ptc

LIVEWORX

A NEW ERA IN PRODUCT LIFECYCLE INNOVATION

SESSION ID: AR1538B

DEPLOYING AN OEM AR SUPPORT TOOL: THE VALUE OF ENABLING END CUSTOMERS

SPEAKER(s):

Alexander Ouellet

Innovation Manager, Harpak Ulma

PRESENTER

Alexander Ouellet

Innovation Manager, Harpak Ulma

Smart Connect Machines & Digital Transformation at Harpak Ulma

HARPAK-ULMA PACKAGING A PICTURE IS WORTH A THOUSAND WORDS …

HARPAK ULMA

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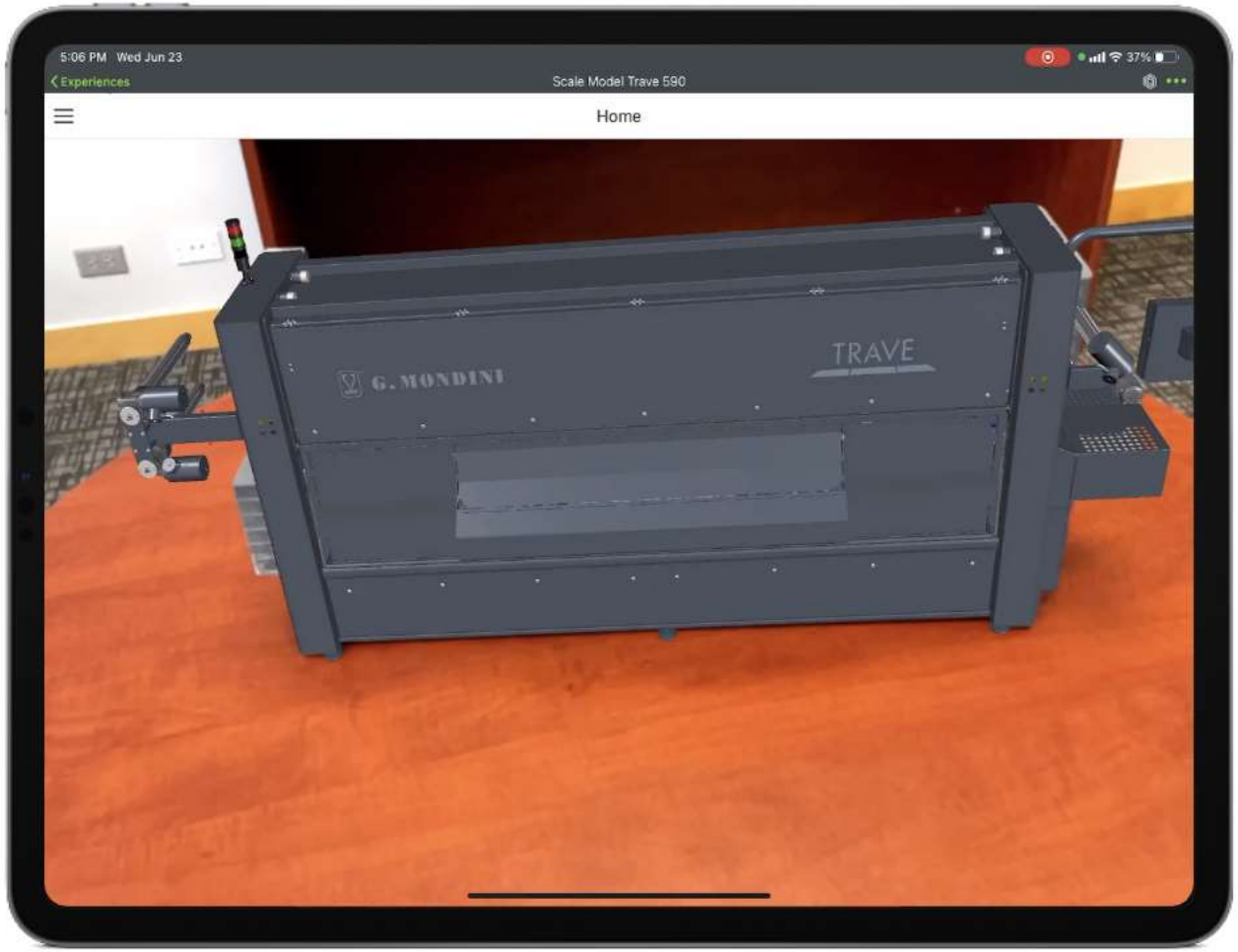
WHY DOES DIGITAL TRANSFORMATION MATTER?

