



Quality 2.0

It's time to revise the quality mission.

Quality has been around as long as mankind. Humans seem to have an innate sense of when something is done right. We can look at something we've never seen before and know when it's good—or not good.

Modern quality is a newer concept. I'd put its beginning at the late 18th century. In 1798, Eli Whitney was awarded a contract by the United States government to produce muskets whose parts were interchangeable. This meant that a good musket could no longer be determined by looking only at the musket. Indeed, the musket might be fully functional and flawless, yet be considered of poor quality because its parts couldn't be replaced. Quality 1.0 had arrived.

Quality 1.0 has evolved, but the quality mission has remained fundamentally the same. At most, the changes between 1798 and 1985 were revisions that helped accomplish this basic mission:

- *Quality 1.1:* Statistical process control
- *Quality 1.2:* Statistical quality control/acceptance sampling
- *Quality 1.3:* Quality assurance
- *Quality 1.4:* Total quality control
- *Quality 1.5:* Total quality management

Quality 1.0 has had its problems. For one thing, it left out other major stakeholders. Quality 1.0 advocates trumpeted, "The customer is king!" But what about investors? Employees? Society? Quality champions are put on a limb when they're required to obsess on customers to the exclusion of other key stakeholders. William E. Conway, an early U.S. disciple of W. Edwards Deming, lost his job at Nashua Corp. when he delayed release of an important new product so that its reliability could be improved. The delay affected revenues and threatened Nashua's financial solvency in the short term. Nashua's board of directors decided

to replace him with someone who'd take quick action. Conway's methods benefited Nashua in the long term, but that was probably of little comfort to Conway.

Quality 2.0 is the first major revision of the quality mission in more than 200 years. Quality 2.0 seeks to define a harmony of stakeholder interests. The organization's major stakeholders—all of them—must be the beneficiaries of the organization's activities. I consider the concept of mutual gain to be a fundamental principle of free markets. There should be no losers in a commercial association.

Genichi Taguchi defined quality in terms of the potential loss to society. Taguchi's loss functions were an attempt to capture and measure these losses as they related to deviations from the ideal customer requirement. Quality 2.0 needs to generalize Taguchi's ideas to include deviations from the ideal for all stakeholders. Taguchi also believed that all losses would find their way back to the originating organization. Quality 2.0 practitioners need to develop ways to measure these losses in terms that are unambiguous and meaningful to the organization's leaders.

Quality 1.0 ensures that customer requirements are obtained and translated into internal performance specifications. In other words, quality provides an interface between people who are outside the organization—such as customers and suppliers—and people inside the organization. Quality 2.0 extends this principle. Stakeholders shouldn't benefit at the expense of unacceptable costs to others.

The new mission of the quality function is to provide information to leaders so they can ensure that an organization's outcomes conform to stakeholder requirements, and loss to society is minimized.

This new mission is radically different than the old, Quality 1.0 mission. Quality must grow into this new role because, at

present, it concerns itself almost entirely with the customer's requirements. The new mission will require new tools, skills and perspectives.

Noriaki Kano's customer satisfaction model lists three types of quality characteristics. First are basic quality characteristics, which the customer doesn't even think about when making a buying decision. These are "deal breakers" if they're not there; for example, we assume that the product won't be defective. Second are expected quality characteristics, which customers think about and want more of; for example, we want a car with power and fuel efficiency. If we can find a car with both better fuel economy and power, we prefer it over another car with less of either.

Quality 1.0 is all about these two types of quality as applied to customer judgments. Quality 2.0 adds a focus on the third type of quality characteristic: delightful quality. These are quality characteristics that surprise customers in a good way. Quality 2.0 operationalizes delightful quality with metrics and requirements, but it doesn't stop there. Quality 2.0 also looks at all three types of quality as they apply to investors and employees.

Quality 2.0 involves much more than what I've presented here. I'll return to the topic in future columns.

About the author

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