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Monday, 15 February 2010 11:04

Had a group of maintenance pros been asked 25 years ago about their knowledge of and preference for various maintenance improvement strategies, I'm not sure there would have been great depth of response. While programs such as PdM, RCM, TPM, SMED, RCFA and others were not unknown, they were not used to the extent they are today. "Flavors of the Month" would probably have been a common answer.

By contrast, when asked the above question recently, *Maintenance Technology* Reader Panelists provided detailed answers that indicate both their familiarity with such strategies, and their practical understanding of where and how each works best. With regard to implementation, however, modern concerns place many Panelists in a bind. Fluctuating production needs and working conditions caused by an unstable economy, for example, now demand that maintenance crews be flexible. While these conditions seem to have reduced experimentation (flavor of the month), they have ushered in a more hard-boiled approach that Panelists say is as likely to invite strategic implementation as it is to shut it down.

The long and winding road

"I've used RCM, TPM and SMED much more than RCFA," says a maintenance technician in the Midwest. "But I believe that each of these works best per its application." Success, he believes, also depends on the level of maturity of each manufacturing environment. In other words, is the company setting benchmarks or is it in the red trying to become profitable? "I have no doubt," he says, "that SMED or eliminating wastes would be [used] most heavily in companies that are not mature, less profitable or below a benchmark." He adds that SMED could be viewed as a fundamental building block that must never be removed. Or, he notes, "every other method will collapse."

This Panelist reports that significant personnel changes across all departments at his operation have caused his employer to take a "shotgun" approach to maintenance. Despite his experience in TPM and RCM gained from a previous employer, he says, "we are still making improvements in SMED."

Another Panelist also finds himself in the position of having more experience in maintenance improvement than his company can (or chooses to) use.

"I have used parts of TPM, and liked it," says a food-industry maintenance supervisor in the Upper Midwest. "I have also worked with a non-computer-based PM system, using hand-written PM forms. But selling PM is tough, because payback is not immediate." He adds that while he's seen many maintenance systems evolve into strong, high-performance programs, without the support of upper management, "it's a waste of time and money." Despite computerized systems, he laments, the organization doesn't have enough skilled people to do all that needs to be done. At his current company, the maintenance team has been reduced to the fire department and not much more. "We now mostly run to failure," he observes. "It is a very high-pressure environment to work in."

A maintenance journeyman for a utility in the Northeast deals with the same disturbing trend. As he puts it, "I have seen systems and methods come and go, and my opinion is that PM is the best. But, even if a machine is scheduled out of service, the company wants it back as soon as possible. [This can be difficult] if there is an unexpected problem, as there is bound to be as equipment gets older."

He believes this is where real-world issues get in the way of potential maintenance gains. "Welcome to the field-expediency world of today," he says. "Now we must do more with less people, and we are unable to stock parts because the company is taxed on the value of these parts." His company's CMMS, which, he reports, showed promise, has been rendered only partly useful because they keep wanting to stretch the recommended times between maintenance. "The run-to-failure mode seems to be the one we almost always fall back into," he adds, noting that performing maintenance tasks on a running machine "just isn't economically feasible."

Sticking with PMs

Yet another Panelist notes that while he has seen many programs chosen, few catch on. "We have used just about all of them," explains this auto-industry PM leader. One success included shifting time-based PMs to PMs based on parts produced, which improved production uptime by 62%. "So we started to do this process to a number of machines," he says, "but we did not finish all of them, which was a real shame." He now guides workshops where maintenance, production and engineering get together and create strategy-based solutions that save money and show increases in production. "But again," he says, "we start out with good intention, and never follow through." Today, his faith is in a recently reinvigorated PM program. With this, he believes, improvements again should be seen.

A utility-industry mechanical maintenance supervisor in the Upper Midwest also puts stock in his operation's PM program, which is coupled with PdM and planning and scheduling. "I was involved in developing and championing this program," he recalls, adding that results include boosting MTBF in process equipment from 1–3 years to 8–10 years. Similarly, the program helped increase his plant's critical-equipment replacement cycle from 1–6 years to 5–12. And, while maintenance costs have increased, he reports that they've done so "at an average of 7% below the rate of inflation for the past 26 years." This Panelist also notes that the program's success has created a harmonious working relationship between operations and maintenance, and has enabled the 38-year-old facility to set production and availability records. "This facility consistently ranks among the top low-cost generating plants" in the company, he says.

Strategy, with Culture Change

While some Panelists have had the opportunity to fully implement maintenance programs and shepherd them to success, others report frustration in these efforts. Often they blame a lack of management commitment. A former practitioner who is now a consultant based in the Southwest points to this outcome being the result of a culture that does not accept strategies like equipment ownership as fundamentally important. Steering cultures in this direction "is always a challenge," he says. "However, convincing senior plant or corporate management of the benefits of these programs and selling the up-front cost layout is critical to their success."

Like most Panelists, this consultant also believes "that different concepts are necessary for different situations." Though he does have a favorite approach ("real-time condition-based monitoring, coupled with a good predictive program and TPM equipment-ownership philosophy"), he knows that this, too, will fail without other elements firmly in place. "It must be used in an organization with good maintenance engineering and planning and scheduling," he observes, "and where maintenance is accepted as a profit contributor, not a cost center." **MT**

Have a question or comment on what you've just read in this column? Have a suggestion for a future Reader Panel question? Let us hear from you. E-mail: rcarter@atpnetwork.com