FLUKE® Reliability

Get more value from your CMMS (Part I): Best usage models for business impact and user adoption

Michael Mills

Accelix™
Webinar Series

Meet the speaker

Michael Mills

Sr. Solutions Engineer, Fluke Reliability

- 7 years in CMMS leveraging best-of-breed solutions and best practices.
- Experience ranging across roles such as Customer Success Manager, Solutions Engineer, and SME on integrated systems and providing solutions for Workplace Safety, Packaging, Life Sciences, Manufacturing, Public Sector, and Utilities.
- Certified Reliability Leader – 2018

Agenda/goals

What is the Purpose of a CMMS?

The Business of Maintenance

Continuous Improvement

Best Usage Models for Business Impact and User Adoption

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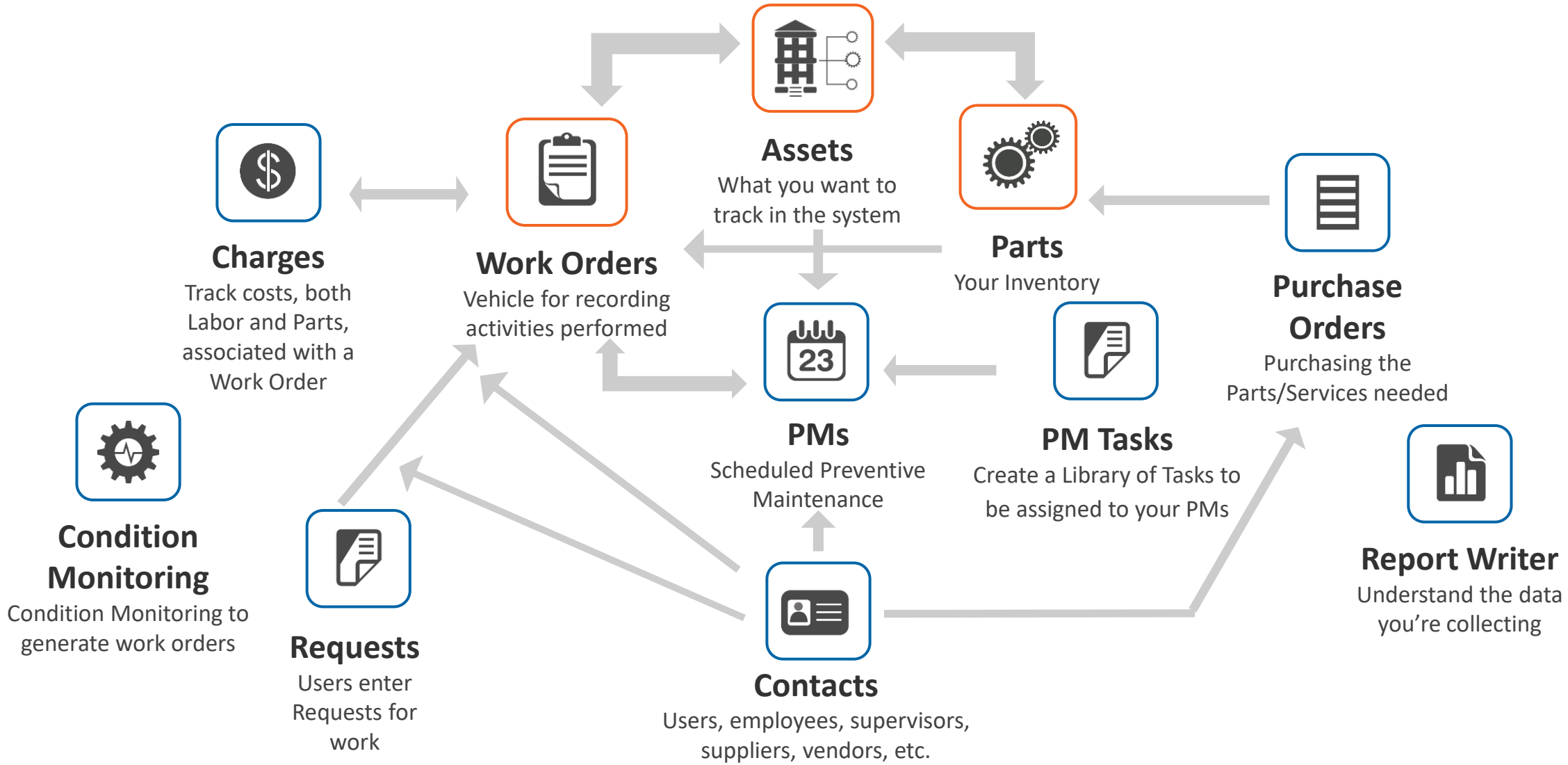
Core CMMS functionality



Desired outcomes of using a CMMS

Reduce Unplanned Downtime on Equipment

Increased Visibility and Transparency

Increase Worker Productivity

Eliminate Manual Processes

Help Meet Regulatory Standards

Create a Paperless Work Environment

Extending the Life of Assets

CMMS workflow

Work Request

Approve / Reject

Preventive Maintenance

PM Generation

Work Order

Work Order Backlog

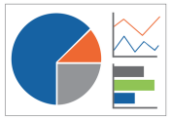
WO Complete

WO Close

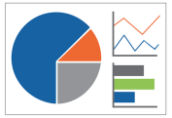
Retrospective WO

History & Analysis

Supervisor / Manager



Technician / Vendor



CMMS Planner / Scheduler

Assets

Tasks

Resources

Parts

CMMS Administrator

WO Charges

Labor

Parts

History

Reliability

Manager / Engineer

Asset & Reliability Engineering
RCA, RCM, FRACAS, ISO 14224, ISO 55000

Stores

Inventory Management

Parts Issues

Parts Returns

Cycle Counting

Parts Reordering

Purchasing

Purchase Orders

Invoice Matching

Parts Receipts

CMMS workflow

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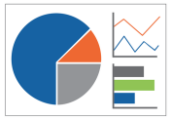

