Balancing asset availability and utilization to improve business performance

What I'm about to say is going to sound like heresy to many of today's RCM-focused maintenance professionals: maximizing the availability of industrial assets—even critical assets—is not always the best business strategy.

Please hear me out and note the intentional underlining of the word "always," because the time factor is critical here.

Sure, chances are, as a maintenance professional, your performance is measured (and rewarded) based on how well you keep the plant running while containing costs. But, to succeed in today's global industrial environment, companies must manage their manufacturing plants to meet ever-changing business objectives.

For example, in a production-constrained environment, where high demand and limited capacity mean that you can sell as much of a commodity product as you can make and charge pretty much whatever the market will bear, then sometimes a "run to failure" approach that utilizes assets to the max (even if only temporarily) can actually be the best overall business strategy to follow (if not the best maintenance strategy).

Clearly, what's needed is an approach that enables you to balance industrial asset availability and utilization in a manner that allows you to maximize overall business value. Our organization calls this approach, "asset performance management."

The problem is that while the maintenance staff in an industrial plant is typically measured on asset availability, the operations staff is typically measured on asset utilization. Beyond the obvious Maintenance/Operations organizational issues, the respective measures are inverse functions. That is, they tend to fight each other, especially as a plant approaches the maximum points for each.

For example, a well-maintained valve, pump, motor, heat exchanger or entire process unit that is hardly ever used—or used at a small percentage of its rated capacity—will almost always be available. Conversely, when operated non-stop for extended periods at or above their rated capacities, the availability of these plant assets will likely be seriously compromised (due both to wear and tear and lack of maintenance...).

To solve this problem, manufacturers need to identify the optimum balance between asset availability and utilization for any asset set at any given time, based on the current business strategy. Then, they need to use an integrated asset performance management approach to get Maintenance and Operations working together to achieve and maintain this balance.

New asset performance management models and algorithms are available to help manufacturers measure both asset utilization and availability in real time and identify the optimum balance that will best enable them to achieve current business objectives. With this understanding, a combination of advanced technologies, services and approaches (including RCM) can then be effectively applied by both Maintenance and Operations to drive utilization and availability to the desired states and thus maximize overall business performance.

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