

Manufacturers **ALLIANCE**

Tech, Skills & Strategies to Advance
Predictive Maintenance

New Councils at Manufacturers Alliance

Diversity & Inclusion

**Financial Planning &
Analysis**

Information & Cybersecurity

Plant Management



Micah Statler

Director of Operations

EXPERIENCE & EXPERTISE

Micah Statler serves as Director of Operations at Advanced Technology Services where he is responsible for the operational delivery of reliability-centered maintenance services within the surge support business along with the strategy and innovation of sensors and machine health monitoring aligned to the ATS 'Technology First' strategy.

1. The State of Manufacturing & Maintenance
2. Predictive Maintenance Research & Analysis
3. Benefits of Outsourcing & Case Studies
4. Questions & Discussion



**THE STATE OF
MANUFACTURING & MAINTENANCE**

Business



Leadership Priorities



New Technology



Delivery & Costs

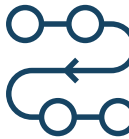
Assets



Aging Production Assets



Lack of Systems



Lack of Processes

Maintenance



Retention Challenges



Aging Equipment, Workforce & Skills Gap



Rising Labor Costs

Reactive vs. Proactive Approach

<p>Reactive Maintenance</p>	<ul style="list-style-type: none"> Repair it after it breaks 	<ul style="list-style-type: none"> High costs Overtime
<p>Preventive Maintenance</p>	<ul style="list-style-type: none"> Repair it before it breaks 	<ul style="list-style-type: none"> Scheduled Coordinated
<p>Predictive Maintenance</p>	<ul style="list-style-type: none"> Don't just repair it, improve it Eliminate the root cause 	<ul style="list-style-type: none"> Extend asset life Reduce labor

Reactive Effects vs. Proactive Effects

Greater Downtime
(Unplanned and Planned)

vs.

Less Downtime

Higher Parts Costs

vs.

Reduced Employee Costs

Increased Costs Due to Reactive Fixes

vs.

Improved Asset Reliability

Growing Employee Costs

vs.

Increased Productivity and Efficiency



PdM Roadblocks

- Data-Savvy Talent
- Incomplete or Unreliable Data
- Unclear Ownership
- Creating & Articulating Business Case



Desired PdM State

- Technology-Based, Process Driven
- Proactive Maintenance
- Data-Driven Actions using Technology
- Automation and Real-Time Execution
- Decreasing Annual Costs, Efficiency