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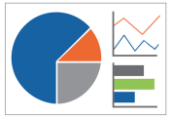

CMMS Planner / Scheduler

Manager / Engineer

Assets | Tasks | Resources | Parts

CMMS Administrator

WO Charges

Labor | Parts | History | Reliability

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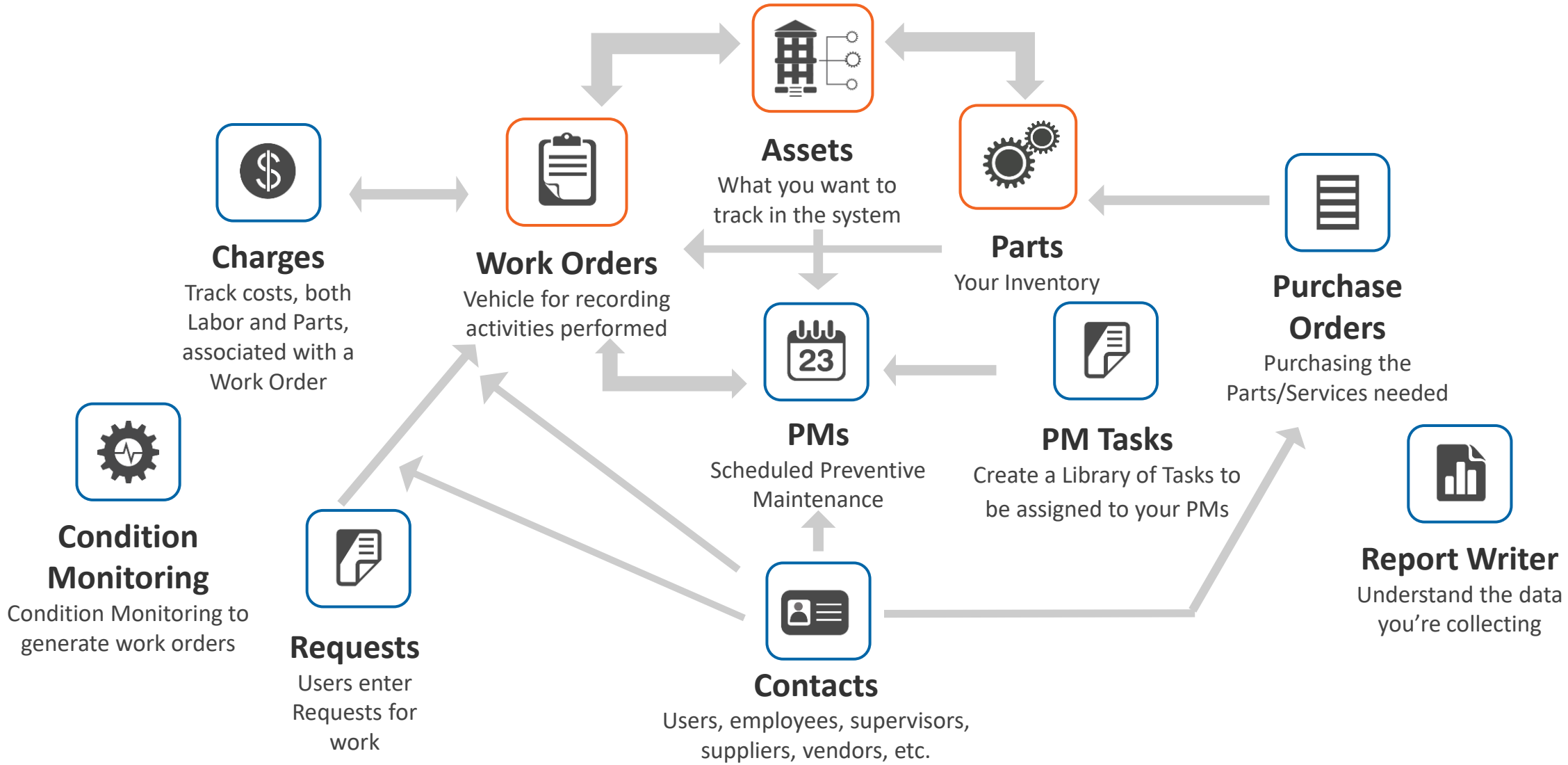
Core CMMS functionality



POLL QUESTION No. 1

Who at your company is currently assuming ownership of your CMMS success? (Click only one answer)

- Maintenance & Reliability
- Operations
- Management
- Team effort (multiple teams)
- Not sure