- Digital allows us to do almost everything better, faster and more scale-ably



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HARPAK ULMA - FIELD TECHNICIAN OPTIMIZATION

CUSTOMER STORY

USE CASES

Training

Rich, effective training anywhere anytime

Work Instructions

Empower front-line workers with “On-demand” knowledge

Inspection & Checklists

Structured enforcement of complex tasks reduces/eliminates human error (DIY possible)

Remote Collaboration

Rich, visually interactive interface reduces service call cost/time

Real-time Performance Monitoring & Analytics

Visualization/diagnosis in physical machine context

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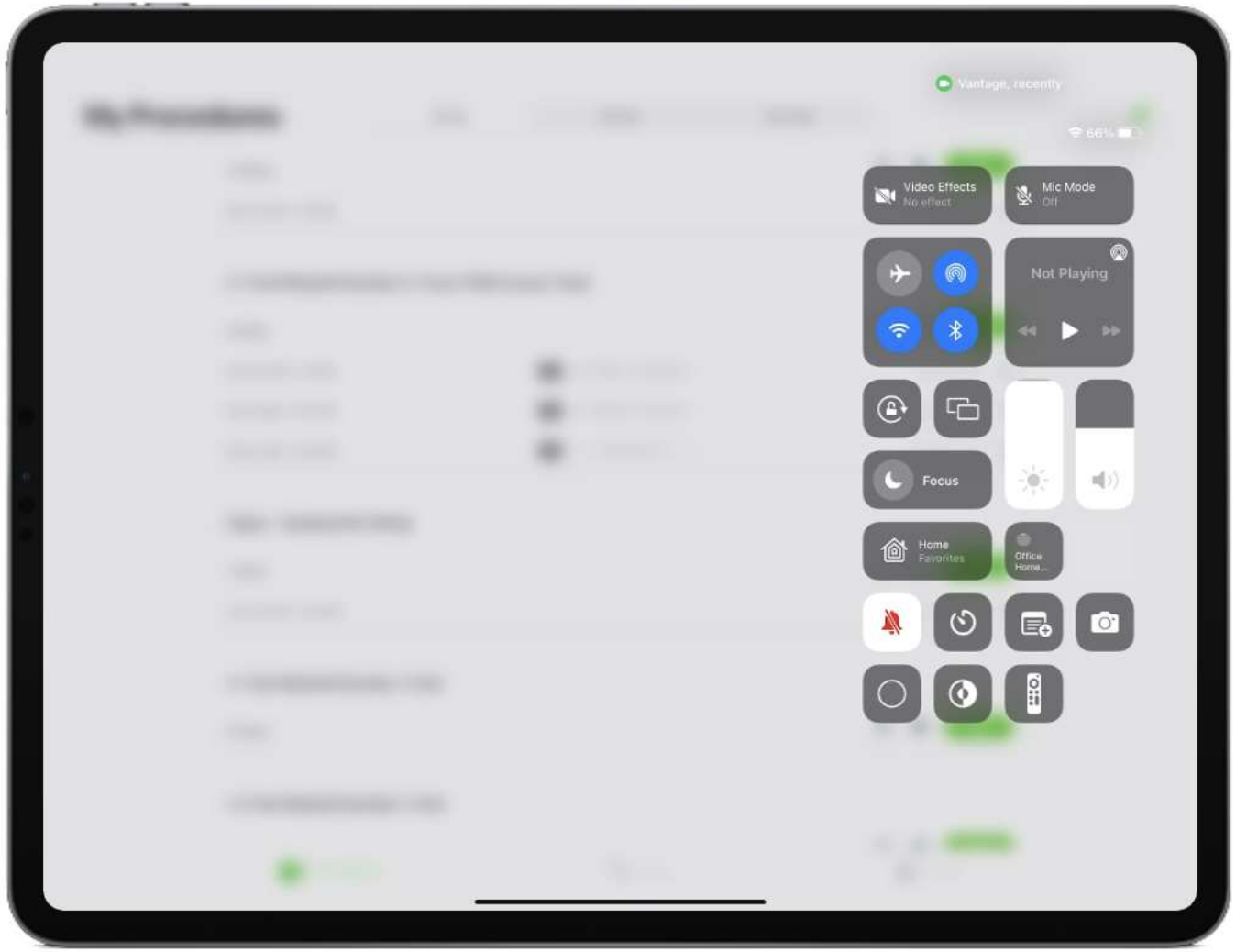
TRAINING

- Visualize learning for complicated processes
- Capture expert knowledge for training purposes
- Train anytime, anywhere