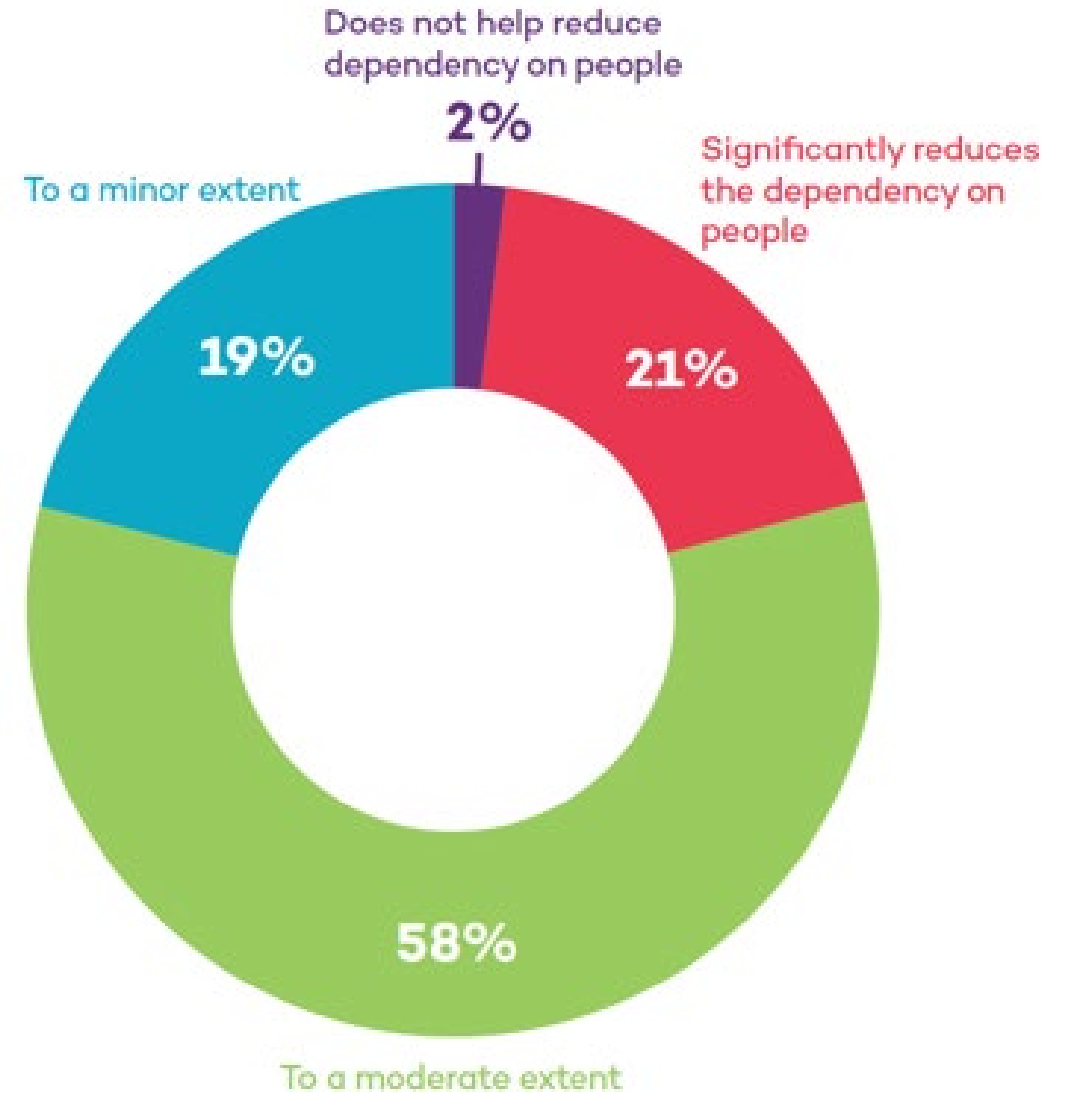


**PREDICTIVE MAINTENANCE
RESEARCH FINDINGS**

