

A Fresh Look at Cost of Quality

Quality professionals must learn to speak the language of management. BY ED MCMENAMIN

Cost of quality is often misunderstood, improperly measured, and underutilized.

If used to calculate costs incurred by producing bad products and the cost of preventing bad products, the cost of quality can provide transformative information for an organization. Unfortunately, the metric has not infiltrated boardroom thinking and upper-management philosophies in the way Armand Feigenbaum likely imagined when he introduced the core ideas.

"I'm not aware of many organizations, or even a few organizations, that have counted or made a claim that they're looking at cost of quality," says T.M. Kubiak, president of Performance Improvement Solutions. "Organizations tend to measure scrap, and sometimes rework. So those are typically visible and easier to measure, and organizations have done something in that regard. But beyond that, I haven't seen any real, full implementations of the concepts embraced by cost of quality."

To bring better understanding, Douglas C. Wood would start by renaming the cost of poor quality categories.

"The language that we use for cost of quality comes from 40 years ago, and it's just way out of step with our language today," he says. "Prevention, appraisal, internal failure, and external failure—that's the language that's published. Those terms don't mean the same things today."

Wood, president of DC Wood Consulting LLC, suggests using "investment" rather than prevention, "monitoring" rather than appraisal,

"waste" instead of internal failure and "downstream consequences" rather than external failure.

"You know, there are challenges in business, in industry, in manufacturing, in any human endeavor when you have a long-established tradition and you want to change the names. It's difficult to get people to use a new name. But when the old name does not reflect common usage, or what you're trying to say, it builds friction when people try and implement their ideas."

Similarly, understanding cost of quality as waste would also help upper management better grasp the importance of the concept, says Thomas Pyzdek, president of Pyzdek Institute LLC.

"If you throw something away, scrap it, then it obviously costs you money," he explains. "But it's a different kind of cost. If everything was done correctly the first time, you wouldn't need [appraisal, internal failure or external failure measurements]. So it's a waste cost. Other costs in the business produce something of value. But if you're looking at, for example, internal or external failure cost, they not only don't add value, but they take away value. And I think when cost reduction rolls around and the finance people are looking at places to save money, I think these costs should take precedence over other costs because there's no value associated."

FROM THE TOP

The new revision to ISO 9001 placed increased emphasis on upper management to look at risk based thinking, and other quality measures. In a similar way, Pyzdek thinks quality professionals should place greater emphasis on relaying the ideas of cost of quality to senior leadership. Upper management has the ability to foster communication between quality engineering and process engineering departments, along with other departments that might not otherwise regularly speak with each other.

"Over the years I've seen that cost of quality hasn't had the impact that it should be having," he says. "And I think part of the reason that

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it's underappreciated is because it's looked at as just another cost. And I think the idea to change the definitions and terminology may be a prelude to actually taking a brand new, fresh look at cost of quality, and maybe finding a way that can move it up to the board level and get their attention. I think it can form the basis of a leadership and management approach. If you understood it correctly, it would be like Toyota with lean. It's the way they run their company. And yet it doesn't look like it's at that high of a level. But it's the philosophy that makes it so power-



AUTOMOTIVE IATF 16949 STANDARD INCLUDES COST OF QUALITY

The 2016 revision of the Automotive IATF 16949 standard added the word “cost” for the first time in several requirements.

The new standard was published Oct. 1, 2016, and organizations with current certificates must transition to the new standard by Sept. 15, 2018 in order to keep accreditation. Any organization looking to certify after Oct. 1, 2017 must also conform to the new standard.

- Accounting for cost is now included in:
- Design and development controls
- Product design input
- Monitoring
- Manufacturing process design input
- Management review inputs

Source: Roderick A. Munro, business improvement coach, RAM Q Universe Inc.

ful. If we could get the cost of quality philosophy understood and taught to boards, I think it could address a lot of issues in terms of sustainability. We’re the folks that are preventing and eliminating waste, and that means we can do more work with less resources. It even has societal impacts if we look at it correctly.”

For the message to reach higher-ups, quality engineers must learn to speak the language of management, Kubiak says. Then management can begin to see how cost of quality gives insight into organizational efficien-

cies and effectiveness. “If you look at cost of quality in terms of dollars, as opposed to the defects aspects, if you can put it in dollar terms, you’re likely to get management’s attention,” he says. “If quality professionals know that well and can translate the organizational inefficiencies and effectiveness into cost of quality terms, you’re going to garner the management’s attention. Otherwise it’s not going to happen. It might happen on a project-by-project basis, but never at the total organizational perspective. Those benefits of cost of quality can be huge,

they can be enormous. And when they can be that big, management simply can’t ignore them.”

RIGHT THE FIRST TIME

Regardless of terminology, many organizations don’t make the preventive investments needed to get it right the first time, says Roderick A. Munro, business improvement coach at RAM Q Universe Inc.

Proper preventive action can reduce the “hidden factory,” often explained as the portion of an iceberg under water, invisible to the eye, yet much larger than the portion above water.

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“We’re so busy fighting the day-to-day fires, we can’t see the forest through the trees,” Munroe says. “We’re trying to make sure the customer is getting the right parts, and if they complain, then we’re trying to fix it real quick. And nobody takes time to record it as it’s happening, to get a good feel of how much time is really spent on correcting things that went wrong versus trying to prevent them in the first place. Our society is still primarily in a ‘fire, ready, aim’ mode.”

Munroe suggests that traditional accounting practices aren’t in line with cost of quality ideas, and aren’t trained to see the benefits and returns on the preventive investments. Those benefits can also be hard to spot when an organization’s cost of quality metric does not look broadly from the secretary to the CEO, and instead only looks at the quality department.

“It’s literally across the board,” Munro says. “How much of an operator’s time do they actually spend redoing something because it wasn’t right in the first place? You would hope zero, but a lot of times that’s not the case.”

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