

## 2011 Forces of Change – Shaping the Future of Quality

(Note to readers – these forces and their descriptions represent the first phase of the 2011 ASQ Future of Quality Study. The study was fielded January through March 2011. The descriptions below represent a synthesis of thought and the contributions of over 150 panelists from 40 countries. The purpose of identifying the Forces and descriptions is to stimulate discussion about the future of quality and the implications to those who practice quality and those who lead organizations. These forces provide a focused opportunity to explore an uncertain future. Ultimately, it is what we do in response to these forces that is the real value of the study. In Phase 2 of the study we will explore the implications of these forces acting upon the future of quality.)

**1) Global responsibility** represents the blending of heightened awareness of the requirement to become more socially responsible with a growing awareness of the global impact of local decisions. Our planet's finite resources are being called upon by a growing percentage of people in the world, and waste that was once economically acceptable is becoming socially unconscionable. The breadth of global responsibility spans governance, human rights, labor practices, fair operating practices, environment, consumer interests, and contribution to society as described by ISO 26000. Global responsibility is a call to ethical leadership at all levels of society – governments, organizations, schools, civic organizations, neighborhoods, families, and individuals with an evolving understanding of what being responsible means.

At an organization level, global responsibility embraces growth and profit – it is not philanthropy. Global responsibility appreciates the dual dynamic of being responsible by reducing waste (in all forms\*) and the realization of that savings to the bottom line with increased expectations that web-informed consumers will reward organizations for their responsible efforts with their purchases. Leaders will advocate concurrent improvements in top and bottom lines. Organizations increasingly value their reputation and act to sustain it in the face of crisis. For producers, global responsibility is a complex topic that goes well beyond production efficiency and production waste. It includes responsible design and the obligation for full product lifecycle stewardship. Innovation becomes an advocate of sustainability. An innovation without a decreased cost to society will be viewed as irresponsible.

There are increasing expectations that today's global organizations will contribute their problem-solving skills and resources to societal needs out of enlightened self-interest for the longer horizons of business sustainability through a combination of social and organizational strength.

(\*Waste – most definitions of waste are limited to the observable aspects of waste – scrap and pollution. Some might include rework (the hidden factory) as a cost of waste. Fully understood waste includes the cost of addressing dissatisfaction and both the disloyalty of customers and the lost opportunity that dissatisfied word-of-mouth may cost in the reduction of new customers. Future measures of waste may well include the waste of poor use of material in design, the waste of human potential, and the full cost of unethical conduct on the lives of those affected. All these costs and consequences are avoidable and therefore may be considered waste. Another waste is the waste of humanity that comes from undeveloped minds; lives lived without purpose and the lost

contributions to society that would come with the full engagement of all people living worthwhile lives.)

- 2) Consumer Awareness** is about consumers using their knowledge to make purchasing decisions best aligned with their preferences. Before the Internet, consumption was primarily limited to locally available products and services. Today consumers can “shop” around the world, and they can use Internet knowledge to inform their decisions not simply related to the product/service itself, but also the practices of the company. If the Internet made knowledge *widely* available, social media is making information *instantly* available. Consumer behavior moves at “speed of the electron” pace in both positive and precipitously negative directions. Providers will find themselves needing to respond at similar rates to the collective behavior of customers.

Closely related to the rise of consumer awareness is the ability for consumers to match their requirements and product/service attributes. The organizations that create the greatest flexibility in their ability to create products and services to match customers’ exact wants and needs will be rewarded. Service providers are already headed this direction as they tailor experiences to custom fit their customers. Their databases and the massive data bases available to them allow them to capture customer preferences. New flexible manufacturing technologies will soon allow manufacturers to follow similar paths of mass customization. Economically order quantities of one and zero wait times will become the rule.

This force will usher in a new meaning for the customer–focused organization.

- 3) Globalization.** Globalization is the only force that has been on the study since 1996. It was first on the lists in 2005 and 2008. Earlier studies referred to globalization as the “800 pound gorilla” of forces. Its strength was twice that of the force that followed it on the list. However, what globalization means, has shifted since 1996 when globalization meant a huge opportunity for companies that could figure out how to capitalize huge new consumer markets. By 2005 the opportunity of global markets was offset by fear of competition and lower cost labor. What seemed certain by 2008 was either way – opportunity or threat – globalization was an irreversible reality. Those that ignored globalization did so at great risk.

Then, as now, the only neutralizing factor, but not strongly measured, was the prospect of local production and a sense of social responsibility to earn a greater share of consumer spending. Why buy produce shipped halfway around the world, even if less expensive, when locally grown alternatives could significantly reduce packaging, transportation, and energy consumption? “Read the Packaging” has new meaning in 2011.