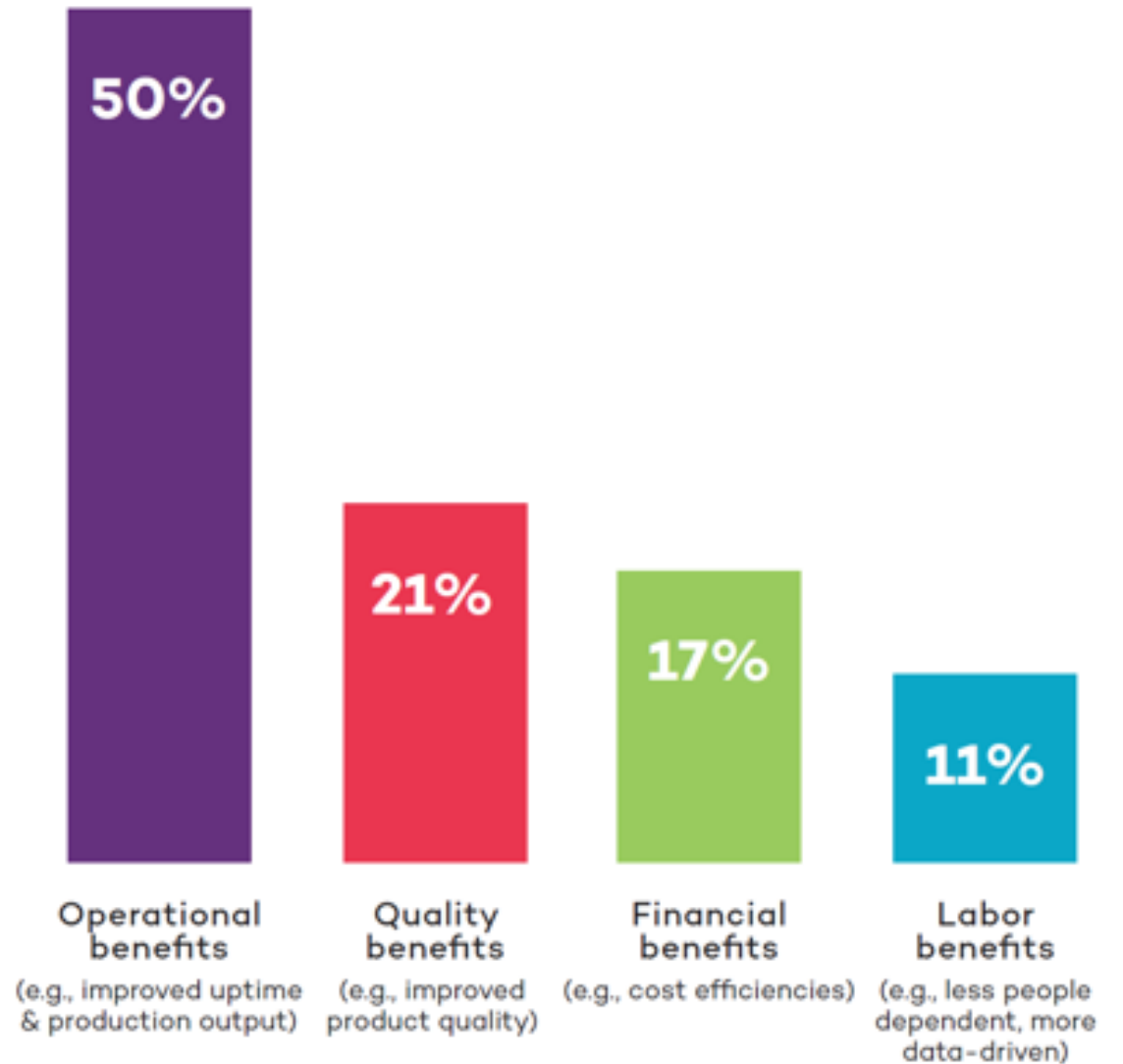
170 Manufacturers Alliance Members Were Surveyed



