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Introducing:



18 – 21 FEBRUARY 2023
RIYADH FRONT EXHIBITION AND
CONFERENCE CENTER (RFECC)

MAXIMO: Defining Technicians of Today

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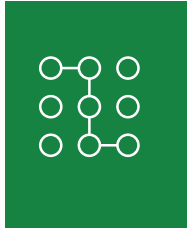
Sunday, 19 February, 2023

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The Need is Urgent !

A digital re-invention is transforming the Field Service Business Model



Equipment becoming more complex



Equipment remotely monitored



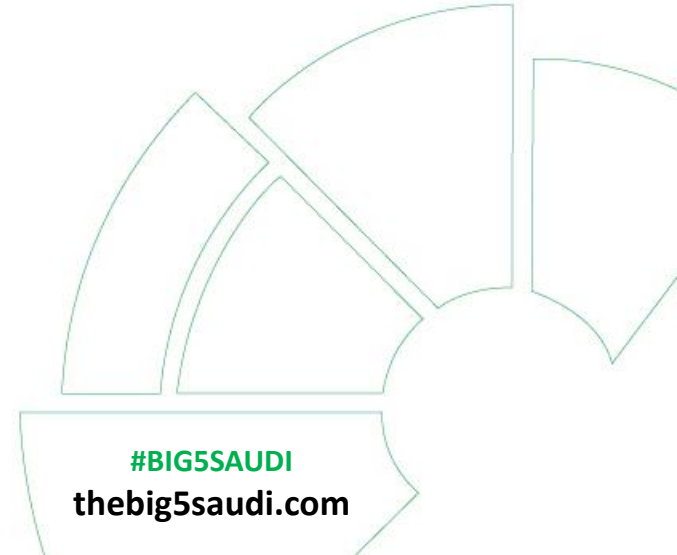
Experienced technicians retiring



Higher churn for newer technicians



Safety concerns increasing



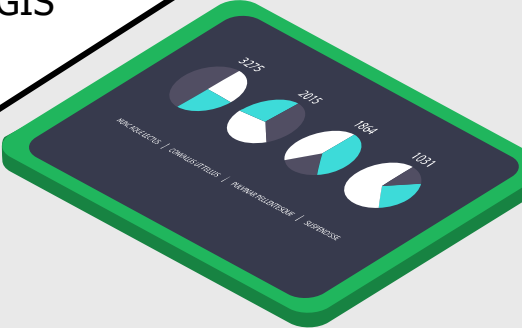
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Continuum of technician tooling

IoT devices
(e.g.: wearables, beacons)
AI assistance
conversational UI
Augmented reality

Tablets
smartphone
GPS and GIS

Pen and paper



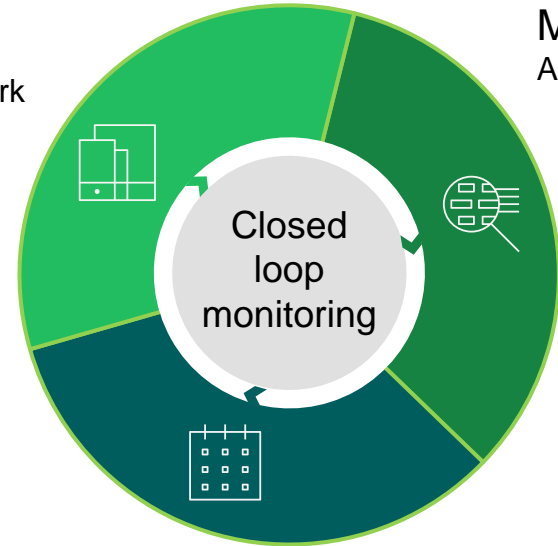
- Most clients are still:
- Pen and paper world
 - High mean time to repair
 - No standardized repair processes
 - Unnecessary repair and parts replacement

