

# WHAT'S

ASQ's **futures study** offers insights into where quality is headed

## In 50 Words Or Less

- ASQ's fifth futures study predicts the forces that will shape quality and the world.
- Globalization, social responsibility and new dimensions of quality topped the forces list.
- Study participants outlined the forces, four scenarios in which they might play out, and the implications to quality, organizations and the profession.

# UP?

by Seiche Sanders, editor

**FUTURING, AS IT TURNS** out, is nothing new. The term, which means the “formal study of the future,” dates back to 1842, when it was used to refer to Christian scriptural futurists. In the early 20th century, the term was used to describe Italian and Russian futurists and the “artistic, literary, and political movement that sought to reject the past and rather uncritically embraced speed, technology and violent change.”<sup>1</sup>

Change is inevitable, then as it is now. But change today occurs at a rate that even the most prophetic futurists couldn't have fathomed a century or two ago. The swiftly changing world makes efforts to predict the forces shaping our future all the more crucial, lending strategic advantages to those organizations that do it well.

ASQ undertook its first futures study in 1996 and followed up with studies in 1999, 2002, 2005 and now in 2008. Table 1 shows the forces from all past studies.

Led by Paul Borawski, ASQ's executive director and chief strategic officer, the 2008 futures study effort included three important steps:

- Identifying and prioritizing the key forces that will shape the future of quality.
- Developing scenarios that describe how the forces might unfold.
- Determining the implications for organizations and the quality field, quality professionals and ASQ.

The study invited 98 hand-picked participants—names and voices in the quality arena from around the world—to choose what they think are the top 10 forces in each of three rounds (see Online Sidebar 1, “Study Methodology,” at [www.qualityprogress.com](http://www.qualityprogress.com)).

Participants identified seven forces. In order of significance, they are:

- 1. Globalization:** This is the only force that has been identified in all prior futures studies. It dominates the future of quality and creates opportunities and challenges.

Globalization is driving global supplier networks and the need to manage global quality platforms.

Organizations are no longer bound by location and space. Likewise, entirely new consumer markets are being created—often by the internet, which creates opportunity and concern (this is reflected in the forces described later).

Globalization will influence trade policy and trading partners in new, unimagined ways.

- 2. Social responsibility (SR):** As organizations begin to realize that social responsibility is not only the moral thing to do, but that it's also good for business, the world will continue to embrace SR philosophies and practices at an increasing rate. Consumers are demanding more knowledge of companies' practices, and corporate reputation will play a greater role in consumer buying choices.

Organizations that seek to improve their practices will need to know the concepts, techniques and tools of quality to deliver on their goals.

Issues such as ethics, transparency, social behavior and environment coincide with the broader considerations of SR and formulate what some have called a “triple bottom line” impact that encompasses people, planet and profits.

- 3. New dimensions of quality:** A new collection of quality-related competencies will be required if quality is to maintain relevance in a quickly changing world. Organizations are looking for leadership in innovation—the ability to develop new ideas and manage change.

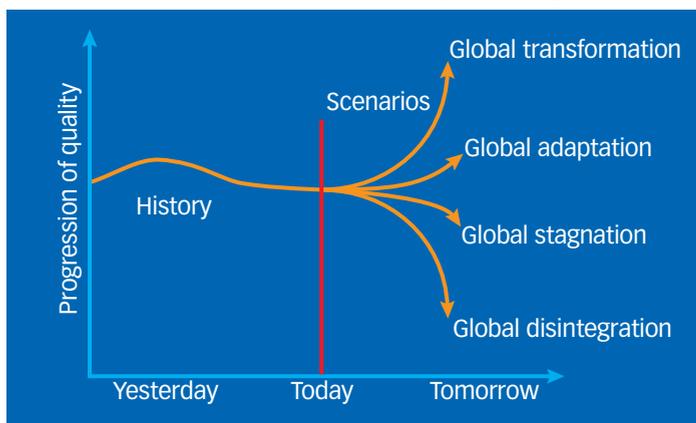
This necessitates the commingling of quality and innovation. The emerging focus must work within the systems of organizations—not just be focused on products and services. Organizations must master change and these emerging capabilities, or give way to smaller, newer and more agile competitors.

- 4. Aging population:** The world's population is getting older, and with that trend come problems and solutions. By 2025, the majority of the population will be 60 or older. This aging population will push economies and organizations to respond to the resulting market needs.

Aging workers will leave the workforce, and organizations will be charged with replacing those skills. This, in turn, may cause traditional retirement to be redefined as companies seek to tap into the skills of those who have left the workforce.

