

A roadmap for Maximo

Introducing the Maximo Application Suite

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The operating model in asset intensive industries is changing

15%-50%

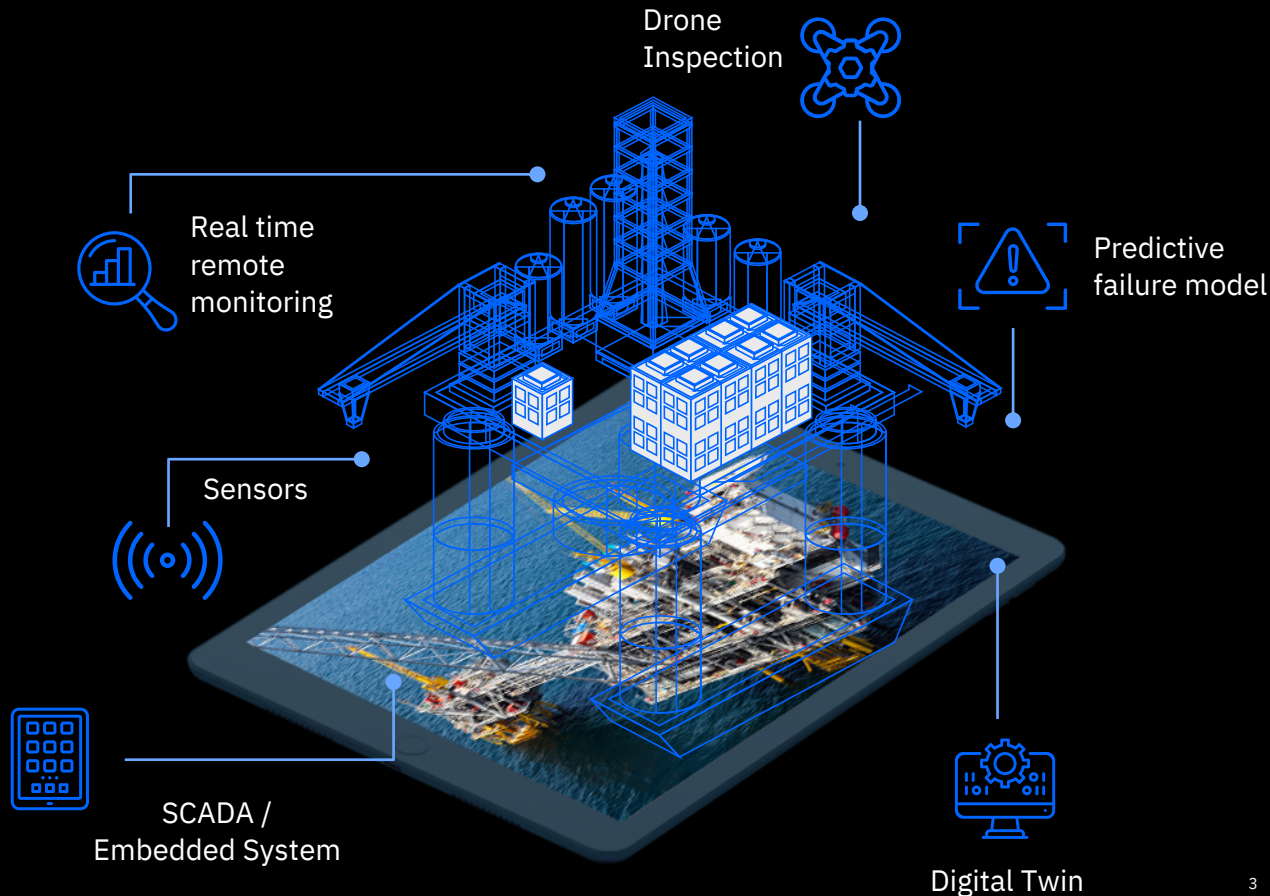
Reduced Operational Cost

5%-10%

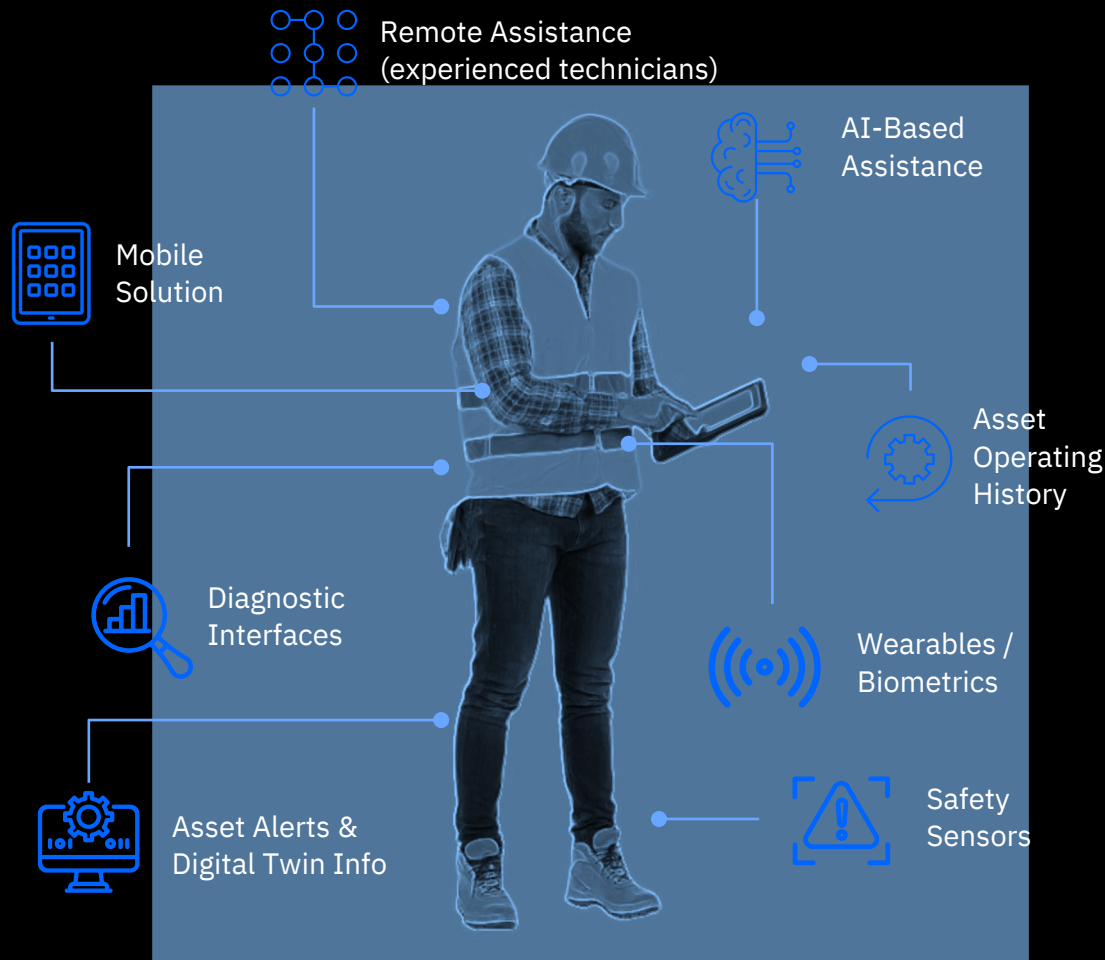
Increased Up time
& Availability

Up to 15%

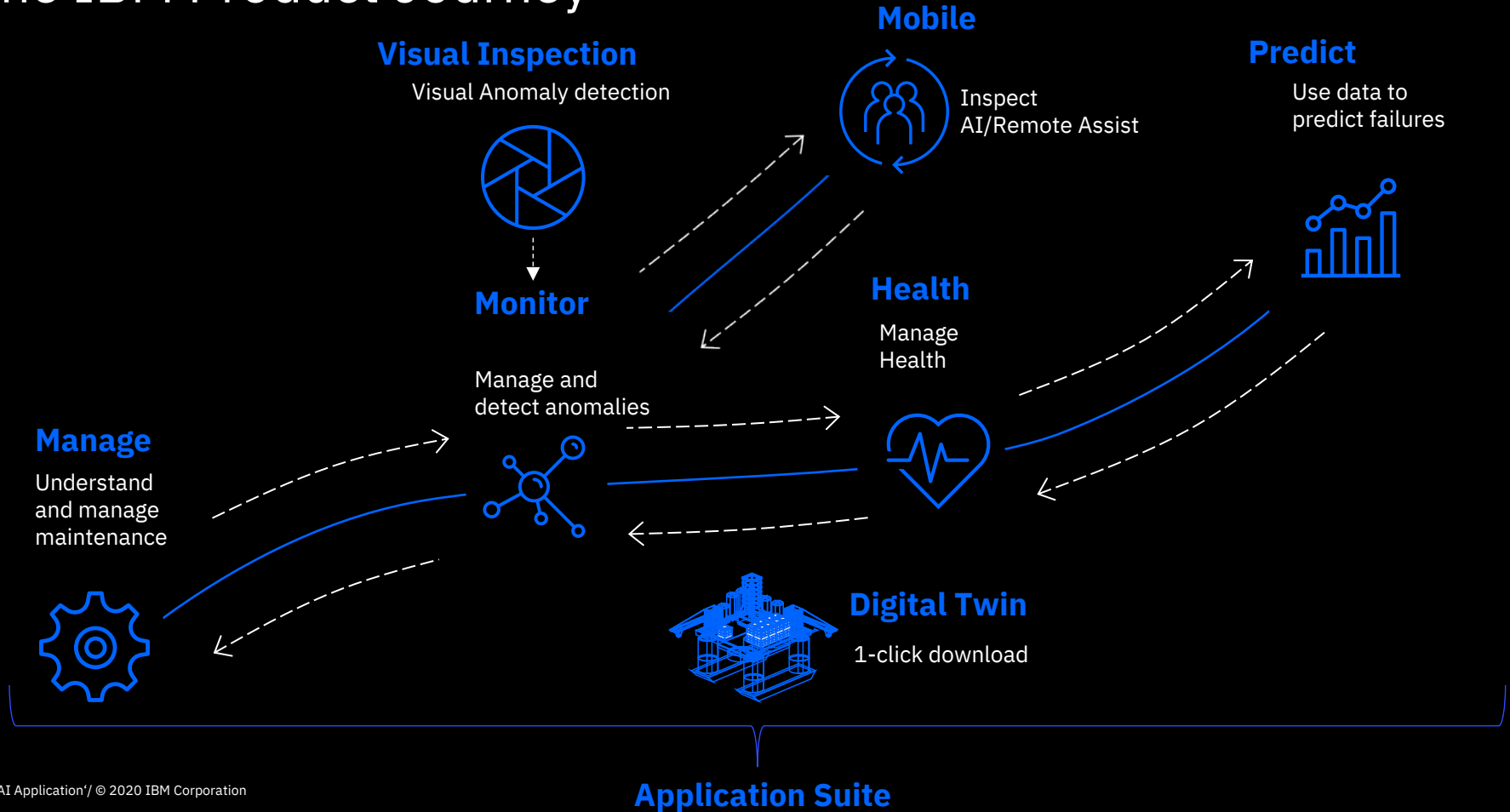
Increased Asset Life



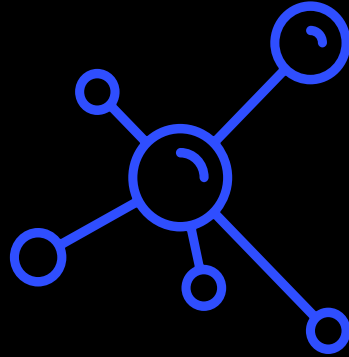
The operating model change also applies to technicians



The IBM Product Journey



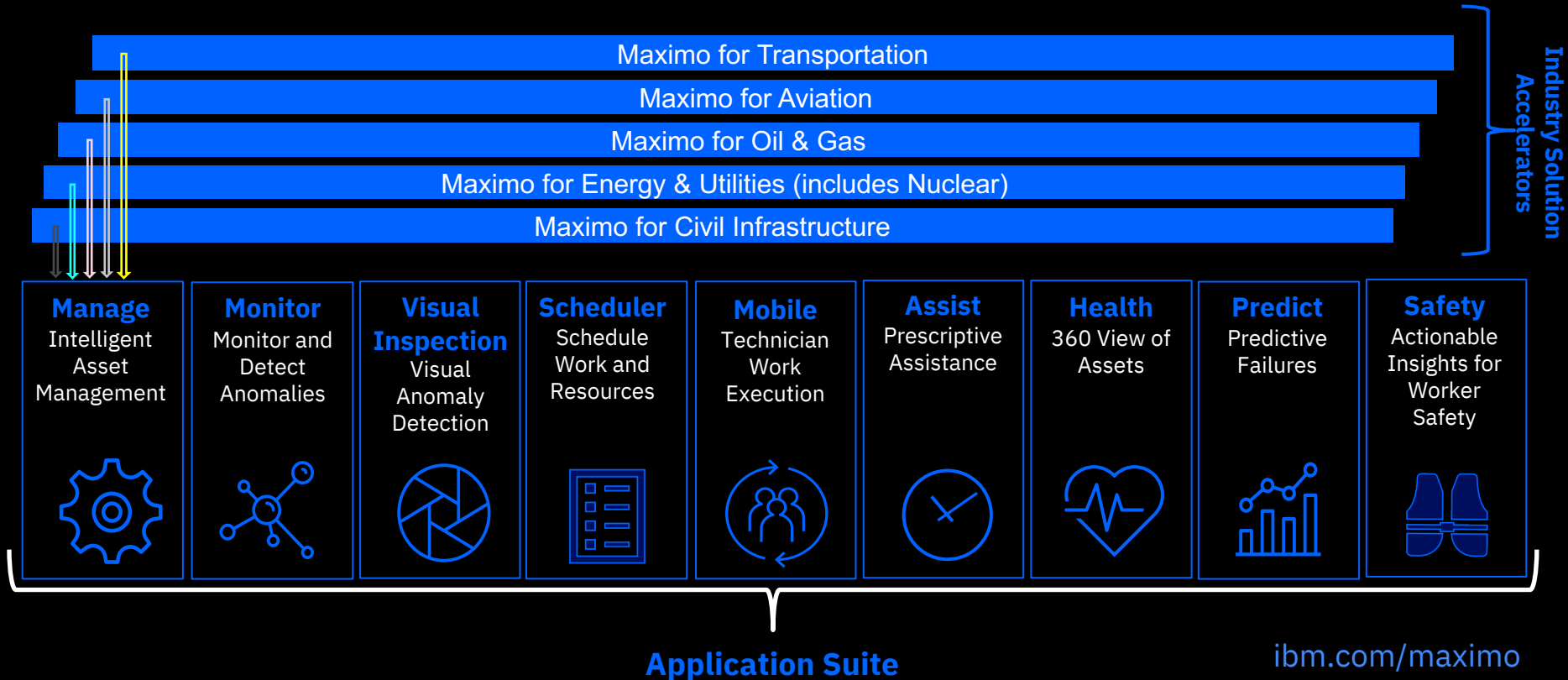
Application Suite



MAS 8.0 Released Jun 2020

Maximo 8.0 Application Suite

designed for the new operating model



Application Suite: A New Model for Software



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**

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



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

Choice of subscription term licenses or perpetual licenses

1. Single license

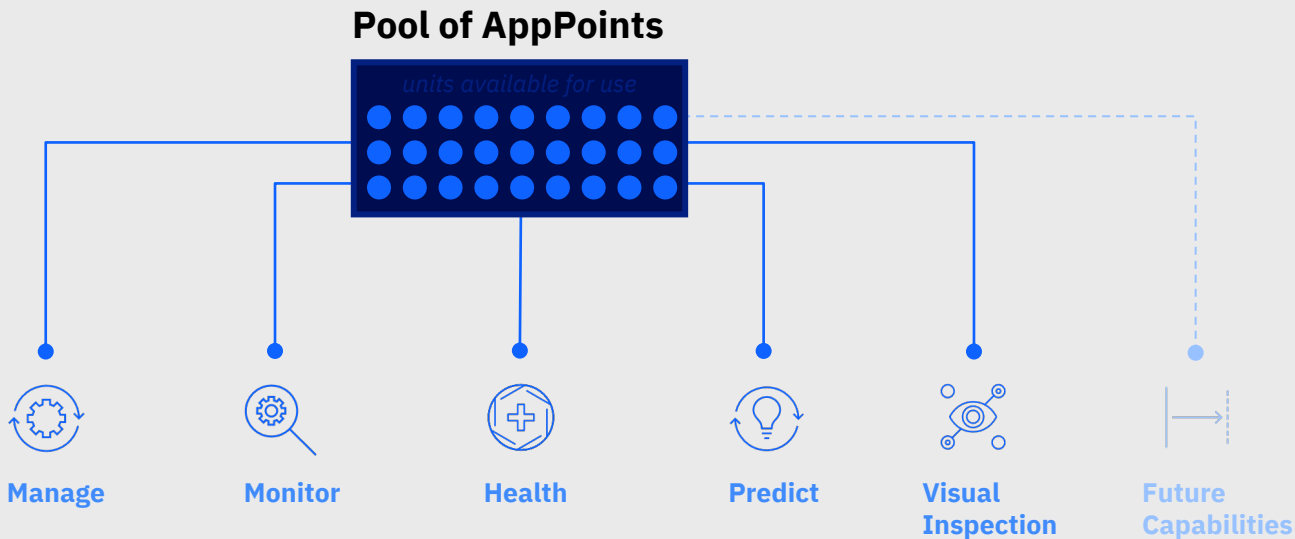
One entitlement to entire Suite

2. Flexible consumption

Sharing of license through concurrent users

3. Simplified usage

Access applications without additional provisioning

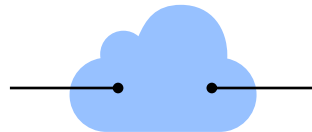


Maximo Portfolio - Today

Core Solution

Maximo
EAM

Maximo
EAM SaaS Dedicated



