smart
SOLUTIONS SUMMIT

VAN METER

DATA > DOWNTIME

Top Use Cases to Leverage Data & Maximize Production Efficiency

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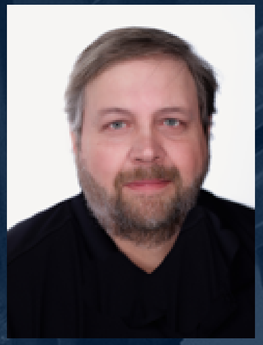


AGENDA

- Reality Check – Leveraging Data
- Choose your adventure! (2 of 3):
  - Use Case Highlight #1: Production Monitoring
  - Use Case Highlight #2: Predictive Maintenance
  - Use Case Highlight #3: Quality Management
- Summary & Questions

REALITY CHECK

Why focus on data & specific use cases?

35%

Companies that say they lack the ability to use data to make decisions, which is a 40% YoY increase. (**)

62%

Manufacturers who collect production data at least partially on paper/manually. (*)

33%

Manufacturers that are hampered **by technology paralysis –** an inability to decide between solutions. (**)

**Digital Systems Survey 2023 – Hanover/Van Meter (145 respondents in MN/WI/IA)*

***Source: 8th Annual State of Smart Manufacturing Report (1300+ global manufacturers polled)*

THE DATA OPPORTUNITY

01

Industrial processes generate **huge amounts of data**, most of which disappears within moments after being created.

02

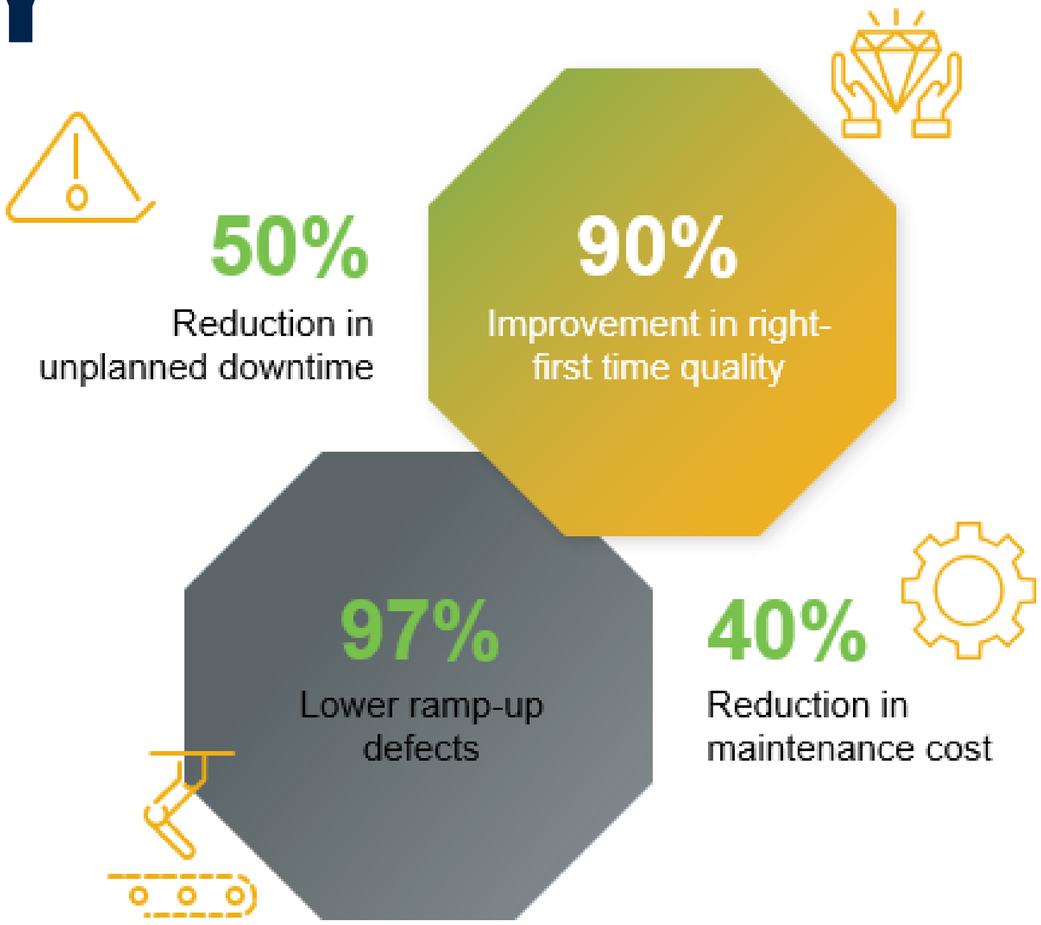
Only some of that data is collected and stored, and some of what's stored is accessible, and some of what's accessible is used.

