

**A CALL TO REVITALIZE THE QUALITY PROFESSION;  
AN EXAMINATION OF ISSUES HURTING THE EFFECTIVENESS OF THE QUALITY PROFESSIONAL,  
WITH SUGGESTED SOLUTIONS.**

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Scott D. Dalgleish  
Vice President of Manufacturing  
Spectra Logic Corporation, Boulder, CO 80301  
scott@spectralogic.com, 303-449-6400

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## **SUMMARY**

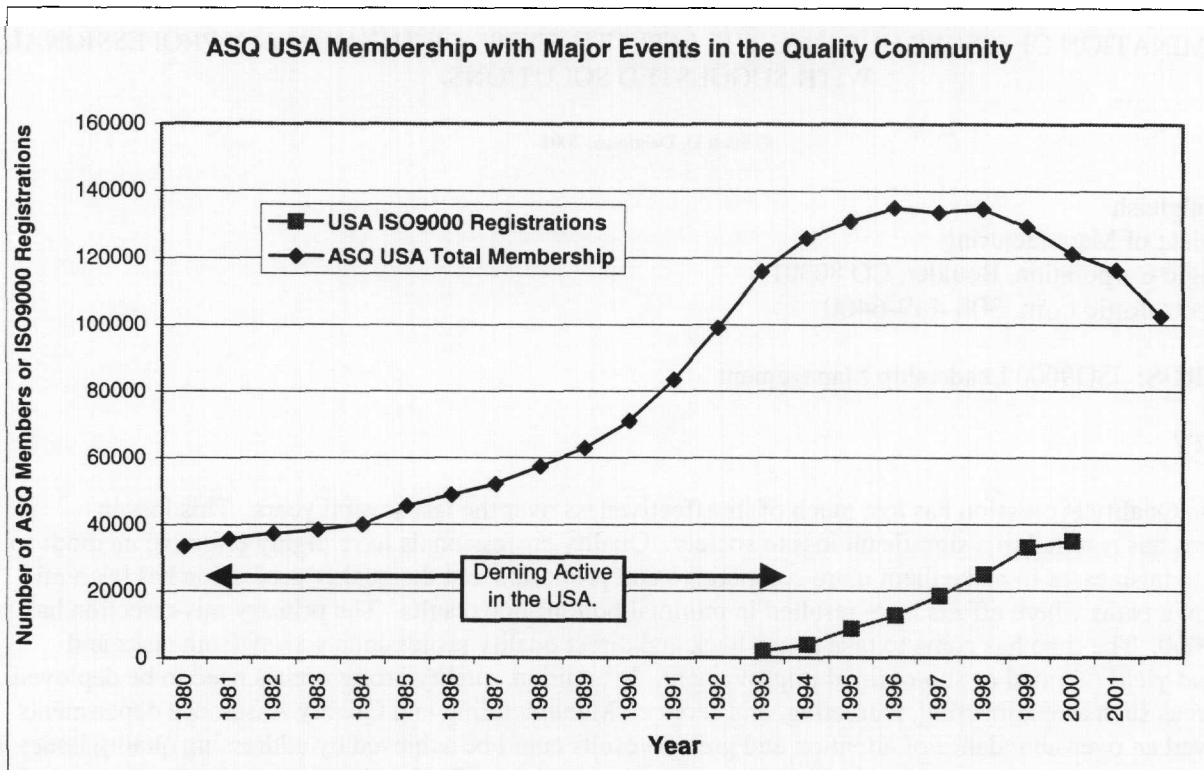
The Quality Profession has lost much of its effectiveness over the last several years. This loss in effectiveness has resulted in a significant loss to society. Quality professionals have highly effective methods to contribute to businesses to make them more competitive and profitable, but the quality profession has been mis-directed down paths where efforts have resulted in minimal bottom-line results. The primary mis-direction has been ISO9000. The time has come to take a step back and direct quality professionals away from tasks and methods that yield minimal or sub-optimal improvement. In addition, quality professionals need to be deployed into new areas such as engineering, marketing, and service. Manufacturing and Quality Assurance departments have received an over-abundance of attention and greater results could be achieved by addressing quality issues in these other departments that have been lacking in attention by quality professionals. Redirecting resources to new areas, and taking different approaches towards quality, would very effectively revitalize the quality profession back to a critically important role in organizations that are trying to be the most competitive leaders in their industries.

## **INTRODUCTION**

Working in the quality profession in the late 1980's was a joy. American companies were getting into trouble and the TQM movement, sparked by a television show featuring W. Edwards Deming, provided answers to American industrial problems by applying quality techniques. TQM efforts caused revolutionary changes in how businesses were run and enhanced the competitiveness and profitability of those businesses. The quality profession provided critical answers and tools to make businesses more successful. The excitement and esprit de corps in the quality profession was high.

In the last several years, though, the quality movement has lost steam and in many ways been mis-directed down a path of greatly reduced effectiveness. The "body of knowledge" in the quality profession provides the business world with a highly effective "toolbox" to win in the competitive market, but the use of those tools has been diminishing over the last several years. In addition, there are many progressive management methods that are greatly underutilized that could yield tremendous improvements in product quality.

When Dr. Deming passed away, it left a void in the quality world, and it is sad to see with what that void has been filled. It is unfortunate to see the direction the quality profession has taken absent Deming's leadership, and it is sad to see the resulting loss to American society. The quality profession, and tools that the body of knowledge provide, probably are the most powerful means that Americans have for improving our competitiveness. Right now, this knowledge and set of tools is greatly underutilized. This loss has been great and quality professionals have no one to blame but themselves. It is no wonder that the membership in the American Society for Quality has been on a steady decline for several years now, after a major increase in membership during the height of the TQM movement (See Figure 1).