SaaS Solutions

Maximo EAM SaaS Public
(multi-tenant)

Industry Solutions

**Maximo for
Transportation**

**Maximo for
Nuclear**

Cal

**Maximo for
Life Sciences**

Cal

**Maximo for
Utilities**

Spatial

**Maximo for
Oil & Gas**

HS&E

**Maximo for
Aviation**

**Maximo
for Civil
Infrastructure**

Add-on Solutions

Maximo
Scheduler

Maximo
Service Provider
(managed/internal)

Maximo
Asset Configuration
Manager

Maximo
Spatial

Maximo
Anywhere

Maximo
Health, Safety &
Environment

Maximo
Scheduler Plus

Maximo
ERP Adapter for SAP

Maximo
ERP Adapter for Oracle

Maximo
Calibration

Maximo
Linear

Maximo
Archiving

Integrations

IBM
Cognos Analytics

IBM
Control Desk

Maximo
Safety (Worker
Insights)

Maximo
MRO Inventory
Optimization

Maximo
Assist (AI/AR)

Maximo
Health

Maximo
Predict

Maximo
Monitor

Maximo Application Suite License model

– User has access to all products in their level and all lower levels

Premium Concurrent User – 15 AppPoints

Manage Industry Solutions				
Trans.	Nuclear	Utilities	Oil & Gas	
Aviation	Civil Infrs.	ACM	MSP	HS&E

Predict

Base Concurrent User – 10 AppPoints

Scheduler	Manage (full access)	Spatial
		Linear
		Calibration

Health

Limited Concurrent User – 5 AppPoints

Manage/ Ind. Solutions (3 modules)	Spatial
	Linear
	Calibration

Manage Mobile user
(Anywhere/3rd party)

