



## The Quality Conundrum

The more things change, the more they stay the same.

When you've been involved in quality for as long as I have, you begin to wonder just where we're going. I hear ever-younger consultants telling us about what's new and different, but it all sounds like the same quality methodology I was introduced to 72 years ago, when my father began to keep control charts on my first-grade tests. (At that time Dad was the chief inspector at IBM.)

In an effort to define what's truly new and different, I borrowed a copy of Armand V. Feigenbaum's *Quality Control: Principles, Practice, and Administration* (McGraw-Hill & Co., 1951). This was the benchmark book that defined total quality control (TQC). In it, Feigenbaum summarizes the methodology as an effective system for integrating the quality development, maintenance, and improvement efforts of an organization's various groups to enable production and service at the most economical levels that will allow full customer satisfaction. TQC includes:

- Design of experiments
- Quality cost
- Design review
- Statistical process control
- Process certification
- Involvement by top management
- Supplier controls
- Trained, certified quality engineers
- Reliability engineers
- Employee training

The next change in quality methodology, which occurred during the 1980s, was total quality management (TQM), which includes:

- All of TQC
- ISO 9001
- Benchmarking
- Team problem solving
- 5S
- Toyota Production System

- Strategic quality plans
- Lean
- Process focus

TQM's measure of quality is: Do it right the first and every time. No level of defects is acceptable.

The next major change to the quality approach was business process improvement (BPI), which arrived on the scene in 1984. BPI attacks the heart of the current white-collar problem in the United States by focusing on eliminating waste and bureaucracy. It helps organizations simplify and streamline operations, while ensuring that both internal and external customers receive quality output.

The main objective of BPI is to ensure that the organization has business processes that:

- Eliminate waste
- Eliminate errors
- Minimize delays
- Maximize use of assets
- Promote understanding
- Are easy to use
- Adapt to customers' needs
- Provide a competitive advantage
- Reduce excess head count

In 1987 Six Sigma appeared. This management strategy uses statistical tools and project work to achieve breakthrough profitability and quantum gains in quality.

Motorola defines Six Sigma as a business improvement that focuses an organization on:

- Understanding and managing customer requirements
- Aligning key business processes to achieve those requirements
- Utilizing rigorous data analysis to minimize variation in those processes
- Driving rapid and sustainable improvement to business processes

At the heart of the methodology is the define, measure, analyze, improve, and control (DMAIC) model for process improvement.

Six Sigma includes:

- Selected TQM tools
- Selected BPI tools
- Full-time problem solvers called Black Belts
- Expanded statistical training for a selected group of problem solvers

Since 1987, we've also seen design for Six Sigma, lean Six Sigma, total improvement management, and now total Six Sigma.

What do all these approaches have in common? They all use:

- Top management leadership
- Process focus
- Similar problem-solving approaches
- Measurements of dollars saved
- Customer focus

I believe that these quality models are more alike than they are different. Business process improvement differs slightly because of its focus on information technology, but overall, it seems that they're all good if used correctly, although none of them are good if they're implemented poorly. What do you think?

### About the author

H. James Harrington is CEO of the Harrington Institute Inc. and chairman of the board of e-TQM College Advisory Board. Harrington is a past president of ASQ and IAQ. He has more than 55 years of experience as a quality professional and is the author of 28 books. Visit his Web site at [www.harrington-institute.com](http://www.harrington-institute.com). **QD**

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