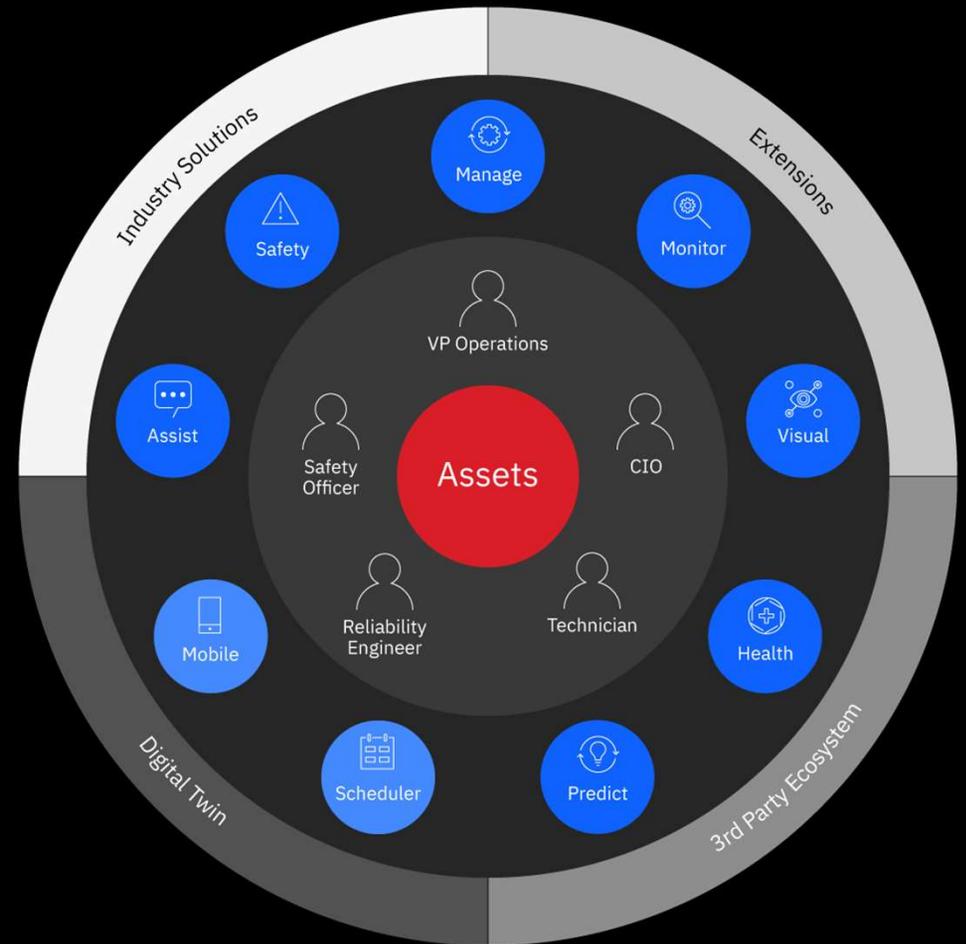
Simplified Licensing and Usage

MAS AppPoints will be used across suite

Entitlement covers the whole suite. AppPoints are expended based primarily upon different active User types
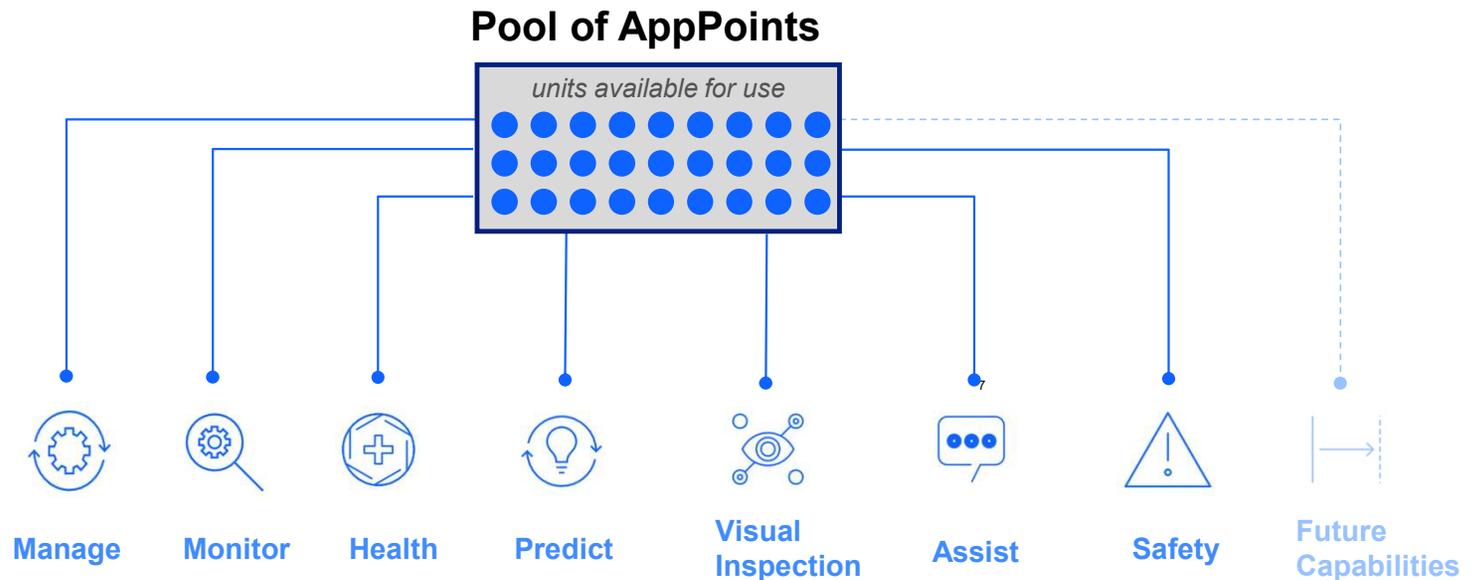
Available as Subscription or Perpetual Licenses