(Figure 1)

The good news is that this problem, like any quality issue, is an opportunity for improvement. By identifying the problems and using the plan-do-check-act cycle, the quality profession can be re-directed to play a primary role in making American business much more competitive than ever. To start this process, we need to be willing to take a step back and take a critical look at ourselves. This paper examines some key problems that exist in the quality profession now and suggests potential actions that would effectively bring the quality profession back to a position of leadership in American competitiveness. **The author hopes that this paper will spark a serious discussion that starts a revolution, a re-direction, and revitalization in the quality profession.**

This revolutionary re-direction would primarily entail moving resources away from traditional activities that deliver little *incremental* value to a business to new areas such as engineering, marketing, and service where there are major opportunities for improvement. By modeling how each department in a company affects final product quality, this point becomes clearer.

### USING “TIME TO MARKET” AS A MODEL TO RE-DEPLOY QUALITY RESOURCES

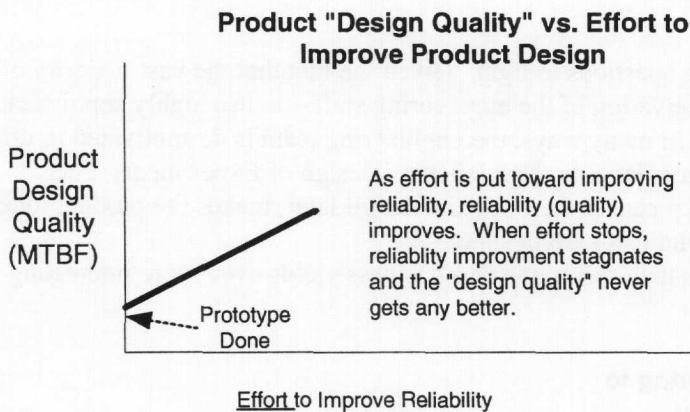
The company that is modeled below is a high technology company where being first to market or early to market with a new product is critical to product and company success. In most markets, even in less “leading edge” markets (such as food), being the first to market with product improvements or enhancements gives a company a major advantage. The issue of being early or first to market can put a quality manager or CEO in a difficult position. There are certainly cases where products that had significant quality problems, but were first to market, captured the market. Clearly, there are other examples of products that pushed this too far and lost their market share as the result of very poor quality. This issue of speed to market has created some challenges in the quality profession that have been poorly addressed. From a marketing perspective, it is often stated that speed to the marketplace directly relates to market share. As any quality professional knows, the speed that a product makes it to market is often a function of quality. If final product testing is cut short, or if software bugs are left in the program to be corrected in future releases, then the product can make it to market much faster. **The real issue in new product releases is not speed to market vs. market share, it is quality vs. market share. How much**

can quality is sacrificed in order to speed time to market is often the critical question in new product releases. "Cost of quality" techniques might be used to determine how good is good enough to release a new product, but trying to quantify the cost impact of how a new, huge, market will react to quality problems in a leading-edge product is often impossible to accomplish.

One could wrestle and debate all day about "how good is good enough" to release a new product, but this question remains extremely difficult to answer. There is an answer that does get universal agreement, though. If very high-quality products are first to market, they have a double-advantage in the market – superior quality and first to capture the minds of the consumer. To accomplish world-class quality and be the first to market would require superior product development processes. The good news is that there is tremendous potential to improve the product research and development process for companies that are willing to implement grossly under-utilized quality techniques and advanced product development management skills. **A re-direction of the quality profession to engineering processes and engineering project management would enable companies to be first to market with superior quality products – a formidable advantage in the marketplace.**

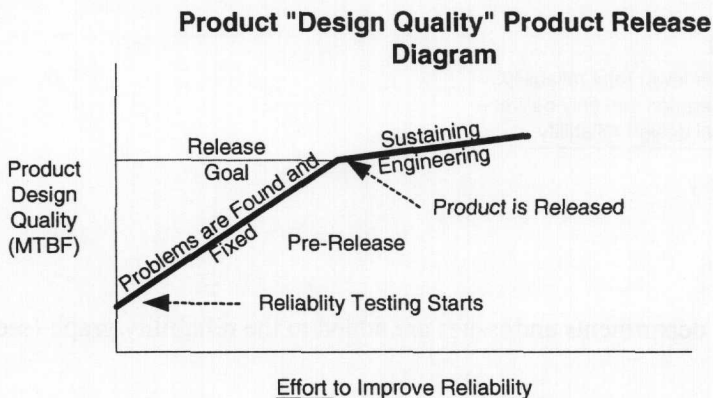
To illustrate how a re-direction of focus and effort to engineering would have a tremendous pay-off, an illustration of this concept is presented below. To keep the model simple, a single quality attribute – product failure rate (MTBF) will be used to represent product quality.

Figure 2 represents a typical new product design process. The term, "Effort" is a combination of all things that are part of the development process that are done to wring out quality issues during the design process. "Effort" includes things such as man-hours, techniques (life testing, HALT testing, DOE, preventive problem analysis, tolerance analysis...), and test environments (worst case, corner case, and rare case scenarios).