Monitor

Install – 1 AppPoint (x multiplier)

Manage
ERP Adapter for SAP/Oracle (x80)

Manage
Spatial (x20)

Monitor



Business Value

- Reduce unplanned downtime by over 10%
- Shorten duration of outages by over 50%
- Increase production output by up to 5%
- Decrease wasted time investigating false-positive alerts



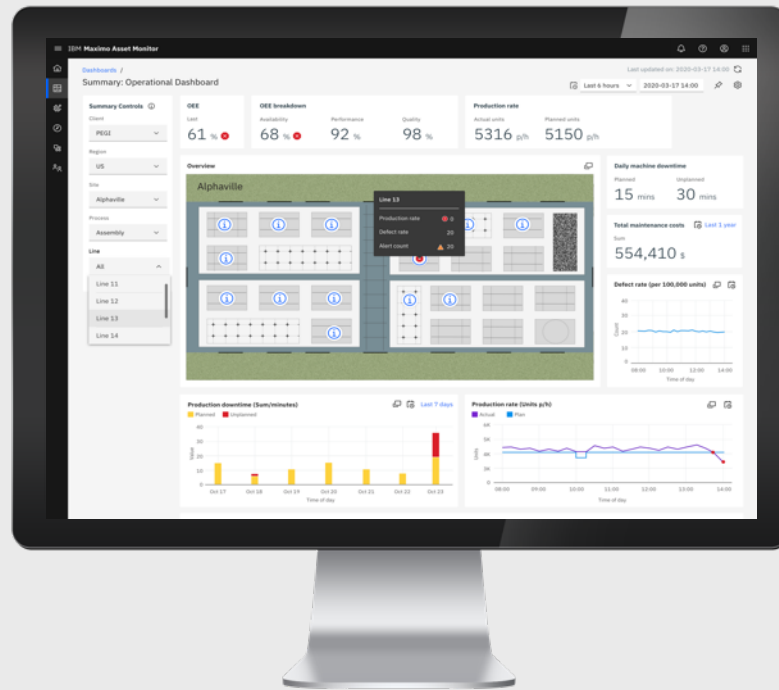
Application

- Enterprise Scale Monitoring
- AI-based anomaly detection



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
- Hierarchical data filtering and management



Health



Business Value

- 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



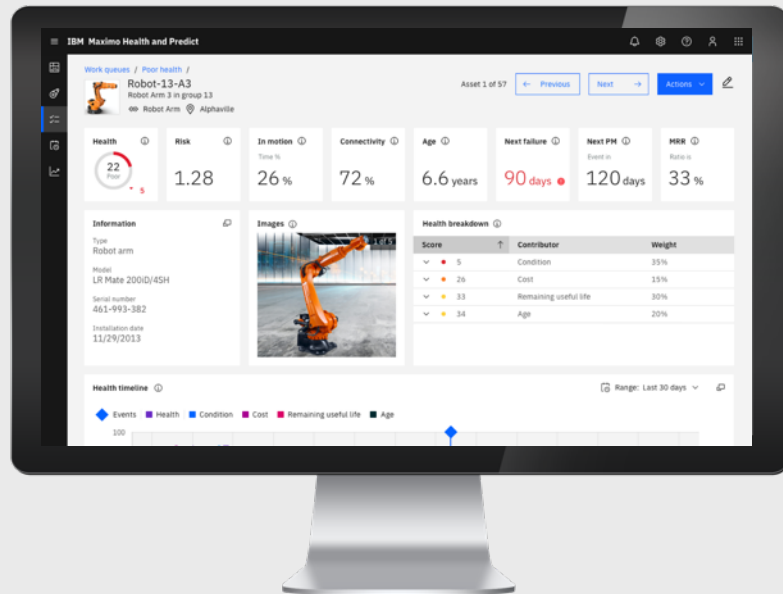
Application

- 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



Predict



Business Value

- Reduced failures
- Reduced maintenance costs
- Improved asset utilization
- Extended life of asset
- Increased production output



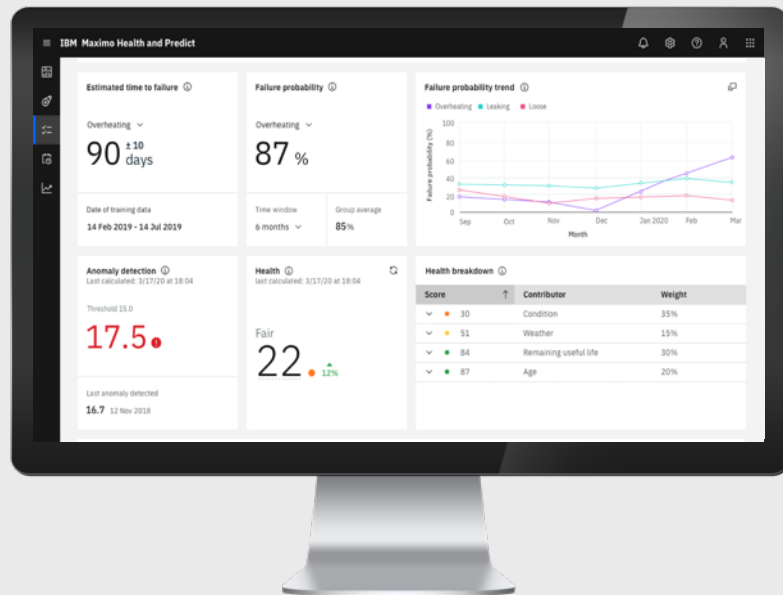
Application

- Build asset failure models
- Predict failures
- Determine factors that contribute to failure
- Score models with current sensor data



Capabilities

- Templates provided to build 5 common predictive models
- Score predictive models using Watson ML
- View pre-built visualizations for the 5 common models
- Use model scores to assess asset health with Maximo APM
 - Health



Maximo 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

The screenshot shows the IBM Maximo Visual Inspection application interface. At the top is a dark navigation bar with the text "IBM Maximo Application Suite | Visual Inspection" and several menu items: "Data sets", "Models", "Custom assets", "Deployed models", and "Projects". On the right side of the navigation bar, there is a user profile icon labeled "adminuser", a bell icon for notifications, and a question mark icon for help. Below the navigation bar is a white header area with the text "Welcome to IBM Maximo Visual Inspection". The main content area has a light gray background and features four large, colorful icons arranged horizontally, each representing a step in the workflow: 1. "Create data set" with an icon of a laptop and upward arrows, with the description "Start by adding images and video files to a data set." 2. "Prepare data" with an icon of a laptop screen showing a landscape, with the description "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." 3. "Train model" with an icon of a grid of small images, with the description "Select a few custom options to create your model." 4. "Deploy model" with an icon of a rocket launching, with the description "Deploy the trained model and receive an API link for an inference device." At the bottom right of the main content area is a blue button with the text "Get started".

Now Available on Maximo Application Suite

Maintenance Technician

- Intuitive, digital native tools for the workforce
- Technicians are empowered with access to the right information at their fingertips
- Proactive safety monitoring
- Technicians can act on data from critical assets
- Leverage expertise and share knowledge across organization
- Reduced mean time to action and improved first time fix rate



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:



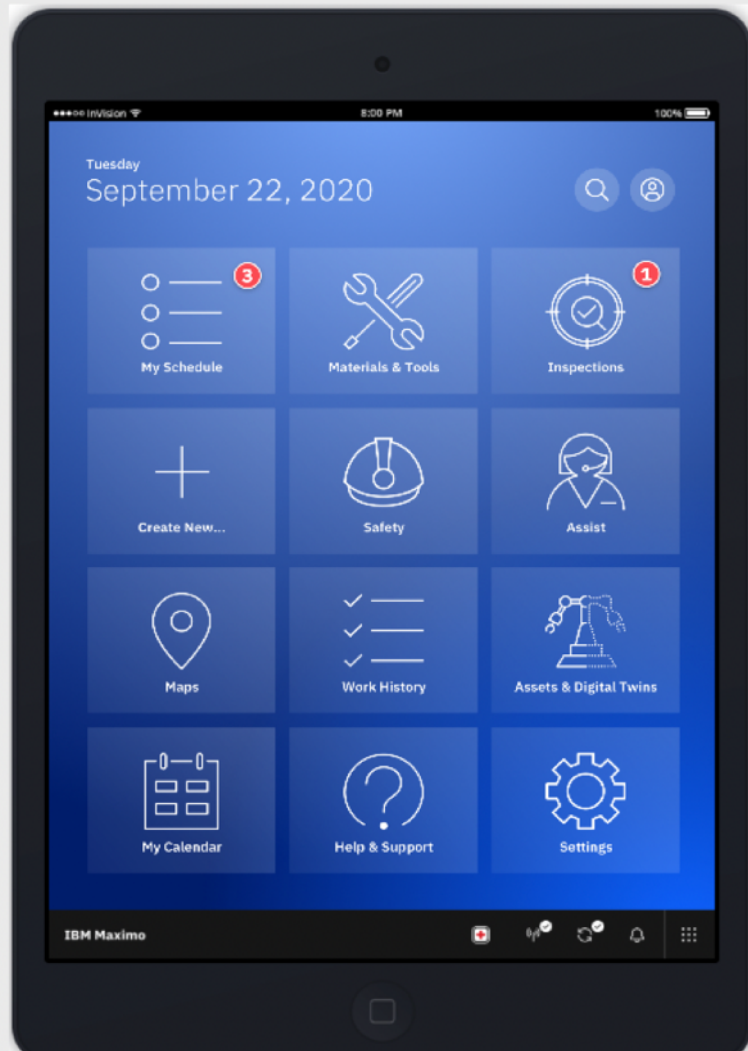
Apple
App Store



Google Play
Store



Microsoft
Store



Safety



Business Value

- Avoidance of injury claims
- Reduced Workforce disruption
- Compliance of worksite safety plan
- Increased employee availability