03

Without a **well-established plan**, the act of collecting, storing, accessing, and using data can be complicated and expensive.

04

The benefits of using data effectively can unlock **new business value** across the organization.



USE CASE #1: PRODUCTION MONITORING

AKA: OEE

40-60%

Typical OEE

85%

Best in Class OEE

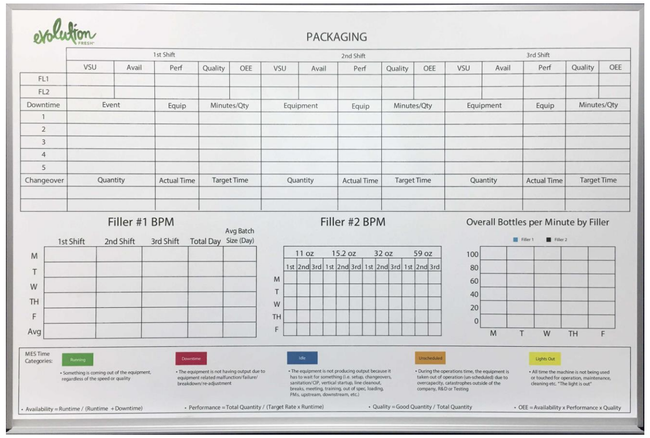
*www.leanproduction.com

POLL

What is the biggest challenge with your existing approach to Production Monitoring (OEE) today?

1. Lack of context
2. Accuracy of data (manual entry)
3. Cannot access data in real time to make effective decisions or effective CI.
4. People do not use the system effectively.

OEE GONE BAD



- **Manual tracking and transfer of data**
- Comparing ‘scores’ across dissimilar processes

- **Lack of context and granularity**
- Implementing without the right data available.
- Setting OEE goal for 100%
- Assuming OEE doesn’t apply in process

- **DIY**
- No Continuous Improvement

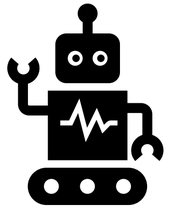
PRODUCTION MONITORING CONSIDERATIONS

PEOPLE

- Identify owners and stakeholders
- Adoption Training
- Enable team with **information**
- Align the team on objectives

PROCESS

- **Baseline**
- Identify opportunity
- Prioritize
- **Plan and action**
- **Track progress**