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 |

MAS Application License Model

Premium Concurrent User
15 AppPoints
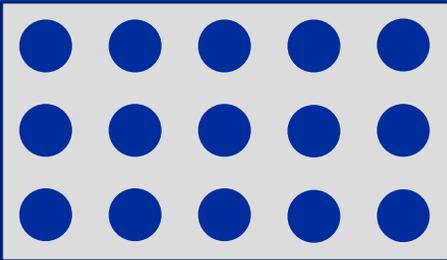
Manage
Industry Solutions
- Oil &Gas, Aviation, Transportation, Utilities, Nuclear, Civil Infrastructure

Add-ons
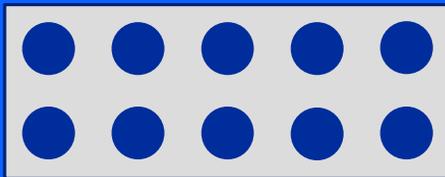- Asset Configuration Mgr, Service Provider, Health, Safety Env.

Predict
Health and Predict - Utilities
Visual Inspection

Base Concurrent User
10 AppPoints

Manage
Includes:
- Linear
- Calibration
- Spatial (requires install)
- Scheduler

Health
Safety

Limited Concurrent User
5 AppPoints

3 Modules:
- Manage
- Manage Industry Solutions
- Manage Add-ons

Mobile
- Maximo Mobile
- Assist
- Anywhere
- 3rd Party

Monitor

Self Service Concurrent User
0 AppPoints

Self Service Applications
- Service Requests
- Desktop Requisitions
- Requests (Oil & Gas)
- Create/Review Incidents (HSE)
- Vehicle Requests (Transportation)
- Graphical Appt Book (Scheduler)
- Bill review (Service Provider)
- Data Transfer via devices and sensors (Safety)

Install – 1 AppPoint (x multiplier)	SAP/Oracle Connector (x80)	Spatial (x20)	Civil Infrastructure (x50)	Visual Inspection (x45) Edge (1 pkg 5)	Assist (x150)	Health & Predict - Utilities (x60)

Application Suite: A New Model for Software

Included with MAS License:
IBM Cloud Pak for Data
- *Watson Studio*
- *Watson Machine Learning*
- *Watson Discovery*
- *DB2 Warehouse*
- *WAS Liberty*
- …and more

RedHat OpenShift Container Platform

Faster **Hybrid Installation**

All Applications in one Suite

Simplified **Licensing**

The Application Suite effort is driving the journey for hybrid software built on RedHat OpenShift

IBM Cloud   aws   Azure   Private

Drives a fundamental improvement in how IBM packages, provisions, licenses application software

IBM

Start anywhere and scale your digital transformation journey

Integrated Suite of Applications

- Install as few or as many of the available applications as your business needs.
- Have the option to expand easily and experience all the Maximo Application Suite has to offer.

IBM **Maximo Application Suite**

Application navigator

Applications (4) | Tools (1) | Third party add-ons

Manage
Manage and curate your organization-wide assets with this foundational application. Set up workorder flows, asset maintenance scchedules, and more.

Monitor
Visualize and monitor your asset data in near real-time. Use AI-powered monitoring for asset maintenance and operations. The Monitor application provides extensive insights...

New tool availiable
Manage profiles faster, better then before
Get new tool

Health Homepage
Manage asset health and minimize downtime by preventing asset failures using IoT data and other sources such as weather, asset records, and work history...

Predict
Identify and manage asset reliability risks to plan and prioritize maintenance needs. The Predict application uses Watson machine learning and analytics to...

Safety
Manage asset health and minimize downtime by preventing asset failures using IoT data and other sources such as weather, asset records, and work history...

Assist
Manage asset health and minimize downtime by preventing asset failures using IoT data and other sources such as weather, asset records, and work history...

10

Modernized User Interface

Easy navigation, common controls and visualization
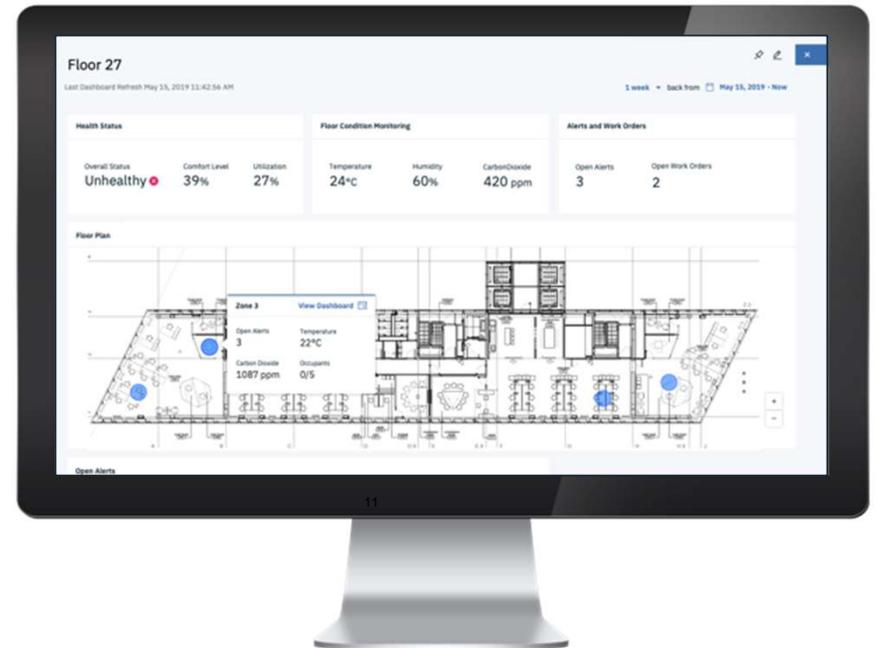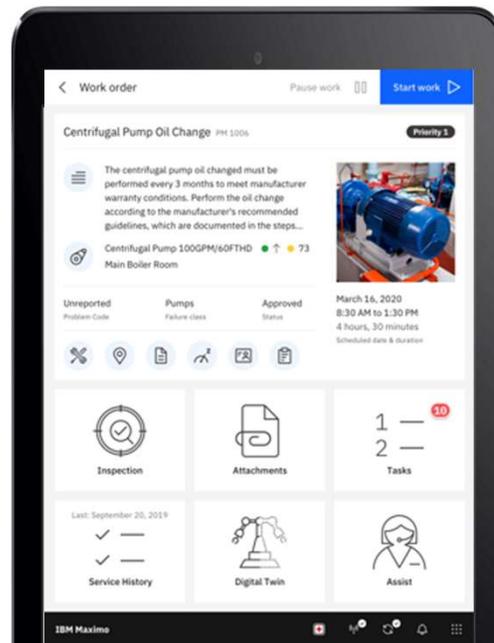
Updated Look and Feel
Manage 8.0

