FLUKE®
Reliability

Avoiding Best Practice Implementation Pitfalls...

A view by a Plant Manager

Joe Kuhn

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Meet the Speaker

Joe Kuhn

President of Lean Driven Reliability

- 32 years with ALCOA
- Plant Manager, CMRP, Global Director R&M
- Consultant, Author, YouTube Channel, Speaker
- Experience with over 40 plants

Sample of Results

Large aluminum Smelter

42% reduction in R&M spend while doubling OEE in bottleneck area

Aluminum Rolling Mill

10% reduction in R&M spend (in 12 months) while sales increased 29%

7% ($115MM) in R&M spend savings across 31 global locations as Director of Reliability and Maintenance

Doubled wrench time at several locations through planning, kitting, scheduling, staging and problem solving

R&M savings is less than half the opportunity unleased through newfound stability, freeing up resources, capacity improvements and sense of unity/winning of groups

For most, the traditional approach to reliability is not working

Learn tools from a consultant; deploy tools; Wait 1 year; 2 years; 3 years
Experience a “bow wave” of spending

Often assessments and KPIs get better while $/lb gets worse. Why?

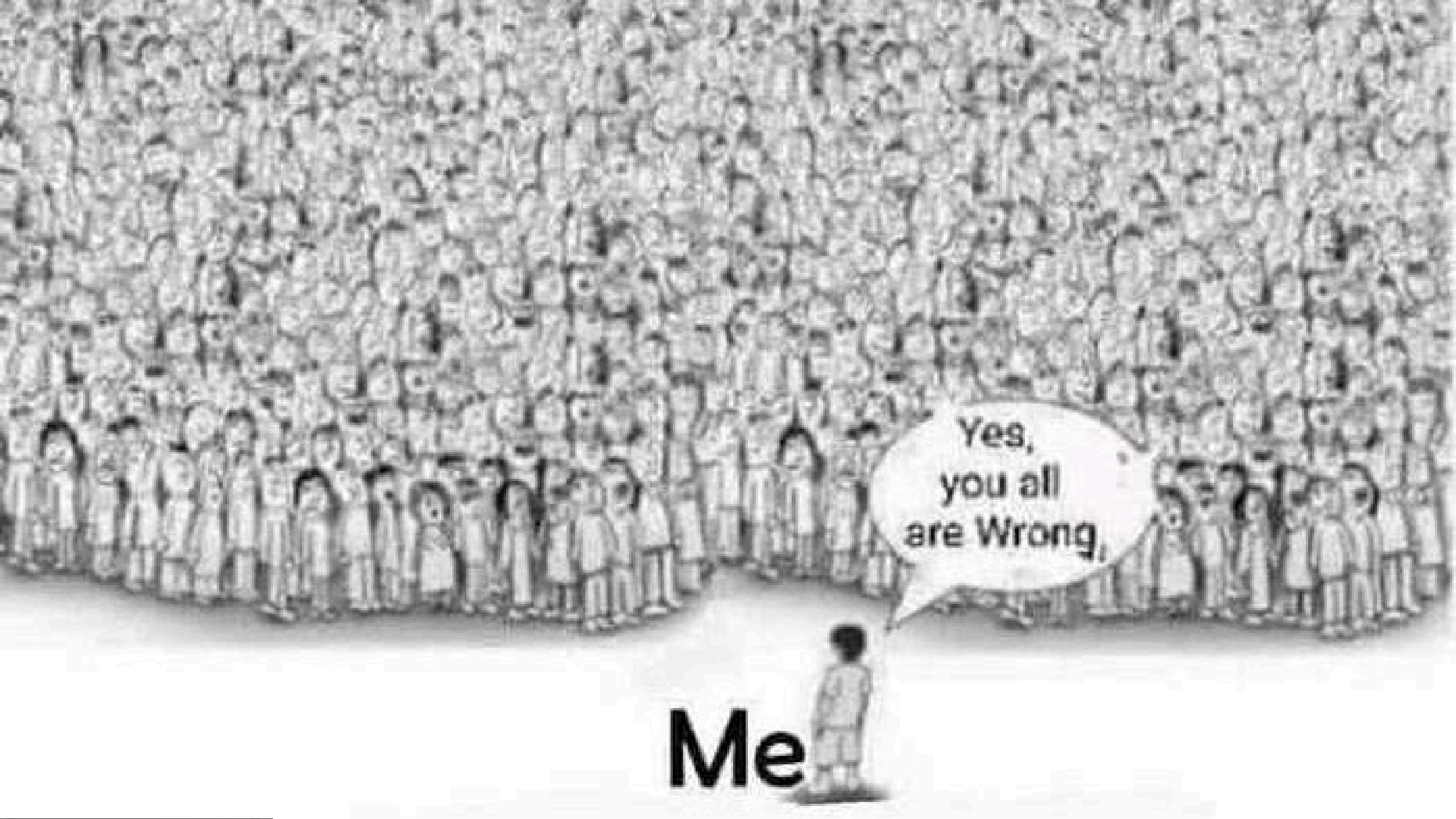
Then….Business Cycles; Loss of Sponsors; Hiring Freeze;
Spending Freeze; business decisions; change of focus; Cut costs