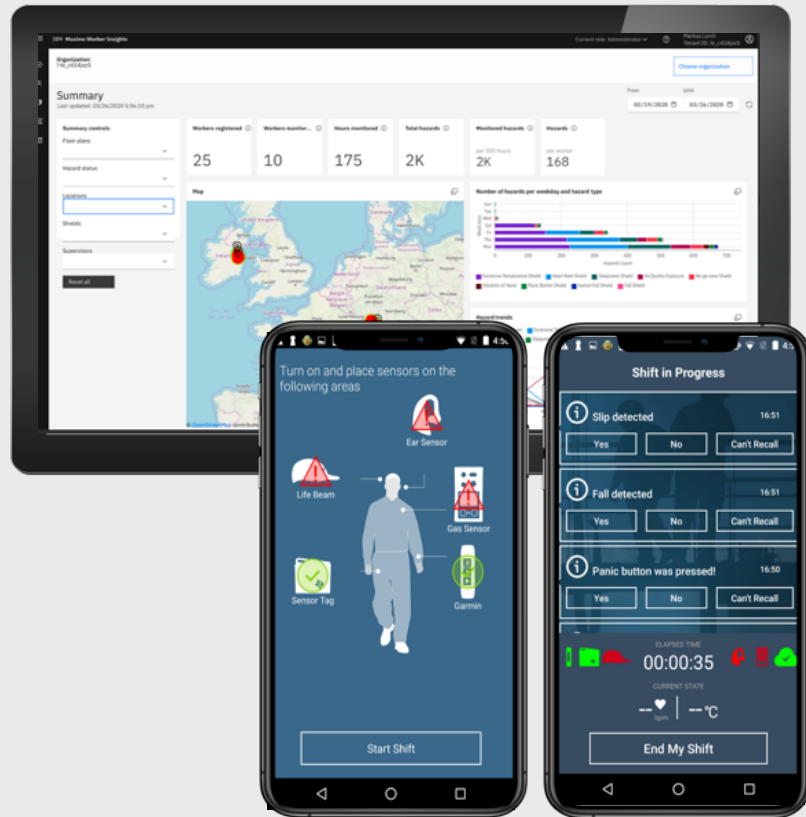
Application

- 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



AI Assistance and AR-enabled Remote Collaboration

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



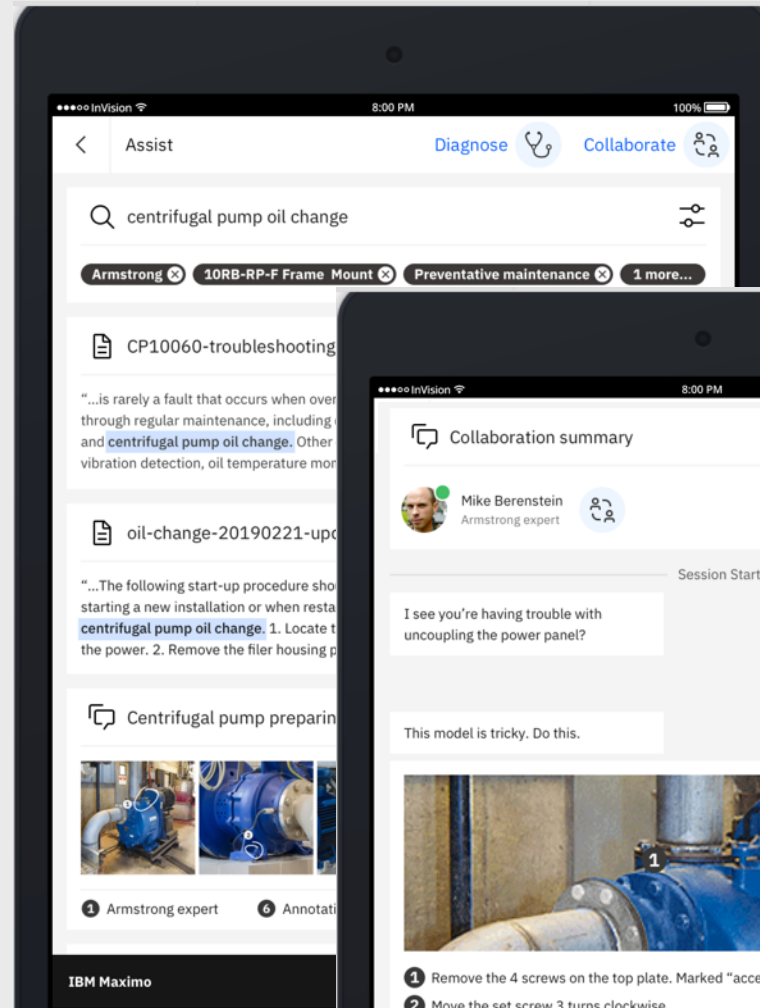
AR Collaboration session history
attached to the **Maximo work order**
for future reference and added to AI
knowledge base



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

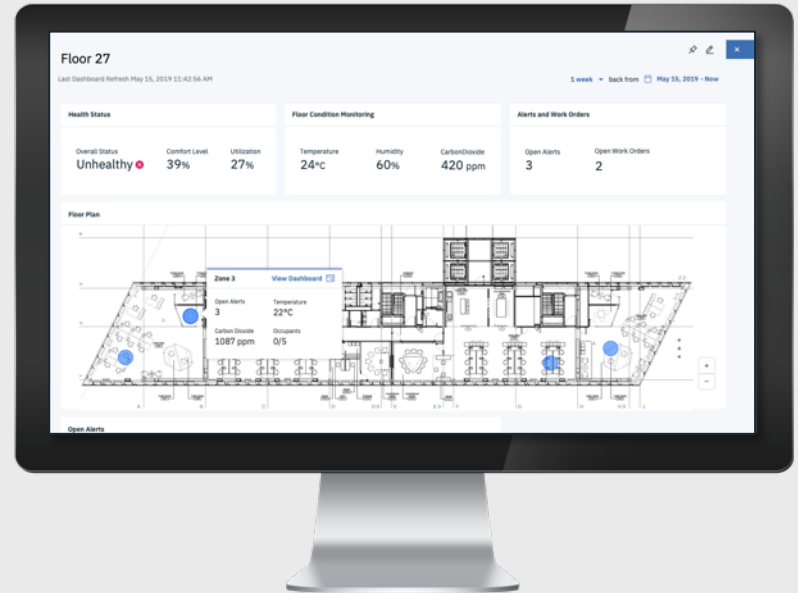
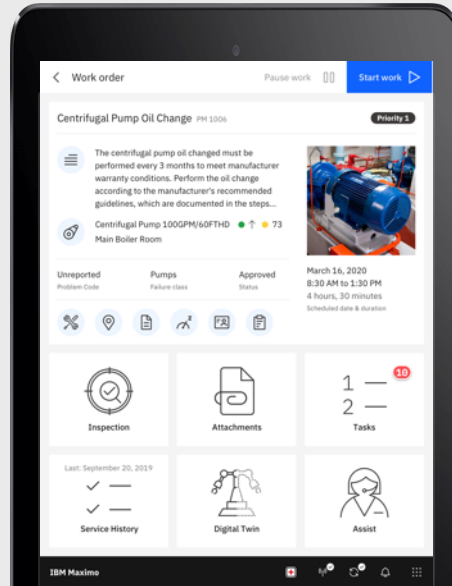


Enhance experience for new
technicians and help **every technician**
perform like your **best technician**



Modernized User Interface

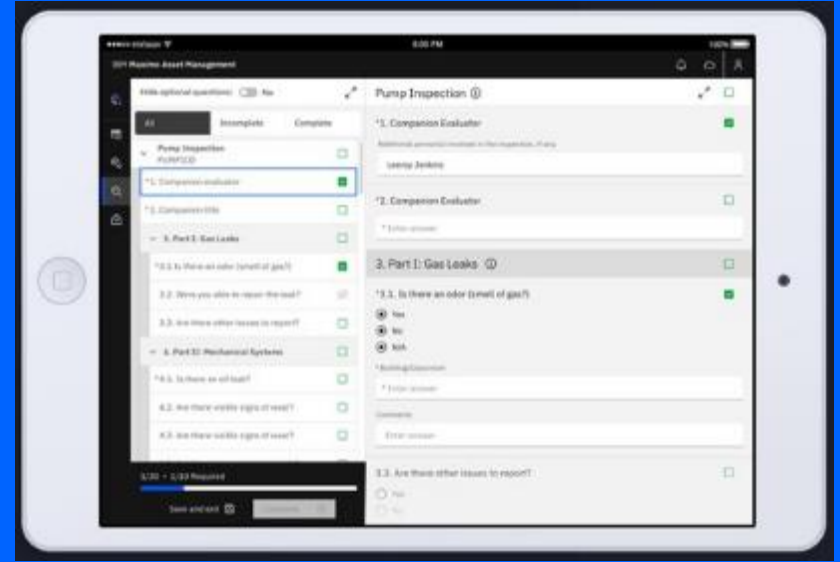
*Easy navigation,
common controls
and visualization*



IBM Design Pattern

Consistent look & feel across IBM

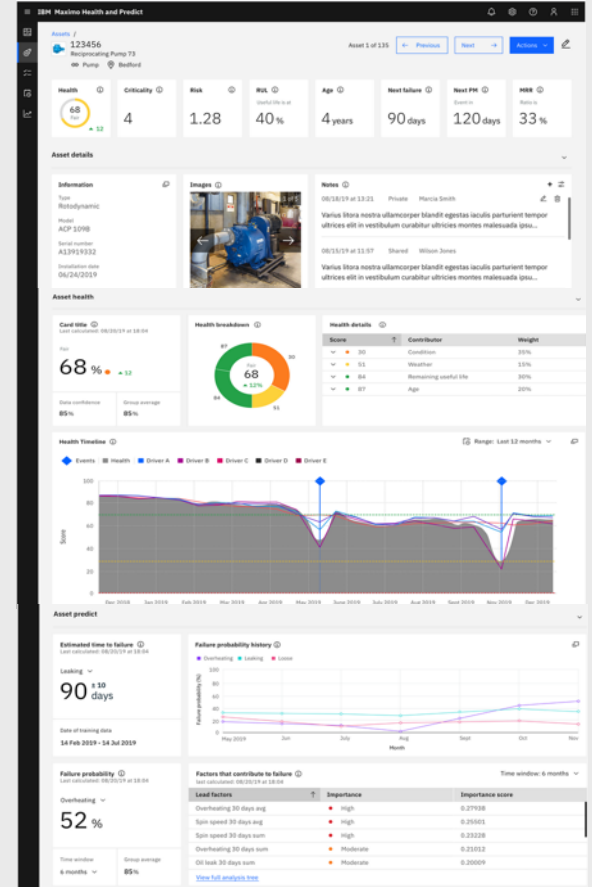
- Improve UI consistency and quality
- Make the design and development process more efficient and focused
- Establish a shared vocabulary between designer and developer
- Provide clear, discoverable guidance around design and development best practices



New Work Center Development Framework

What will it provide?