Does PdM help reduce dependency on people and increase the reliance on technology?



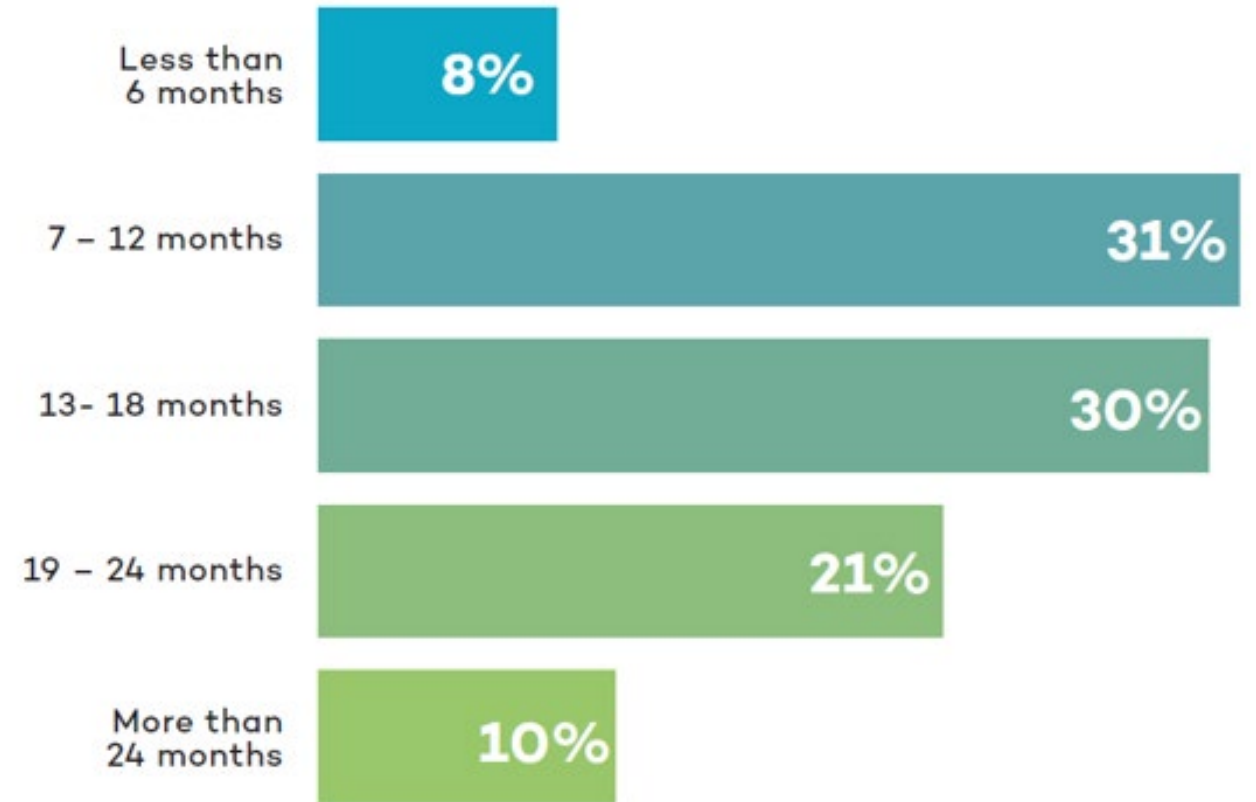
Benefits of using PdM tools



Productivity increases after implementing PdM



How quickly did you see ROI from PdM initiatives?





BENEFITS OF OUTSOURCING & CASE STUDIES

71%

of survey respondents expect to collect, analyze and act on machine data in the next 1-3 years

Plant Engineering Maintenance Study, 2022

Benefits of Outsourcing



Experience & expertise



Increased uptime & productivity

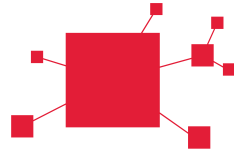


Lower overall costs

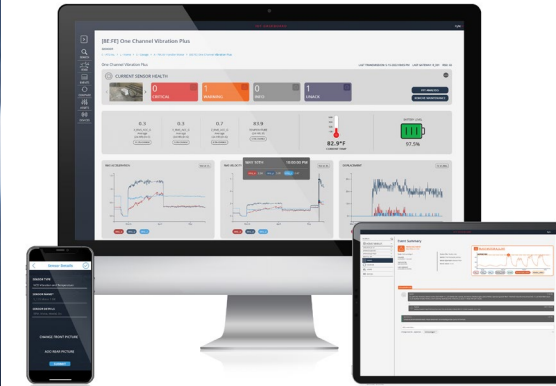
What Sets ATS Apart?

3

Over 3 Decades of Maintenance & Reliability Excellence



Centralized Reliability 360® Technology Center



Predictive Maintenance Experts Monitoring Machine Data



Knowledge Base Across Hundreds of Plants



Prescriptive Actions to Prevent Unplanned Downtime



Immediate Results and ROI

Machine Health Monitoring Trial Provides \$86K in Savings for CPG Manufacturer



MANUFACTURER'S CHALLENGE

Trouble implementing effective predictive maintenance, eliminating unplanned downtime and the monitoring of critical machine assets to prevent failure

ATS SOLUTION

- Implemented 30-day trial of Machine Health Monitoring System
- Deployed 132 sensors across 43 critical assets and over 46,000 data points analyzed

RESULTS

- **4 critical alerts** triggered with detailed maintenance recommendations
- **32 hours** of downtime avoided
- **\$86,000** in avoided losses

“ I can't say enough good things about ATS. I'm in daily communications with their reliability team and they answer all my questions and provide suggestions that improve my operational efficiency.” ”

RELIABILITY MANAGER



MANUFACTURER’S CHALLENGE

Existing systems were no longer adequate to support the company’s just-in-time, continuous production processes and a more technology-driven, automated approach was needed to avoid equipment failure and costly downtime.

ATS SOLUTION

- ATS MHMS was implemented in a head-to-head comparison with an alternative system.
- The ATS MHMS solution, which includes active monitoring by the Reliability 360® Technology Center, performed highly and was deployed at multiple plants globally.
- The ATS MHMS team installed sensors for motors, gearboxes, pumps, and other crucial components which enabled real-time machine sensor data in a graphical format via cloud-based dashboard.

RESULTS

- \$800,000 investment resulted in \$2 million in avoided downtime. **150% ROI**
- By the end of 2021 over **2000 sensors** were installed on 1,200 critical assets.
- The MHMS system delivered 250 notifications, alerted 490 issues, and provided the data needed to **avoid 50 downtime risks**.

“We use the sensors not only to catch assets before failure but also to adjust our maintenance plans.”

RELIABILITY MANAGER

Thank You

QUESTIONS & DISCUSSION