- 5. Healthcare:** A byproduct of the other forces on this list, globalization and the aging population

## Future scenarios for quality / FIGURE 1



# On the positive side, **advancements** in biotechnology and nanotechnology will result in **cures for diseases** and prolonged lives.

have heightened the need and expectation for quality healthcare. Quality can play an important role in healthcare by taking waste out of the system so more people can benefit. Policymakers must also address equity of access—inefficiencies in the system only exacerbate these problems.

On the positive side, advancements in biotechnology and nanotechnology will result in cures for diseases and prolonged lives. This will require increased focus on quality in the waste-free development of these technologies. Quality can also help ensure operational efficiencies in healthcare delivery.

**6. Environmental concerns:** The world has come to understand that much of the environmental damage that has been done cannot be reversed and that increasing consumption will put even more strain on finite resources.

What are the solutions? Study participants sug-

gested macroeconomic correction (demand's ability to drive up price); technology to address environmental problems; and SR's ability to set standards and practices that will mitigate resource consumption and curb environmental damage. Quality provides the concepts, tools, techniques and standards to foster change.

**7. 21st century technology:** Technology's impact is difficult to forecast and will most certainly surprise us in terms of how it affects current models we think we understand. Some believe technology will deliver solutions to address energy, food and water shortages, and the need for clean air. Information technology and advances in genetics, biotechnology and nanotechnology will change everyday life and drive our future state. A new, innovative definition of quality is required for this innovative age.

## Forces of change from all ASQ futures studies / TABLE 1

1996	1999	2002	2005	2008
Changing values	Partnering	Quality must deliver bottom-line results.	Globalization	Globalization
Globalization	Learning systems	Management systems will increasingly absorb the quality function.	Innovation/creativity/change	Social responsibility
Information revolution	Adaptability and speed of change	Quality will be everyone's job.	Outsourcing	New dimensions for quality
Velocity of change	Environmental sustainability	The economic case for the broader application of quality will need to be proven.	Consumer sophistication	Aging population
Increased customer focus	Globalization	Global demand for products and services will create a global workforce.	Value creation	Healthcare
Leadership	Knowledge focus	Confidence in business leaders and organizations will decline.	Changes in quality	Environmental concerns
Quality in new areas	Customization and differentiation	Customer expectations will continue to rise.		21 <sup>st</sup> century technology
Change in quality itself	Shifting demographics			

## Scenarios and forces / TABLE 2

	Scenario 1: Utopian	Scenario 2: Domsday	Scenario 3: Preferred	Scenario 4: Business as usual
<b>Globalization</b>	Environmental, political and social issues are treated as an international system.	The world loses its global perspective as national and tribal interests dominate the agenda of local governments and disorder prevails internationally.	There is recognition of the need for collaboration to address the systemic problems of the world.	Regional alliances prove to be more compatible with national politics and there is growing distrust of “Western” motives. The world’s fiscal resources are fractured and not concentrated on solving the world’s problems.
<b>Social responsibility</b>	A balance between the haves and have-nots is achieved.	Breakdown occurs as each nation looks to its own interests rather than broader global interests.	A new standard emerges for self-assessment of “quadruple bottom line initiatives.” Standardized organizational measures are created.	Social responsibility operated well within regional alliances, but trade boundaries and regional groups divide the world in the same way national boundaries once did.
<b>New dimensions of quality</b>	Quality shifts to focus on the broad definition of “total quality” that addresses all aspects of social systems.	Quality as a positive global force has died along with the rest of mankind’s social structures.	A coherent quality methodology has evolved that is applicable in traditional and non-traditional fields.	Toolsets exist to address the world’s problems, but they are met with resistance. “Not invented here” syndrome exists in many countries.
<b>Aging population</b>	All three elements of the aging population crisis are resolved: healthcare and retirement systems; older people work longer and apply their knowledge; fiscal aspects related to urban infrastructure solved.	This ceases to be an issue as this demographic bears the brunt of famine, drought, war and pestilence.	We see a transition of retirees into “second or third” careers, preserving the knowledge base of retired workers. There are communities of practice where elders mentor younger workers.	Resources aren’t put toward addressing the issues, and the elderly are treated according to regional customs.
<b>Healthcare</b>	Genome technology, nanotechnology and biotechnology merge to create core solutions for the longevity of productive human life.	The system is strapped financially and is compromised in its ability to serve given the impacts of social collapse.	Standard procedures for treating most major illnesses have been developed and disseminated. Waste has been eliminated through lean Six Sigma methodologies.	Managed healthcare is not available universally, and the best medical treatment is reserved for those who can afford to pay for it.
<b>Environmental concerns</b>	Environmental degradation is halted, even reversed. Clean energy and pure water are available to everyone.	Global weather becomes the key issue as climactic conditions dictate daily life.	Reforestation has helped reduce the carbon cycle. Major technology investments have helped address environmental problems.	Developed and developing nations are at odds in their view of natural-resource use and exploitation.
<b>21st century technology</b>	Technology creates solutions to fossil fuel dependency and water distribution issues.	Fiscal limitations of the economy have caused technology to revert, rather than become a systematic, scientific program of research.	A global consortium of major corporations gears research toward water purification, food technology, biotechnology, non-conventional power sources and fuel-efficient mass transportation systems. They give back via debt relief provided to developing nations.	There is global backlash against broad-scale adaptation of all things new.