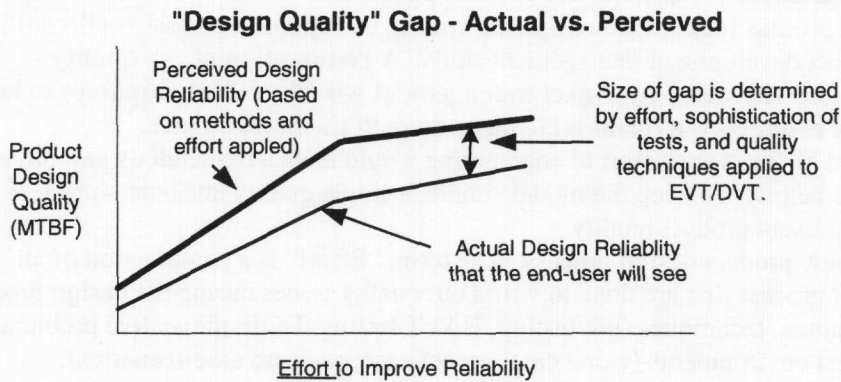
(Figure 2)

At some pre-designated quality level, the product is deemed to be releasable (see Figure 3 below).



(Figure 3)

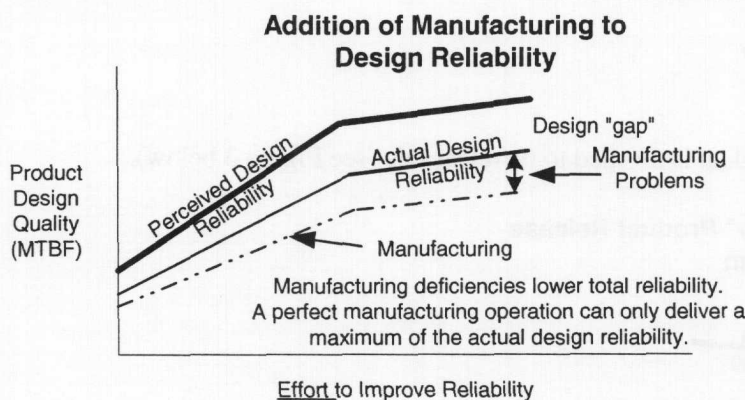
One problem with this process, though, is that even very good design verification processes never find all the potential design quality problems with a product, so there is always a gap between the perceived product design reliability at release, and the real product design reliability that the end customer will see. The size of this gap will be determined by the sophistication of the “effort” used to determine the product design quality (see Figure 4).



(Figure 4)

The diagram above brings some interesting questions to light. Given the fact that the vast majority of engineering design projects run late, what is the motivation of the engineering staff – to use highly sophisticated EVT/DVT tests, or to use more simplistic testing? In many ways, the engineering team is de-motivated to utilize some of the more sophisticated quality techniques available to them (such as Design of Experiments, Peer Reviews, Highly Accelerated Life Test...) because it causes their schedule to go later, makes the product look less reliable, and marketing perceives this as lost time and lost market share.

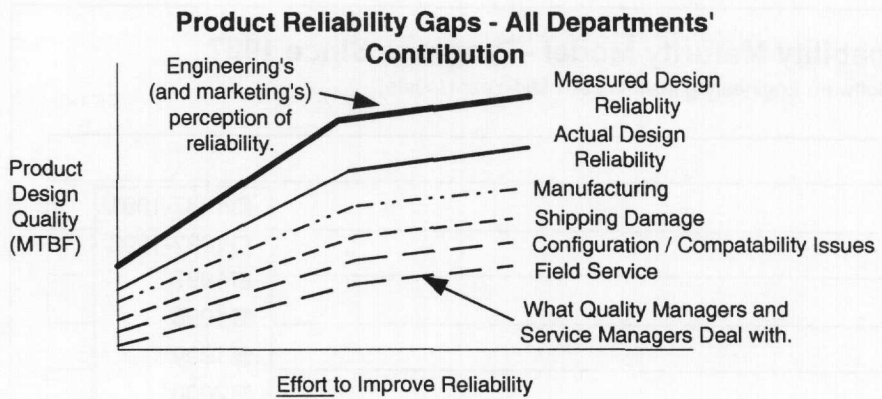
Extending this “time to market” model into the other areas of a business yields even more interesting results (see Figure 5).



(Figure 5)

The whole picture can be seen when all departments and issues are added to the reliability graph (see Figure 6).