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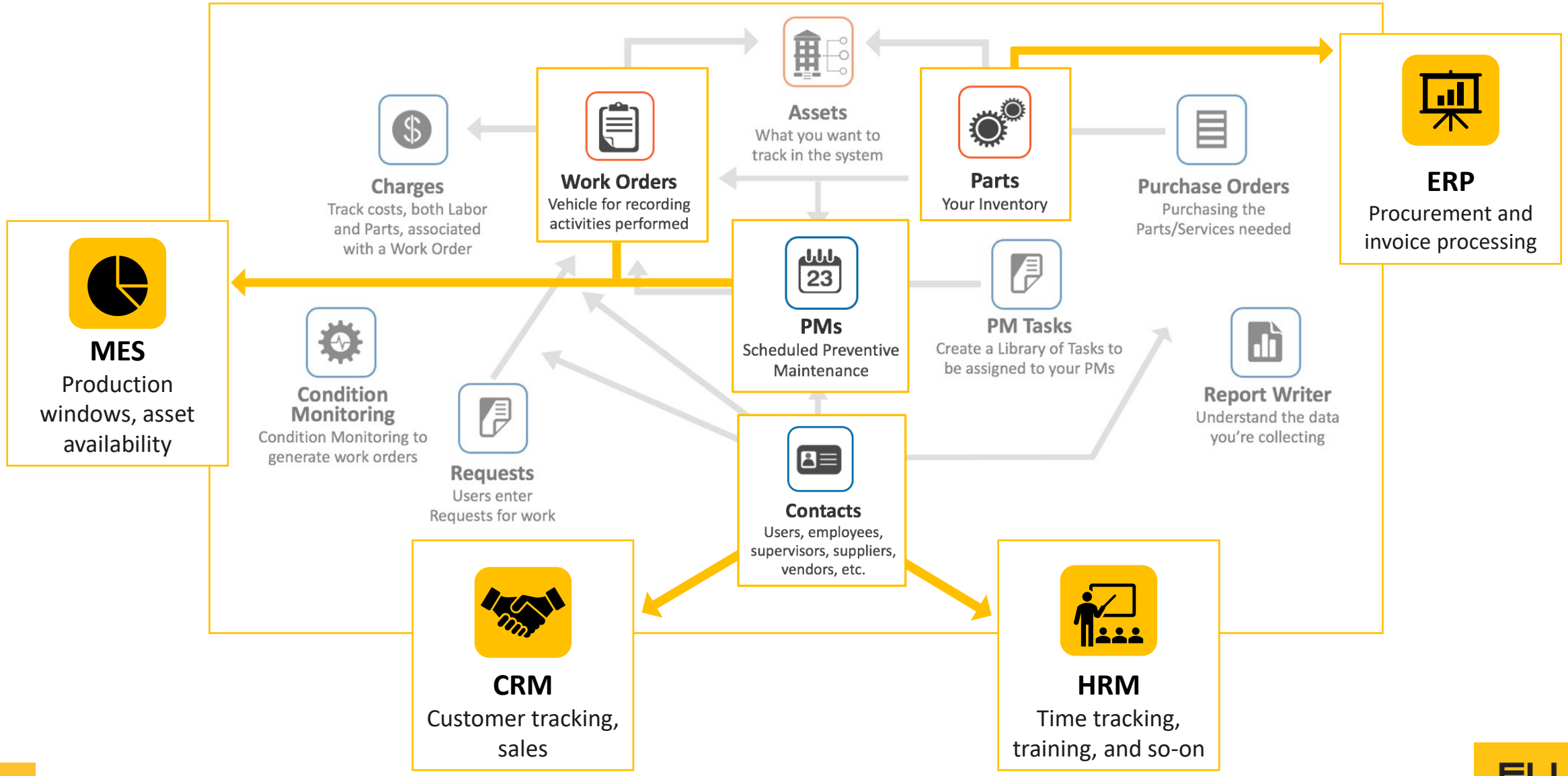
The bigger picture



The business of maintenance

"A business within a business"

"Savings Center instead of Cost Center"