Updated Search Navigation

Collapsed Left side Navigation allows more screen real estate

Updated Look and Feel
Manage 8.0

Tabs 'anchored' at top of page
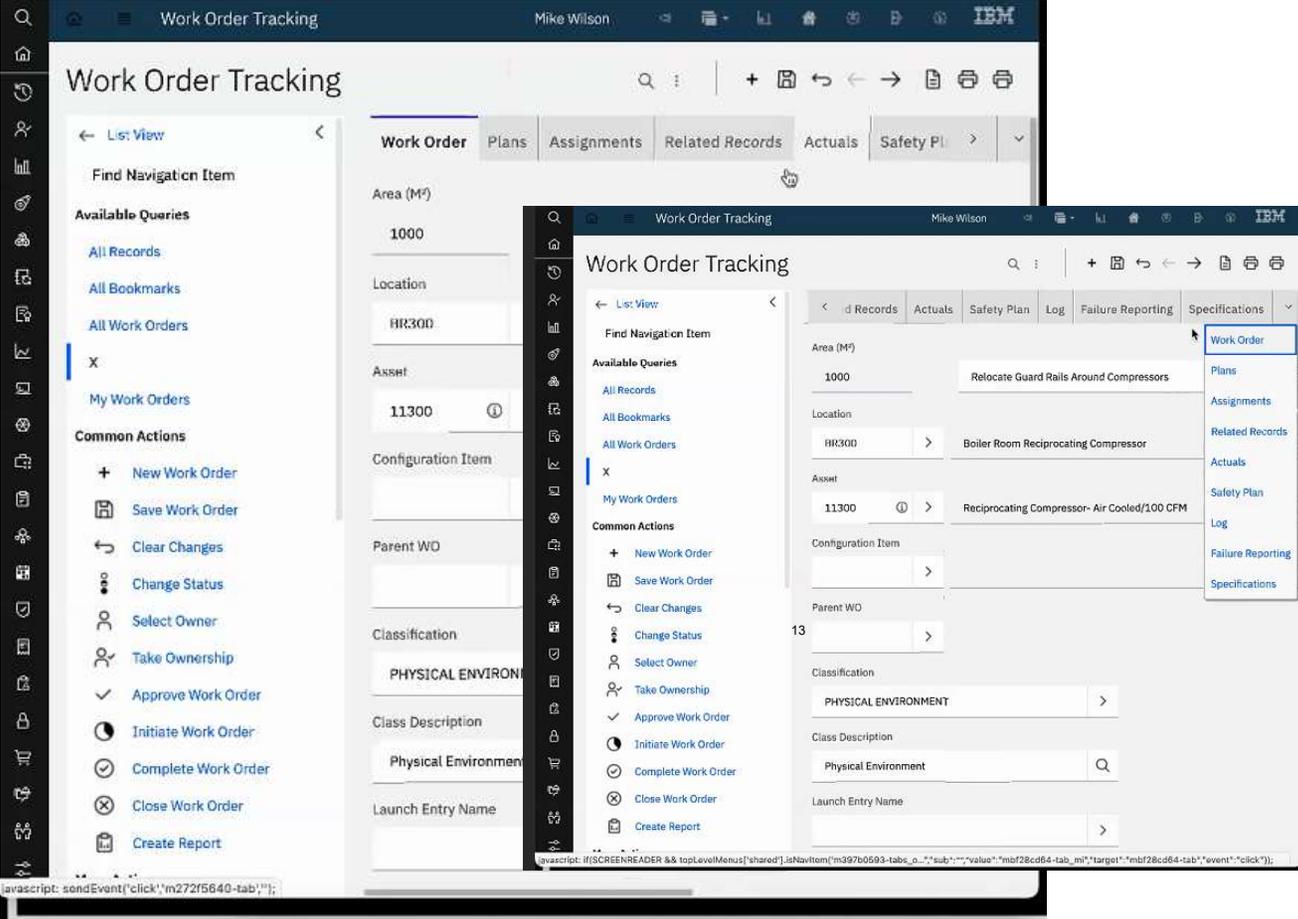
Updated Look and Feel
Manage 8.0

Continues to support previous features
- Application Designer
- Conditional UI

New Capabilities:
Table Window details embedded

Removed properties file options

- Skin
- Dynamicfontsize
- Vericallabels
- showOnToolbar

Toggles instead of checkboxes

Maximo Mobile
Next Generation User Experience

1 application, 1 role-based interface
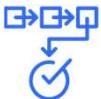
Intelligent workflows = blue button

Intelligent forms = configurability

Connected and disconnected

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

Downloadable from:

Apple App Store

Google Play Store

Maximo Mobile Configuration

Initial Configuration
Capabilities:

- XML Editing Page

- Upgrade Tooling (XML Diff)