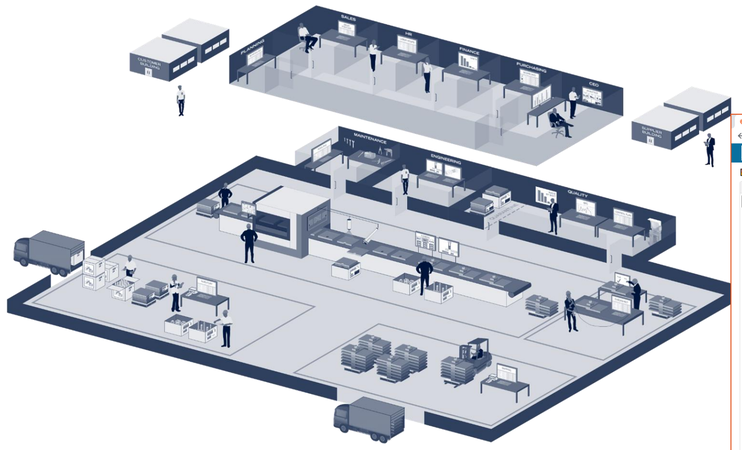


TECHNOLOGY

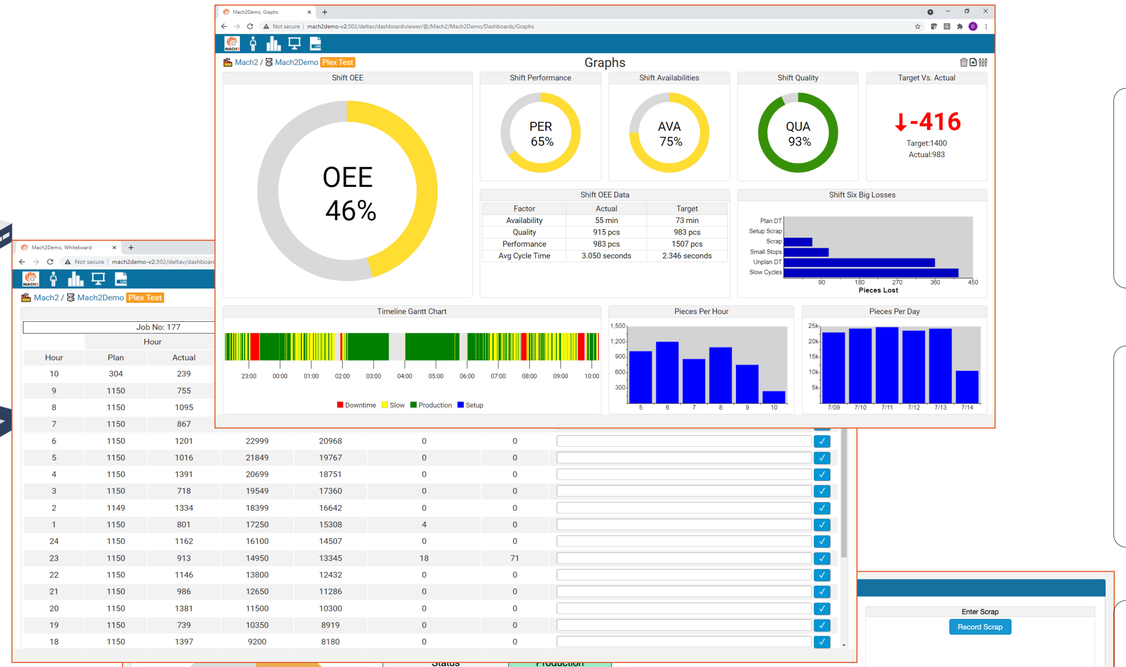
- Commercially available
- **Configure vs customize**
- Standalone vs integrated
- **Mobile friendly / accessible**
- Proven solution providers

PRODUCTION MONITORING: Best Practices

CONNECT



VISUALIZE



IMPROVE

Performance Data

- Production
- Scrap
- Machine Status

Analytics

- OEE
- Performance
- Quality
- Availability
- Etc.

Continuous Improvement

- Operator Notes
- Suggestions
- Workflow
- CI Activity

Edge

Cloud

RESULTS

Production monitoring done right

“Plex Production Monitoring was the perfect solution to build from … Giving us clear, real-time insights into our production challenges while providing the tools to help resolve issues, **the out of the box solution got us up and running in a matter of days.**”

”Based on what we’ve seen of ROI so far, we expect a 30% reduction in unplanned downtime cost, about a 10% reduction of plant maintenance, about a 10% reduction in job transition time.”

Bob Bierwagen - CIO, MPI Corporation

15%

Reduction in machine downtime

$1M+

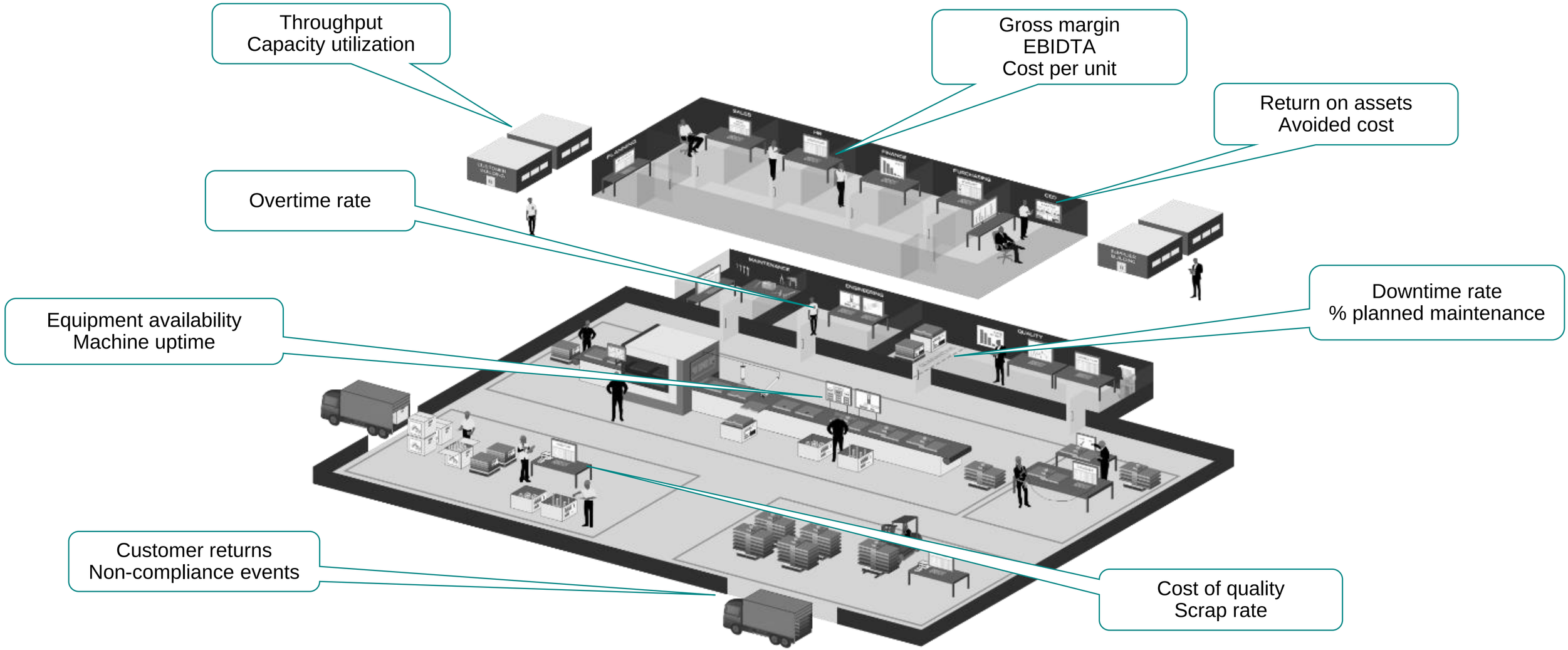
Revenue savings from employee suggestions