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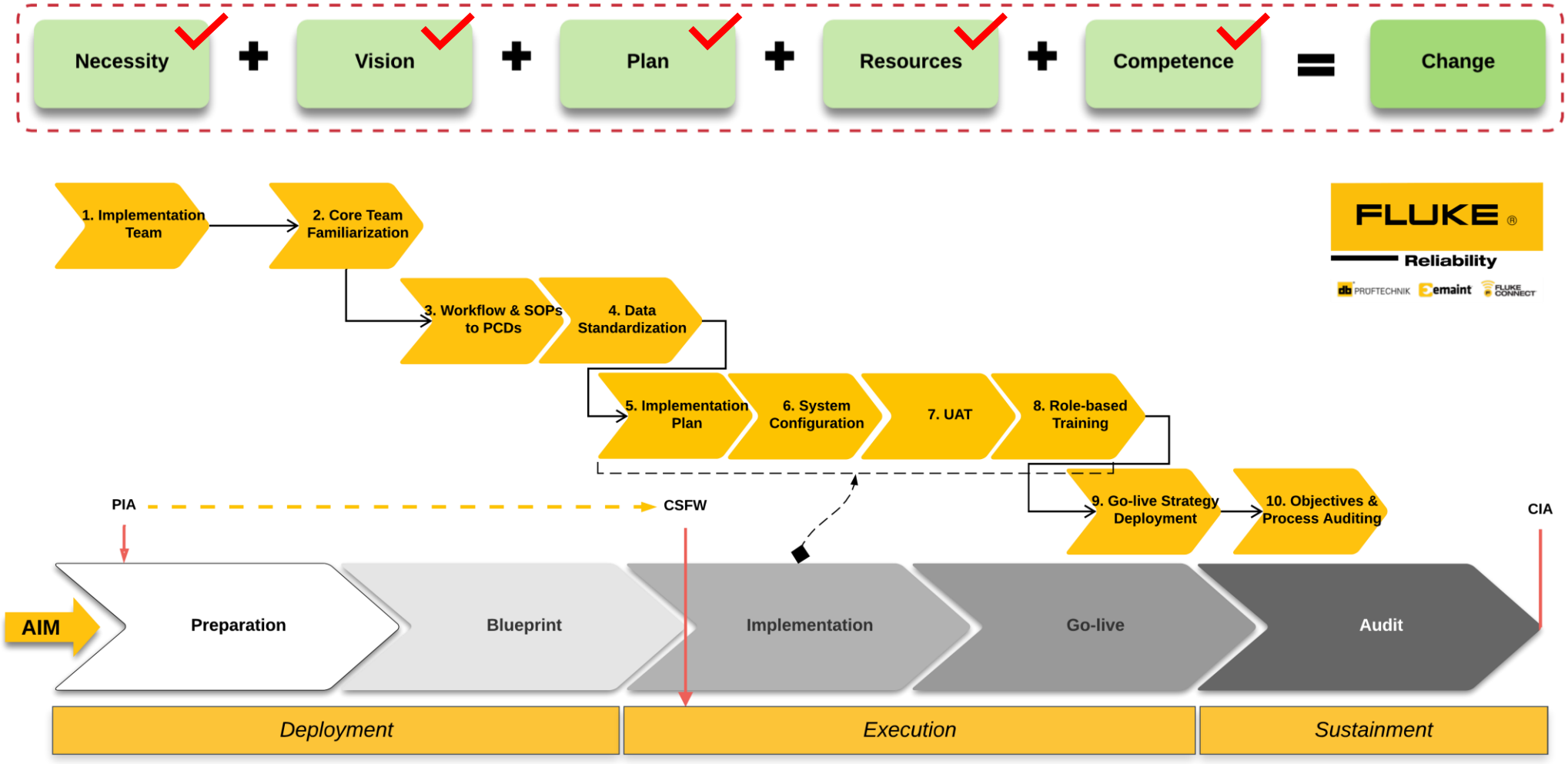
The story of maintenance

- Overall cost of ownership
- Management and control of your maintenance management processes
- Maintenance activity over the lifecycle of an asset
- Your assets
- Your reliability story

“Change” MMS

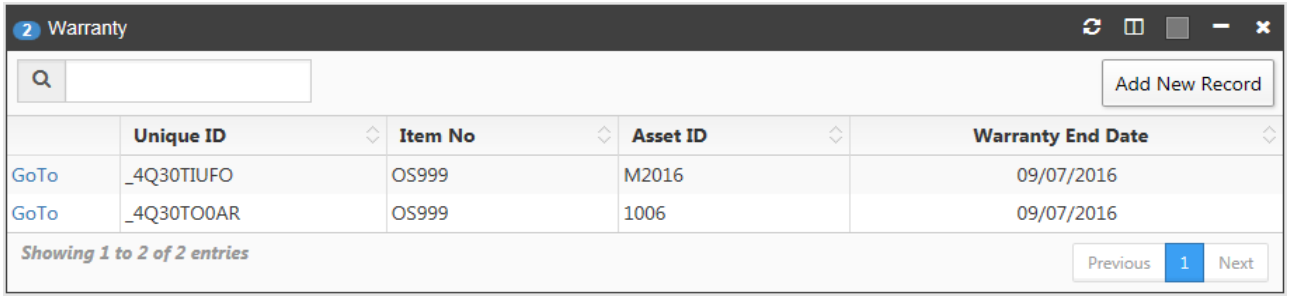


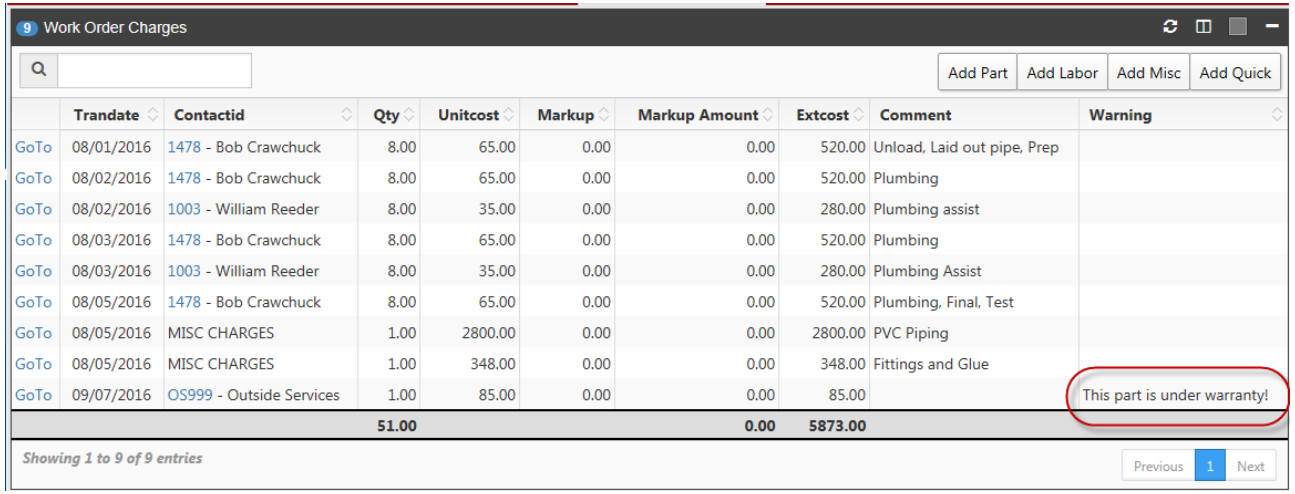
Best usage models for business impact and user adoption