- Customization enablement

- Preview changes

Maximo Assist

Empower technicians to work autonomously by enabling them to obtain AI guidance whenever they need it
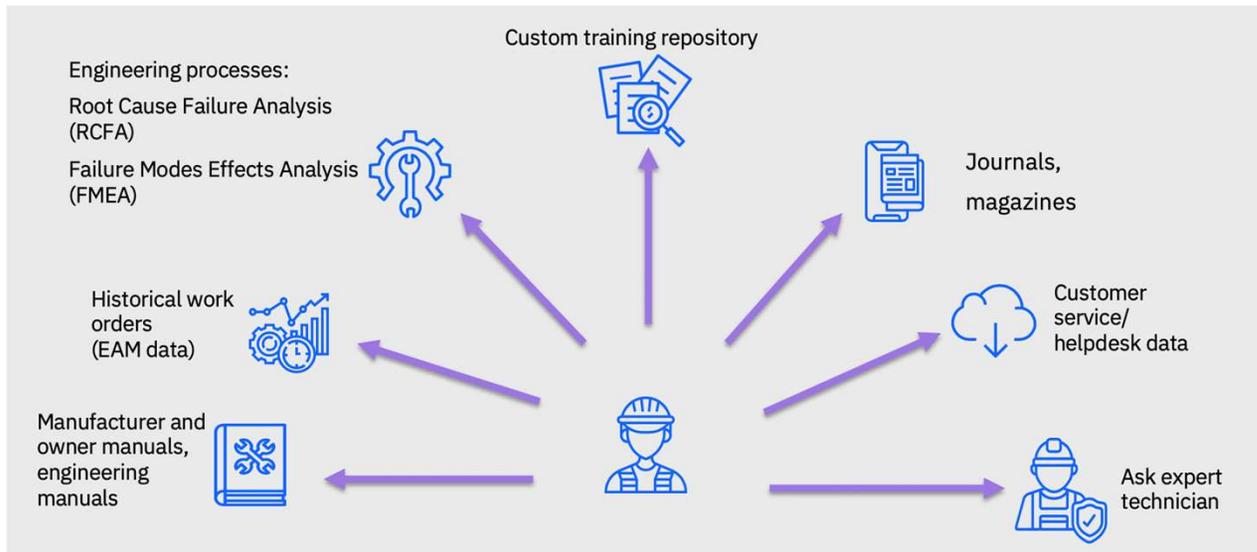
Benefits: Reduce mean time to repair, boost first time fix rates, improve technician productivity
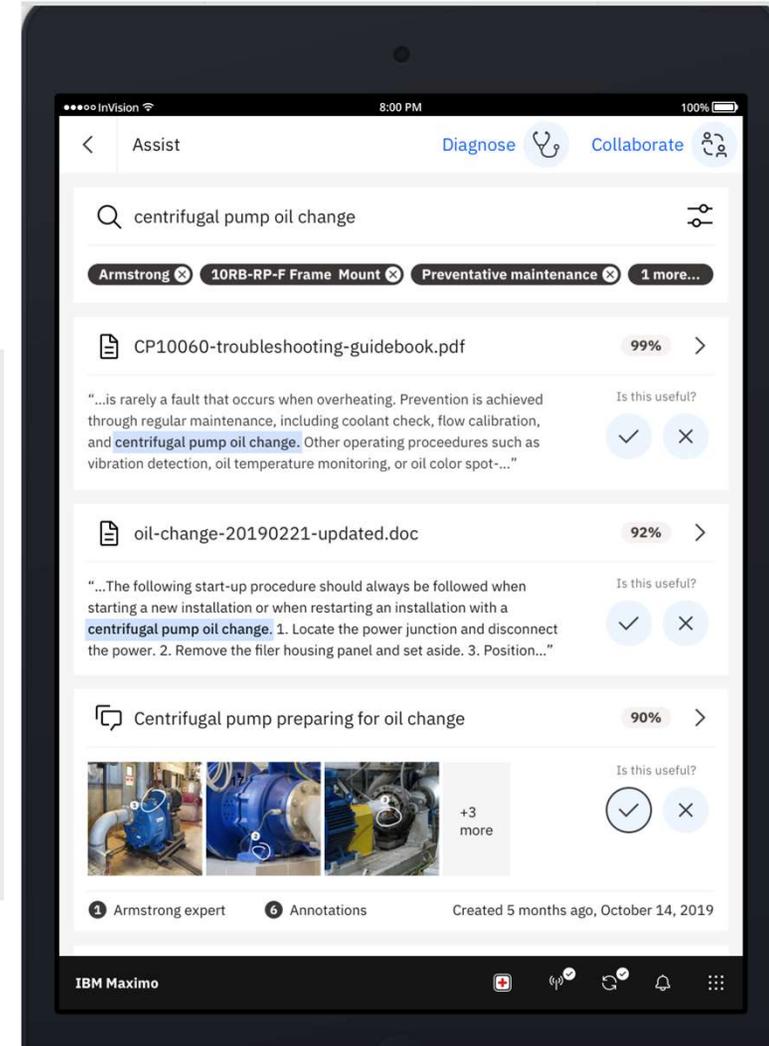
Assist Remote Guidance

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**

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

OVERALL CHANGE TO EAM

DATA – No database changes & no data model changes.
Support for DB2, Oracle and SqlServer DB