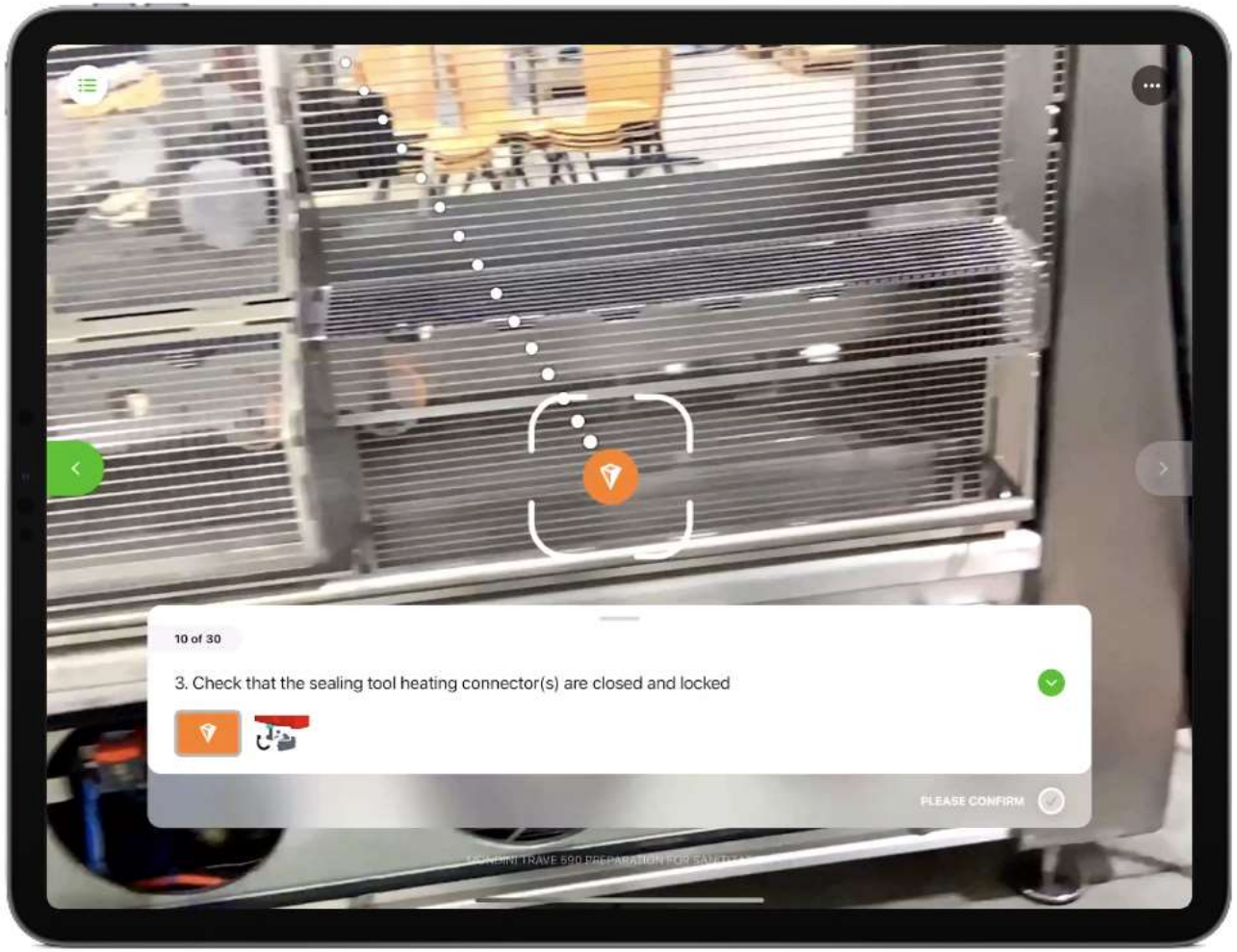
WORK INSTRUCTIONS

- Visualize learning for complicated processes similar to training content
- Integrates AI ‘Step Check’
- Significantly reduces training needs



INSPECTION INSTRUCTIONS AND COMPLIANCE CHECKLISTS

- Enforce step-by-step procedures in order
- Digital audit checklists
- Record data & pictures for compliance and traceability
- Immediate digital record versus paper-based