Warranty tracking

Warranty tracking

- Recoverable costs
- Improved vendor management
  - Deficiencies in product or quality
  - Ability to negotiate with higher quality providers
- Collect appropriate information to avoid delay/deny



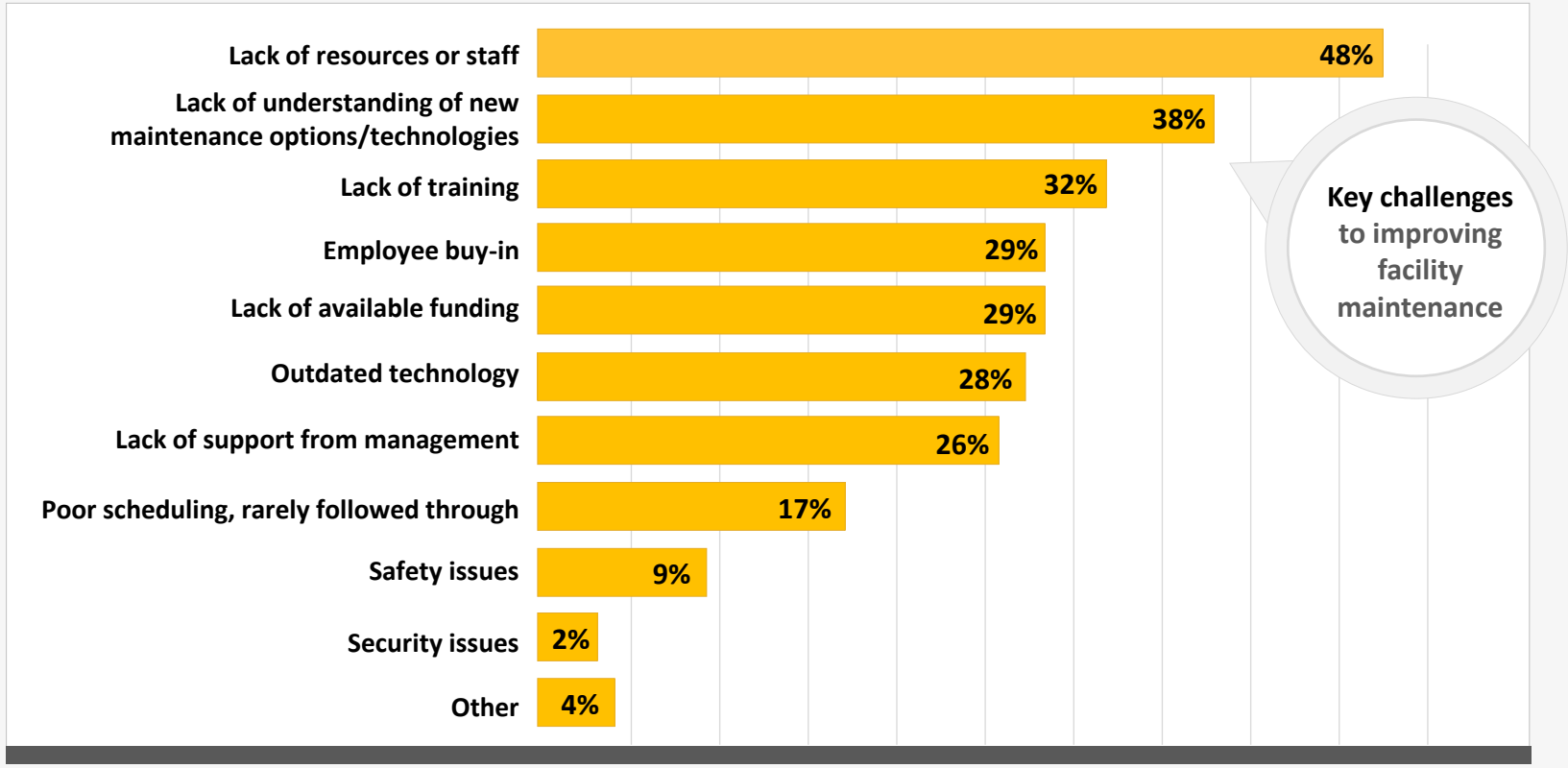


Resource utilization

Today’s maintenance landscape

Maintenance teams in nearly every industry are faced with one common problem

DOING MORE WITH LESS



Source: 2019 Facilities Maintenance Survey, Plant Engineering

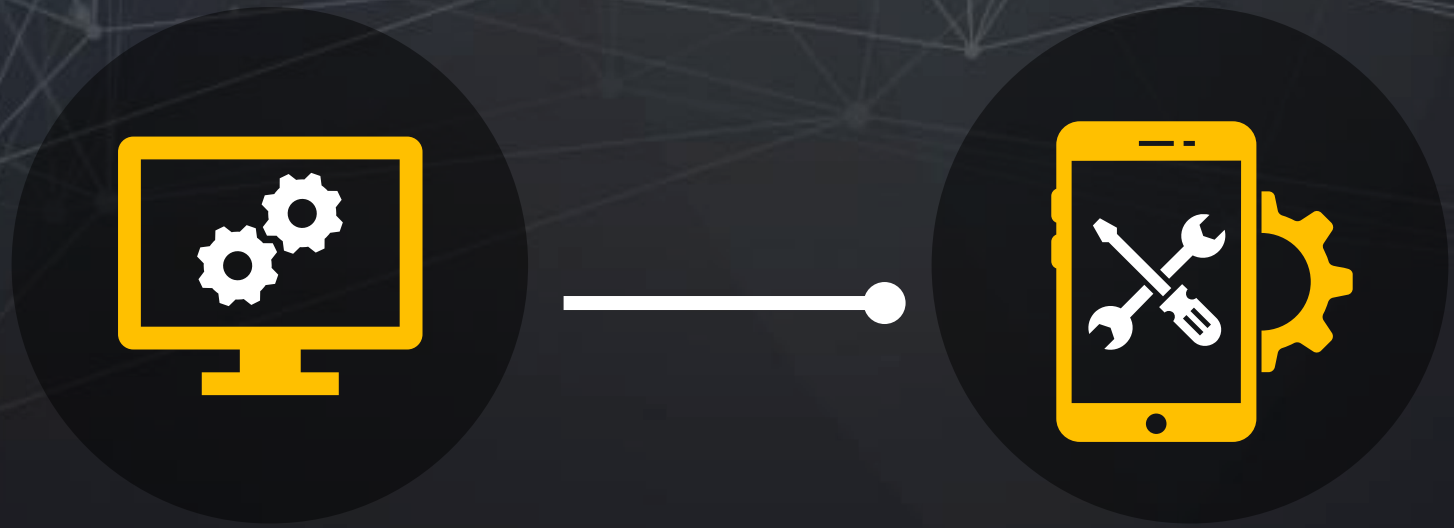
Data drives outcomes

- There is nothing more important than the technician
- Based around maintenance strategy for assets
  - Asset criticality
  - RIME ranking
- “Build a culture of continuous improvement, with something to compare against”

MRO materials management

- Bridge the MRO Reliability GAP
- Designate critical and/or capital spares
- Utilize Demand Maintenance to establish effective BOMs
- Establish and document processes for refurbishment/repair
- Criticality assignment for each part
- Linking equipment failure modes to used parts