NEW OPTIONS AVAILABLE TO CLIENTS

MODERNIZED USER EXPERIENCE – Skin & Navigation

MOBILE – new Mobile experience

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

TECHNOLOGY MIGRATIONS

OPENSHIFT OPERATORS – Install, deploy, config environment, customize deployment, upgrade
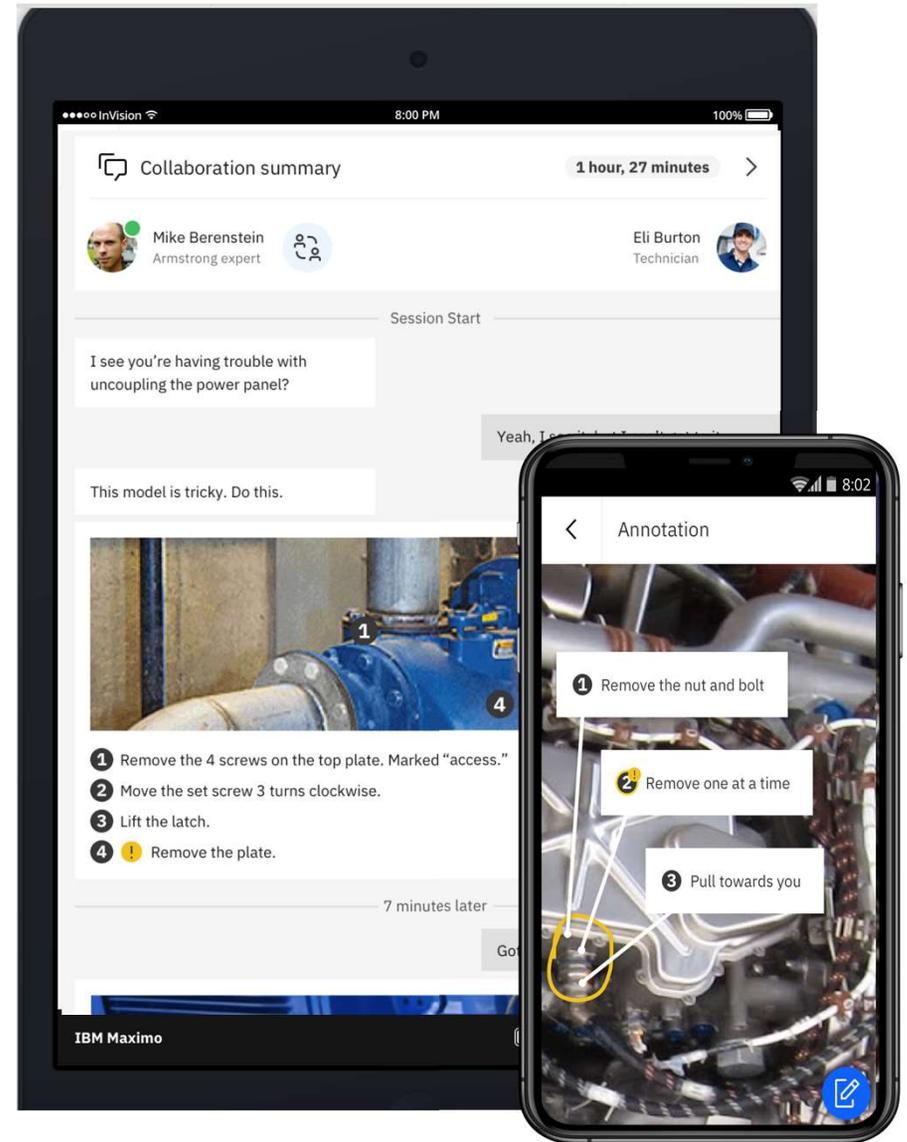
SECURITY & USER MGMT – Migrate to MAS Authentication

APP SERVER – WAS Liberty

INTEGRATION – Rest API replaces Remote Method Invocation

MESSAGE QUEUE – Kafka; JMS (MQ) BYOL
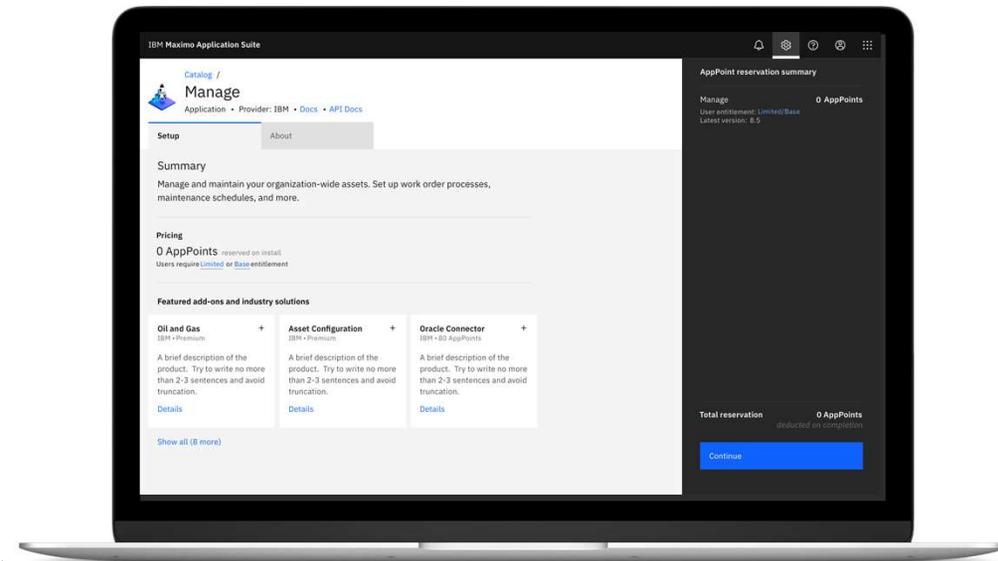
Design is not final