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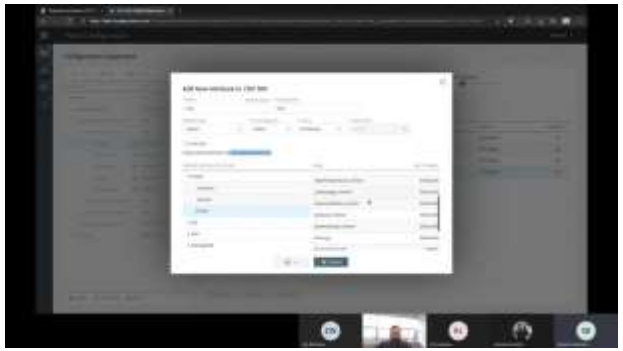
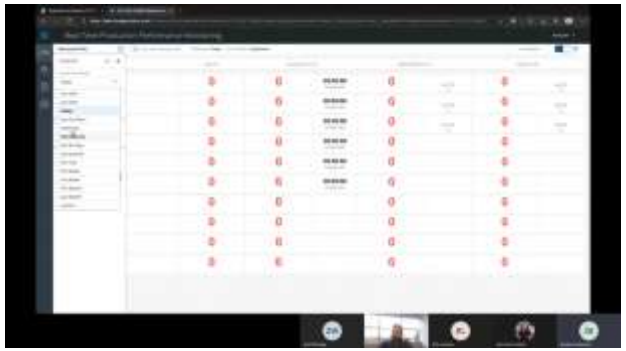
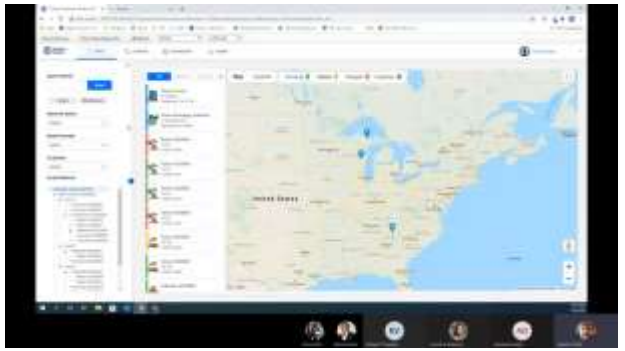
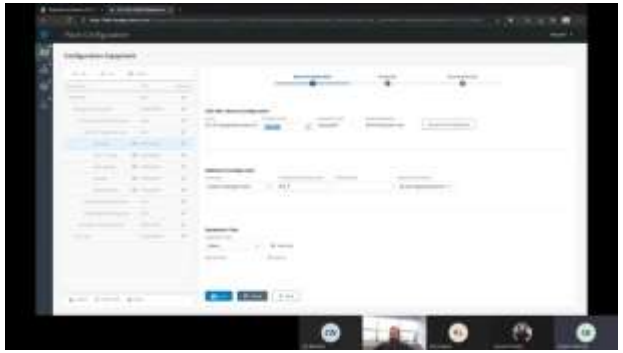
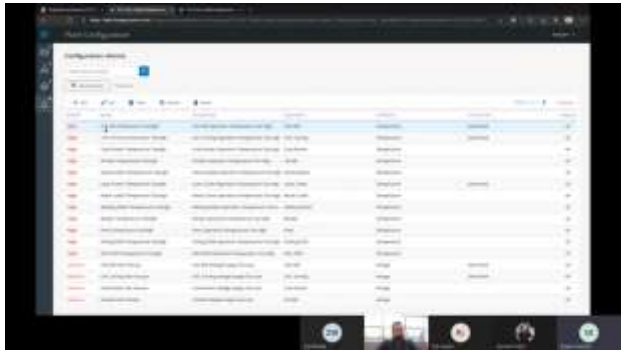
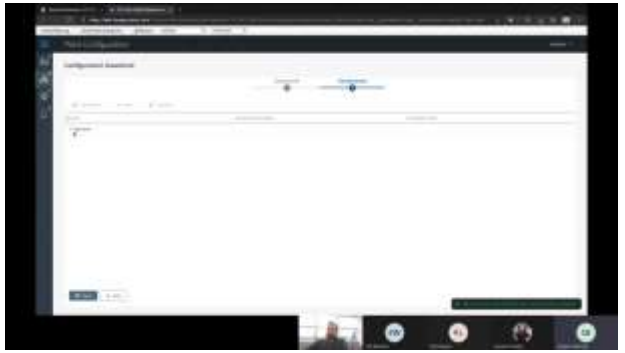
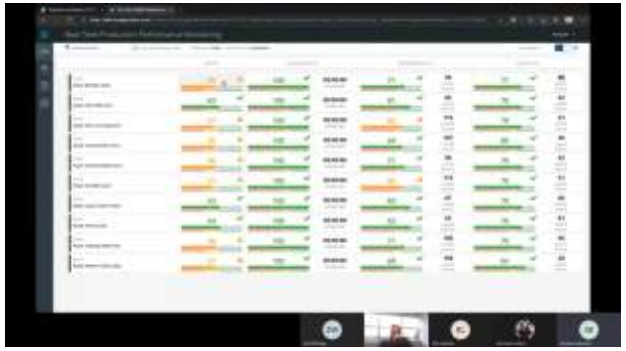
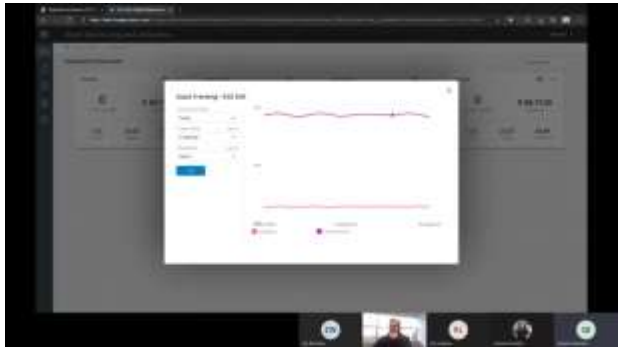
REMOTE COLLABORATION AND ASSISTANCE

- Interactive visual collaboration with experts
- Eliminates time & cost of onsite service calls
- Reduces Mean-Time-To-Repair (MTTR)