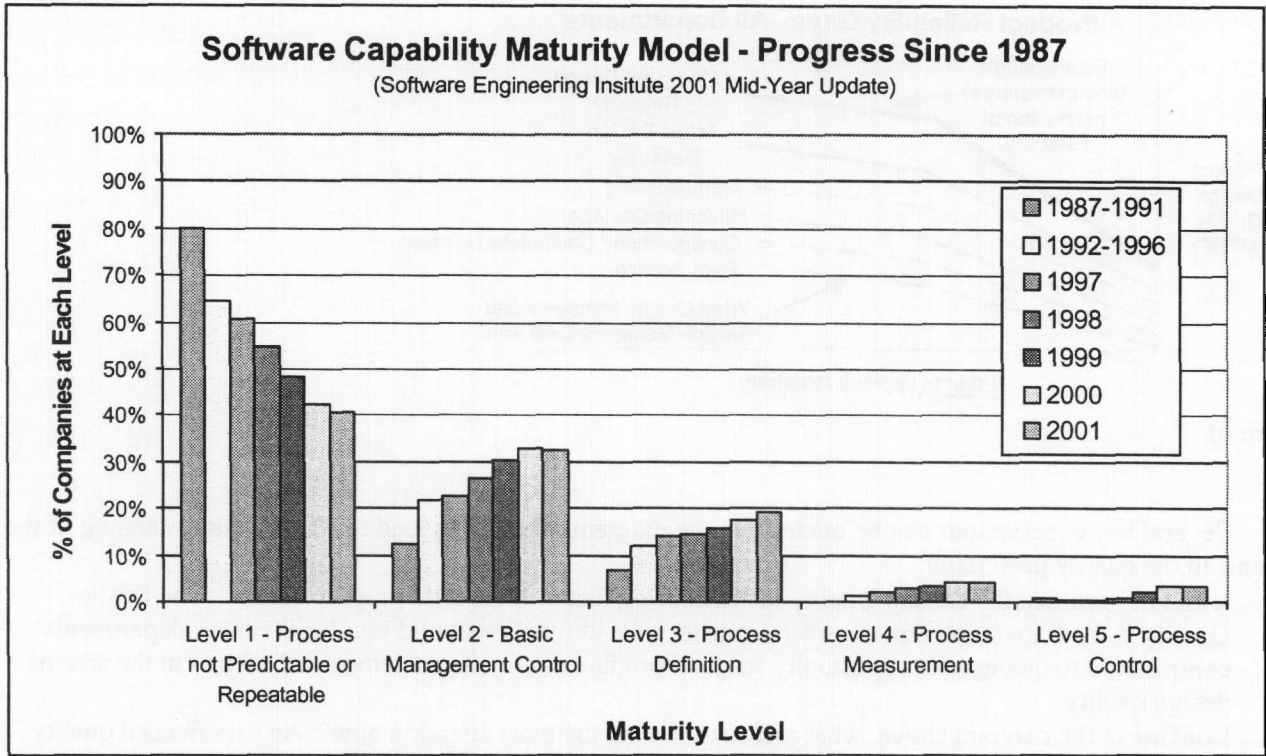




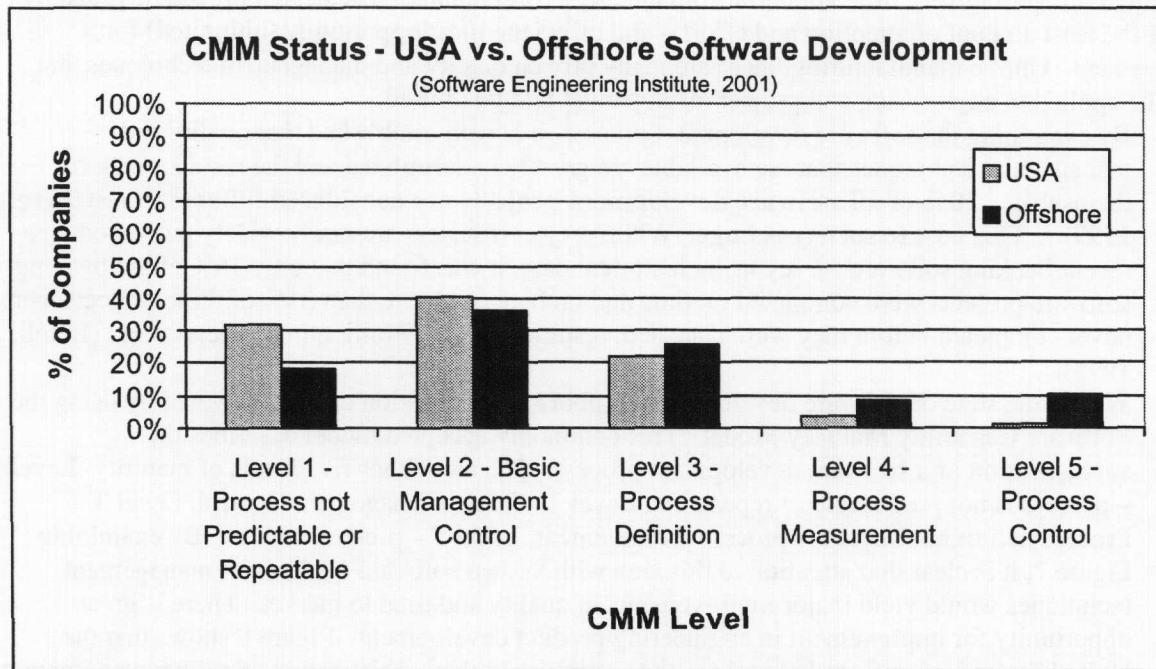
(Figure 6)

Several key observations can be made from the diagrams above that lead to a better understanding of the problems in the quality profession:

- It can be seen that the Design Quality is the limiting factor in the total product quality. The Design Quality is the foundation that all other departments and functions build on. Unlike other departments' contribution to quality, the opportunity for total product quality improvement is limitless in the area of design quality.
- Looking at the diagram above, what areas are getting the most attention now? An experienced quality professional will answer that the vast majority of effort goes toward minimizing the gap between Manufacturing and Design Quality. Manufacturing quality issues (including inspections) get a disproportionately high application of quality resources, as compared to the other areas. There are other departments that are "lower hanging fruit" that could benefit greatly from some of this effort.
- What areas are getting very little attention from Quality Professionals? The design process is probably getting the least amount of attention and effort – and offers the most opportunity (unlimited) for improvement. Unlike manufacturing, there are many proven quality and management techniques that could be applied to engineering and project management that go unused.
  - By examining the software development process, it is well established that quality and management techniques that are available are grossly underutilized and the results speak for themselves. **70% of all software development projects are considered failures (Kreitzberg, 1999). This cost to society is huge.** While project disasters are rarely widely published, in a recent banking software survey using historical data, it was found that only 16% of the banking software projects were completed on time and on budget. More than 31% of these projects were never completed before they were canceled, resulting in ~\$4.7 billion in projects costs. (Littell, 1998).
  - Why is the state of software development so poor? That question can be answered by using the Software Capability Maturity Model. This commonly accepted model describes the sophistication of a software development process. The model has five levels of maturity: Level 1 – process is not predictable or repeatable, Level 2 – Basic Management Control, Level 3 – Process definition, Level 4 – process measurement, Level 5 – process control. By examining Figure 7, it is clear that attention to this area with known software quality and management techniques would yield major improvements in quality and time to market. There is great opportunity for improvement in engineering product development. Figure 8 shows that the United States is significantly lagging other countries in the sophistication of software engineering development process maturity.