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

Software that is Easier to Manage

We are entering a new chapter

Install
Automated provisioning &
configuration management

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

1. Installation

5. Auto Pilot

2. Upgrades

Patch and minor
upgrades supported

4. Insights

3. Lifecycle

Metrics, alerts,
log processing and
workload analysis

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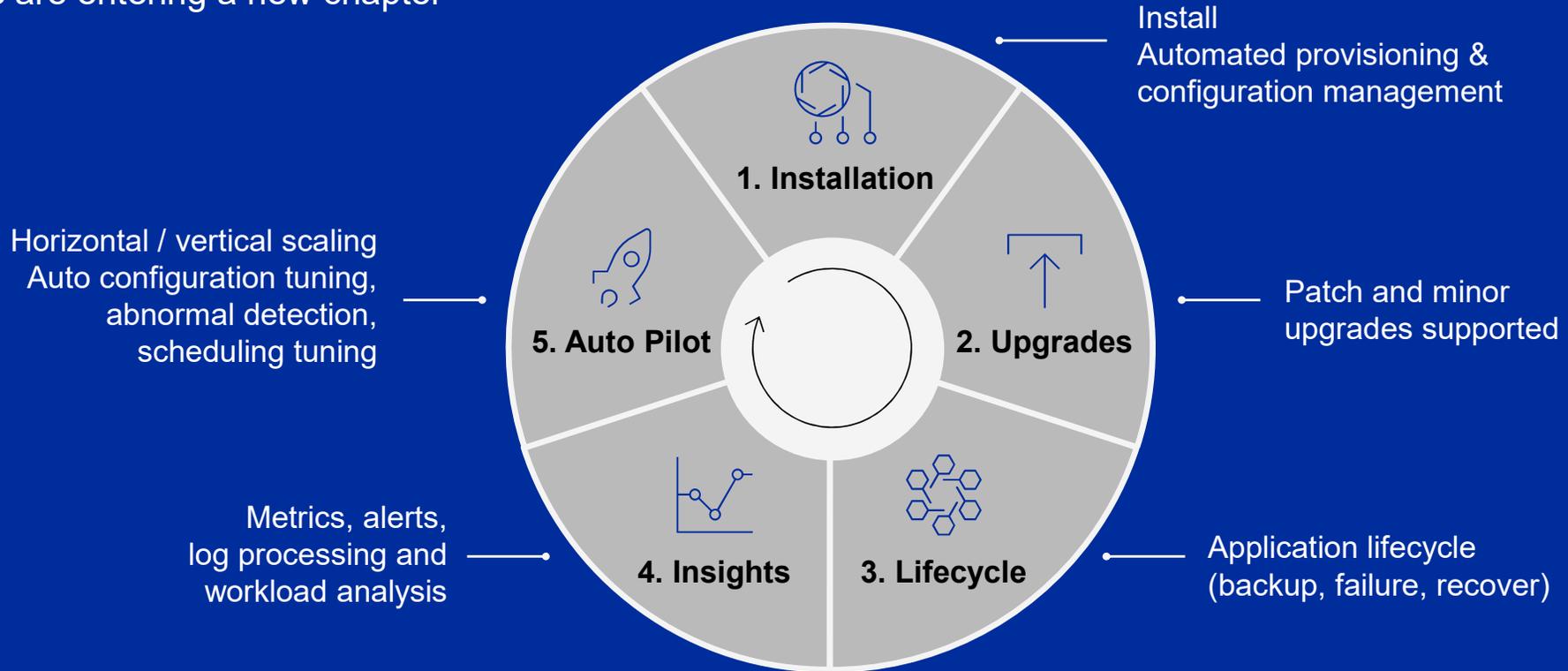
Manage Deployment Lifecycle through a single pane of glass

Maximo Application Suite Roadmap

OFFERING LAUNCH

8.0.0
- Application Suite components
- CP4D 3.0.1, OCP 4.3

- Monitor
- Manage – Entitlement to Maximo 7.6.1.x

Ann: May 29 GA: Jun 26

8.2.0
- Application Suite Components
- Globalization (9 Languages)

- Monitor
- Health (22 Languages)
- Predict (22 Languages)
- Visual Inspection

4Q

8.x.0
- Application Suite Components
- **Manage (EAM)**
- Monitor
- Health
- Predict
- Visual Inspection
- Assist
- Safety

2Q

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |

2020

2021

1Q

3Q

Ann: July 28. GA: Aug 28

8.1.0
- Application Suite Components

- Monitor
- Health
- Predict

8.3.0
- Application Suite Components
- CP4D 3.5, OCP 4.5
- Globalization (22 lang. no bidi)[21]
- App Connect
- Visual Inspection Edge

- Monitor
- Health
- Predict
- Visual Inspection
- Assist
- Safety
- Mobile* (Technician, Inspections, Offline)

8.y.0
- Application Suite Components

- Manage(EAM)
- Monitor
- Health
- Predict
- Visual Inspection
- Assist
- Safety
- Mobile

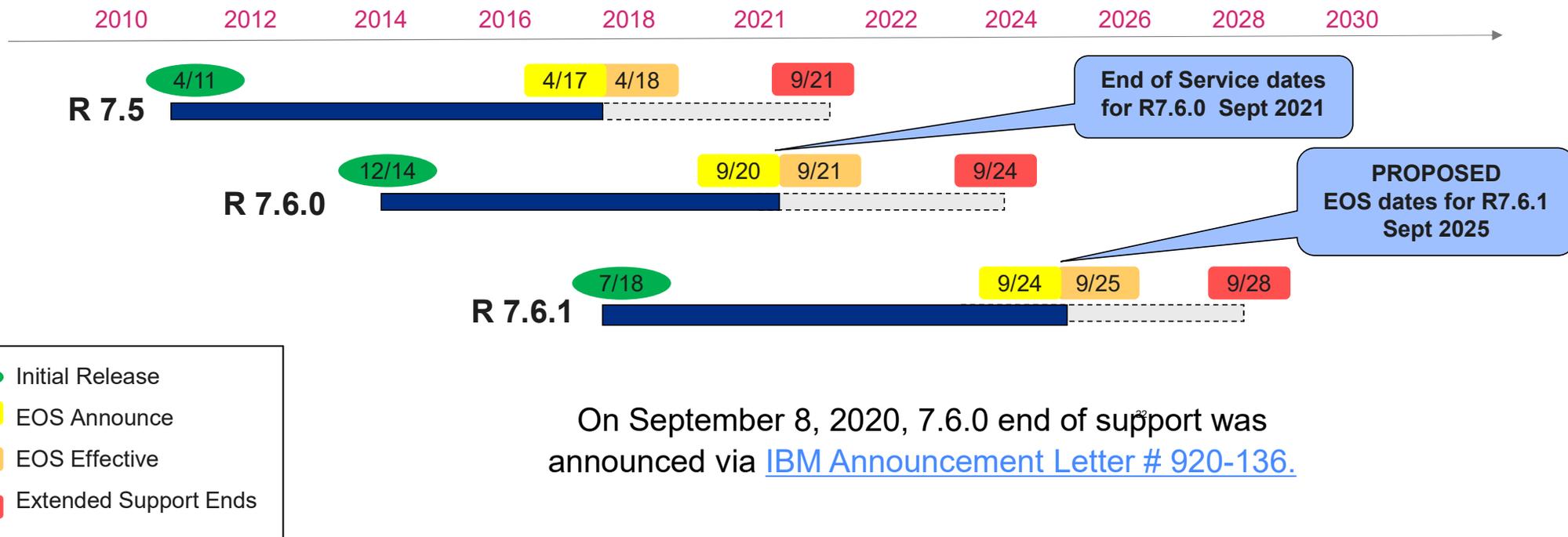*** Mobile supported for EAM 7.6.1.2+**

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

End of Service dates for R7.6.0 Sept 2021

R 7.6.0
12/14   9/20   9/21   9/24

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.

