



White Paper

Capacity Assurance

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Maintenance can mean competitive advantage

By Karl Kelton

There's no doubt about it; these are challenging times. For those in the machinery industry, the litany of challenges seems endless: globalization, a shaky export advantage, industry consolidation, the cost of U.S. produced capital, etc. But there's a light, and it's not at the end of the tunnel, it's within the tunnel—and it's accessible to all manufacturers, even those with tight capital budgets. I call it "Capacity Assurance."

Focusing on a "cost centre" worth upwards of 30-50% of total operating costs and lost opportunity

Capacity Assurance focuses on maintenance excellence as a core competency. When you consider the savings that could result from improving the performance of a cost centre that massive, you're talking about a significant competitive advantage. But because the traditional relationship between the maintenance function and management has been one of—excuse the analogy—slave and master, it's not an obvious advantage.

In most organizations, when something breaks, maintenance is mobilized to fix it. Schedules are thrown off. Deliveries are at risk. Shifts sit idle. Costs go up. Production goes down. Chaos and stress prevail. When the problem is fixed, calm returns...until the next time. Is this any way to run a business, particularly during one of the most challenging periods in the history of the Canadian machinery industry? There has to be a better way—and there is. However, the path to Capacity Assurance begins with a change in philosophy and culminates in an unwavering adherence to the executional details, neither of which is easy—but both of which are possible and affordable.

From Reaction to Reliability

In industries like aerospace or nuclear power generation, maintenance is a strategic, not a siloed function. Maintenance people interact and develop plans with engineering, procurement, quality assurance, HSE, and numerous other departments. Their opinions are sought out and their recommendations are taken seriously. However, when you consider that even the maintenance experts for organizations like NASA find it culturally difficult to hold up a project—witness both the Challenger and the Columbia shuttle disasters—you can understand the difficulty in elevating maintenance to a strategic role. But it doesn't take a rocket scientist to see that the cost of reactive maintenance can be catastrophic, even in less tragic situations. So what's the answer? First it's important to understand the natural stages an organization goes through when attempting to optimize asset utilization and the life of the asset:

Stage 1 – Reactive: Operate / Break / Fix

Stage 2 – Preventative: Some effort to prevent problems proactively

Stage 3 – Predicative: Use of measured physical parameters to correct problems before a failure occurs

Stage 4 – Reliability centered Maintenance: Optimizing maintenance intervention to meet *pre-determined reliability goals*