- Application framework components
- Automatic page navigation
- Applications fully translated
- Automatic internationalization/locale
- State management
- Consistent data interface (Data sources)
- Declarative UI with optional ES6 JavaScript code
- Ability to extend/upgrade UI
- Visual configuration tools
- Mobile offline disconnected data support
- Rich JavaScript library (Network, Device, Screen, Localization, Data sources, Routing)



Maximo EAM Functional Enhancements

Provide additional information on the report downtime dialog when the Asset is currently down.

Perform Asset cost rollup as a programmatic update

New section appears when asset is DOWN indicating WO, Downtime Code, Downtime Start and Reported By

Report Downtime

To change the asset's current status from UP to DOWN or DOWN to UP, select Change Status.
To record the start and end of the asset's downtime, which leaves the asset in its current status, select Report Downtime.

Asset: AB000371 Asset AB000371

Asset Up? ☐

Downtime Reporting Work Order: ABWO Downtime Code: MINRSTOP

Downtime Start: 10/1/20 9:22 AM Reported By: MAXADMIN

Downtime Report

☒ Change Status * Status Date: 10/1/20 9:22 AM

☐ Report Downtime Start Date: End Date:

OK Cancel

System Properties

Global Properties

Property Name: Description: Current Value:

rollupcost

rollupcost Automatically process maintenance cost

Global Properties Details

Property Name: Description: Current Value:

rollupcost

rollupcost Automatically process maintenance cost

Global Value: 0

Current Value: 0

Rollup Status: 0

Entered By: 0

Entered By: 0

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 Rollup Costs icon.

Unprocessed Costs Filter 0 - 0 of 0

Asset	Work Order	Site	Entered By	Rollup Status	Total Cost	Change Date
There are no rows to display.						

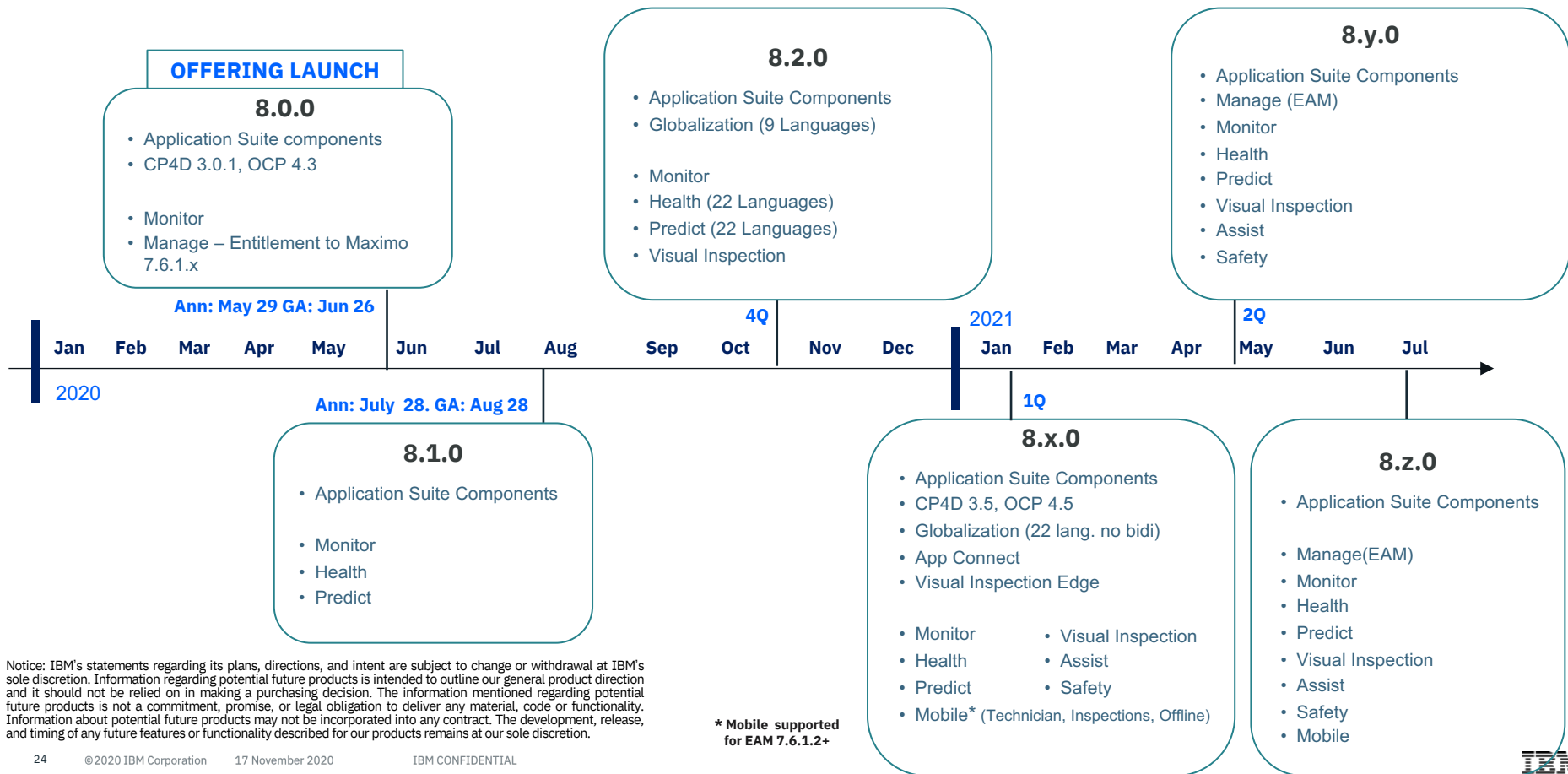
OK

Option to automate the collation of asset costs at the time of WO completion or close
OR

Action to manually roll up costs within the application

...continuing to prioritize many others (serviceability, migration manager, reporting)

Maximo Application Suite Roadmap



Investment in EAM Capabilities – 2H 2020 deliverables

Maximo 7.6.1.2

Address customer RFE's

Work center
enhancements

Security and Currency
updates

Location Based Services/Spatial

Offline mapping
improvements

Data/Security layers

ArcGIS Online data
synchronization support
and use of feature
services

Scheduling

2 New Applications –

- Graphical Work Week –
Calendar
- Graphical Resource
View - Heatmap

UX Enhancements (e.g.
Inline editing)

Optimization
improvements using ILOG
CPLEX studio

Data cleansing pre-
processing tools to ensure
optimization success

Industry Solutions

Oil & Gas / Health Safety Environment Manager

- Incident management
(OSHA 301/300a), track
multiple secondary
incident events and
outcomes
- New Training module
- Lock and Key
Management
- Permit to Work updates

Civil Infrastructure

- Create/View Defects in 3D
and Linear Views
- Enhanced Import/Export of
Asset Hierarchies
- Sample Bridge Health
Score model

Maximo Asset Management 7.6.1.2

Currency Updates

- Windows Server 2019, RHEL 8, Ubuntu 18.04 LTS,
- WebSphere 9.0.5 (Latest DB2 & WebSphere fix packs are certified)
- DB2 11.1.4.4/11.5, Oracle 19c, SQLServer 2017/2019
- Firefox 68 LTS, Safari 12, Chrome 81
- Drop IE Support (Adding support for Edge Chromium)
- Entitlement to Cognos 11.0.13 (Passport updated)

- Java 2 Security support

Technical Enhancements

- API token encryption/security
- OAuth2 email authentication
- Kafka support as an alternative to JMS queue
- Support integration of MXAPIJOBPLAN
- Improved output from PMWOGen crontask
- Provide support for async job using scripting [s]