IBM Software Lifecycle : https://ibm.biz/BdidVf

Questions

Dave Gasdia, Program Director, Maximo
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Kim Woodbury, Product Manager, Maximo
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Lisa Stuckless, Product Manager, Maximo
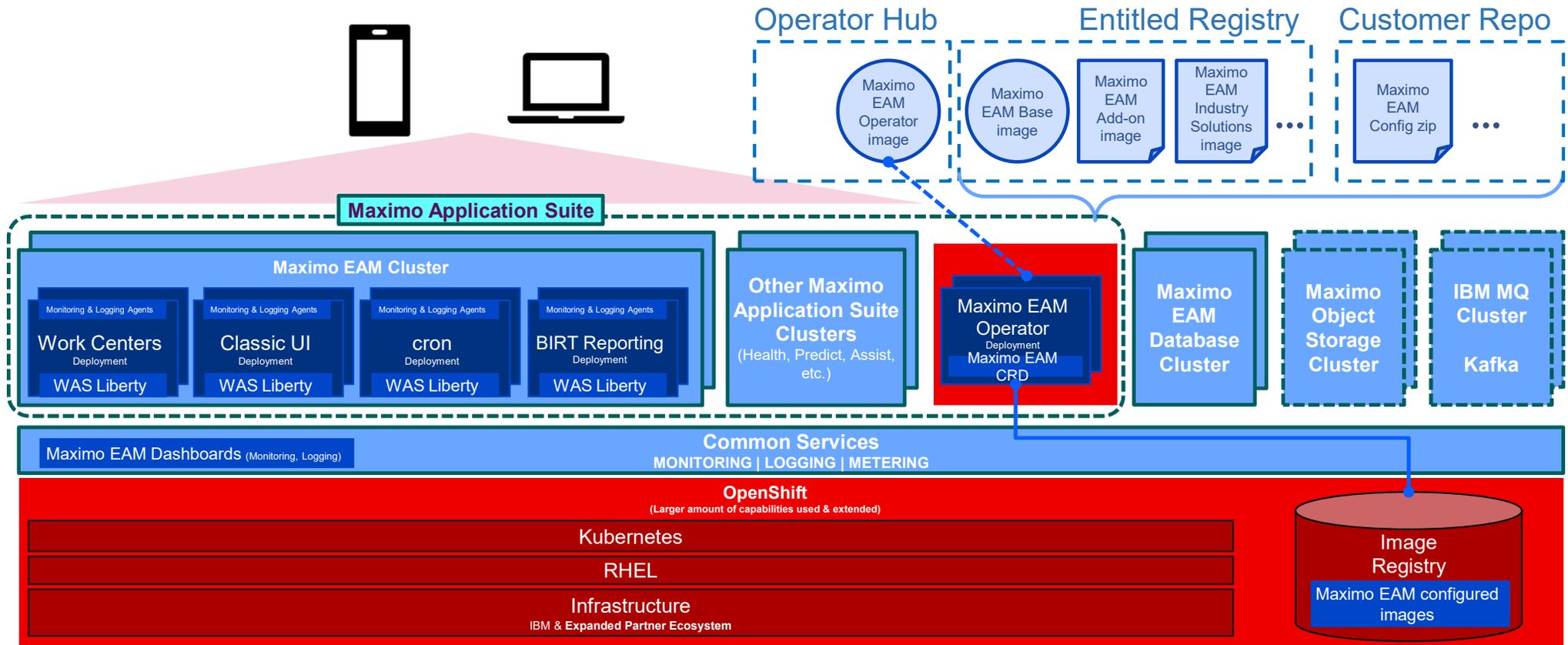lss@ca.ibm.com

New IBM Documentation site
formerly Knowledge Center

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

New name: IBM Knowledge Center is now IBM Documentation   Close

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

Work Centers	Classic UI	cron	BIRT Reporting
Monitoring & Logging Agents	Monitoring & Logging Agents	Monitoring & Logging Agents	Monitoring & Logging Agents
Work Centers Deployment	Classic UI Deployment	cron Deployment	BIRT Reporting Deployment
WAS Liberty	WAS Liberty	WAS Liberty	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

IBM MAS Managed Service

Hosted on IBM Cloud

- **Provision:** Create instances in IBM Cloud with OpenShift Cluster

- **Installation**: Install MAS

- **Security/privacy/compliance**

- **Configuration:** Configure system, services & applications

- **Monitor:** Continuous monitoring of performance and security

- **Upgrade:** Patch fixes and upgrades

- **Backup & recovery:** Daily backup & DR support

- **Availability:** 99.9% Availability SLA

Client, possibly with Consulting — **Business Strategy**

Client, Business Partner, IBM GBS — **App Development, Design, Integration, Customization**