Global customers and global supply chains occupy a greater share in organizational strategy. Risk and opportunity are huge and executives and governments are reeling in response to issues that are no longer bound by national borders. Complexity has new meaning – or, better said, human minds struggle to make meaning of the complexity they face. If that’s not enough, complexity is certain to increase.

Woven into the opportunity and risk of globalization and the challenges of organizations to manage their enterprises that now cross borders, cultures, and economic developmental stages, are the issues of finite resources.

“Still the 800 pound gorilla, is ever more present in the minds of managers and leaders - creating new opportunities, creating new challenges, driving consumption, and (resource) exhaustion. Offering lower cost labor and creating demand. Global is simply the reality in which organizations must learn to compete and win.” - *2011 Future Panelist Comment*.

- 4) The increasing rate of change** was bound to surface as a force of change. In the background of past future studies has been the issue of speed. In fact in 1999, when we reviewed the findings of the 1996 study, a common comment was, “the only thing we underestimated was the rate of change.” We referred to that factor as speed – and in the 21<sup>st</sup> century technology is the gas pedal.

Like earlier forces the increasing rate of technological change brings opportunity and threat. High amongst the threats is society’s inability to adapt to the changes foisted upon us by new technology. New technology could create consequences if we fail to imagine.

On the opportunity side of technology are solutions to world problems. Energy, pollution, fresh water, food, housing, HIV, and cancer all lay on our list of hopes for technological solutions. Without solutions to these problems, our dream that the future can provide our children a quality of life equal or greater than our own is doubtful. If population growth was the driver of economic success in the last century, it will have to slide over as technology takes the wheel in the 21st century. However, technology will be much less predictable a force than population growth. Technology is certain to surprise us in ways that disrupt our status quo.

Futurists are already predicting that nanotechnology will have a more significant impact on our lives than the Internet, and other technologies are coming that we haven’t even labeled will be right behind nano. And don’t count information technology out either. In 2005 (when the 2005 issue of the Future Study was being drafted) a terabyte of storage was nearing \$100 (USD) and was the size of a small handbag. Now 2 terabytes can be purchased for the same price and the size is not much bigger than a pack of cigarettes!

Product lifecycles are short now. Consumer electronics have lifecycles of six months or less and will be shorter in the future. Industries will be born, become significant in our lives, and disappear with increasing rapidity. Being first to market will be where the riches will be won. There will be little time, or even market, for second place.

All this speed will require organizations to better anticipate the future and be prepared to respond to the customer’s feedback in lightning speed. The cost of missing a cue from the market, at today’s speed of information sharing, could be disastrous to producers, if they fail to sense and respond.

“This factor is fast becoming a way of life causing faster change cycles, more dynamic thinking, and R&D in a world that demands more, faster, and better at lower total cost.” - *Future Panelist Comment*

- 5) **The Workforce of the Future** will challenge our notions of talent, work, workplace, and learning. While hard to fathom we're being told unemployment, as we think of it, will become a thing of the past. The number of jobs will soon exceed the number of people available to fill them. Demographers predict organizations will find themselves competing for talent and that competition will move jobs around the globe. High tech companies already report this reality. This search for talent, along with technological advances will change the nature and place where work is done and organizations will grow increasingly flexible in their definitions of work engagements. Those who of retirement age will be re-attracted to work with flexible hour arrangements and work that can be done without commuting.

The rapid expansion of information (now doubling every 18 months) and the impact of accelerating technology change will put pressures on organizations to keep their workforce current. Lifelong learning will take on new meaning and the methods of learning will change in response to just-in-time education needs. Organizations will find the need to provide greater considerations of time for learning and larger investments in keeping their workforce current. Counter to the doubling of new information is our ability to forget the wisdom of the past – which also seems to be accelerating. A real challenge in educating the workforce of tomorrow is to preserve the wisdom of the past and to build upon it based upon new insights rather than to continue to treat knowledge and theory as if it were disposable property to be discarded in favor of the latest, most-fashionable concepts.

Traditional providers of education (schools and universities) will find a need to place a premium on preparing students to learn. The emphasis may shift from what students learn, to how students learn. Professional certifications, evolving toward competency bases models, will grow in volume and importance as organizations shift their expectations from knowledge and experience toward demonstrated competencies.