## Scenarios

To illustrate how these forces might play out in real-world situations, Greg Watson, a past president of ASQ, outlined four scenarios to communicate a range of potential futures.

The first scenario reflects a utopian world in which the forces of good overcome the forces of evil that would degrade the global condition. The doomsday scenario describes the opposite end of the spectrum—where humans can't solve or address any of the issues they face.

Between these two extremes are the preferred and business-as-usual scenarios. Preferred is more realistic than utopian. It requires careful planning and hard work, but it can be achieved. The business-as-usual scenario is achieved by doing nothing.

Figure 1 (p. 44) shows how quality might affect the future. Table 2 describes how the forces might play out in each scenario.

### The utopian scenario

**Global transformation—innovation of a complex system:** The threat of drastic changes in mankind's way of life from negative forces facing the entire world is met with a rebound effect as people stop their constant arguments about what will happen and embrace the need for aggressive corrective action. The aim of this action is to halt and then reverse the negative effects of the unpreventable forces and to seek solutions to prevent those negative forces of change that are avoidable.

Quality methods (defined in their broadest sense) are a key change catalyst that enable mankind to consider new opportunities and define action alternatives by focusing the best minds, methods and means to spark improvement in areas that threaten the infrastructure of the world (economic, environmental, political and social). To drive the outcome of this scenario, technology, finance and quality methods are the forces used to create and implement a global investment strategy able to achieve broad systemic solutions to the world's most pressing problems.

### Preferred scenario

**Global adaptation—evolution toward a synergistic society:** The growing atmospheric hole in the Southern Hemisphere contributed to increased global warming and the subsequent loss of major portions of

the Antarctic ice shelf in late 2008. This served as a wake-up call to global leaders to unite for the common good to preserve the environment.

In the political world, the United Nations decided to expand its emphasis on the principles of quality governance by providing a global quality management program for the 200 national governments holding membership. This united front was developed to decrease waste, fraud and abuse in publicly funded programs and to establish a global transcendental culture based on proven principles of quality management. More than half the governments have elected to participate in the program, but a few major holdouts have limited the effectiveness of the entire program.

In summary, many of the dimensions of the social and environmental threats that were perceived in 2008 have been halted, but, in many cases, not before there has been significant damage. Focus on repairing social, fiscal and environmental infrastructures through evolving global improvement programs is a major role of this alliance.

### Business-as-usual scenario

**Global stagnation—the halt of human progress:** The promise of technology has not been fully achieved, and the optimistic belief that technology can resolve all of society's problems has faded. The rate of progress in technological advances over the second half of the last century has decelerated, and society has not been able to absorb new technologies. The evidence of technological slowdown exists in several advanced technology applications: Nanotechnology is limited by measurement system capability, artificial intelligence is limited by the lack of decision algorithms to define new learning patterns, and telecommunications advances are limited by the burden of maintaining legacy systems.

Because technology was unable to be diffused into appropriate social applications at ever-increasing rates, a destructive tension has evolved: Potential advances for the benefit of mankind aren't deployed due to the inability of mankind to manage discontinuous and disruptive change. In short, people have come to fear the impact of new technologies on their personal lives. This trend began with genetic biotechnology applications in agriculture during the mid-1990s and expanded to include all innovations that confront people's lives with major change.

Other observations can be made about this scenario: First, there has been a systematic weakening of the United States' political-economic power in the world and a concurrent progressive growth and expansion of the political-economic power of developing nations (most notably China and India), which have come to dominate the world's economy.

Second, strength in a unified Latin American market has occurred. Several trade agreements consolidated to encompass the Caribbean, Central American, South American and North American countries in a more viable Free Trade of Americas agreement, with inclusion of the United States and Canada as equal partners in a democratic trading union.

Third, following the inclusion of Russia and all the central European states, the European Union (EU) increased its political-economic influence. But, EU market growth came as a natural consequence of expanded membership and the fiscal realignment based on a continuing weakened American dollar, not from innovation. The impact of the shift to these regional trading centers has fundamentally changed the global marketplace, resulting in silos representing clusters of nations that have created a modern form of self-preserving isolationism.