- **Over 550 APARS + Documentation in the Readme**

Functional Enhancements

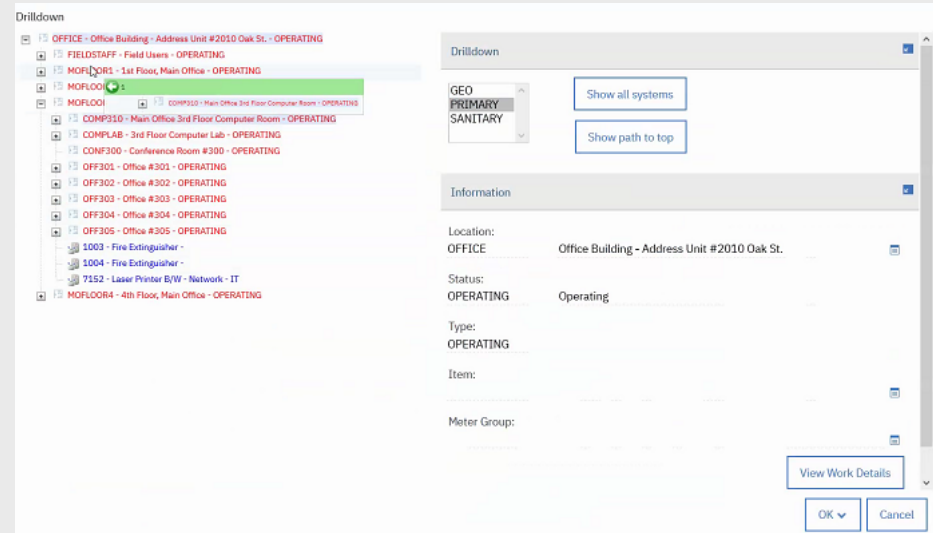
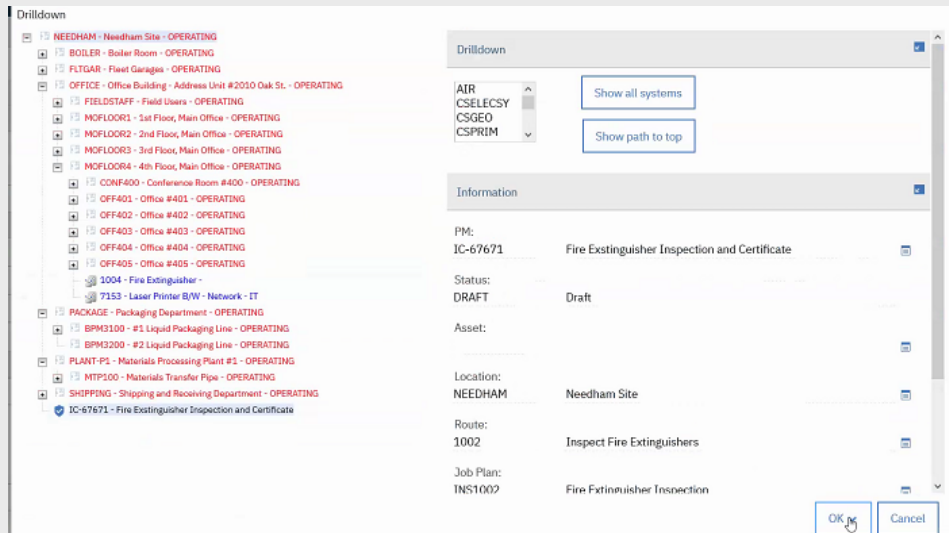
- Add multiple attachments
- Updated Drilldown
- Storeroom Hierarchies
- Work Center updates – Technician, Supervisor, IoT Connector
- Inventory updates and new Pick and Stage
- Guest user registration for Service Request WC
- License Usage Monitor support for additional products
- BIM Enhancements – latest Forge viewer, updated doc
- Inline embedded images/attachments in communications
- Digital Twin Integration for Exchange and Siemens Teamcenter

Push Notifications

- Used for Mobility (Anywhere 7.6.4)
- Support is provided for the following services:
 - IBM Push Notification Service
 - Google Firebase Cloud Messaging
 - Apple Push Notification Service

Updated Drilldown Navigation

Refreshed look and feel and access to more related data and actions



- Color indicators and new icons
- Drilldown to PM, JP and Spare Parts
- View Details on related records

- Drag and Drop to move assets or locations – green indicates a valid move
- Follows standard business logic for moving an asset and presents the dialog

Attach multiple files simultaneously

Create a File Attachment

Only files with the following formats can be enabled for printing: .pdf, .xls, .csv, .txt, .doc, .gif, .jpg, .ppt. Clear the check box beside the Print attached document with report if printable type option (Advanced Option) if the file being attached is not in one of these formats.

*Select a Folder:
Attachments ☒
Select Files

Name the document:

Advanced Options

Copy document to the default location set by your adm ☒

Add document to the document library for others to use ☐

Print attached document with report if printable type? ☒

Create a File Attachment

Only files with the following formats can be enabled for printing: .pdf, .xls, .csv, .txt, .doc, .gif, .jpg, .ppt. Clear the check box beside the Print attached document with report if printable type option (Advanced Option) if the file being attached is not in one of these formats.

*Select a Folder:
Attachments ☒
Select Files IOT Security and Privacy - 20180927.pdf, M_Jackson_eTicket.pdf

Advanced Options

Copy document to the default location set by your administrator (recommended)? ☒

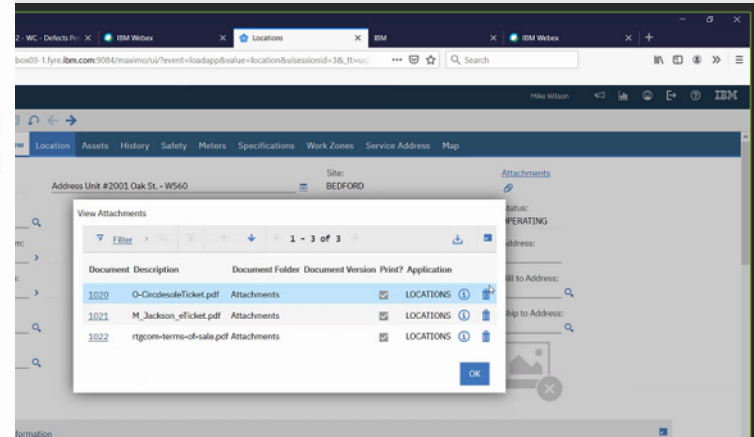
Add document to the document library for others to use? ☐

Print attached document with report if printable type? ☒

OK **Cancel**

New property to define limits on file sizes to prevent performance issues.

No new naming – defaults to file name in directory



Storeroom and Inventory updates

- Create Storeroom Hierarchies
- Add items to multiple storerooms and manage additional details
- Set a default reorder storeroom

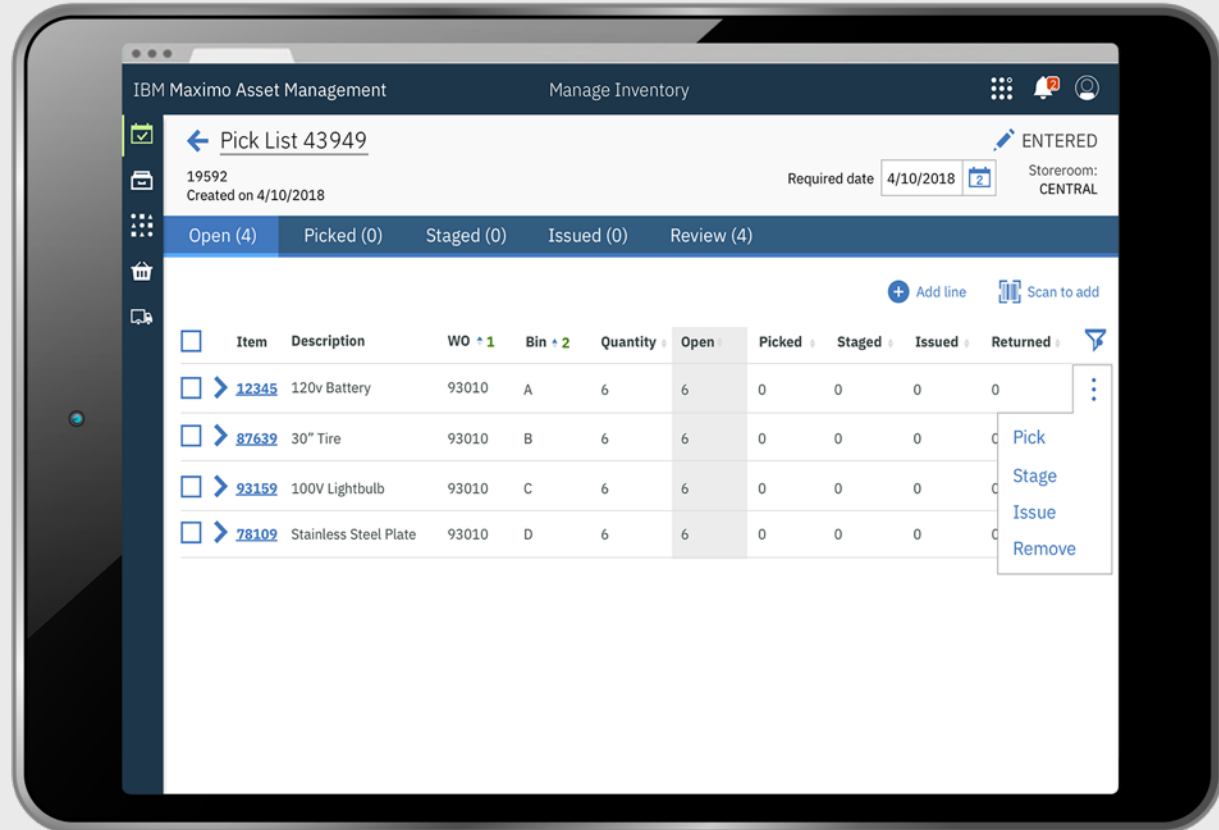
Indicate a
parent
storeroom
location

The screenshot shows the IBM Maximo 'Storerooms' application interface. The left sidebar contains navigation and action menus. The main area displays the 'Storeroom' details for 'REMSTORE1'. The 'Parent Storeroom' field is highlighted with a blue box and contains the value 'CENTRAL'. Other fields include 'Remote Storeroom 1', 'Site: BEDFORD', 'Reorder Storeroom: CENTRAL', 'Reorder Site: BEDFORD', 'GL Control Account', 'Cost Adjustment Account', 'Receipt Variance Account', 'Purchase Variance Account', 'Recent Lead Time Weight in %', 'Ship to Labor', 'Shrinkage Account', 'Invoice Variance Account', 'Currency Variance Account', 'Tool Control Account', and 'Default Storeroom?'.

