



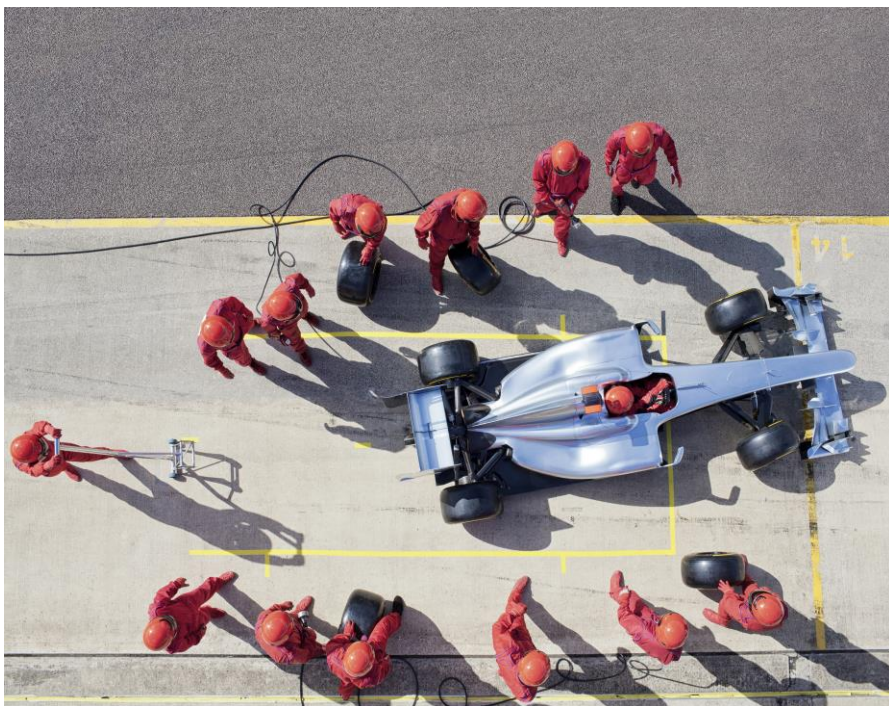
Maintenance Excellence

Increasing Reliability



Maintenance Excellence Approach

Increasing Reliability



Implementing Continuous Improvement tools systematically enhancing processes and asset reliability.

Asset management strategies focused discussions on the appropriate time-based, condition-based, or predictive maintenance mix to enhance Up Time and the avoidance of downtime.

Building One Team Mindsets which align Maintenance Activities and Operations goals to reduce response times and improve quality.

Core Meeting Cadence (CMC) strengthened communicating performance and removing barriers to improve business decisions.

Front Line Engagement connecting maintenance teams daily activities to the asset management strategy and operational requirements.

Strengthen existing Capability leadership and supervisor sessions aimed at the practical application of the tools and processes including site follow up.

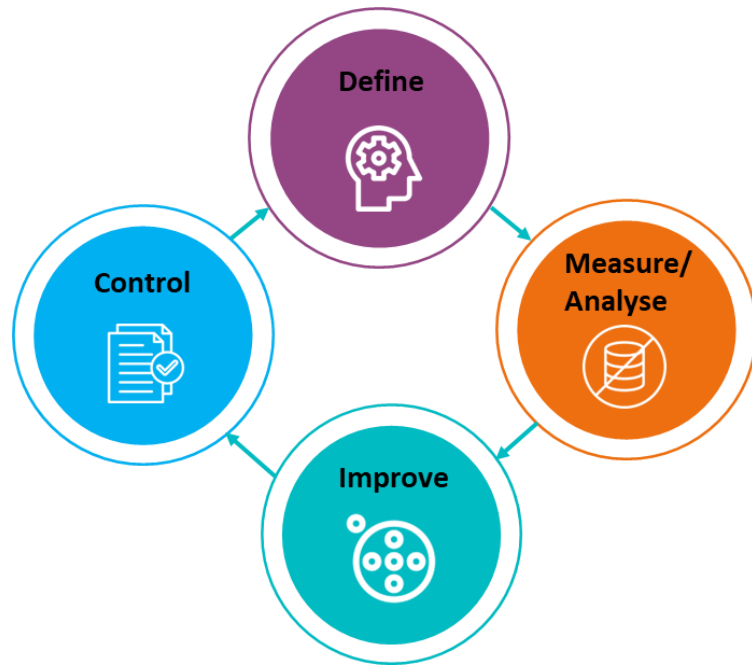
Root Cause Analysis processes and discussions focused on eliminating the Bad Actors. With Agile teams formed to execute improvements.

Turnaround readiness to execute tested and strengthened in targeted sessions.



Maintenance Excellence

Agile Improvement Teams For Opportunity Areas



Cross functional improvements teams are formed and facilitated following the DMAIC process

Define Clearly define the problems/opportunities, the goals, and the process to be improved.

Measure Collect and analyze data to understand the current state of the process.

Analyze Identify the root causes of the problem and opportunities for improvement.

Improve Implement solutions to address the root causes and improve the process.

Control Establish controls to maintain the improvements and prevent the problem from recurring.



Maintenance Excellence Approach

Key Success Factors

The closer the alignment and relationship is between Maintenance and Operations the more quickly important decisions can be made.

A Bad Actor process exists and data is used to prioritise time and effort on eliminating the big hitters.

A comprehensive Asset Management evaluation exists and is used to choose the appropriate Maintenance Strategy and inventory levels for the various assets.

Work Order Management system is robust and includes regular reviews with both Maintenance and Operations personnel.

Backlog management is in a healthy state with of 4 to 6 weeks of work.

There is a robust work planning process which is documented, understood and followed and has the flexibility to allow for break-in work where this is necessary.

A fully integrated PdM program is in place and includes the like of oil analysis, vibration analysis, radiography, ultrasonic, infrared camera, electrical voltage testing.

Proactive maintenance work represents more than 80% of total maintenance work.