OEE ASSET MONITORING

WHY DIGITAL TRANSFORMATION MATTERS

Barriers to Transformation

Bureaucracy

Silo'd systems and processes prevent the creation of a digital thread

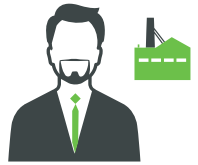
Cybersecurity

Concerns about vulnerabilities kill initiatives

Skills Gaps

Legacy organizations are unwilling to invest in talent

Tribal Thinking

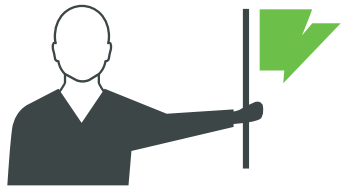


Many organizations have a deep cultural resistance to change

WHY DIGITAL TRANSFORMATION MATTERS

Building a Digital Transformation Strategy

Vision & Leadership



The need to for leaders to have a clear roadmap and end goal

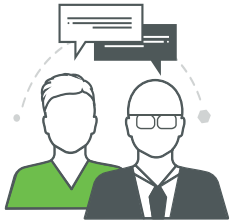
Engagement

There must be buy in from the lowest levels to CXO to support these changes

Digital Culture

A culture built around digital tools will adapt better

Move Fast & Break Things



Expect to and be willing to make mistakes and fail

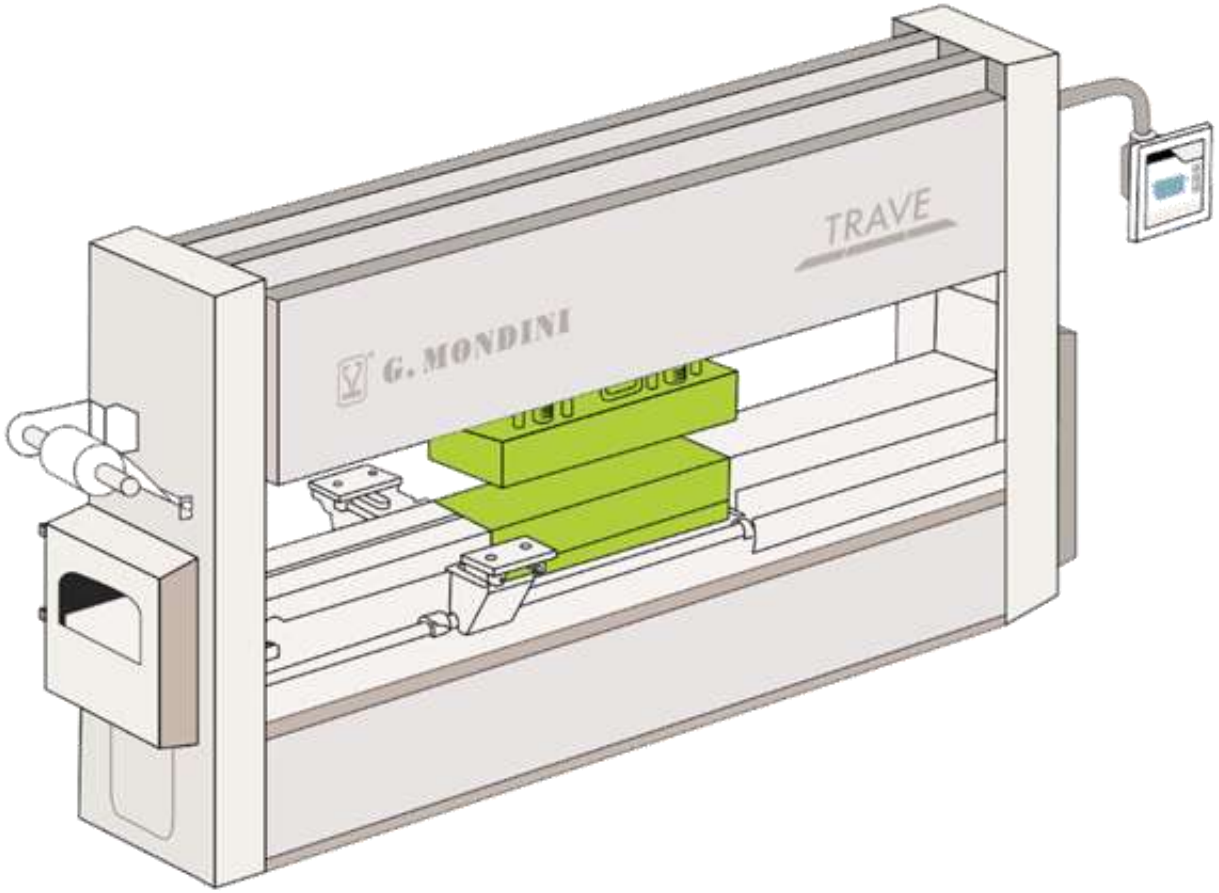
THE OEM'S ROLE IN DIGITAL TRANSFORMATION

Adopt Enabling Technologies

- Smart, connected machines and IoT
- Software skill sets
- Proprietary CAD data
- Contextualized data viz physical environment
- Expertise on packaging processes

Expose Machine Data

- Key to root cause determinations
- Analytics drives actionable insight
- AI adoption accelerates



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AR ENABLES SELF SERVICE

The customer has more power than ever

Augmented Reality has reduced time to completion by up to 80% with complete removal in errors

AR ALLEVIATES STAFFING CHALLENGES

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AR= AN OUTSIZED IMPACT ON PACKAGING