Field	Value
Location	REMSTORE1
Remote Storeroom 1	
Site	BEDFORD
Parent Storeroom	CENTRAL
Reorder Storeroom	CENTRAL
Reorder Site	BEDFORD
GL Control Account	
Cost Adjustment Account	
Receipt Variance Account	
Purchase Variance Account	
Recent Lead Time Weight in %	
Ship to Labor	
Shrinkage Account	
Invoice Variance Account	
Currency Variance Account	
Tool Control Account	
Default Storeroom?	<input type="checkbox"/>

New in Inventory Work Centers – 7.6.1.2

- Picking and Staging
- Reconciliation preview
- Barcode scanning
- Condition-enabled items

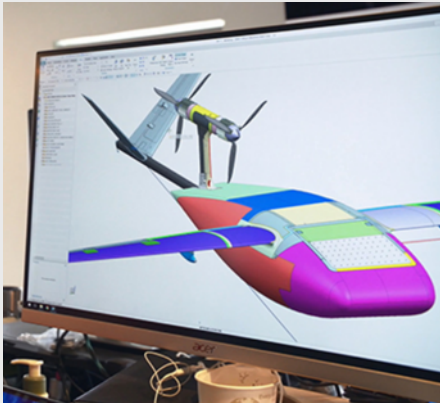


IBM-Siemens collaboration to improve the entire lifecycle



IBM-Siemens collaboration to improve the entire lifecycle by reducing equipment operating costs and improving product reliability and capability with bi-directional information flow between product engineering and maintenance operations

Product Development

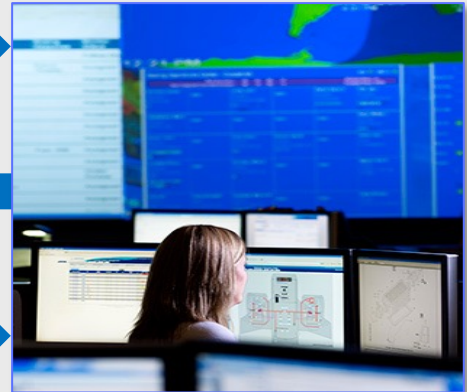


Step 1 - Initial transfer of asset information including an image, spare parts, specifications, 3D models, drawings, frequencies, maintenance plans and procedures

Step 2 - Unanticipated failure initiates the transfer of failure codes, maintenance history and technician notes to engineering

Step 3 - Engineering redesigns a component and transfers an updated spare parts list and recommended work plan to update the aircraft

Maintenance Operations



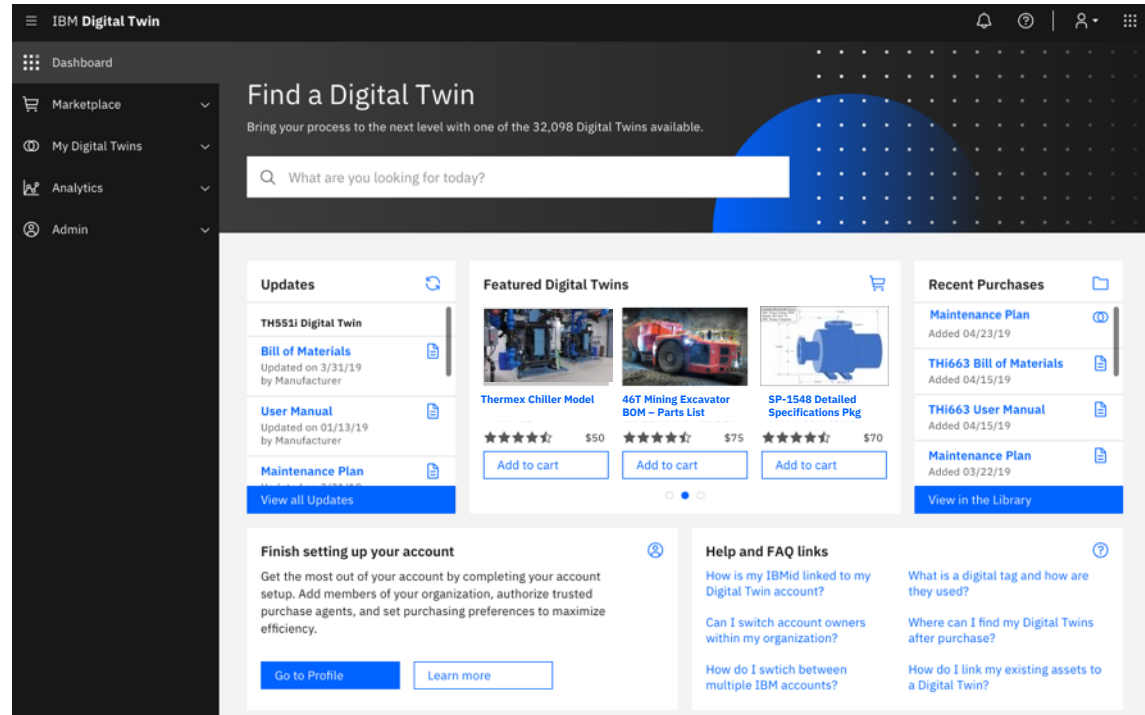
Digital Twin Exchange

Data is the new fuel for AI

Digital Twin Exchange Content Examples:

- Bill of materials
- Parts list
- User manuals
- Engineering manuals
- Fault codes
- 2D/3D CAD files
- AR/VR models
- Maintenance manuals
- Maintenance plans
- Operating model
- Stocking strategy
- Forecast model
- Building information models (BIM)
- Service manual

Driving large industry leaders for content



<https://digitaltwinexchange.ibm.com/>

Asset Application – Action to Import Digital Data

The screenshot displays the Asset Application interface. The left sidebar contains a 'Common Actions' section with 'Import Digital Data' highlighted. The main area shows a table of digital data with columns for Product ID, Name, Image, and Status. A modal window titled 'Select Data Source' is open, showing 'Digital Twin' as the selected source. Another modal window titled 'Import Digital Twin Data' is open, showing fields for 'Digital Twin Email' and 'Key', and a 'Request Data' button.

Select Data Source

Digital Data Source:

Digital Twin

Digital Twin

Teamcenter

OK Cancel

Import Digital Twin Data

[Visit IBM Digital Twin Exchange](#)

Digital Twin Email: sbudhira@us.ibm.com

Key:

Filter by Name:

Request Data

Digital Data	Product ID	Name	Image	Status
<input type="checkbox"/>	DT-78-243673	Front End Loader FEL-700 BOM spare parts lists		
<input type="checkbox"/>	DT-78-243685	Centrifugal Pump 12 month Job Plan and BOM parts List		
<input type="checkbox"/>	DT-78-243668	Centrifugal Pump 12 month Job Plan		

Import Data Close

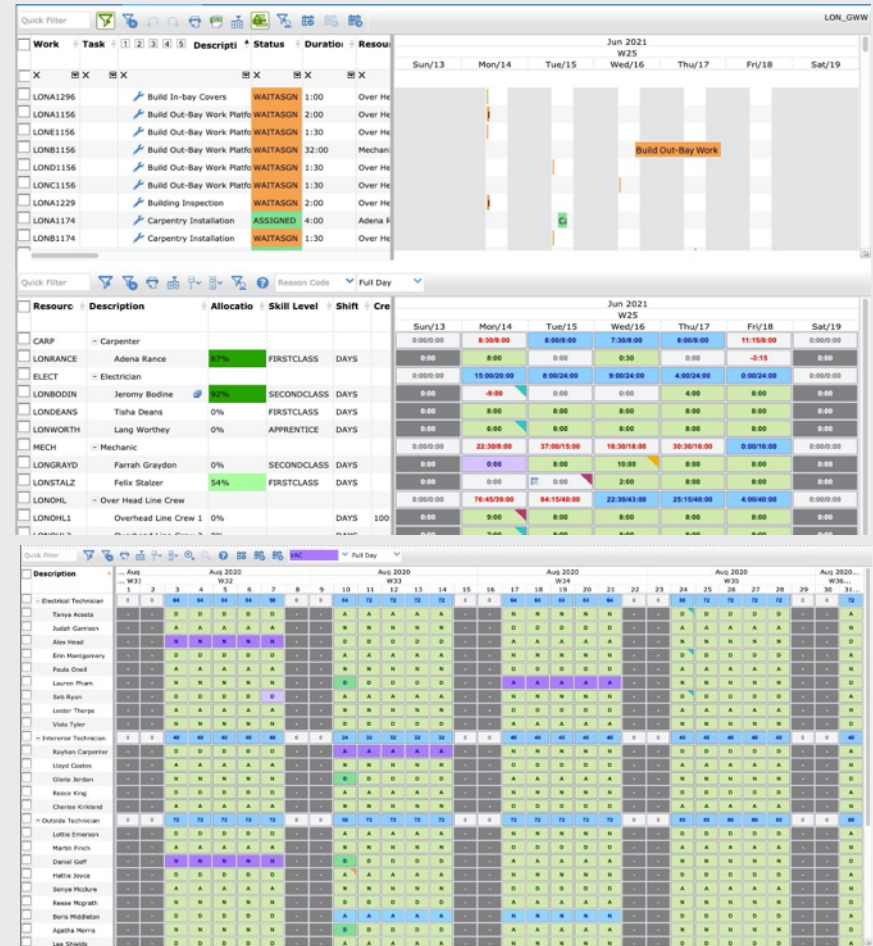
What's new in Maximo Scheduler 7.6.8

Features for Improved User Experience

- Easily schedule and assign work based on resource hours available in a day and percent allocated for the week with the new Graphical Work Week application
- Easily manage modified resource availability from a calendar view with the new Graphical Resource View application
- Export to calendar apps (Outlook)
- UX Enhancements (e.g. Inline editing)

Features for Optimization

- Port existing optimization models to new scalable engine built on ILOG CPLEX Optimization Studio (replaces ILOG Decision Optimization Center)
- New scalable engine includes EAM domain data management/ application & deployment management layer
- Large project optimization enhancements



Maximo Scheduler 7.6.8

Features for Data Quality

- Easily identify and fix issues with your data with the new Scheduler Data Manager application
- Allows you to easily fix issues and to understand what data is needed to support planning, scheduling and assigning best practices

← List View | Schedule | **Work** | Dependencies | Resources

Scheduler: 761_SCHED | 761 Scheduling for GA demo data | Selected Validation Date: | Last Validation Date: |