10%

Increase in production efficiency across plant floor

*Actual results – Tier 1 Automotive Supplier

USE CASE #2: PREDICTIVE MAINTENANCE



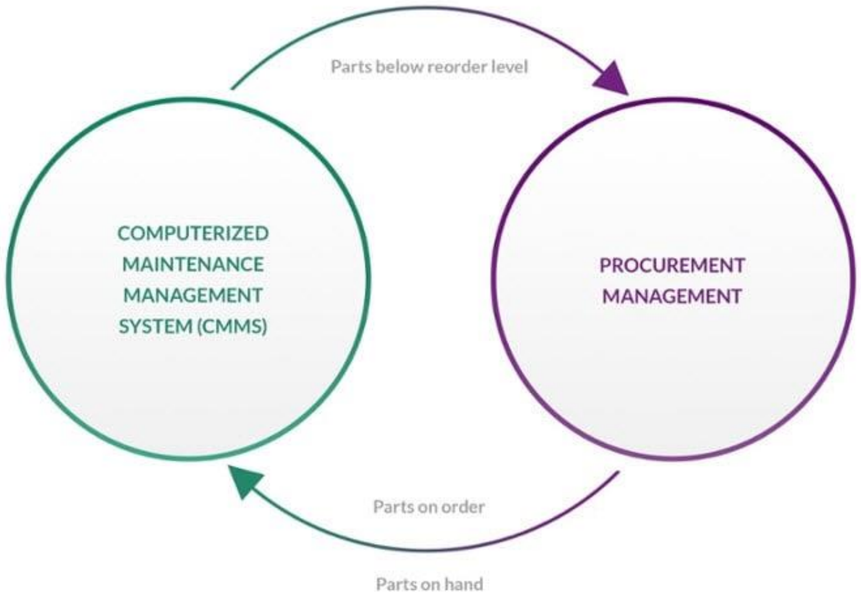
POLL

What is the biggest challenge with your existing maintenance strategy and system?

1. Unplanned downtime / unexpected failures.
2. Maintenance team isn’t deployed efficiently.
3. Technicians cannot access the system or workorder information on the plant floor.
4. Current CMMS doesn’t provide connectivity.

MAINTENANCE STRATEGIES AND SYSTEMS

BEWARE!



- **Lack of asset hierarchy**
- Inability to easily integrate condition data.
- No built-in insights.
- **The CMMS doesn't drive the process or provide the right information.**
- DIY
- **EAM vs CMMS**
- Misalignment with Operations

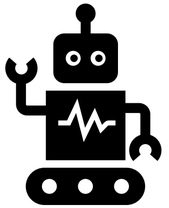
MAINTENANCE STRATEGY CONSIDERATIONS

PEOPLE

- Identify owners and stakeholders
- Adoption Training
- Enable team with **information**
- Align the team on objectives

PROCESS

- **Define the plan evolve your maintenance strategy.**
- Prioritize assets & hierarchy.
- **Define plan and cadence to review maintenance data and insights for CI.**