Frustration; rinse and repeat

Best Practices are KILLED by Culture during Execution

First a Survey…
If I had one wish to improve the reliability of my plant, it would be to…

1. Hire more people. Reliability Engrs, Planners and/or craftspersons
2. Have top management invest more dollars into reliability
3. Provide more best practice training
4. Restructure the organization to better support reliability
5. Understand our reliability problems better.


Yes,
you all
are Wrong,
Me

Agenda

1. 3 Stories (2 short;1 long)
2. Connect the dots
3. Questions

Saudi Arabia -#1 Reliability issue in the company. $5B investment

John and Jerry – Reliability Engineers -- from 10 to 8+2

ACME - background

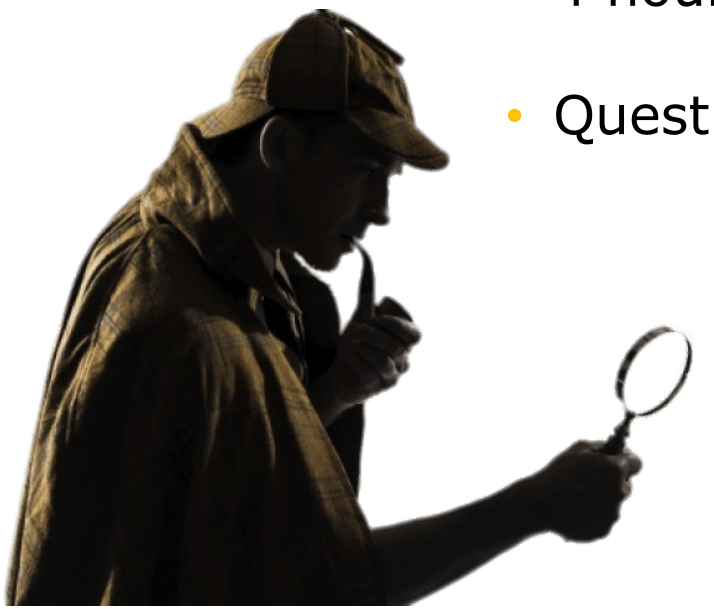
- Specialty Clothing Manufacturer – FR
- 400 employees; 8 maintenance; no maintenance supervisors or planners
- 4 types of machines: 70 sewing machines (2 types); 3 pattern cutting; 6 RF Welders
- 100% reactive maintenance
- Top Employee Complaint – equipment reliability
- KPI: 13,021 hours of downtime- average of last 3 years and increasing
- Opinion: We need to begin conducting Preventative Maintenance (PMs)

ACME - Actions to know current state

Observations – 72 hours

- 8 hours with 4 senior maintenance technicians – 32 hours
- 8 hours with operators on 4 machine types – 32 hours
- 4 hours with production supervisors – 8 hrs

- Question: Who does this?