(Figure 7)



(Figure 8)

- Practical experience also points to shifting the focus to engineering, rather than the manufacturing and quality departments, when it comes to product dissatisfaction. In many high-tech companies, correcting

product dissatisfaction issues most often results in design or software changes. Manufacturing or Quality Inspection breakdowns resulting in dissatisfaction occur much less frequently than design issues – especially in products where time to market is critical.

There are many parallels between the quality process issues in engineering and in marketing.

## **MARKETING'S RESPONSIBILITY FOR PRODUCT SUCCESS FROM A QUALITY PERSPECTIVE**

One critical aspect that was omitted from the product development model above was initial product definition. The product development model above assumed that the product definition was perfect, and if the product met its design criteria, customers would be satisfied.

Both engineering and marketing suffer from a gross under-utilization of quality techniques, and both groups seem to carry an aura of being correct in what they say, with little or no backing from sophisticated techniques available that could lead to data-backed, convincing answers. Both groups also suffer from a lack of critical up-front planning that often results in major disasters down the road.

In engineering, poor planning leads to a tremendous amount of product development rework. **In marketing, poor planning and inadequate market research leads to a released product that no one wants.** Putting more effort and money in the initial investigation of customer wants and needs would greatly enhance a product's success in the market. There are many quality techniques that would greatly enhance marketing's ability to write a good product specification, but these techniques are grossly under-utilized. These techniques include statistically valid market surveys, focus groups, customer satisfaction evaluations, and customer involvement in the product definition and development process. As with engineering, moving the abundance of quality effort that is now going into manufacturing into understanding the market's wants and needs would have a major pay-off for any company willing to make the unconventional move to re-direct these resources.

"Business" has been described as, 'the art of managing limited resources'. As quality professionals, we should be looking outside the traditional areas of the manufacturing and quality departments and into these other areas that could benefit greatly from the skills that a quality professional could apply.

In addition to taking on new tasks within a company, quality professionals also need to drop the tasks that yield minimal results for the effort put into them.

## **THE QUALITY LEADERSHIP VOID IS BEING FILLED WITH ALL THE WRONG THINGS**

During the late 1980's, the quality movement and profession had leadership, focus, and direction. Although there were many active quality leaders, they all sent a similar message and there was a consistency to them that complemented each other. All of them seemed to have a genuine interest in improving quality with little or no desire for personal gain.

The quality profession seems to be going many different directions at the same time now. At a recent local quality conference, different factions were present – the ISO9000 supporters, the Six Sigma advocates, and the Baldrige champions. In each conference meeting it was discussed how to sell to management "this best quality improvement solution". It is no wonder that the quality profession has lost its effectiveness when we are sending a very inconsistent and confusing message to our CEO's – who we need to support our improvement initiatives.

Having separate factions in the quality profession is not the worst problem. The biggest problem is some of these factions, especially ISO9000, are a major mis-direction and hindrance to what the quality profession should be trying to accomplish – high quality products and highly satisfied customers.

It is no surprise that ISO9000's popularity took off after Deming was gone. Our greatest quality leader would be shocked to see what ISO9000 has done to his efforts. ISO9000 is not all bad – it provides a good framework for many aspects of a quality system, and it has helped many "garage shops" put systems in place to improve their quality. ISO9000 can be a good foundation for an excellent quality system.

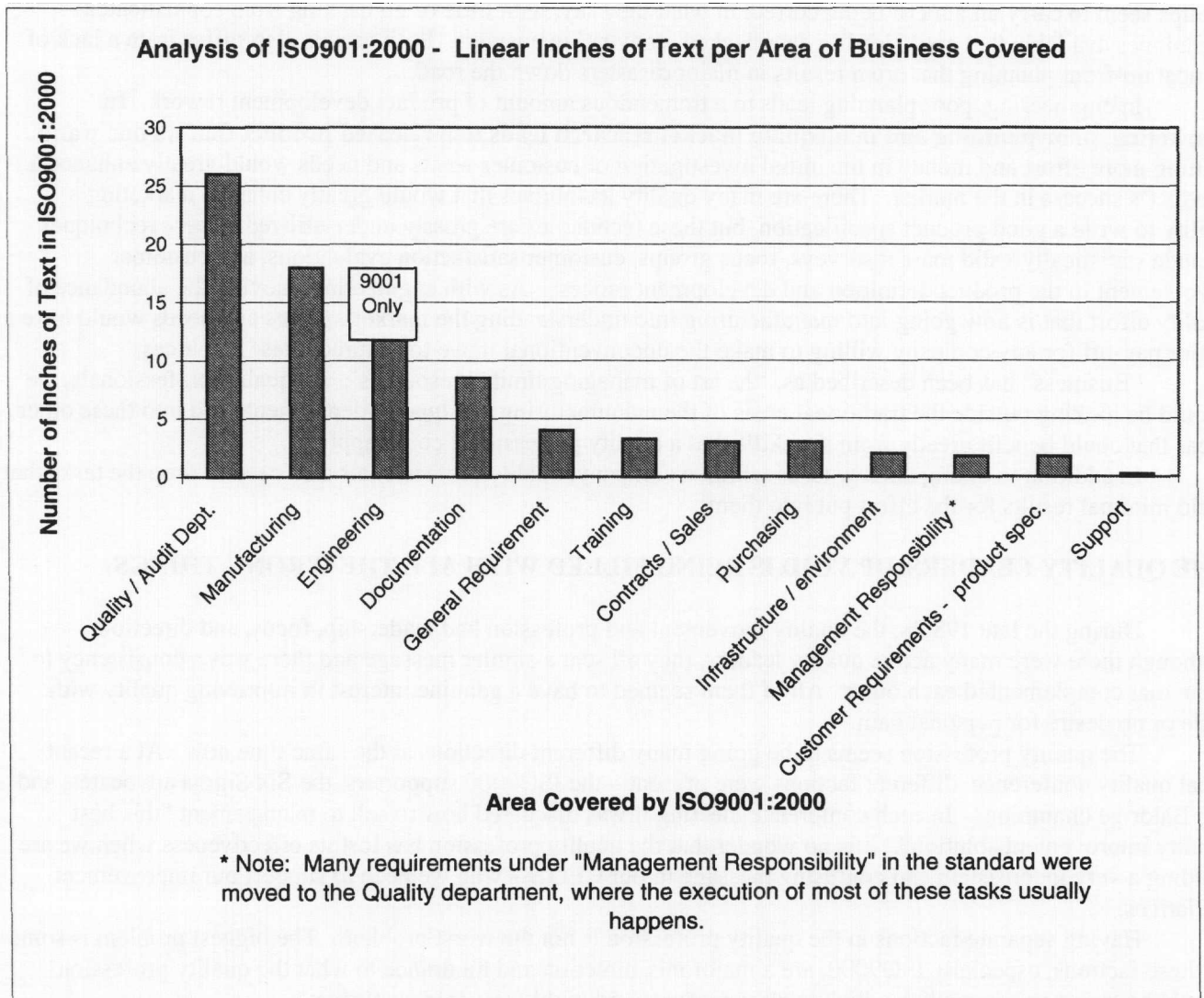
ISO9000 has had some major detrimental effects, though. They are:

