Bob Williamson, Contributing Editor What are the perceptions, and the reality, of "maintenance" in today's world? While there are many recognized national and international standards (definitions, metrics, measures, methods) for workplace safety, quality, environmental, health, banking & financial, pharmaceutical, aircraft and even nuts, bolts and road signs, there are no broadly recognized standards for industrial maintenance and reliability (M&R).

Sure, there are bits and pieces, terms and definitions. There are military standards, Automotive Engineering standards, emerging European standards, industry-specific standards and others. Some large industries even have their own M&R standards. But, there are no overarching standards for M&R "best practices"and how to consistently measure their attainment-despite Edwards Deming having long ago reminded us that "*you cannot improve it if you don't first standardize it.*
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Given such a perennial void, many large companies and consultants have created their own unique ways to measure M&R activities and effectiveness. That's helped make "standardization" even more difficult.

The Society of Maintenance & Reliability Professionals (SMRP) Best Practices Metrics Committee has set out to identify and define the most important aspects of maintenance and reliability. Since beginning in earnest fall 2003, the committee has defined five major categories, including 46 individual metrics, now in varying stages of development. Still,

until these and other standards are adopted, "maintenance"will continue to be the least defined of all major industrial activities-an aspect of our profession that I recognized back in 2004 as a member of the SMRP committee.

Standardizing M&R metrics is an extremely critical endeavor that will allow us to make decisions about our equipment care practices based on objective FACTS, rather than opinions or assumptions. (*Refer to Occam's razor, defined in the July 2006 installment of this column: the decision or explanation with the fewest assumptions is liable to be the correct one.*)

Let's look beyond specific "M&R metrics"for a moment and consider the terminology and even the buzzwords associated with our profession."Maintenance," for example, means sustaining a desired level of performance.Mechanics, however, were called "fixers"in the 19th century textile industry-a term that carries over to this day. In many plants, "maintenance"is dominated by fixing things that break-*repair*. In turn, this sets the stage for the popular misconception that the primary job of maintenance people is to "fix things that break."Ugh!

Who actually performs industrial maintenance work? It's the mechanics, general mechanics, technicians, multi-skill mechanics, journeymen, craftworkers, skilled trade workers, machinists and, yes, the fixers, among us. In some plants, there are specific "trades"(electricians, instrument mechanics, mechanics, welders, millwrights, machine repairers, HVAC/ refrigeration techs, setup mechanics, etc.).While some of these job roles are very specific (e.g. HVAC/refrigeration techs), others can be quite broad (e.g. general mechanic). The U.S. Department of Labor has historically lumped these jobs into the classification of "Industrial installation, maintenance and repair occupations." Job-specific maintenance training and qualification standards typically have not existed!

A project started in 1997 by the Manufacturing Skills Standards Council (MSSC) has created "A Blueprint for Workforce Excellence"that defines skills and knowledge standards for six broad job concentrations, including industrial maintenance, installation and repair occupations. The MSSC skills certification system, defining core skills and knowledge, common across 14 manufacturing sub industries, has been published. It's a great start to begin developing industry and job-specific training and qualification for front-line maintenance personnel.

Terms that define how "maintenance"work gets accomplished can be confusing too: self-performed, contracted out, supplemental contract and operatorperformed maintenance. The "age of Lean manufacturing" has contributed new buzzwords to the mix, including "outsourcing"(referring to manufacturing by outside/offshore suppliers) and, now, "outsourcing" of maintenance. (*Then, of course, comes the latest wrinkle: "in-sourcing,"or bringing back unsuccessfully "outsourced"work.*) Unfortunately, the term "outsourcing" has taken on some rather negative connotations out on the plant floor. That's because it typically means job loss when we "outsource"all or part of the equipment and facility maintenance functions.

In too many businesses, maintenance continues to be viewed as an "overhead expense"or "indirect cost."The Quality Revolution of the 1980s attacked maintenance as a "non-value adding"function in manufacturing plants. Today, many Lean leaders continue to label maintenance as a "non-value adding (but necessary) activity."Ironic, isn't it?

The very focus of a maintenance group tends to be the company's assets-in many cases, its single largest investment-its equipment and facilities. Yet, in countless organizations across this country, those assets that enable so much generation of revenue are being entrusted to the care of "non-value adding"personnel. Ugh!

Words (*and labels*) are powerful. Every time we speak and act, we influence our profession, our future or someone's perception of our business- be they CEOs, plant managers, prospective employees or students.While I'm not pleased that "maintenance"still is the least defined of all major industrial activities, I am delighted that positive change seems to be underway. To keep it on track, we all should strive to better "define"ourselves.

We need to stay focused on the true mission of M&R in today's rapidly changing, globally competitive economy.We also need to choose wisely when it comes to the terms we use to define M&R. Avoid using buzzwords; they can send very mixed messages. Support consistent and objective metrics and measures of the M&R activities in your plant or business. Most importantly, keep your eyes on the prize. Properly maintained, reliable equipment lowers operating costs and improves the competitive position of your business-*and our Nation*
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