Leaders are optimizing their data



Mobile
Perform work

Monitor
Anomalies



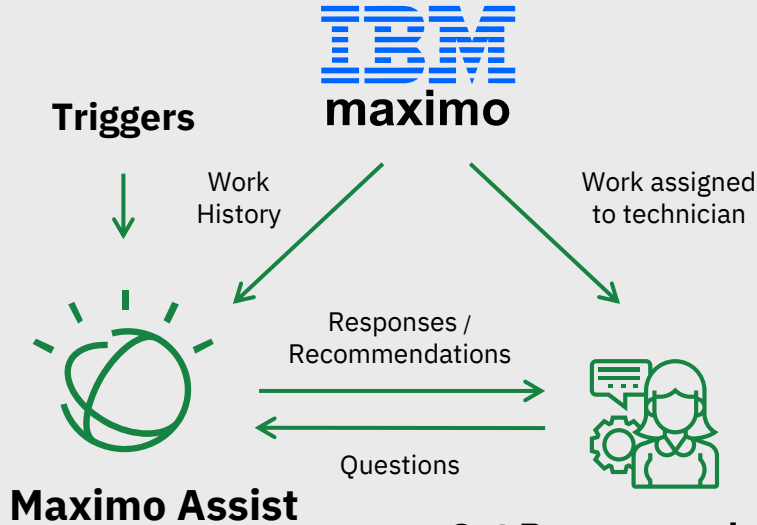
Assist
Guidance

How does it work?

Natural language query (NLQ)
Problem diagnosis capabilities



Refine & Train model



Get Recommendations

Examples:

- Assist provides most probable resolutions based on work order assigned
- Craftsperson can document other physical observations to have Assist refresh resolutions
- Troubleshooting guide
- Etc...

Ask questions

Examples:

- How do I check the motor starter overloads on Refiner Pump 1271?
- Cooling Water Pump VFD 57445 is displaying Failure Code FC002
- RTD #3 on Crusher Conveyor Motor #2 is reading 140 degrees C. What could be the problem? (Diagnosis)
- How do I change the bearings on High Pressure Compressor #8?
- Etc...

Technicians Empowerment

What kind of documentation does Maximo Assist ingest?



Custom training repository



Ask expert technician



Historical work orders (EAM Data)



Journals, magazines



Customer service/helpdesk data



Manufacturer and owner manuals, engineering manuals



Engineering Processes:

- Root Cause Failure Analysis (RCFA)
- Failure Modes Effects Analysis (FMEA)

(20%-40%) Increased productivity and first time fix **(50%-75%)** Reduced training costs

What additional structured data sources can you query?



Work history

- Specific to the asset
- Specific to like assets at other locations
- Failure history of equipment
- Operator / Maintenance logs
- Metering Information



Incoming Maximo Work Order data

- Work Order #
- Equipment #
- Failure description
- Location
- Initiator / Contact Point
- Commentary / Logs
- Parts / Material / Tools
- Others



Metadata associated to

Equipment being serviced

- Equipment service history
- Failure modes
- Location
- Others...



IoT Sensor Data

(access to equipment sensor data)



Analytics output

(e.g. data lake or equivalent)

