Written by Ken Bannister, Contributing Editor
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According to Webster's, "innovate" means "to make changes, to introduce new practices, to renew." The synonyms for "innovate" are even more powerful and include authoritative action words such as "revolutionize," "invent," "modernize" and "transform."

If you're able to describe your current maintenance strategies and methods in the above terms, congratulations on your innovative approach to improving your state of maintenance! Sadly though, for many maintenance departments, "stagnation"—*the antonym for innovation*—would be a more appropriate description of the situations in which they find themselves.

The first order of innovation is to establish the need for change through recognition of the systematic and design problems we face as we deal with the art and science of our craft on a daily basis. The second order is the recognition of our internal resource strengths that can be capitalized upon immediately to develop and administer innovative solutions for a change-management program. The third order of innovation involves the discovery and creation of a suitable change catalyst to facilitate the transformation process. Once established, the Return On Investment (ROI) statements can be developed and the selling process for moving forward can begin.

1st Order: Establishing the need for change

Although no definitive study exists, many maintenance-management professionals suspect that the maintenance department itself is directly responsible for more than 50% of its maintenance problems. Some believe the figure is as high as 80% in certain heavy industries.

The reasons for this are many, including:

- Inconsistent PM completion (PM language is too vague and subjective, with PMs rarely checked for effectiveness);
- Ineffective work-management practices (many maintenance departments have no formal

planning and scheduling program in place);

- Poor lubrication practices (up to 70% of all mechanical failures are directly or indirectly attributed to ineffective lubrication practices);
- Lack of failure analysis (often there's no time and no recorded failure history, which causes unnecessary duplication of repair and spare parts requirements);
- Poor communication with operational partners (resulting in no prior warnings of impending failures and extensive wait times for equipment);
- Inadequate MRO inventory-parts availability (leading to other secondary failures if the asset is still used while waiting for parts to arrive); *and*
- Lack of process and direction from management (maintainers are forced to work to their own agenda).

Although this list sounds ominous, such problems should be viewed as opportunities seeking innovative solutions.

In fact, a plethora of opportunities exist within every maintenance department. Recognizing and documenting it is accomplished through performance of a Maintenance Operation Effectiveness Review, or MOER®. Such a review is usually conducted by a third-party maintenance-management professional working in conjunction with the maintenance department. The MOER's goal is: 1) to analyze and audit the maintenance department to define the current state of maintenance and see if it meets the needs of its customers and the company; 2) deliver a tangible benchmark scorecard that can be used to set goals and objectives against and gauge future improvement success; and 3) deliver a project Management Action Plan (MAP) for moving forward. Remember: Opportunities translate into immediate and future needs requiring "champions" to move forward.

2nd Order: Recognizing internal strengths

The MOER is frequently a difficult process for a maintenance-management team to go through, as members of the team tend initially to view opportunities as weakness or failures they could be blamed for. Once managers recognize that many of their problems are legacy issues that pre-date their watch—*and that it takes great strength as a manager to document his/her department in all its nakedness* —denial quickly turns to acceptance and excitement for the innovation process toward improvement success.

Surprisingly, most maintenance trades jump at the chance to open up and discuss how they have managed to "work around" chaos to bring order to their work process and deliver a reasonable level of accomplishment despite the obstacles. Through these interviews, "pockets

of excellence" are discovered, bringing to light the fact that undocumented, truly innovative approaches are utilized on a daily basis, without management knowledge! Due to lack of structure, however, the "fix" sometimes may cause additional problems in other areas.

For example, a personal cached inventory of high-failure spare parts purchased on an expense account can keep equipment running and available. In this case, the maintainer has learned what fails, how often and how to purchase parts outside the normal inventory channels and quickly repair assets without a work order.

In the this example scenario, no equipment work history is captured, the PM strategy is not challenged and the true cost of maintenance is not accounted for. Still, out of necessity, the maintainer has unknowingly become a very effective maintenance planner and scheduler and has acquired skills that could be very useful to the planning and scheduling effort in the future.

The lesson in the second order of innovation is to look beyond the deed and recognize strengths in actions that can be capitalized on in a positive manner with simple direction—*and to recognize people who can be turned into "champions" and advocates for change.*

3rd Order: Discovering and creating a suitable catalyst for change

True innovation is said to take place when a single-minded solution resolves a multitude of problems. There's no panacea in maintenance—*the closest we have is the Computerized Maintenance Management System (CMMS) or Enterprise Asset Management (EAM) system.*

All too often, however, the CMMS (that may not have been updated since it was implemented) functions purely as a work-order system in which the historical data cannot be trusted. In this condition, the CMMS is a perfect change catalyst as maintainers recognize the power of a well-implemented maintenance-management system.

Most users will willingly change their habits to accommodate a new system. In the sprit of innovation, this need not be an expensive proposition. That said, why not be truly revolutionary: Reinstall your current CMMS! After a simple reimplementation, a truly effective CMMS will be able to meet the needs of its users, deliver value and resolve many of the maintenance issues found in the MOER. In the next issue, we'll investigate a fast and innovative way to implement or *re-implement* a CMMS. **MT**

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Ken Bannister is the author of the book Lubrication for Industry and the Lubrication section of the 28th edition Machinery's Handbook. He's also a contributing editor for Maintenance Technology and Lubrication Management & Technology.
Email: kbannister@engtechindustries.com

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