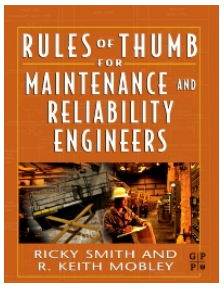


How to Create a Culture Change in your Maintenance Department

By Ricky Smith CMRP, CMRT, CRL

This article was written based on my experience as a Maintenance Supervisor and Maintenance Consultant along with the time I spent working in a World Class Maintenance Organization , "Alumax Mt Holly" (Alcoa Mt Holly).

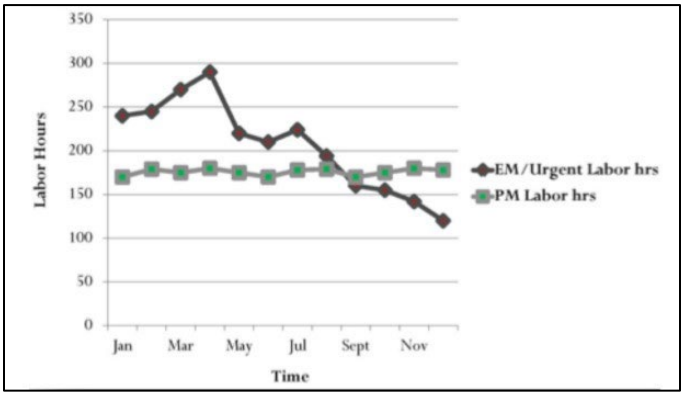
World Class Maintenance vs Typical Attributes

Category	Typical Maintenance	World Class Maintenance
Maintenance Cost as a % RAV	5.6 – 11%	2.0-2.5%
Budget Compliance	Less than 60%	100%
Planners per Craftsperson	No Planner or No Proactive Planning Process	1 - 20
Absenteeism	10% plus	+/- 5.0 %
Ready Backlog in Weeks	Unknown	2-4 weeks
% Planned Work	15% or less	90%
Schedule Compliance	50%	90-100%
PM Compliance	60%	95-100%
Inventory Accuracy	Unknown	95% plus
Maintenance Training Cost	No Budget	6% of Budget
Maintenance Rework	High	Low
Accurate Maintenance Dashboard	Not Available	100%

Is your maintenance crew in a reactive mindset? Check out a list of qualifiers to find out and then learn how to change it.

It's difficult to manage a maintenance crew effectively in a reactive environment. We're either unaware we're in a reactive mode or we don't know how to get out of it. The following list of qualifiers determines if your crew is reactive:

- PM labor hours stay the same (or increase) and emergency labor hours trend upward.



- PM work orders lack specifications.
- Repeatable procedures are not used.
- Yesterday's maintenance problems and reliability issues consume 90% of daily maintenance meetings.
- Ineffective Maintenance Planning and Scheduling
- The maintenance supervisor is a hero one day, a no good the next.
- The maintenance supervisor must work late at least twice a week.
- Maintenance crews don't know what equipment they'll be working on tomorrow.
- The maintenance supervisor routinely expedites parts for emergency work.
- Equipment reliability issues prevent the plant from operating at targeted capacity.
- Maintenance Rework is high because maintenance technicians are not given the amount of time required to repair equipment to specifications.

If these points seem too close to home, you're probably operating in a reactive maintenance environment. The challenges and obstacles you face are many. I know, I was there and faced these issues daily. The toughest challenge was a cultural one – my maintenance crew was resistant to change.

Now, as a consultant, I find that in many plants neither Production nor Maintenance feel responsible or accountable for equipment reliability. Instead, the maintenance department focuses its effort on time-based PMs that don't work anyway, doing too much too soon and doing too little too late.

Remember these words of wisdom: You know you're in reactive mode when you continue to perform preventive maintenance on equipment that continues to fail. Also, I've found some plants never meet capacity projections. In fact, I've seen management formally reduce production projections and even change the name from "projections" to "stretch goals." Shouldn't we admit that if we have a stretch goal, it really means we don't believe we'll ever meet it? Nevertheless, as maintenance and manufacturing costs continue to rise for no apparent reason, maintenance comes under pressure to do something quickly.

So, quick fixes are tried and tried again, but they never really work reliably.

So how do you get out of a downward spiral and move your crew from reactive to proactive? I changed my crew's behavior by convincing and proving to them that there was a better way – being proactive in maintenance. And, I had to convince them there was an easy way to get there, and they would benefit personally from the change.