Key Current State Observations/Leverage Points

1. Maintenance Techs talented but: conflict; blame; reactive; lacked hope tomorrow better – No systems to improve.

2. Operators while talented and in good spirits were frequently damaging equipment – 10x for new operators

3. TPM program to Lube equipment – 0% compliance.

4. Operators frequently knew equipment was failing 1-4 days in advance.

ACME – new target state

1. Establish 4 Equipment Owners from Senior Technicians.
   - Own Equipment Maintenance Plan including PMs, train operators, coach peers and own KPIs.
2. Equipment Owners to train new operators – 30 minutes on each machine type
3. Implement a Problem Tag System – operators have a system for early detection of issues.
4. Begin Yesterday/Today/Tomorrow Meetings.
   - Report DT, PMs created/target; executed/target; Train peers; ask for help; commitment/accountability

ACME - results

- 30% reduction in downtime in first year.
- 65% reduction in downtime in year 2.
- Reliability is no longer a topic by operations.
- Financial impact: Confidential.
- For the 1st time every, a Reliability Slide made it to the board of directors.

- Question

If I would have given ACME leadership perfect PMs on a Silver Platter, would these same results have been realized?

Connecting the Dots – 4 Truths

1. Every Reliability Best Practice attacks waste
2. KPIs and Opinion are insufficient to understand a problem/opportunity → **WASTE.**
3. Intense Observation Changes Everything
4. Next Steps / Actions become obvious with understanding

Back to the Survey…
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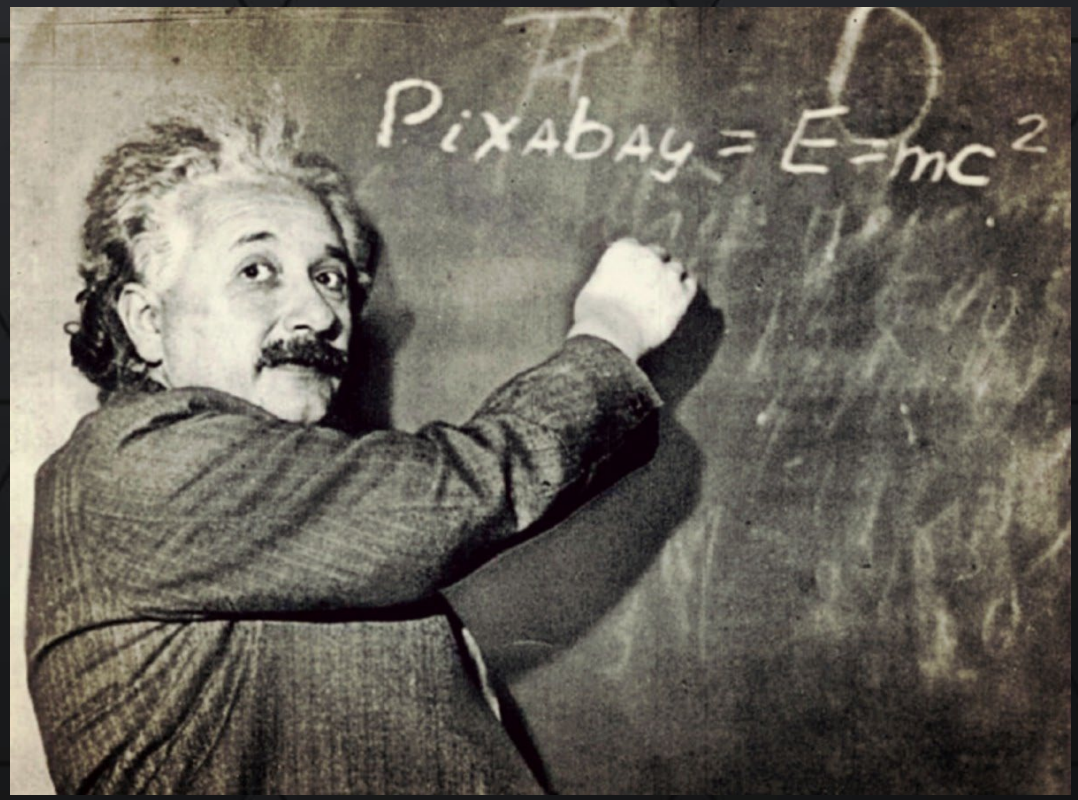
“If I only had an hour to solve a problem, I’d spend 55 minutes thinking about the problem and five minutes thinking about solutions”

– Albert Einstein



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Actions to BEGIN TOMORROW…

1. Add 4 hours of CHALK CIRCLE observation to your weekly calendar.
2. Add Observation to your data set for presentations.
3. Add “Go and See” time to meetings.
4. Challenge others when only giving opinion and KPIs.
5. Go watch my videos. Send select one’s to leaders.