

QUALITY AND INGENUITY ARE INTERTWINED



Regaining Our Innovative
Edge Through Quality
Assurance

By Jim Turner and
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It is a metaphor for our times that the average American has never heard of Joseph Juran.

Juran, who died on February 28 at the age of 103, was a giant in the quality movement that revolutionized manufacturing, first in Japan and then in the United States and the rest of the industrialized world. Juran and those who followed him extended quality principles across the entire business sector and into other aspects of society. It is now clear that Juran's views on teamwork and his ideas about continuous improvement and quality assurance management techniques are even more important today to the United States' position as an intellectual and practical world leader in innovation.

But first, a bit more on Juran's critical legacy. Born in a primitive East European village, Juran immigrated to the United States as a child, and at age 21 was one of the first engineers to apply statistical methods to quality inspection in manufacturing. Ultimately, he became Western Electric's corporate Head of Industrial Engineering and then went on to re-engineer military logistics during World War II. On loan from Western Electric to the federal government, Juran led a multi-agency team that redesigned the U.S. armed forces' shipping processes, reducing the amount of paperwork, significantly cutting costs, and aiding the war effort.

After the war, Juran became a full-time quality consultant, and is credited with transforming the Japanese post-war economy. He popularized the Pareto Principle—the idea that 80 percent of potential improvements are due to 20 percent of operations—teaching that the most successful organizations optimize that vital 20 percent first.

Juran's key insight is that process matters. He stressed the importance of empowering individual workers, the reinforcing nature of teamwork and quality circles, and the importance of extending quality management techniques to suppliers and customers. And he taught the importance of benchmarking to understand and meet the challenge of competitors. Japan's embrace of quality management placed it on the road to world manufacturing leadership, as documented in *The Machine that Changed the World*. Japan's recognition of his contribution led to the award by the Emperor of Japan of the Order of the Sacred Treasure Award, that nation's highest honor. This is why the Japanese were so amused when, in the 1970s, American companies wanted to learn Japanese management techniques. The Japanese believed that they

were practicing American management as taught by Juran and his colleague Dr. Edwards Deming.

Juran's book, *Total Quality Management*, is the bible on this topic. At age 82, Juran was the star witness in the Congressional hearings that led to the creation of the Malcolm Baldrige National Quality Award, which honors superior performance in organizations that function at the highest quality level.

JURAN'S LESSONS FOR AMERICA TODAY

Management guru Peter Drucker stated in a 1996 PBS documentary that "whatever advances American manufacturing has made in the last thirty to forty years, we owe to Joe Juran." Indeed most of the large companies worldwide have embraced his ideas, including U.S. quality award-winning manufacturers Boeing Co., General Motors Corp.'s Cadillac unit, high-end textile and chemicals company Milliken & Co., and Texas Instruments Inc. Yet, U.S. manufacturing today accounts for only 15 percent of our Gross Domestic Product. This is less than Japan, Germany, and other high-wage economies. Why? The reason is that services now dominate our economy, yet Americans often wonder where the service is in our service economy.

Quality principles apply in services as strongly as they do in manufacturing, but the problem is that much of our service and manufacturing sectors still cling to the rigid industrial efficiency production models of Frederick Taylor, the turn-of-the-last-century's most famous efficiency management expert. The high throughput, Taylorist model that treats workers as automatons, quality as an after-the-fact consideration, and customers as uninformed and undemanding still appears to dominate.

Nor are we as a nation aware of how fast our competition is moving. Other countries are taking quality a step further by considering how their governments and educational institutions need to restructure to better accomplish their national goals. Taiwan's industrial parks now often bundle leading research universities and government agen-

cies to provide research and policy expertise for integrated solutions. The result is a nation that has moved from a underdeveloped country famous for cheap goods to the world's largest manufacturer of all manner of computer peripherals—and increasingly the inventor, designer, and manufacturer of cutting-edge electronic technologies.