- ISO9000 has made the misdirection of resources worse by its concentration on areas that already are getting a disproportionate amount of attention. This can be seen in Figure 9 below. ISO9000



has also allowed companies to ignore quality issues in engineering areas by allowing “a way out” by registering under ISO9002. From the previous discussion, it can be seen that leaving out engineering is a terribly critical mistake.

- ISO9000 focuses on what quality professionals are most comfortable with and know best – the quality department and manufacturing. It is very difficult to quantify how much focus ISO9000 puts on different areas of a company, but Figure 9 attempts to do this. This makes the misallocations of resources even worse. When it comes to market research and developing a good new product specification, the new ISO9001 standard is very thin. While ISO9004 guidelines encourage market-research-like activities, the little attention and vagueness in the standard itself makes the “customer focus” section weak at best.



(Figure 9)

- Nowhere in ISO9000 is management style/methods (14 points for management), or pride in workmanship addressed. These aspects are at least as important as the “hard quality disciplines” such as metrology, but they are not addressed in the standard. Although the new standard addresses work environment, it only requires that product specifications be met. It is very



possible to have a totally demoralized work force, with poor management, and no pride in workmanship and for that company to be ISO9000 registered. It is very sad to see a standard that is missing such a critical piece be so heartily embraced by the quality community. It is very sad to see how quickly we have chosen to ignore Deming again.

- ISO9000 certification, in many companies, has led to the conclusion by top management that, “we made it and the journey has ended”. This very common perception by top management (fed by customers that demand ISO9000) has inhibited support of quality improvement efforts beyond certification. It is easy for top management to conclude that everything on the quality front is fine as long as the certificate is hanging in the lobby. The “journey is over” message that an ISO9000 certificate sends to top management has really hurt the potential benefits that quality professionals can contribute.
- ISO9000 certification is not an indication of good quality. During a recent local ASQ meeting, none of the attending members felt ISO9000 certification was much assurance that the product quality was good. In fact, I recently disqualified two of my main suppliers due to severe quality problems, and both are ISO9002 registered with respectable registrars. A Baldrige assessor once told me that he knew of an ISO9001 registered company that scored barely over 300 out of a possible 1000 on their Baldrige assessment. Why does ISO9000 get so much attention and effort by quality professionals when we know it means so little?
- ISO9000 misdirects resources to an over-abundance of paperwork that does almost nothing to make products better or customers happier. Many quality managers would love to re-direct quality professionals away from activities such as updating and polishing the quality manual prior to an audit and towards problem investigation, corrective/preventive action, and process improvement. ISO9000 encourages resource allocation for wordsmithing of process documentation, rather than real process improvement. The recent conversion to the revision 2000 standard has made this problem much much worse. The new standard has had almost no effect on how good companies operate, but has required quality staffs to spend hours in front of a word processor – taking huge amounts of time away from efforts that would make our products better and our customers happier.
- The quality movement has whole-heartedly embraced ISO9000, making the situation much worse. ISO9000 is a high-profile topic in ASQ and in all quality journals and books. ISO9000 provides simple answers to complex quality questions – do you meet the standard? Yes/No. ISO9000 produces desirable tangible positive feedback (certificates and audit reports), but these things over-simplify the complexity of quality issues.
- The opportunity that ISO9000 created for quality professionals to jump from their companies to become ISO9000 consultants has been huge and sad. Many of these experienced “quality improvers” have spent the last several years finding a way for companies with fair quality to become registered as quickly and easily as possible. “We will document what you are doing in a way that meets the standard” seems to be the consultant’s mantra. Think what could have been accomplished if these seasoned professionals’ efforts had been focused on improving products, processes, and customer satisfaction, rather than wordsmithing.
- ISO9000 feeds on itself. ISO9000 requires supplier evaluations. Most supplier evaluations require ISO9000 registration, even though most supplier quality engineers understand how valueless registration is to end-user product quality.
- If a standard is needed, or a standard could be of use to a company as a means to organize quality improvement, the application of the Baldrige criteria would be much more effective. The Baldrige criteria do a great job exposing areas needing attention, and focusing on moving to “better than anyone else” quality instead of just meeting a low minimum standard that ISO9000 sets. The Baldrige criteria also has a better overall business perspective which is better suited to identify the areas needing the most attention across the whole company.