## Doomsday scenario

**Global disintegration—the crisis of environmental collapse:** Politically motivated, short-term thinking based on summary data has precipitated an unheralded collapse of the global ecological system. Mankind has doomed itself by using optimistic estimates to establish politically correct goals for reversing global ecological damage by 2050. Ignoring data that indicated a systemic problem based on increasing rates of change in climatological conditions has brought society to a tipping point where the negative effects of environmental degradation can no longer be reversed.

Global warming collapses the polar ice pack in half the time that had been estimated in 2000. This causes an unexpected fiscal impact as the emergency actions required to cope with the rising ocean levels are a drain on a global economy already burdened by years of war.

“Too little, too late” is the theme as mankind watches its world disintegrate, having little capability to intervene. The voices of science and quality are not brought to bear to combat the environmental crisis.

Everything Al Gore described comes true; however, the more conservative estimates that he tempered for public consumption do occur.

The rise in the world's oceans subsequently pollutes the seas and causes a threat to the world food supply in two ways: salinization of productive farmland and pollution of the oceanic food chain. The world consumes its natural resources at a pace that is faster than the ability of technology to replace traditional resources with alternatives. Thus, the promise of technological salvation now seems empty.

The result is that the depleted fossil fuels, rising food costs, and food and water shortages give rise to mass famine and drought. These concerns become magnified, as no agreement can be reached on collaboration, transparency and participative decision-making, and social democratic governments are replaced with strong, military-backed dictatorships.

As a result of inequitable distribution of global resources, have-not nations combine forces with major developing nations to fight a military battle against North America and Europe over access to and consumption of resources. As a result of this warfare, social systems implode. There is a return to social conditions that resemble the Stone Age, as global transportation, mass communication, power generation and political systems have been destroyed.

## Implications

These scenarios serve as narratives to help envision how the forces might play out. This sets the stage for the most important part of the futures study: the implications. This step moves us closer to the most important outcome—change. The hope is that this study will help us be less reactionary and more proactive in leading change.

The implications included here are not designed to be an exhaustive list. Instead, they are meant to prompt thinking.

Study participants were asked to envision the implications of the key forces and scenarios for quality within organizations that seek to benefit from quality and practice it in their organizations and communities. The thoughts that follow were gleaned from their responses. They fall under six key themes:

- **Global, social and environmental scale:** Quality is no longer confined to the organizations in which it has grown and matured. Many of the participants

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pointed to quality’s ability to make the world a better place. The statistical analysis, tools of control, system and process-based problem solving, as well as improvement, can work with small and large-scale issues. There is some frustration in the ability to get to the decision-making table but little concern about the value of being there.

- **Getting the message heard:** The greatest challenge for quality is equipping those who understand it with the ability to communicate what they know to the audience that can benefit from it. There is a need for new voices for quality to be heard and for those who can communicate its role and importance to everyone else.
- **Process to systems (call it “Big Q”):** The future calls for the quality community to grow in its skills of system thinking and system problem solving. Quality at a process level must almost always consider the broader implications of change at the system level. Process thinking alone will not be sophisticated enough for issues of global scale.
- **Speed:** The rate of change will only accelerate. This speed demands adaptability and agility that are proving difficult for organizations and individuals to achieve. Ability to cope with change might be the difference between survival and extinction.
- **Relevance, knowledge and learning:** Those seeking to attune quality to the forces defining the early 21st century—including a global marketplace, workforce and supplier network—must set aside what they knew about quality in the 1980s and 1990s. Buyer sophistication, the internet and shorter product life cycles create new demands on organizations and the quality profession—both

must learn to offer value in this new world.

- **The bottom line, the top line and the triple bottom line:** Quality has as much to offer the top line as it does the bottom. Understanding the customer’s requirements, growing satisfaction and loyalty, anticipating needs and driving word-of-mouth recommendations all contribute to the top more than bottom line. Soon, sustainability and the triple bottom line will roar into the objectives and goals of all organizations.

Hundreds of insights were provided by the participants of this study, providing further food for thought. Implications of the forces related to quality, organizations and the profession can be found in Online Sidebar 2, “Implications for Quality.”

## What now?

The study’s purpose is to raise questions more than it is to provide answers. This year’s study will provide focus for a series of stakeholder dialogues in which ASQ will invite members to have conversations about the future of quality. These conversations will be held all over the world, the responses will be documented, and the patterns and themes will be used by ASQ’s board to determine future strategy.

The study also aims to offer talking points for individuals to assess how the forces might affect their careers, what skills will be in demand and where opportunities may lie.

As the old proverb goes, change is the only constant. The best you can do is prepare for it. **QP**

## REFERENCE

1. Acceleration Watch, [www.accelerationwatch.com/futuristdef.html](http://www.accelerationwatch.com/futuristdef.html).

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## FULL FUTURES STUDY AVAILABLE

Download the full PDF version of ASQ’s Future of Quality study—it’s available at [www.qualityprogress.com](http://www.qualityprogress.com).