- **Work Instructions**:
  - Speed - Rapidly upskill untrained/inexperienced staff
- **Virtual Training**:
  - Flexibility - anywhere/anytime training
- **Remote Collaboration**:
  - Cost - less need for flying in techs – self service capabilities
- **Remote Monitoring/Digital Twins**:
  - Performance - continuous improvement, quickly sus out OEE misses

Confidential Information
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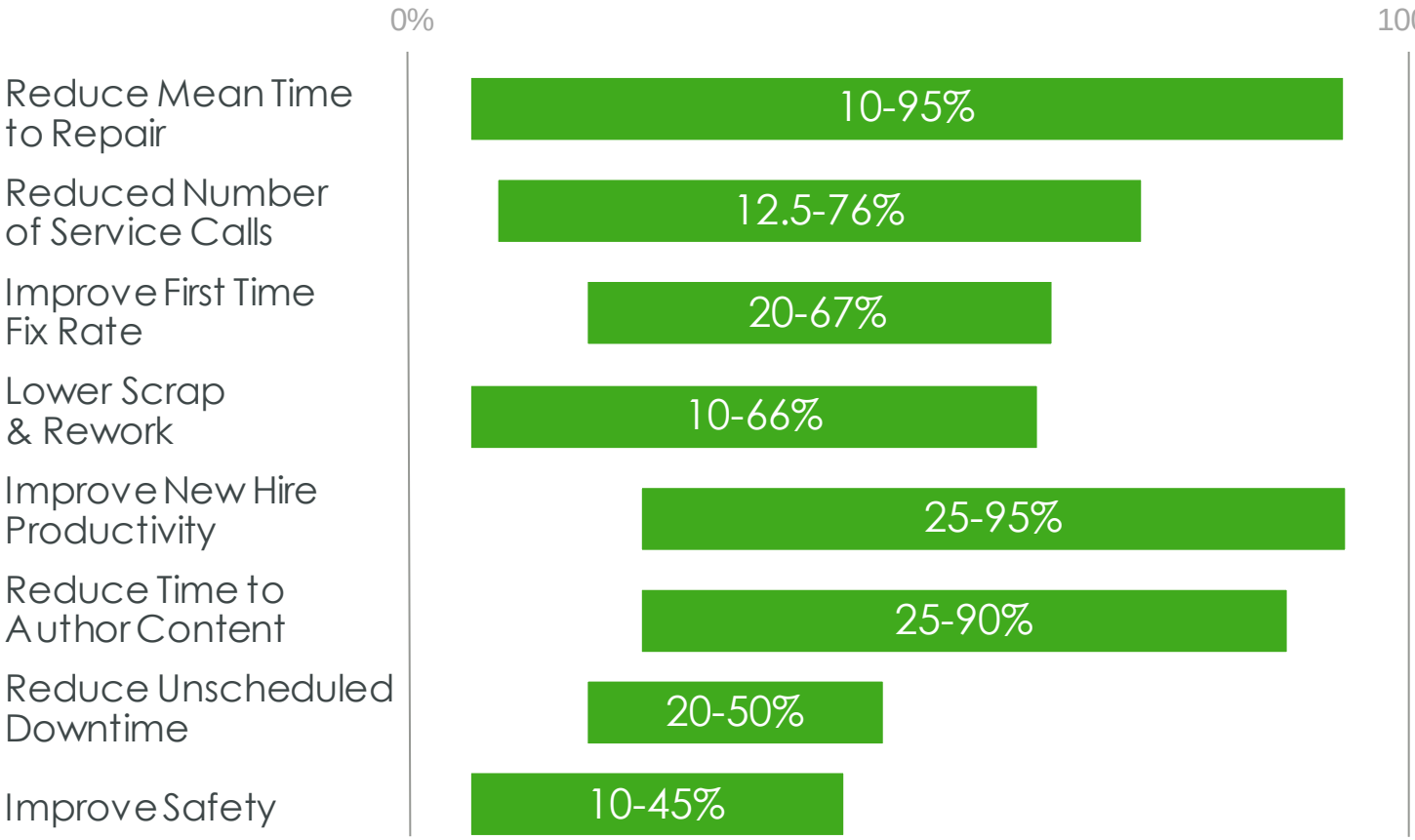
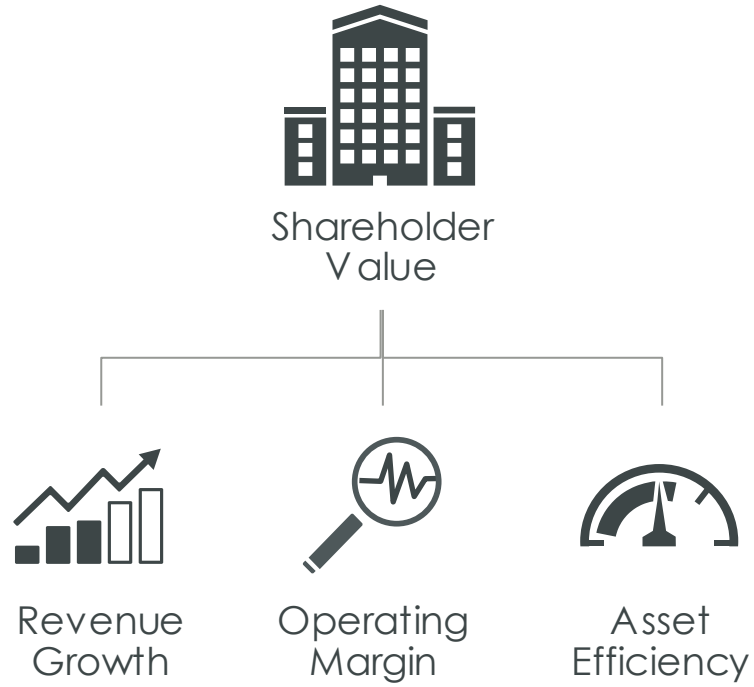
THE BENEFITS OF AUGMENTED REALITY