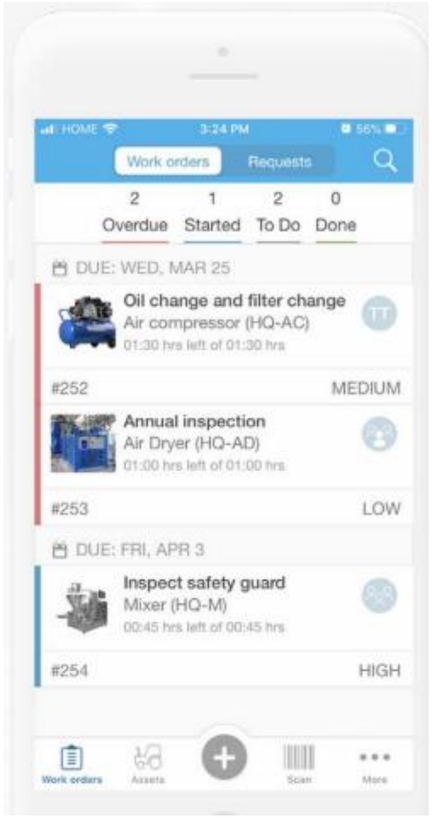


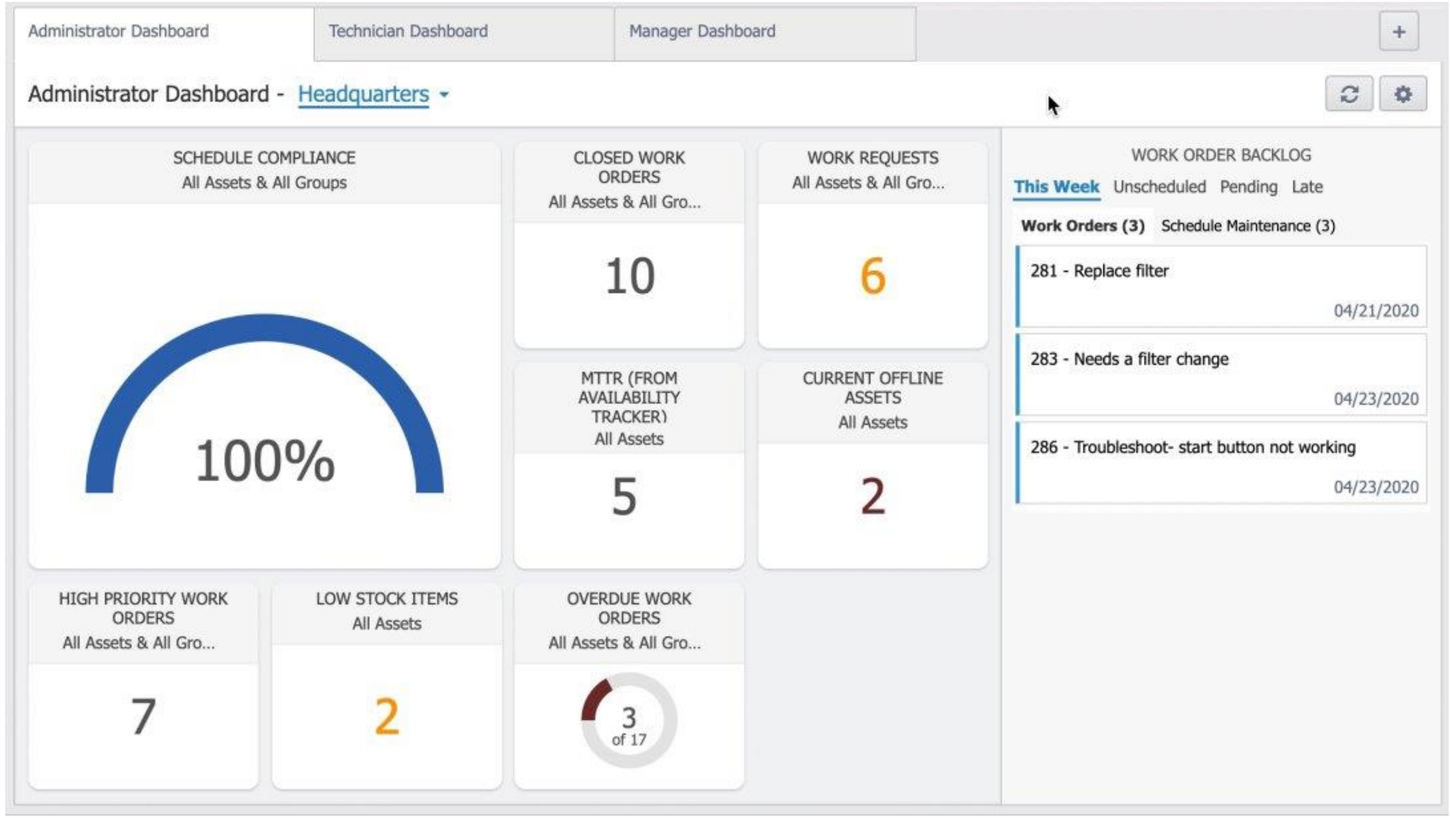
TECHNOLOGY

- **Technology supports your strategy**
- Configure vs customize
- Scalable and secure
- **Mobile friendly / accessible**
- **Integrate – ERP, Machines**
- Proven solution provider

PREDICTIVE MAINTENANCE

Best Practices





RESULTS

Maintenance done right.

