Written by Ben Stevens, President, OMDEC Inc.
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What do our corporate leaders want? Their major KPI (Key Performance Indicator) is ROI (Return on Investment). What do we deliver? RAM (Reliability, Availability and Maintainability). This reflects a serious disconnect that minimizes our voice at the executive table.

From RAM to ROI requires three intermediate steps—*RAM to Capacity Assurance to Delivered Output to Value to ROI.* It's the proof of "Value" that causes us problems.

Let's start with two very practical basics. First, if it adds no value, stop doing it. Second, failures are not necessarily bad maintenance.

"More PMs" is the mantra. Yet experience shows that about 70% of PMs add no value; and only 27% of PMs issued are actually completed. This correlation would be neat if it were planned. Here's the business test, though: Does the PM achieve its objectives AND does it add value?

Does the PM cost exceed the failure cost? If so, then the PM reduces value, which, in turn, reduces the company's ROI.

The PM is a key step in a critical chain. It should not be designed to "generally prevent failure," but to prevent a specific failure mode. This demands a direct cause-and-effect chain between the PM task and the failure mode—*and beyond*. An inspection identifies measurable potential failures, which prompts a PM (and, often, on-the-spot action). The PM tasks specifically prevent a functional failure. If not, it's time to challenge the PM's value.

When completing the work order, add the failure mode to it. Failure mode records are then easily analyzable. If the task improves our knowledge and experience, (e.g. a new effect or failure mode), create a temporary record for later RCM validation.

Finally, an unexpected failure mode in critical equipment calls for several repair actions—*the equipment, PLUS the RCM record, AND the RCM logic, AND all records using the same logic AND all their PM Work Orders*

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Now back to the question of value. Does the PM cost exceed the failure cost? If so, then the PM reduces value, which, in turn, reduces the company's ROI. So let the equipment or system fail. Focus on the cost of doing the PM versus the risk of not doing it. The PM cost has three components: 1) the cost of the work; 2) the lost production value during the outage; 3) any penalty costs, and loss of market reputation through non-delivery. Failure cost has three similar components—*the emergency repair cost, the loss of production value and the penalty costs.*

Next, consider risk, something that is most easily defined as the Cost of Failure x the Probability of Failure over a given period (typically before the next outage). The risk calculation prompts a simple business equation: Do you spend $5000 on a PM or run the risk of failure with a 25% probability in the next 30 days that will cost $60,000?

The issue of value in asset management extends beyond these brief examples. For us Asset Management Professionals to take our long overdue place at the executive table, we need to think, act and talk in language that the corporate leaders understand—*$$$ and RISK!* **MT**

Based in Godfrey, ON, Canada, OMDEC (Optimal Maintenance Decisions Inc.) provides asset management consulting, training and software solutions for clients around the globe. For more information, e-mail: ben@omdec.com

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