These benefits have a tangible impact to customers…



Metrics have been compiled from CIMData, Aberdeen Group, Gartner Group, IDC, and PTC Customers.

TOOL REBUILD CASE STUDY

Problem

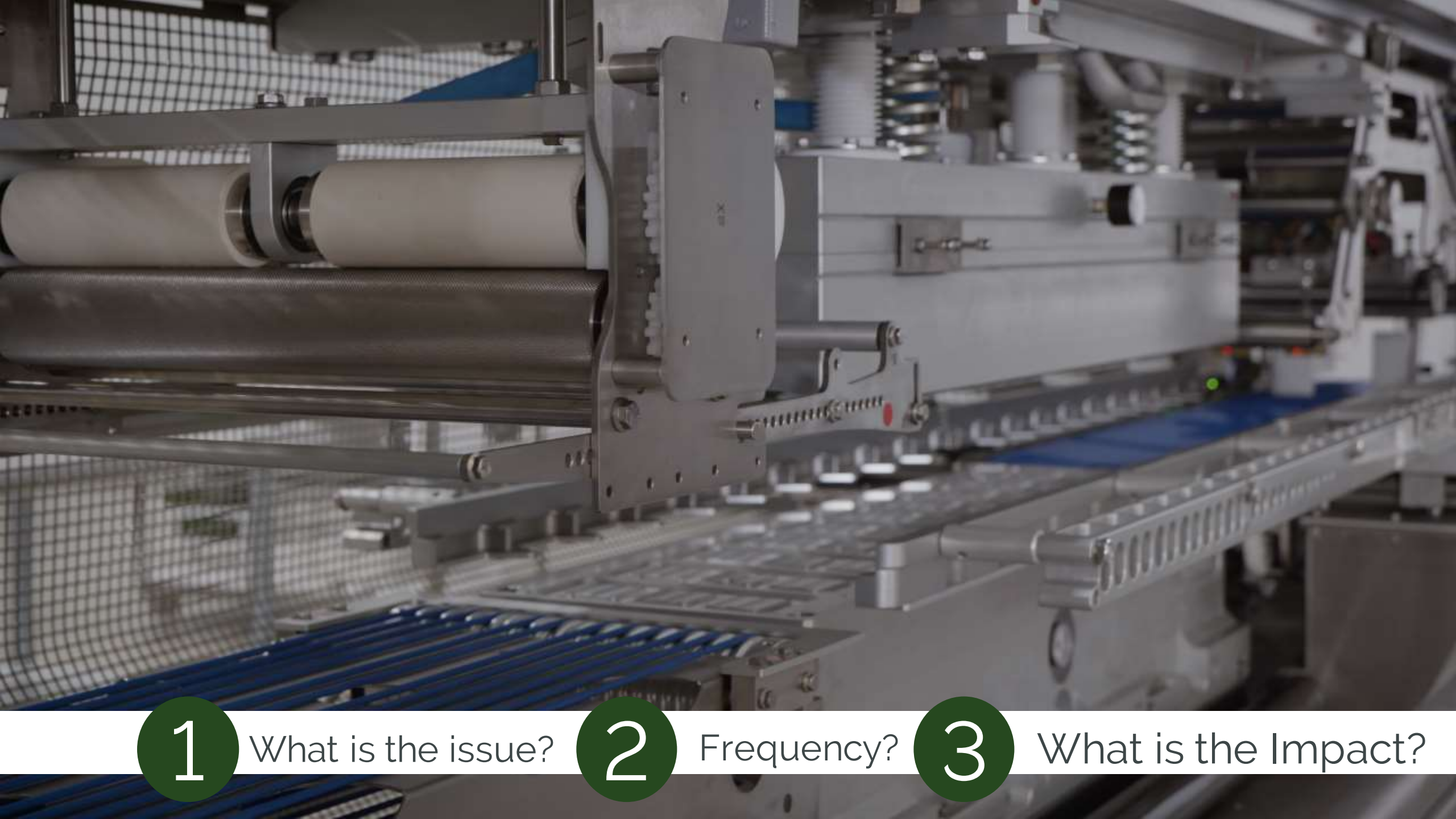
Tool Rebuilds are long, technical and error prone