Or consider Finland, which has coupled its emphasis on quality in business with application of quality principles to its schools, with the goal of empowering its students and teachers. Despite deemphasizing standardized tests, they have raised performance levels to the point where students are among the best in the world, both in standardized tests and adaptability in the workforce upon graduation.

Countries across the globe are aggressively modernizing, and once again, as in the 1970s, the United States is not keeping up. That's why reengineering government through quality management is so essential.

PUBLIC POLICY QUALITY MANAGEMENT

Ten years ago in the book *The Death of Common Sense*, legal scholar Philip K. Howard documented the rise of rules in American government. We were then and still are a society in which rules and procedures often inhibit creativity and problem solving. Much of government is driven by the same bureaucratic approach that Joe Juran spent a lifetime working to replace.

When people say that they dislike government, they highlight the maze of rules and regulations, the lengthy and seemingly illogical processes, and the difficulty in getting governments to make decisions. Too often, government acts after the fact when something goes wrong—the analog of old-fashioned quality control—rather than working with its constituencies to avoid problems, an approach that lies at the heart of today's quality assurance programs in the private sector.

Once something goes wrong, too often our government embraces an overbroad rule to prevent it

from happening again. One shoe bomber and thousands of Americans take off their shoes to comply with a rule that does not make us more secure and does not anticipate the next event.

Joe Juran and his colleagues have shown us the way out. It is now time for the government at all levels, and wherever feasible, to replace end-of-the-line regulation with active participation. A re-engineered regulatory agency should be able to deliver a higher level of public safety by working with companies and all other interested parties on setting commonly acceptable standards that guarantee a high level of public good in a cost-effective manner.

For instance, state auto inspections could be redesigned to increase public safety. Data that they routinely collect could be targeted to that 20 percent of components that cause 80 percent of the safety problems—the 80/20 rule again. Faulty components could be traced back to a manufacturing lot and allow auto companies and their suppliers to correct unusual patterns of wear. Currently wide-ranging recalls happen only after significant and catastrophic failure. Why not solve the problems in situ and work for much smaller recalls well before failure occurs?

Critics will claim that the active participation of government agencies and industries in solving problems will result in what's known as "regulatory capture," in which the industry being regulated commandeers the agency policing it. But that's what happens when regulations are rules-based; companies work hard to change the rules. In contrast, quality assurance management, if properly implemented, replaces regulatory capture with cooperation, and brings public officials, private industry, and consumer and workers groups together to achieve maximum efficiency, innovation, and speed in getting the product or service right the first time.

A government operating on its own priorities at a bureaucratic pace does not deliver timely solutions—just when U.S. international economic competitiveness demands timely action. To be effective in the 21st century, governments need to switch to a

quality approach in conducting government business. This means going digital wherever possible, which in turn will necessitate setting privacy-protection for the mining of that data, working with manufacturing and services industries on developing common language, and setting standards to make government/industry interactions as seamless as possible.

In short, it will require a government commitment to excellence in forcing out waste and maximizing efficiency in its functions, and in committing to what is best for private sector entities and the common good. We need to realize that government services are part of the international competitiveness of private companies. Joe Juran championed international benchmarking for companies. We need to benchmark government delivery of services against the most efficient governments in the world. We need to get over assuming that everything in the United States is above average.

Finally, we must recognize our nation's inherent advantages and work to strengthen them as well. We have one of the world's longest traditions of democracy and of productively working together. The Internet has greatly increased the efficiency of democracy by rewarding open systems and by making distributive work and decision-making easier. Premium services from government are one of the offsets we can offer to low wages from other countries.

We have every reason to believe the United States can once again emerge as a world leader in productivity and quality of life if we focus on the vital issues where we can make the greatest improvements; if we err on the side of an open and free society; if we reorganize to empower our entire workforce; and if we update Joe Juran's gift of quality through a commitment on focused, continuous improvement. *sp*

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