Hopefully, soon a new quality leader like Deming will emerge. It may not be possible, though, until quality professionals understand that current quality standards and for-profit consultants are leading us down the

wrong path of easy answers. We need to abandon the things that are consuming our time and delivering little value before we can re-establish to business leaders how the quality profession can lead the effort to build industry leaders. It is well documented that ISO9000 does deliver improved quality, but it also is a huge drain of resources that could be better deployed to improve customer satisfaction, product quality, and company profitability.

Once the problems with the status quo are recognized, then next step is to make plans for initiating change.

## INITIATING CHANGE

### Changing the Individual

As Deming stated in *The New Economics for Industry, Government, Education*, “The prevailing style of management must undergo transformation...The first step is transformation of the individual”. Quality Professionals need to play the lead role in teaching, demonstrating, and showing successes by using quality tools, the “body of knowledge”, and Deming’s four principles of the system of profound knowledge – appreciation for a system, knowledge about variation, theory of knowledge, and psychology.

Quality professionals often use Deming’s teaching that ‘quality improvements must come from the top of the organization’ as a scapegoat for taking no risks to promote and demonstrate valuable quality techniques. CEOs of companies are very busy people and it is the role of the quality professional to take risks and demonstrate better methods to CEOs so that they can learn and support these better methods. This process will not start until quality professionals drop resource draining quality methods that yield minimal improvements and start advocating quality methods that yield “big bang for the buck”, bottom-line results. Changes start with one person, and quality professionals (not the CEO) need to take the lead role in identifying why quality tools are under-utilized and start advancing methods that will earn the support of CEOs by delivering bottom-line results. When individuals start to take risks to correct misdirections in the quality movement, the role of the quality leader will become a highly valued, critically important role for companies and our society.

### Address Areas Lacking in Attention – The First Bars on the “Return on Resource Allocation” Pareto Chart

#### Engineering

Improving the engineering development process is the low-hanging fruit to get products to market faster and at higher quality levels. The Quality Profession needs to do more training and increase awareness to these powerful, but underutilized management and technical tools available for use in the engineering development arena. For example, the Software Engineering Institute, lead by Watts Humphrey, has developed a methodology for software development that has shown major improvements in development time and quality and a return on investment between 500-800% (Anthes, 1997). Frederick Brooks, in the *Mythical Man-Month Essays*, also describes the problems that plague engineering development projects and offers many realistic solutions to these very common problems. This quote from a recent *Computerworld* article reports what sounds like a replay of our regrettable quality profession history:

“Software developers in India have seized upon the quality religion in much the same way the Japanese embraced the quality concepts of W. Edwards Deming in the 1950s and 1960s. Attention to quality in Japanese manufacturing cost U.S. automakers a rapid loss of market share until Detroit belatedly got on the quality bandwagon about 20 years ago, and many experts say U.S. automakers are still playing catch-up.

“Today, American software quality guru Watts Humphrey is known in India as “the Deming of software,” and a year ago, the Watts Humphrey Software Quality Institute in Chennai, India, was dedicated in his honor. He created the <Capability Maturity Model> at the <Software Engineering Institute>, where he’s now a research scientist, in 1987, but he may be better known today in India than the U.S.” (Anthes, 2001).

Other known techniques such as design of experiments, theoretical reliability evaluation, highly accelerated life testing, and other such techniques are known but very under-utilized. These tools and methods need to be more prominently added to the ASQ body of knowledge and the quality press should give these techniques more attention, as opposed to familiar, comfortable, and worn-out topics such as SPC, Six Sigma, and metrology (not that they are un-important, just worn-out). Once design quality techniques and engineering project management techniques become better known, it is only a matter of time before “early adopters” in the quality profession try them and report successes. Once successes are made known, others will flock to adopt these techniques in order to stay competitive.

Even more important than these engineering techniques is the opportunity to improve engineering project management. In fact, a survey of information technology managers listed all human factors in the top ten reasons so many software projects were failures (Kreitzberg, 1999). Once again, quality professionals could be of tremendous value to an organization if they would recognize that engineering/project management issues as an opportunity for improvement – and offered training and guidance in this area. Quality would take great leaps forward in the United States if we focused on improving the engineering development process with known techniques such as the ones that Watts Humphrey and Frederick Brooks advocate.

### Marketing

This shift in attention will bring an awareness that quality principles apply to other places than just the Manufacturing and Quality Assurance departments. The quality profession needs to recognize that product definition (typically a marketing function) is the absolute foundation to a product’s success. The quality profession should play a lead role in educating, promoting, and demonstrating the use of proven market research techniques that lead to product specifications that customers will really want. Given the huge cost of bringing a new product to market, spending a little more time, money, and effort on product definition would have huge pay-offs. Quality professionals have a great skill set to play a key role in market research and data analysis to lay an excellent product definition foundation that will greatly enhance the product’s ability to satisfy customers when it hits the market.

### Customer Service

Customer service is another area where great training and systems exist, but examples of good customer service are rare. If leaders in the quality profession were to actively promote, emphasize, educate, provide training, and start a dialog in this area of quality, there would be a major payback.