Mobility



Computerized

Mobile

Supporting your maintenance strategies (business)

- Run to failure
- Time-based/periodic
- Condition-directed
- Design-out maintenance

Supporting your team members

Know what's going on
with assets real time

ASSETS

See the bigger picture
across all systems

SYSTEMS

Take the right action
at the right time

TECHS

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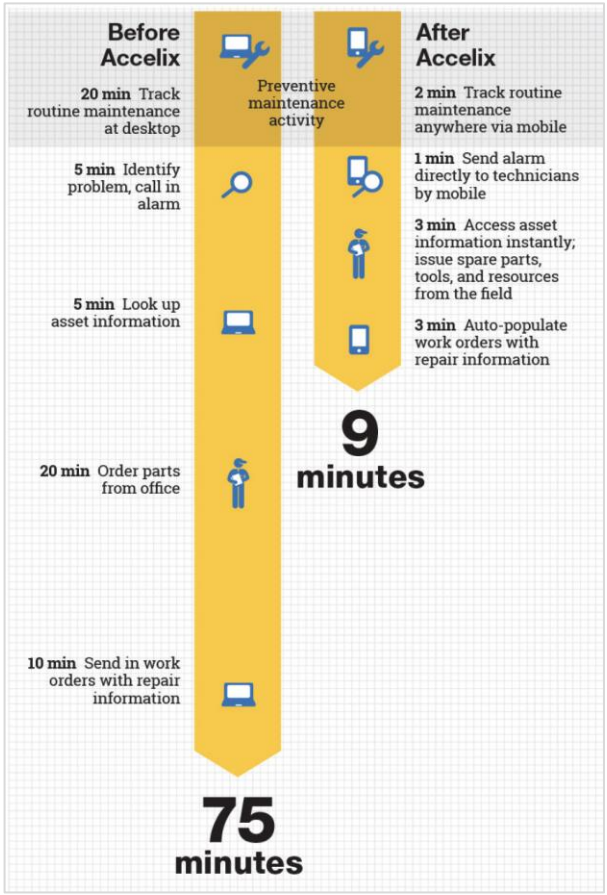
Cut data entry and travel by 88%

Streamline maintenance by combining real-time asset data and EAM information on a mobile device



Reduced response times

Filter alarms directly from PLC/SCADA systems directly to technicians based on location, skill, and availability

Improve team productivity with mobility

Record labor and spare parts from anywhere to ensure Maximo is always up to date while eliminating time wasted.

Give technicians a 360 view of asset status

Anytime, anywhere access to condition data from SCADA, asset information and maintenance history speeds troubleshooting.

How do you measure success?

