



WHITE PAPER

6 High-Level Elements to Guide Your Maintenance & Reliability System Review and Achieve Sustainable Results





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INTRODUCTION

Just as individuals should undergo an annual physical, companies should complete an annual checkup to evaluate the health of their organization in terms of reliability and maintenance. Unfortunately, most companies only conduct audits on a haphazard basis, or at insufficient frequencies, or they simply do not know where to start. As such, they never derive the substantial, *sustainable* results that are possible from a structured systems review approach.

Reviewing or assessing your organization's systems can be done in collaboration with a consulting organization, or it can be tackled internally without outside support. In either situation, there are a few critical items that should be considered.

GUIDING ELEMENTS

END PURPOSE

The obvious initial question is, "Why are we doing this?" Are we conducting a reliability system review solely for the sake of doing an assessment, or is there a true desire to improve our business by reducing downtime, improving OEE, and reducing our maintenance costs, all adding dollars to the bottom line? Further, are we in alignment across the organization on the path forward?

Many companies “check the box” for having completed a review, but only a minority can later point to significant changes in how they managed their business that evolved from the review findings. The majority do not have a clear roadmap on how to actually close the gaps that were found. An organization serious about change clearly defines what it hopes to achieve from a reliability system review and subsequent improvement activities. Company sponsors, champions, and leadership structures are created at the corporate and site levels to guide the process, free up needed financial and labor resources, eliminate barriers to change, and celebrate achievements. A company must have a clearly defined roadmap to make the improvements needed to make increased productivity possible.

PERFORMANCE STANDARDS

What are the standards against which we are going to compare our current performance levels and practices? If the assessing team doesn't have a common understanding of best practices – whether they relate to precision maintenance techniques, configuration and population of a management system, or planning and scheduling – they will be hampered in pinpointing key areas of opportunity and their ability to support the closing of those gaps.

Prior to initiating the maintenance and reliability review, the team needs to understand what they are evaluating and what “good” looks like. If that knowledge is lacking, it can be procured from consulting organizations. They can provide information about best practices and the lagging indicators that reflect how well companies are applying those practices and the boots-on-the-ground support to move forward on the journey.

AREA OF FOCUS

This seems a simple item to identify, but it requires more thought than one would initially think. The level of support for the endeavor, available resources, and other issues need to be addressed. Ask a few questions to clarify what you are doing:

- Will it be a corporate level maintenance and reliability systems review (all sites) or just an evaluation of one or two locations?
- Will all areas and departments at a site be involved or will the focus be on specific areas?
- If individual areas are reviewed, do you address the ones that appear most receptive to change or the ones perceived to have the greatest need for change?
- Will it be a holistic, broad-based review investigating a wide range of reliability-and-maintenance-oriented areas, or will it focus on isolated business practices – planning and scheduling versus application of condition monitoring?

INFORMATION GATHERING

Many reviews are conducted as plants host a team of assessors who capture information and conduct interviews over a set schedule. Having conducted 1500 maintenance and reliability system reviews over the past 20 years, Allied Reliability recognizes the value of being able to walk the plant, talk to site personnel directly, and search out the means to validate what is seen and heard. Electronic surveys and tools enable us to capture more information from a broader group of functions in a plant, while being less intrusive on their daily activities.

LEARNING ACTIVITIES

Reviews should not just be about assessing, but also about learning. On-site review activities can be structured to include experiential interventions and targeted walkabouts with site personnel that allow them to co-evaluate with the reviewer improvement opportunities in daily site activities, such as planning and scheduling or root cause failure analysis meetings. Or they can participate in structured learning exercises built around unlocking hidden inventory, mapping business process flows, or evaluating cycle counting techniques. Regardless of whether an electronic tool is being used or not, an assessor can lead groups of people through group working sessions that not only allow them to identify their current performance levels but also impart to them an understanding of best practices and what they require.

ACCOUNTABILITY

Without accountability assigned to key corporate and site personnel, few changes of substance will result from the maintenance and reliability system review without a concise roadmap to the desired future state. This may include leadership alignment activities as well as a change in the culture of the company towards maintenance and reliability. The company must also have an understanding of what risks are present in the current culture to keep them from reaching their productivity goals.

MOVING FORWARD

This white paper touches on six high-level items you should consider regarding maintenance and reliability system reviews. Many additional items need to be considered, but this should provide a starting point to ensure your review achieves the highest level of success.

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Maintenance & Reliability Continuous Improvement Efforts Contributed Nearly \$1,000,000/Year to Bottom Line

27%



Reduction in Annual Maintenance Costs

20%



Increase in OEE in 3 Years

1.4%



Improvement in Replacement Asset Value

WHY? OBJECTIVE

Design, develop, and implement an integrated maintenance and reliability business platform across one of client's business units.

WHO? PEOPLE

Allied Team worked with client's Global Maintenance and Reliability Steering Committee to help create the vision for Reliability Excellence and with plant management teams across 16 of their European facilities.

HOW? APPROACH & PROCESS

Integrated Asset Health Management, Reliability Centered Maintenance (RCM), and Condition Based Maintenance (CBM)

- **Asset Validation:** Allied worked with client to develop reliability standards, tools, and processes for performing Asset Validation.
- **Asset Criticality Analysis:** Allied worked with client to customize our Asset Criticality standards, tools, and processes to meet their specific business needs.
- **Failure Mode Mapping:** Allied worked with client to develop standards, tools, and processes for the creation of an Equipment Maintenance Strategy using our Asset Health Matrix (AHM) tool and RCM analysis process.
- **Work Execution:** Task Qualification and Work Execution Standards established.
- **Integrated Asset Health Reporting:** Client adopted Allied's standards, tools, and processes for reporting Asset Health as a strategic Key Performance Indicator (KPI).
- **Continuous Improvement Assessment/Audit Process.**
- **Outsourced CBM Personnel:** Allied provided 10+ CBM professionals to client locations to perform the inspections and execute work to the standards.

ENABLING TECHNOLOGY & TOOLS

- AHM tool, which maps thousands of failure modes to applicable technologies for Equipment Maintenance Plan (EMP) design and deployment.
- Route-based vibration, infrared, motor circuit analysis, ultrasound, and oil analysis.