Before starting this culture change initiative, I had to gain support and sponsorship from plant management. The only way to get that prerequisite is to develop a compelling business case. Believe me, it will be compelling – a reactive environment leaves big dollars sitting on the table.

Maintenance Cost as % Replacement of Asset Value (Source: SMRP Glossary)

Replacement Asset Value (RAV) Definition. The monetary value that would be required to replace the production capability of the present assets in the plant. It includes the replacement value of the buildings and the grounds if these assets are maintained by the maintenance expenditures.

World Class Maintenance Cost as a % of Replacement of Asset Value = 2.0 – 3.4%

Typical Maintenance Cost as a % of Replacement of Asset Value = 4.5 – 11.2%

Moving from reactive to proactive will reduce maintenance costs by at least 20%, depending on the severity of the problems. In addition, capacity will increase because you're improving reliability. I've seen asset reliability raise capacity by as much as 10% to 15%.

Then, armed with management support, I needed true believers. I had to prove to my crew that life was better in a proactive environment. To make the biggest impact quickly, we took one of our worst performing assets and focused on changing our process to improve its reliability. We changed the day-to-day activities and behaviors of the people in Maintenance and Operations and ensured that people understood what to do.

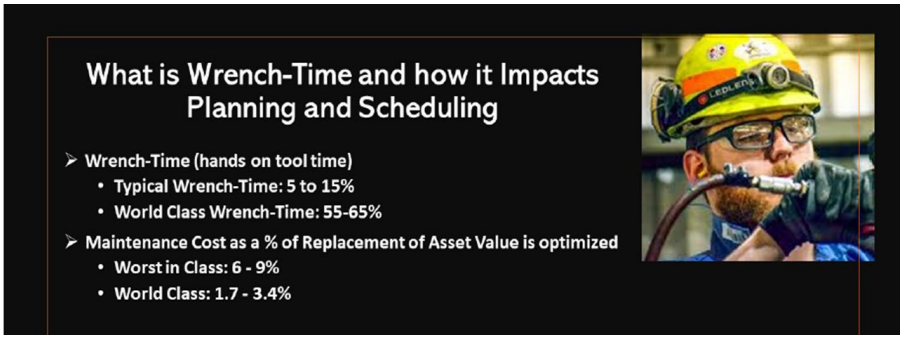
The people who operated and maintained the asset owned and executed the asset reliability program, conducting proactive inspections at designated frequencies. We got some expert help in developing the asset reliability program (there are many work identification methodologies available). We didn't invest in heavy statistical analyses, nor did we use an abundance of additional predictive technologies, but we validated those we had in place when we developed the asset reliability program to ensure we were focused on the right work.

Within six months, we had tuned up the reliability and performance of that asset. We put key performance indicators in place to manage the process and kept it going. The team knew they were successful, and they felt great. The change had occurred. Sure, it was only one asset, but now others wanted a ride on our success train.

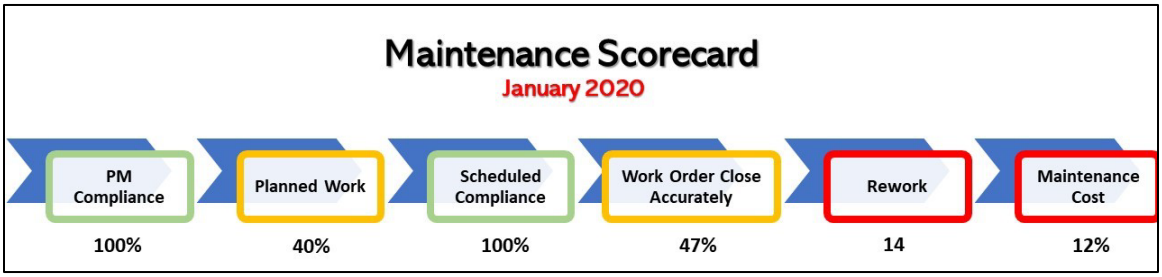
You don't have to tolerate managing maintenance in a reactive mode. Developing a proactive asset reliability program and focusing on a process to implement it is the key to success in changing from a reactive organization to a proactive one.

A few simple ideas that work:

1. Provide training for your maintenance team from Maintenance Leadership to Maintenance Technicians
2. Make sure your Maintenance Planners are trained and understand the value of Maintenance Wrench-Time.



3. Assess the current state of your Maintenance Function
4. Create a Plan using the "Crawl, Walk, Run" Methodology
5. Create scorecards so everyone knows the "Score in the Game."



6. Define roles and responsibilities for all Maintenance Functions.