- Eliminate ~25 minutes per day in data entry & work documentation per technician
- Calendar PM demand reduced by 25%
- Troubleshoot technical issues 32% faster
- 65% Increase in production capacity for critical assets
- 175 Sites, 10,000 technicians, 100,000s of connected data points

- Full ROI within six (6) months
- Realtime alerts to staff within 6 seconds of a fault
- Elimination of travel time has driven increased wrench time
- Enterprise groups are notified as assets return to service

Benefits of mobile CMMS

- Accuracy of data capture
- Increased productivity
- Support standardization and compliance
- Puts safety procedures right in front of the technicians
- Creates opportunity for more value-added functions

Integrated Condition Monitoring

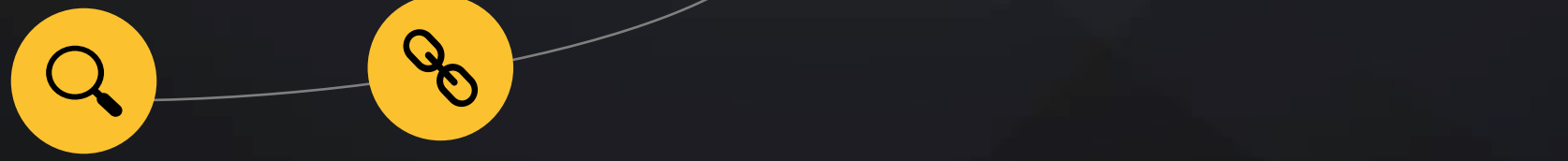
Understand
Evaluate Your Assets In Context

Connect
Enrich Your Data Ecosystem

Predict
Use Sensor Data & Work History to Predict Failures

Repair
Maintain Assets with Intelligent Insights

Optimize
Improve Models Through Continuous Learning



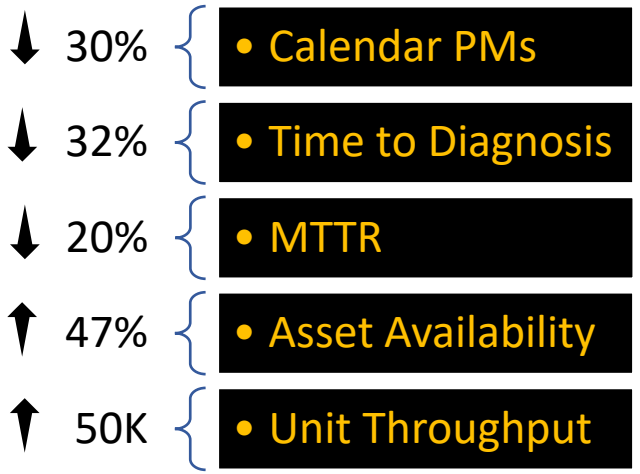
True enterprise asset management (EAM)

Reality of PLC/SCADA data

- Virtually **100%** of companies have this data available
- Only **16%** of them have access to asset condition data in their EAM
- **70%** have no way to use this data to optimize maintenance activities

Reality of integrated CdM projects

- Impact maintenance, HSE, operations, and sustainability
- Datatypes: cycle counts, runtime, gauge values, temp, etc.
- Supports both remote workers and on-site
- Optimize on-site resources



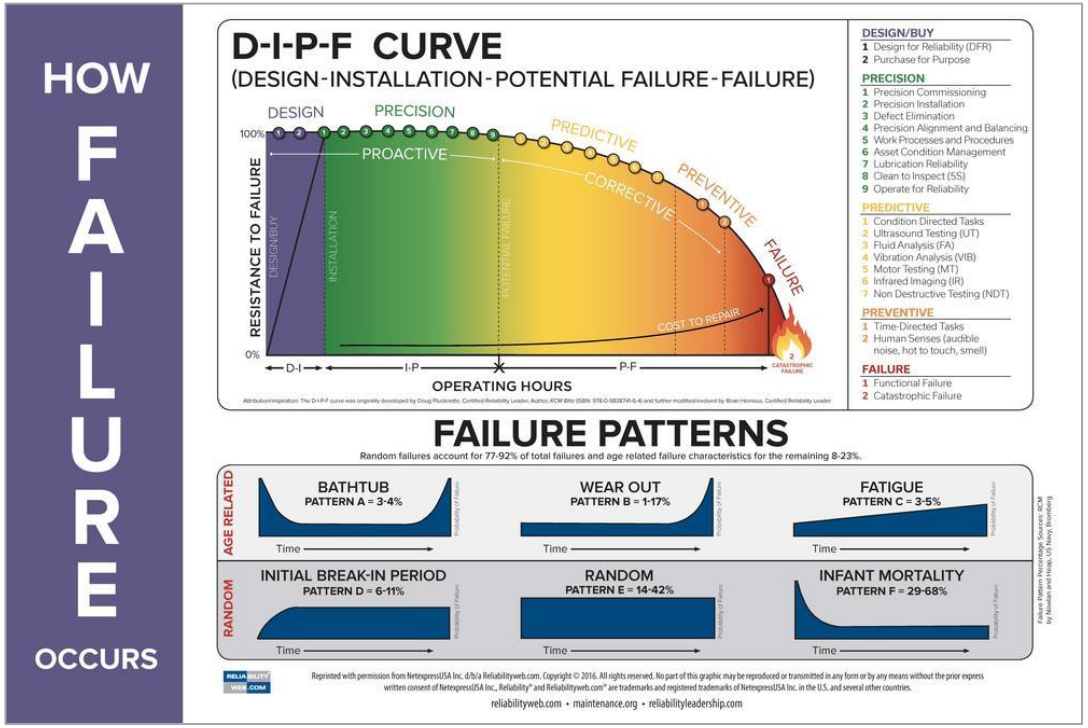
*Fluke Reliability Solutions survey results