- 6) **Aging population** provides challenge and opportunity. Increasing life expectancies will challenge world resources and place increasing pressures on the cost of providing healthcare to a larger percentage of the world's population. Adding years to life comes at a premium of healthcare costs and society has not addressed the ethical and moral ground of our “at all costs extend life” beliefs. Likewise, our models of social welfare for the aged are based on assumptions of the many (working) paying for the few (not working.) Declining world populations and expanding aged populations are already testing the durability of these models around the world.

It seems working longer will be a certain option, if not requirement, to postpone a day of reckoning. Organizations will need talent, and people will need the economic means to shore up their finances. Retirement may quickly become a short lived artifact of the latter half of the 20<sup>th</sup> century.

There will also be opportunity in the growing aged market. Never before has the world faced the numbers of aged citizens and little is known about the consumption and lifestyle needs of this

segment. Demographers predict that by 2025 the majority of the population will be 65-plus. The majority! With housing, furnishings, and the cost of raising and educating children behind them, we can anticipate whole new lifestyle options and experiences being created for a vital and growing segment of the population when other segments might well be in decline.

Quality of life may resurface with significant importance when the answer is not driven by the formula of “more” and the engine of growth – rising populations – is no more. Stable or declining world populations could have a dramatic impact on global economies.

- 7) **21st century quality.** While this may seem like going to a dictionary to look up the future of quality and finding “see quality,” quality itself is called out as a force of change. And that’s fitting as quality is not what quality was. And organizations should prepare to benefit from what quality is becoming or they will be subject to the competition of those that do. The practice of quality has travelled a long evolutionary path, from quality through pride, to quality by inspection, to quality assurance, quality by prevention, perfect quality, and perhaps quality of creation. We have also seen quality depart from an aspect of product, or service, to the quality of management, and ultimately the quality of the enterprise itself. From products, to processes, to systems, to enterprises. Though all this evolution one truth has not changed. Quality is ultimately what the customer says it is, and what the customer is willing to pay for. This truth is shaping organizations, industries, and countries. It is an immutable truth, increasingly so in an information rich environment.

Dr. Juran (1904 – 2008) gave the quality community a compelling prophecy. He said the 21<sup>st</sup> century would be the century of quality. What was it that he foresaw? Did he foresee the expansion of quality into every sector of the economy – manufacturing, services, education, healthcare, government, and nonprofit? Did he foresee the expansion of quality globally? Did he see a large scale realization of the importance of quality by leaders of all organizations? Or did he see all of these possibilities at once?

If quality in the last century was defined by control and improvement, it is clear – that while necessary – control and improvement will not be sufficient for the 21<sup>st</sup> century. Change and transformation as the emerging tools of quality. There is debate over whether the same professionals can span a skill continuum from control to transformation, but leading thinkers in the field are investing their time in minting new tools for change and transformation and investing their energy to obtain new skills.

Many predict that near perfect product/service quality will be a minimum for being competitive in the future. Table stakes. The best companies are moving beyond product quality to manage their total customer experience. Best practice companies around the world are showing, by their examples, the efficacy of quality applied to the improvement of the whole organization. (These are the national quality award organizations in nearly 100 countries – manufacturers, service companies, small businesses, universities, schools, healthcare providers, nonprofits and governments.)

What is clear is that quality still provides a sustainable competitive advantage, wherever it's applied. It is also clear that modern quality practices are still less common than you might hope. There is a huge opportunity for quality to be a force of change in the future of quality. And whatever quality is today, it would surely evolve in response to the constellation of forces it joins in shaping the future.

There's one additional evolution of quality that is evident and powerful. If quality started in the hands of skilled trades and artisans, it moved into factories when mass production became the norm. Then out of factories into every imaginable kind of organization small and large. Today quality is being called out of the organization into the space between organizations through global supply chains, and through networks of companies that understand their greatest challenges lay outside their organizational walls. And from there, quality moves even further up the feeding chain to be used as concepts, techniques, and tools in the solution of social problems. While the number of examples is small, they are none the less evidence that quality is exerting itself in new ways – in hopeful ways.

**8) Innovation** has become a buzzword. It seems to mean the pursuit of different and exciting. How innovation differs from R&D is uncertain. How innovation differs from improvement is unclear. What is clear is that innovation is increasingly the lifeblood of an organization. With today's accelerating pace of change no organization can assume its future without the ability to bring innovation to customers. How to stimulate an organization to innovate is the subject of papers, conference, articles, and the elixir of consultants. How to create cultures that innovate and challenge today's leaders. Innovation it seems is poised to replace manufacturing as the source of wealth creation in countries.

If innovation means the ability of a company to anticipate customer needs, expressed or unexpressed, known or unknown, and bring products/services to the marketplace that excite customers, then clearly innovation is needed in today's changing world, and more so tomorrow.