Client, or delegated — **Customer Support Desk (L1 Support)**

MAS purchase — **Maximo Licenses**

Functional Application Support

MAS Managed Service

Application Operations/DB Management

Installation and upgrades

Open Shift Application install

Hosting Security, Performance, Availability

Open Shift setup and configuration

Infrastructure security, performance and availability

Physical Infrastructure & Network Management

SaaS

Managed Service

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
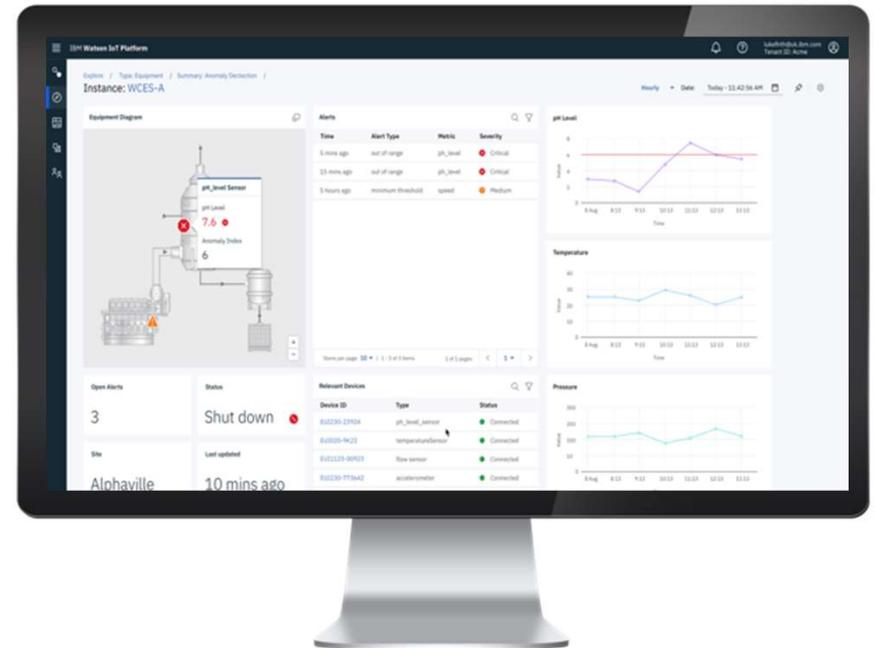
Health
IBM Maximo APM - Asset Health Insights

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
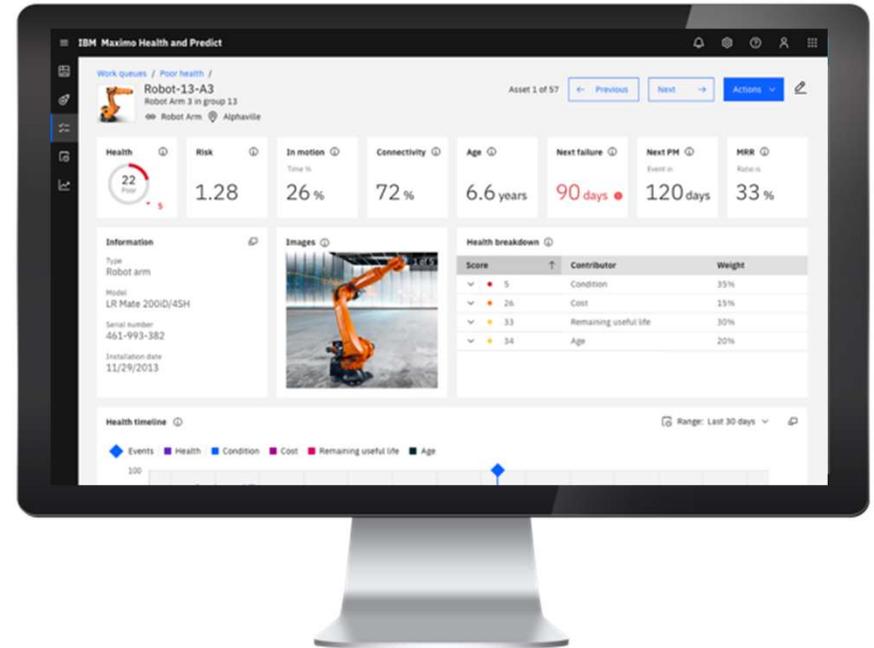
Predict

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
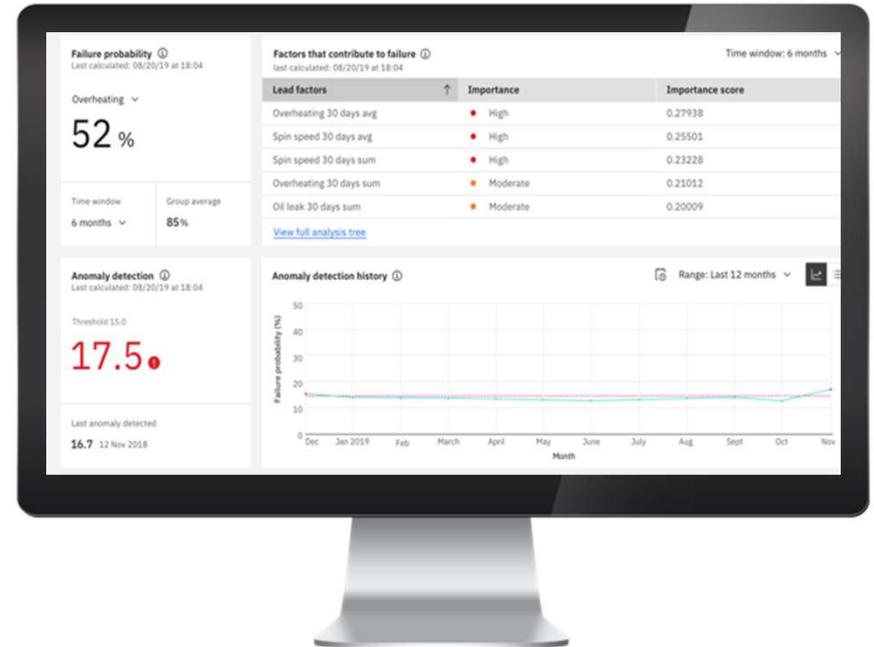
Visual Inspection
Point and Click AI Solution

Key Benefit

Time to Value
– Fast, Easy, Accurate

Detect and Correct
– At The Point of Installation

Asset Maintenance
– AI Powered Insights

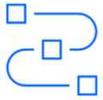**Empower Subject Matter Experts**
– AI Technology

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