Solution

Use AR + AI to guide and correct in real-time

Impact

- 80% Faster
- No Errors
- No Training
- Deployable to anyone, anywhere


1 What is the issue?
2 Frequency?
3 What is the Impact?

1 Service Manager

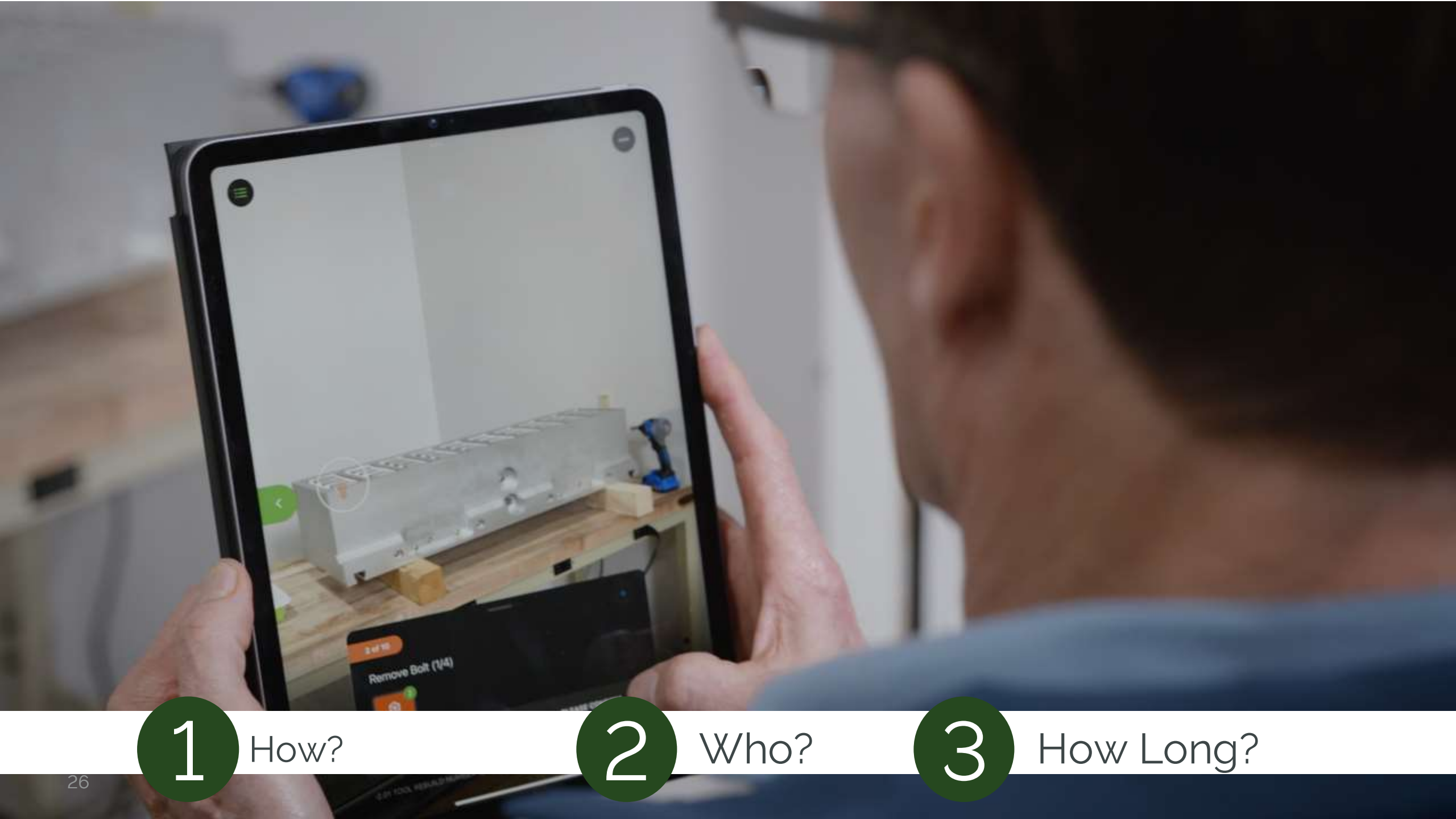
2 Impression

3 Goals and Beliefs

1 High Value

2 Complex

3 Repeatable



1 How?

2 Who?

3 How Long?

Next, you will remove the seal support frame. Notice several drilled holes in the frame, from the left and right edges. Place screwdrivers or other round pry tool into the 4 holes to lift the frame out. Be careful not to damage the edge of the tool with the screwdrivers.

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TOOL REBUILD CASE STUDY RECAP

Problem

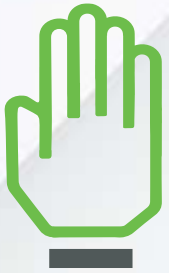
Tool Rebuilds are long, technical and error prone

Solution

Use AR + AI to guide and correct in real-time

Impact

- 80% Faster
- No Errors
- No Training
- Deployable to anyone, anywhere
- Competitive advantage



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