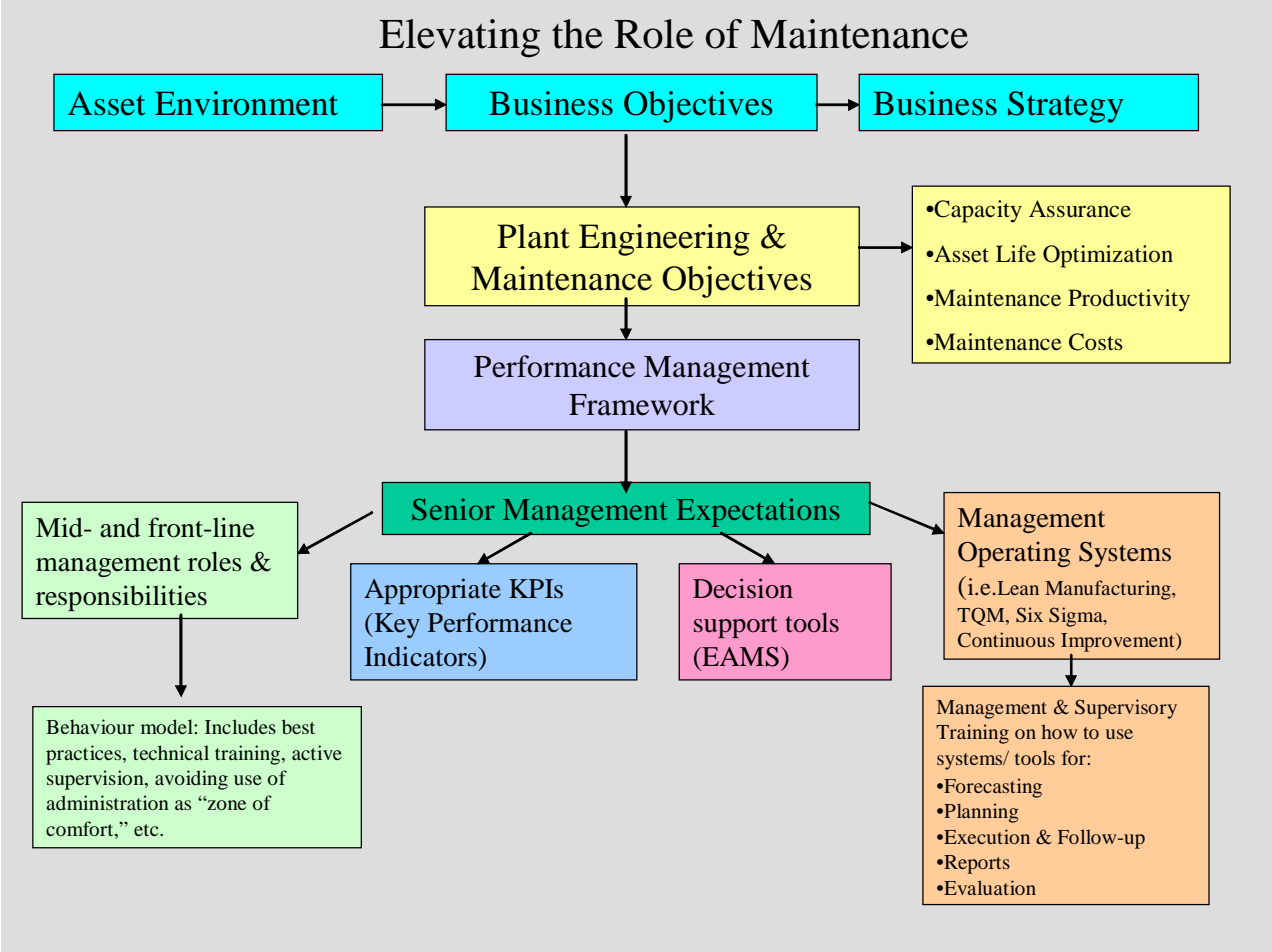
The goal of every organization whose eyes are on tomorrow—particularly those in capital intensive organizations threatened by tight budgets, global competition and shrinking markets—should be stage 4. However, there are no shortcuts, you can't skip stages 2 and 3.

Capital is Starved for Attention

How does an organization elevate the role of maintenance so that it falls into the “Reliability: value-added category, and provides capacity assurance on an ongoing basis? It starts with a senior management commitment to treat maintenance as a strategic partner in the development of strategic objectives and plans. To optimize maintenance capital expense, senior management must become more closely involved in asset management. Often it takes a catastrophe to make this happen, but in the machinery industry, a timely review of the operating costs associated with maintenance may provide sufficient “sticker shock” to get the ball rolling. What's often required first is a change in corporate behavior.

When senior management is convinced of the importance of the capacity assurance concept, the ball is now decisively in their court. Future success will depend on their ability to make changes across the organization to foster a culture of reliability centered maintenance. If they can't do it alone, they should seek support in the form of management change experts. Often the breadth of experience, the objectivity, and the single-minded focus of such experts allow them to accomplish what company insiders, for a wide variety of reasons, cannot.

The following illustration defines the scope of activity involved in elevating the role of maintenance from an independent function to an integrated process:



Giving Maintenance Its Strategic Due

While it may appear as an overwhelming roster of activities, it’s probably a fairly accurate representation of the management model used for other core activities. The time has come to provide the critical process of maintenance with the same attention to detail and expectations that you would any other important process in your operation.

As you embark on the transformation of maintenance from a cost-depleting, unfortunate necessity to a function that adds strategic value, the real work is in the execution. Buying new equipment and putting words on paper are easy by comparison. Most progressive organizations are actually pretty good at the planning stages in the development of a competitive advantage, but most also find that “the devil’s in the details.”

Getting Results: Manage by Walking Around

Once you have your “Capacity Assurance” plan, some very specific activities will likely be required to keep things from falling apart at the execution stage. Things like supervisors walking the shop floor several times a day, gathering information, coaching, and troubleshooting. Things like daily meetings with maintenance managers and their counterparts in production, procurement, and engineering. Things that are time consuming, tedious, demanding, resource draining and tempting to postpone. But ultimately, these activities will have a big impact on a cost centre that can account for up to 30-50% of your operating budget.

Maintenance isn't sexy. But for capital-intensive organizations, transforming the traditional function of maintenance into an integrated, strategic, and fully supported process can spell the difference between a company that attracts new business and provides a competitive advantage versus one that spirals into non-existence. And that's something to get very excited about.



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