AI-Powered Guided Troubleshooting



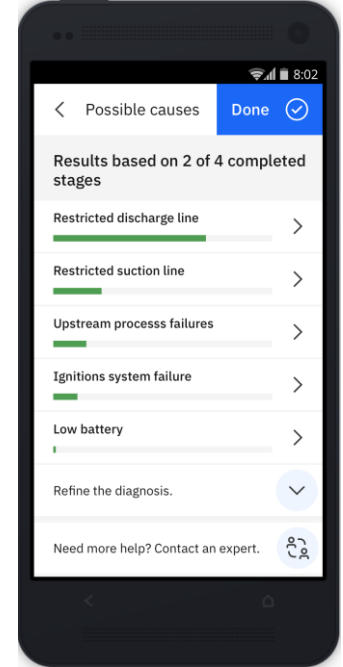
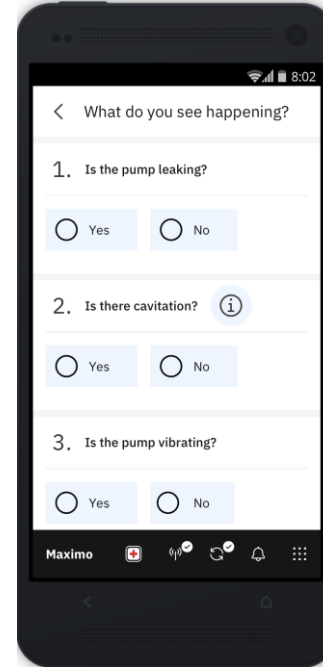
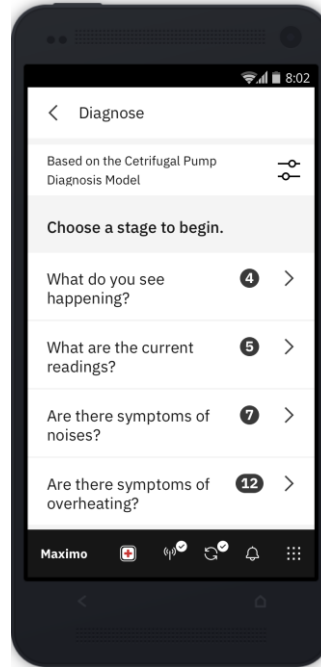
Help every technician using Diagnosis Models to **troubleshoot and solve problems** like your best technician



Intuitive, guided process to ensure technicians can fix even **high-complexity equipment problems**



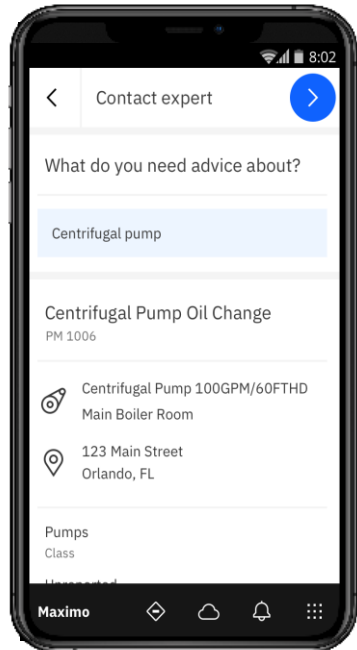
Execute the repair with **no unnecessary parts or additional dispatches**