20%

Reduction in MTTR

10%

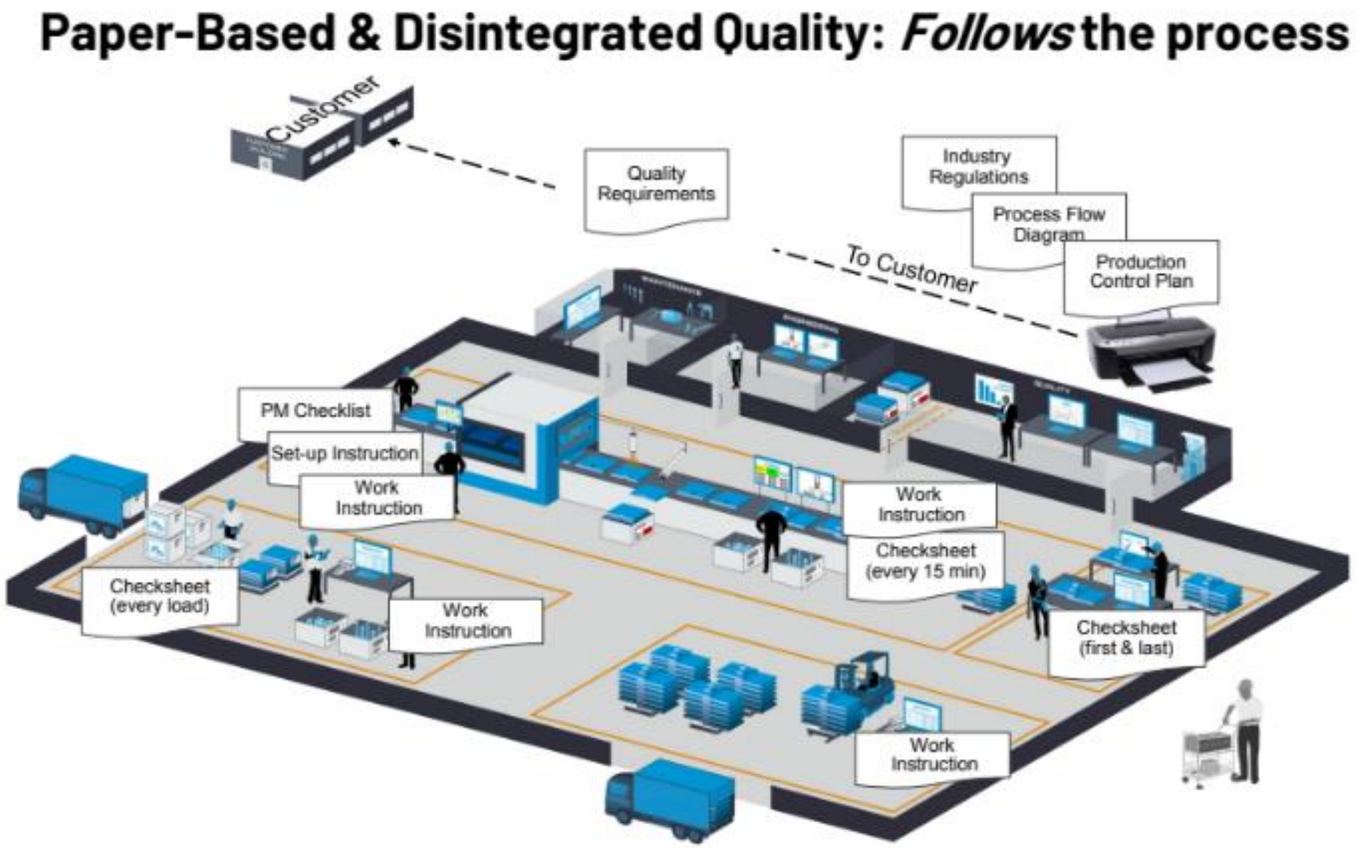
Reduction in operating expense

27%

Reduction in asset related unplanned downtime incidents.