Shifting the curve

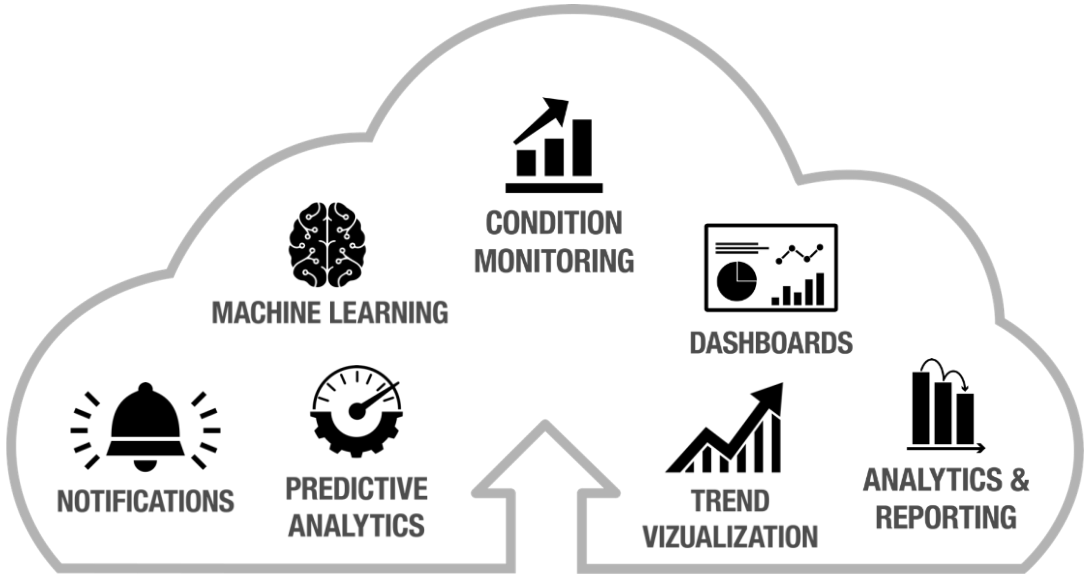
Manage rules-based exceptions such as: Threshold Measuring, Data Validation, Translation, Data Mapping, Session Management, and Notifications.

Costs associated with failure:

- Downtime
- Backlog
- Express shipping
- Overtime
- Contract commitments



Connected systems



IIoT software platform

Data Aggregation & SW Analytics
Large, Clean, Contextual Data Lake:
Sensor Data
Machine Configuration Data
Operational Data
Other Contextual Data
Interconnectivity with Other Enterprise Systems of Record:
Computerized Maintenance Mgmt.
Automation Control Systems
Asset Performance Mgmt.
ERP & EAM
Analytics:
General Analytical Engines & Pattern Recognition
Domain-Specific Analytics
Data Visualization & Dashboarding

Realized ROI from integrated CdM solution

Return on investment	10x
Reduction in maintenance costs	25% - 30%
Elimination of breakdowns	70% - 75%
Reduction in downtime	35% - 45%
Increase in production	20% - 25%

Source: US DOE Operations & Maintenance Best Practices guide, 2010.

Questions

QUESTIONS?

Thank you!

Michael Mills

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Sales Engineer, Fluke Reliability

Next webinar March 24: Integrations for improving machine health

BEST PRACTICE WEBINAR

Wednesday, March 24, 11 a.m. ET

Get more value from your CMMS (Part II): Integrations for improving machine health

You may be surprised by how supercharged your CMMS can be when connected to more powerful sensors, software, and other compatible systems. Your CMMS is designed to support maintenance and reliability, and the outcomes only get better with systems that interoperate. Integrations can be painless and can set your company up for years to come.

In this webinar, senior solutions engineer **Michael Mills** and Fluke Reliability colleagues **Mike Ciocys**, **Brian Harrison**, and **Jeremy Guo** demonstrate the robust synergies of integrating eMaint CMMS with VibGuard IIoT for vibration monitoring and analysis, Fluke Connect sensors for condition monitoring, and Fluke Connect2Assets software for data integration. This is part two of a two-part, CMMS-focused webinar series.

Part II: Integrations for improving machine health

Michael Mills is a Senior Solutions Engineer with Fluke Reliability. He focuses on CMMS/EAM and condition monitoring software, sanitization software, and Fluke's IIoT devices. His vast CMMS/EAM experience ranges across roles such as Customer Success Manager, Solutions Engineer, subject-matter expert on integrated systems, and providing solutions for workplace safety, packaging, life sciences, manufacturing, public sector, and utilities.

Mike Ciocys is the Prüftechnik U.S. Technical Service and Support Manager for Fluke Reliability. His Prüftechnik career began during his college years in 2009 as a member of its co-op program. After time as a Senior Alignment Engineer and an Application Engineer, he was promoted to his current role in 2016. He launched the Technical Support department in 2016 and continues to manage it. Ciocys obtained his CAT III Vibration Analyst certification in 2019 and his Certified Reliability Leader certificate in 2016. He holds a bachelor's degree in Mechanical Engineering from Temple University.

Brian Harrison is the Industry IIoT Lead for Fluke Reliability. He has more than 10 years of experience in enterprise asset management, applying best-of-breed solutions and current industry leading practices. He has worked on enterprise projects across industries, including the public sector, manufacturing, and aviation. Deploying a blend of EAM, Mobile, and IIoT solutions, he has delivered high-value projects leveraging reliability centered maintenance (RCM) in support of ISO55001, CBM, and ICM.

Jeremy Guo is a Solutions Engineer with Fluke Reliability. He joined Fluke in 2017, specializing in software management system and condition monitoring tools. He has worked closely with Fluke Reliability's electrical and vibration tools and sensors teams and the software management teams, participated in several internal startup and innovation teams, and holds nearly a decade of experience in the software management space.

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DEMO

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