Augmented Reality (AR) enabled remote expert collaboration

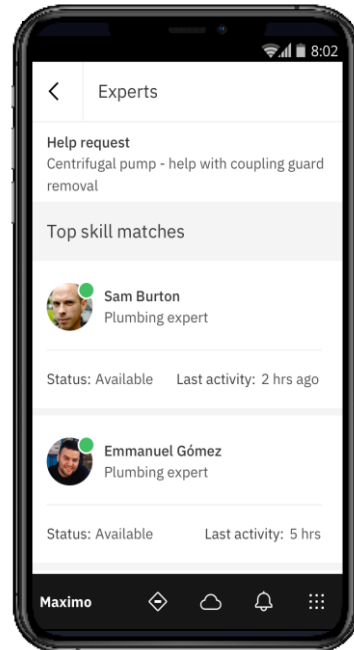
1. Seek advice

Seek advice and contact expert with work order details in context



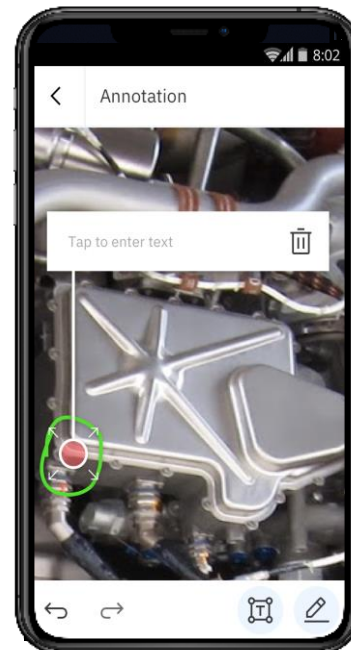
2. Collaborate

Collaborate with an expert based on areas of expertise



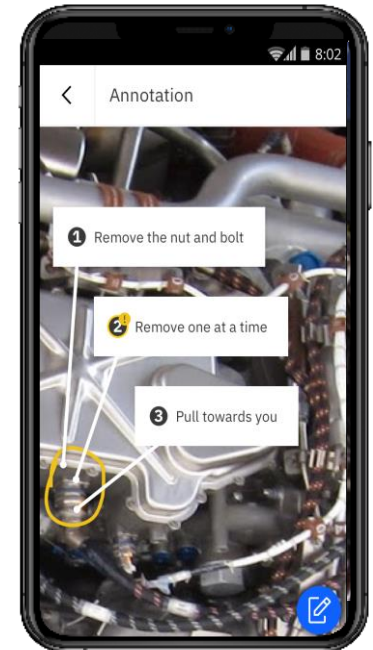
3. Guide

Annotate, diagnose, and get guidance via Augmented Reality (AR)

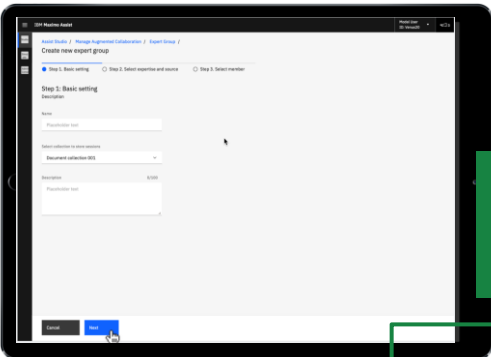


4. Fix and learn

Fix and learn while saving sessions for future reference and training



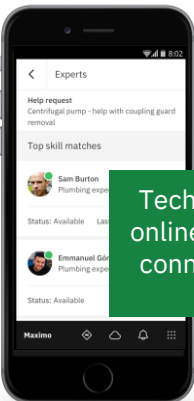
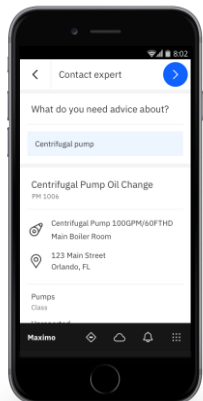
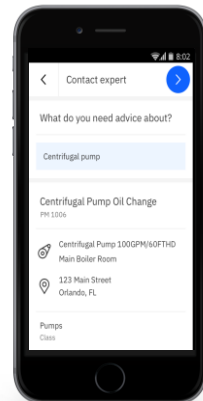
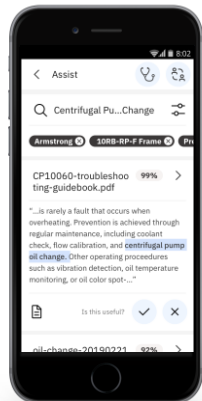
End to End Remote Collaboration Workflow



1 → 2

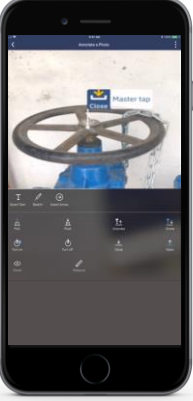
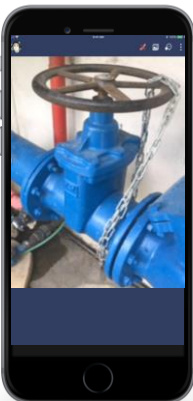
Create Expert Groups in Assist

Technician opens Maximo Mobile and Selects Collaborate



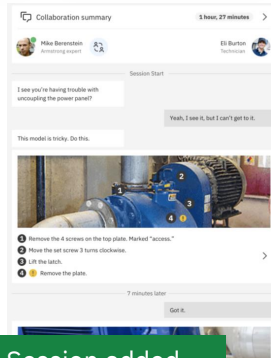
3 →

Technician views online experts and connects with an Expert



4 →

Technician / Expert Interact



Session added to the Assist Knowledge base

Empower experts and scale tribal knowledge seamlessly



Session history attached to the Maximo work order for future reference and added to AI knowledge base



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



Enhance experience for new technicians by giving them tools to do the right fix the first time

Collaboration summary 1 hour, 27 minutes >

Mike Berenstein Armstrong expert Eli Burton Technician

Session Start

I see you're having trouble with uncoupling the power panel?