Zero Duration? ☒ Non-interruptible Work that is Longer than Shifts? ☒ Interruptible on Missing Shift? ☒ Start No Earlier Than? ☒ Finish No Later Than? ☒ Milestones? ☒

Location Assignment? ☒ No Planned Resource? ☒ Priority? ☒ Task without Parent? ☒ Craft Quantity? ☒ Crew Type Quantity? ☒ Rotating Tool Quantity? ☒

Validate Work

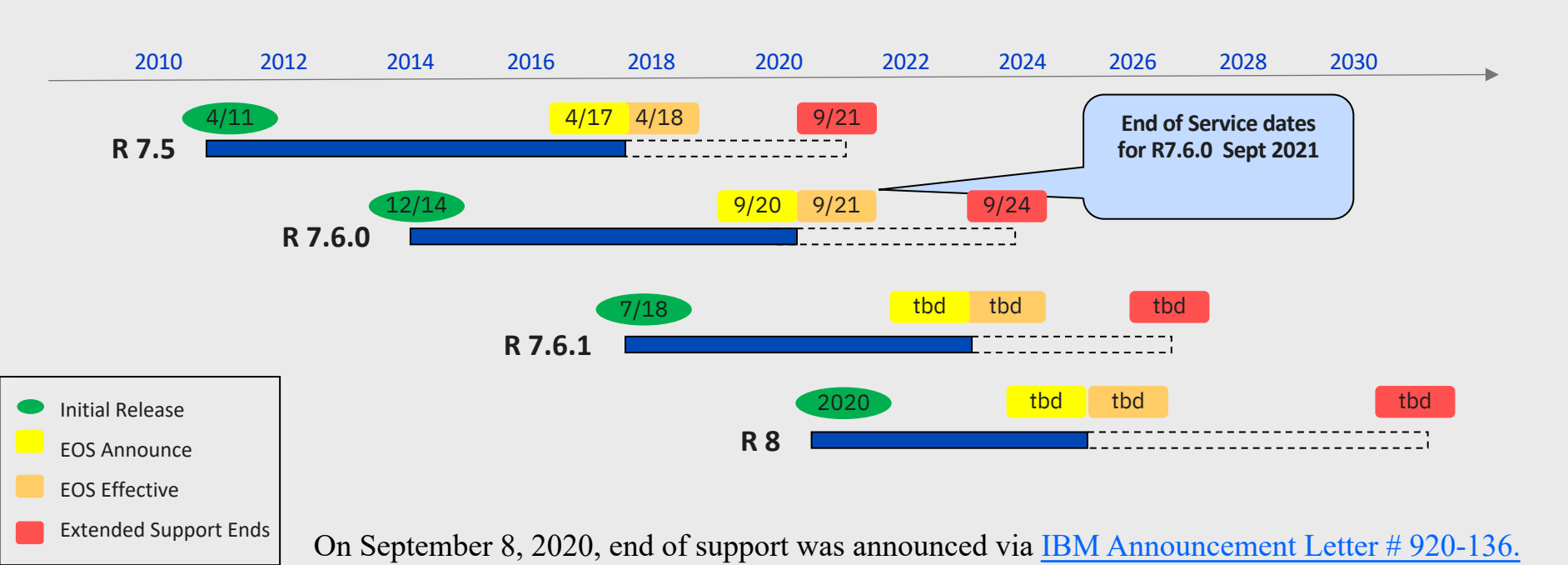
Filter By Error/Warning: Refresh Show Errors/Warnings Only? ☐

Work 1 - 20 of 171

<input type="checkbox"/>	WD Group	Task	Description	Duration	Start No Earlier Than	Finish No Later Than	Priority	Interruptible?	Interruptible shift	Error/Warning
<input type="checkbox"/>	761A1201	>	Airframes (AF) - tasks some in sched - s	6:00	9/14/20 7:00 AM	9/17/20 3:00 PM		<input type="checkbox"/>		
<input type="checkbox"/>	761A1201	>	20 AF Junior task 1	2:15				<input type="checkbox"/>		
<input type="checkbox"/>	761A1201	>	00 AF Senior task	5:00				<input type="checkbox"/>		
<input type="checkbox"/>	761A1202	>	Cabin Food Heating System replacement	1:00	9/14/20 7:00 AM	9/15/20 3:00 PM		<input type="checkbox"/>		
<input type="checkbox"/>	761A1203	>	Cabin Audio System Upgrade - tasks in	1:45	9/14/20 7:00 AM	9/15/20 3:00 PM		<input type="checkbox"/>		
<input type="checkbox"/>	761A1203	>	10 Reset all systems	0:15				<input type="checkbox"/>		
<input type="checkbox"/>	761A1203	>	20 push new firmware on all device	0:45				<input type="checkbox"/>		

Maximo EAM Release Lifecycle Timeline

7.6.0 Announced December 2014 – EOS effective date September 2021



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.

Keep Connected

- **NEW** Maximo IoT Community

<https://ibm.co/2MMI9NZ>

- Linked In Maximo groups

<https://www.linkedin.com/groups/2179193>

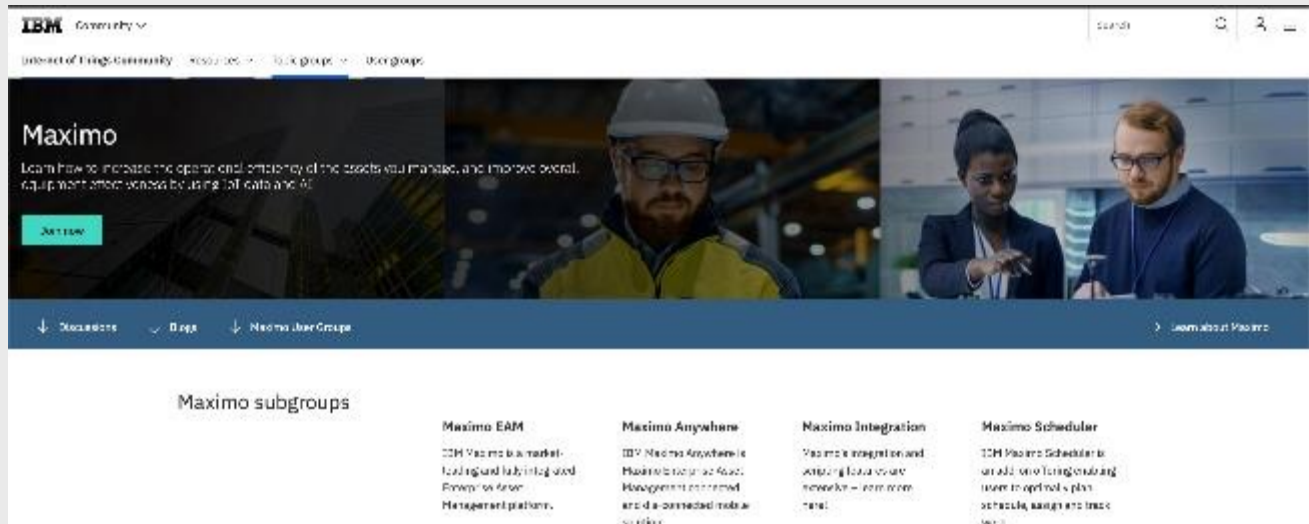
- IBM Maximo Support

<https://ibm.co/2TuROwk>



New Maximo IoT Community

Discussions
User Group Meetings
Content
Blogs
And More!



Join and become a Member
to access content and
receive notifications

<https://www.ibm.com/community/iot/maximo>

New Maximo IoT Sub Community Scheduler



Maximo

Learn how to increase the operational efficiency of the assets you manage, and improve overall equipment effectiveness by using IoT data and AI.

Maximo Scheduler

Settings

Group Home

Discussion 50

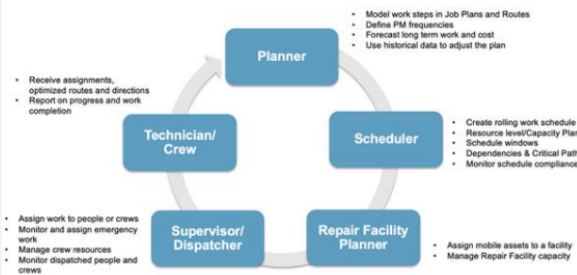
Library 78

Blogs 2

Events 0

Members 339

Maximo Scheduler: Roles We Cater To



Its role based applications offer comprehensive capabilities to help the Planners, Schedulers, Supervisors/Foremen, and the Field Technicians to manage work successfully and efficiently. Furthermore, users can also track how the schedules have been performing against the plans by leveraging the compliance dashboards.

With a Maximo Scheduler license, users get access to the following applications:

- 1) Graphical Scheduling
- 2) Graphical Assignment
- 3) Graphical Assignment Repair Facilities
- 4) Graphical Crew Management

Also included with the license are: a) supervisor and technician templates for connected tablets and phones, and b) access to the IBM iLog DOC optimization engine to run the models that are provided out-of-the-box.

If your requirements include managing large projects (shutdowns, turnarounds, outages), booking customer appointments, more dynamic dispatching, or integrating weather data with Maximo work management, check out Scheduler Plus

#maximo

#scheduler

New Maximo IoT Skills Gateway



<https://www.ibm.com/training>

100 Results

Course - Maximo 7.6 Purchasing
(Code: ITS-W0117G) This course is an overview focused on supply chain management.
★★★★★ Basic | 2 Hours | Self-paced | No Cost

Course - Maximo 7.6 Workflows
(Code: ITS-W0103G) This course discusses the automation of business process within the asset management disciplines using **Maximo**.
★★★★★ Basic | 6 Hours | Self-paced | No Cost

Course - Maximo 7.6 Scheduler
(Code: DLP-DL88177G) This course discusses 3 specific areas of scheduler. It covers PM forecasting, graphical scheduling and graphical assignments using **Maximo 7.6 Scheduler**.
Basic | 4 Hours | Self-paced | No Cost | New

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