*Source: IDC | ANALYZE THE FUTURE

USE CASE #3: QUALITY MANAGEMENT



35M

Cars had open recalls in 2021

NHTSA 2021 Safety Recalls

15M lbs

Food recalled in the US – 2021

US Food Recalls 2021(USDA)

POLL

What is the biggest challenge with your existing quality management system and practices?

1. Document & revision control.

2. Difficult to track root cause quality issues.

3. Poor traceability.

4. Too much time managing audits and compliance changes.

QUALITY MANAGEMENT

The bad and the ugly.

- Paper…everywhere!
- **Inconsistent quality control checks.**
- Audit prep takes weeks.
- **No digital batch records or process tracking.**
- Too much time to release product.
- **Corrective action takes too long.**
- Quality metrics based on customer complaints.

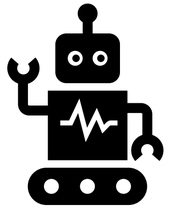
QUALITY MANAGEMENT CONSIDERATIONS

PEOPLE

- Identify owners and stakeholders
- Adoption training
- Remove operator burden
- Build a quality culture and redefine quality metrics

PROCESS

- **Redefine quality processes with technology in mind**
- Align Quality Management to support CI



TECHNOLOGY

- Configure vs customize
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- **Capability to integrate**
- Tech drives the process
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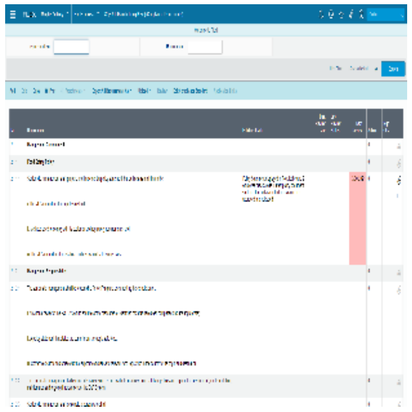
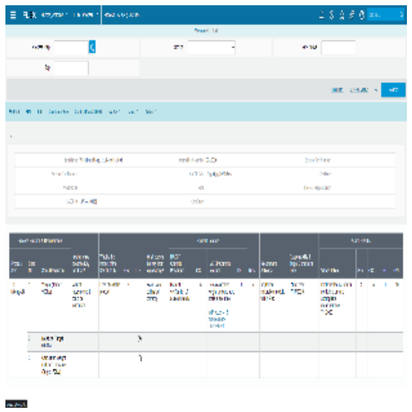
QUALITY BEST PRACTICE