Yeah, I see it, but I can't get to it.

This model is tricky. Do this.

1 Remove the 4 screws on the top plate. Marked "access."
2 Move the set screw 3 turns clockwise.
3 Lift the latch.
4 Remove the plate.

7 minutes later

Got it.

5 Look for the support coupling. It's here and usually needs takes 3

11 minutes later

Is it suppo

Sometimes.

23 minutes later

Done.

Collaboration summary 1 hour, 27 minutes

1 Remove the 4 screws on the top plate. Marked "access."

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



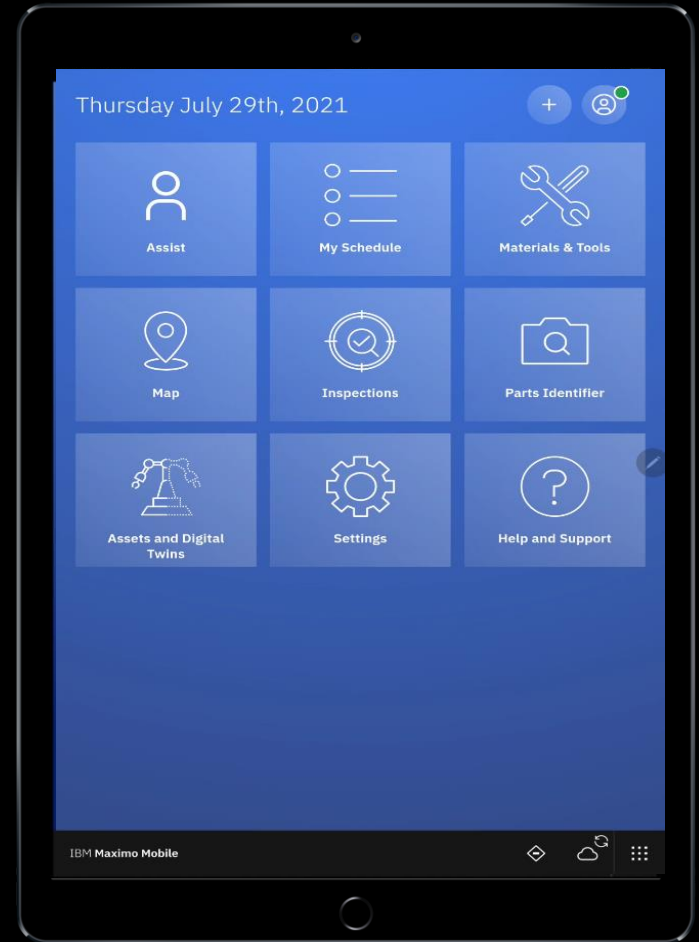
Downloadable from:



Apple App Store

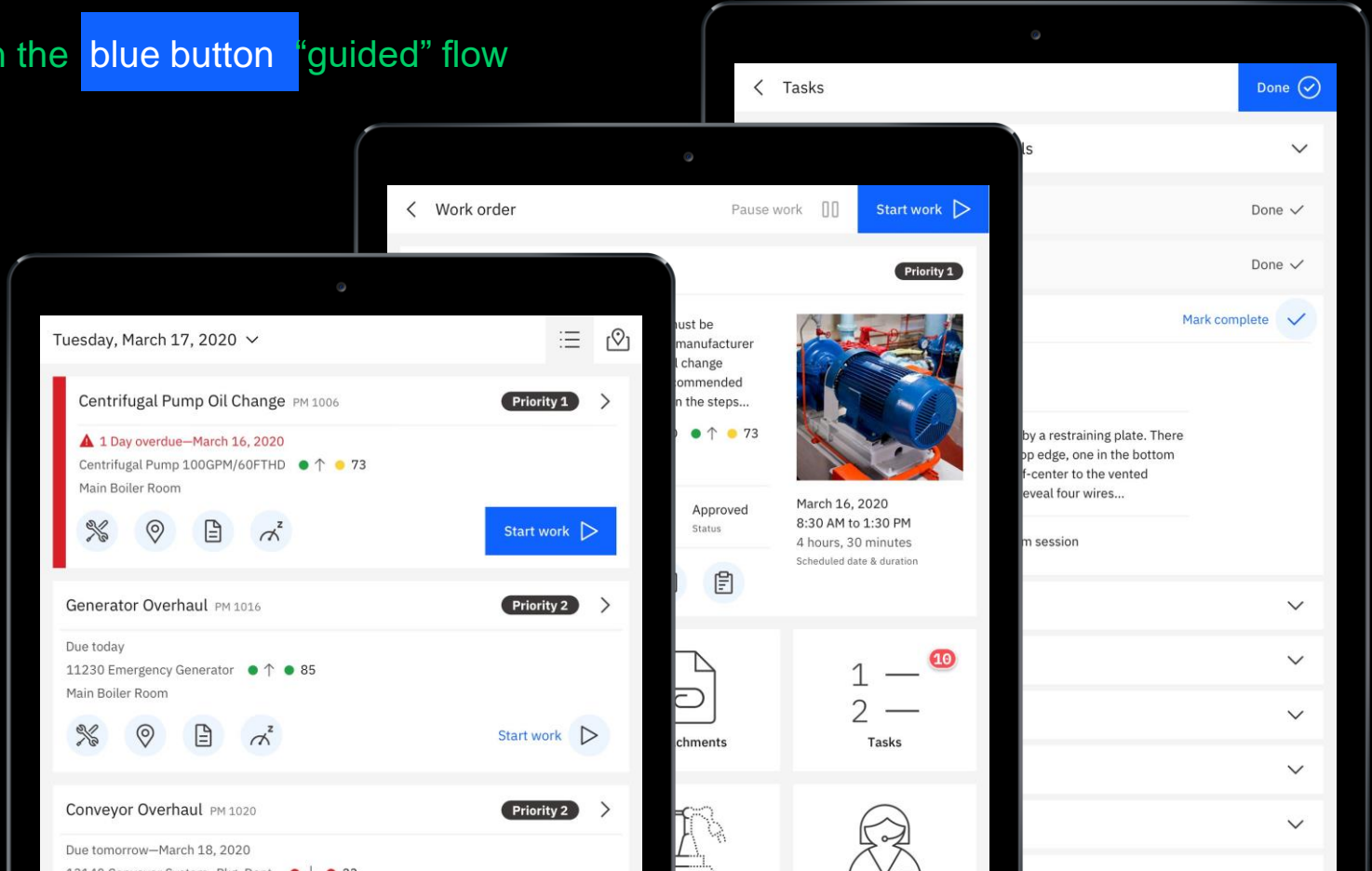


Google Play Store



Simplicity

Just click on the **blue button** “guided” flow



Touchpoints

The right information at the right time



Assist



Materials & tools



Inspection



Expand



Safety



Map



Digital twin



Information



Scan



Photos and
identify parts



Report work



Layers (map)



Meter readings



Tasks



Work log notes



Attachments

Maximo Assist and Mobile benefits



Facilities Management



Improve technician productivity



Boost first time fix rates



Reduce troubleshooting time



Reduce training costs



Reduce repair costs



Maximize equipment uptime



Reduce overall maintenance costs



25%

Increase in first time fix



\$11.2M

Annual savings in cost avoidance from incorrect procedures and repeat failures



\$10M

Annual savings from reduced mean time to action



THANK YOU