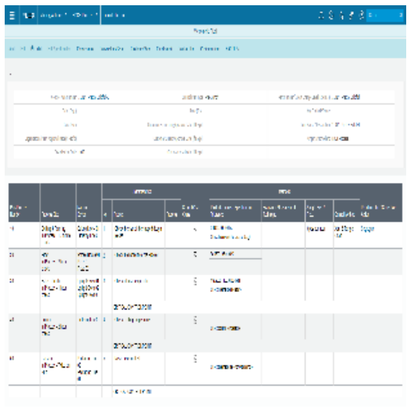
Technology Drives Process



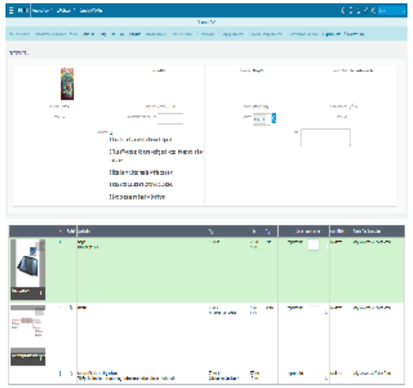
Compliance



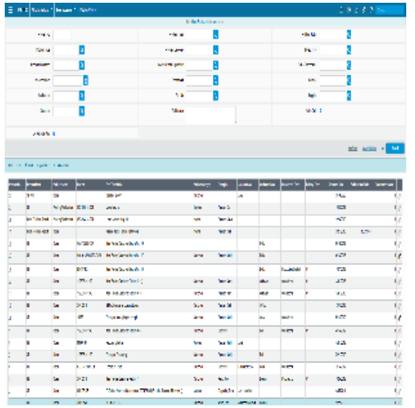
HACCP|FMEA



Control Plan

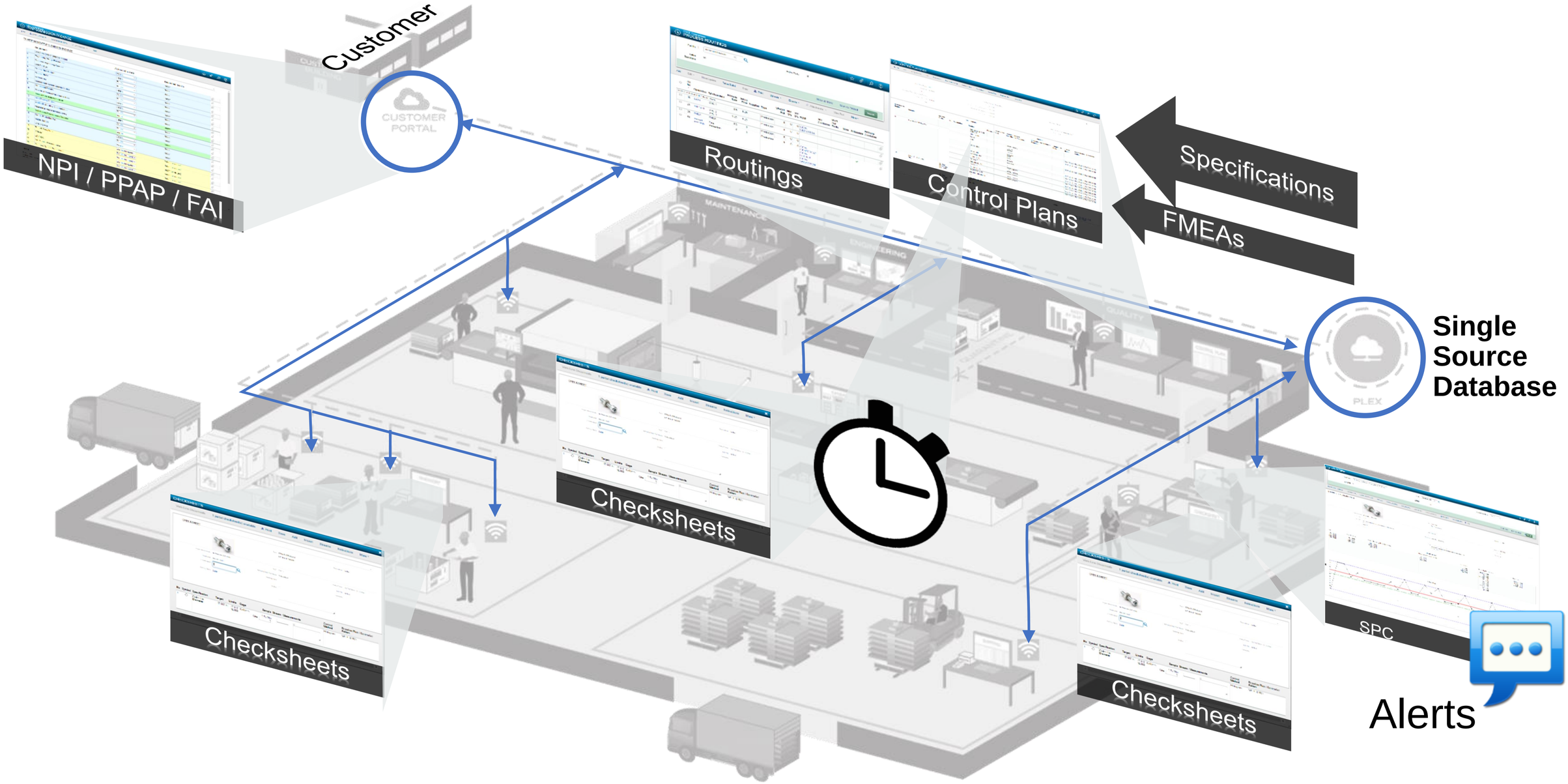


Check sheets



Problem Control

QUALITY BEST PRACTICE: Holistic, Digital and Integrated



RESULTS

Quality management done right

THAI SUMMIT AMERICA

Increased Engagement

2x Employee productivity & engagement

A&K FINISHING, INC.

Reduced Scrap Rates

Scrap rates down from 3% to 1.5%

Kumi Kameo Industries, Inc. | Kumi North American Group

Customer Satisfaction

9 consecutive delivery awards from American Honda

Aaron Thomas
THE MOST DEPENDABLE NAME IN CONTRACT PACKAGING

Boosted Audit Efficiencies

Mock recalls executed
in 7 minutes

WHERE TO BEGIN?

Assess current state
(measure)

Define ideal future state

Identify the gaps

Create & execute a plan
(measure)

~~Key Performance Indicators~~

The New Leadership

KPI

Keep people interested
Keep people informed
Keep people involved
Keep people inspired

KEY TAKE-AWAYS & QUESTIONS

WE WANT TO HEAR FROM YOU!

BREAKOUT SESSION FEEDBACK