### Profound Knowledge, Not Easy Answers

Our profession is based on a word that no one can clearly define – “Quality”. With a basis like this, how can we expect there to be easy yes/no answers? In addition, part of being a quality professional entails a high skill with numbers and statistics, but it is also critically important that the “soft” skill of psychology and working with people not be left out. Standards like ISO9000 that give yes/no answers may make us feel good at the end of a “clean” audit, but ISO9000 leaves out the critically important “soft” part of quality management, leads management to believe the quality journey is done, consumes our time with valueless activities, and misleads us into thinking we are doing a good job in advancing quality. It is risky and very difficult to walk away from such clearly defined “success criteria” that ISO9000 provides, but until some people are willing to do so, the role of the quality professional will continue to flounder and be of reduced value to the organization.

Customers demanding that their suppliers be ISO9000 registered fueled the ISO9000 craze. *As a first step, when evaluating suppliers, do not ask or require that they be ISO9000 registered. A good supplier quality engineer does not need to see a certificate in the lobby to determine the maturity of the quality system during the audit. When auditing suppliers, encourage them to use their quality personnel to maximize customer satisfaction and product quality – not registration paperwork.*

Quality consultants have also fueled the cottage industry of ISO9000 registration. Sometimes calls from these consultants sound like the old “Name that Tune” game show. They say, “I can get you registered in 6 months.” “I can get you registered in 4 months”. It is sad to think what could have been if these quality experts were used to solve process problems, implement better systems, provide quality training, provide management



training, etc. – instead of “documenting what you do so it meets the standard”. Let’s re-direct this army of experts to solve some real problems that customers and our bottom line will appreciate.

Some companies find that having a framework to work from has helped them drive improvements in their quality system. If a framework is helpful, the Malcolm Baldrige Criteria is a much better system for improving a quality system. It takes a broader approach to the business and evaluates the system based on its level of excellence vs. the pass/fail criteria of the minimally challenging ISO9000 standard. The Baldrige criteria is an excellent tool for businesses to use that promotes the most effective allocation of resources to provide better products and make customers happier. The Baldrige program can fall into the same trap of causing quality professionals to waste time doing paperwork, but this can be overcome by just using the criteria as a self-evaluation tool, without all the low-value evidence documentation. In fact, several states even have awards for companies that use the Baldrige criteria to self-evaluate – with the understanding that this self-evaluation process leads to more competitive businesses in the state. Providing customers a graph showing year-to-year Baldrige assessment improvements would be of much more use to a customer, and of much greater value to the company than an ISO9000 registration certificate.

Once change has been initiated, there are some specific tasks that would quickly advance the effort to revitalize the quality profession to become more effective.

### RECOMMENDED SPECIFIC TASKS TO INITIATE CHANGE AND REVITALIZATION

The specific tasks below would address key issues that would result in the quality department playing a much more vital role in a company’s success:

- **Promote and lead the way in developing a broader understanding of all the departments in a business and how they must effectively interact.** Quality professionals tend to be narrowly focused in manufacturing and inspection. Not having a good perspective of the whole business (such as marketing and engineering) limits their effectiveness in identifying where in the company their skills would have the most return. Top managers often discount input from the quality department because they fail to see all the issues in the business, and thus often try to champion projects that are low priorities when all areas are considered. Broadening the skills of a quality professional to have a systematic understanding of the business as a whole will better connect the quality department to top management and make it easier for them to work cooperatively to pick projects in the whole company that have the biggest potential for return.
- **Learn, Promote, and Lead the way in applying progressive engineering project management techniques.** The problem of poor engineering management is huge, and good solutions exist to address these problems. Engineering processes have huge potential for improvement, and improving this area would have a higher quality and bottom-line payback than any other area in the company.
- **Take the risk to deploy resources in non-traditional areas.** To maximize the contribution of the quality department, quality managers need to take risks and lead the way to re-deploy resources away from activities that add little value, such as ISO9000, to new areas where there is great potential for improvement, such as engineering, marketing, and customer service. When it comes to setting strategic direction, quality managers need to get away from an “adherence to specifications”, ISO9000 standards mentality to one that looks at what is the most effective deployment of resources. This deployment needs to be in a different direction than the quality profession is currently going.
- **Earn the support of top managers by showing innovative results in new areas.** The support of CEOs for quality improvement projects needs to be earned by showing major returns on investment. The greatest opportunity for improvement is generally not in manufacturing but in engineering. Once quality leaders that are going in new directions demonstrate major results, CEOs will readily support that new direction.
- **Quit requiring suppliers to be ISO9000 registered.** Requiring ISO9000 registration from suppliers is asking the supplier to sub-optimally deploy their quality improvement resources.
- **Eliminate ISO9000 and substitute the Baldrige criteria, if needed.** At a minimum, eliminate aspects of the standard where it creates major overhead and delivers minimal value. If customers are

disappointed with not having ISO9000 registration, substitute a Baldrige improvement program and show the customer how real progress is being made on the endless journey to become the best of the best.

- **Use experts to solve problems, not for low-value activities.** Use consultants as expert process and product trouble-shooters and as expert trainers. Eliminate their role as wordsmiths.
- **Discuss and promote long-term incentives for engineering project success.** When engineers are rewarded for the long-term reliability of the products that they design, they will be more motivated to use more sophisticated development and testing techniques before the product is released.
- **Expand internal auditing and process evaluations to new areas.** The Baldrige criteria might be a way to guide the evaluation of the whole business against the “best of the best”. When doing internal auditing, do it for the benefit of the company, not with the ISO auditor in mind. Look for areas of the company that have weak, ineffective, or non-existent processes and/or areas that have great potential for improvement.

## CONCLUSION

With these changes – changes that are completely in the control of quality professionals - the quality profession can get back on-track to being a primary factor in making their businesses the best in their industry.

When the quality department focuses on the design process rather than the manufacturing process when something goes bad with a leading-edge product – and when an auditor spends more time in firmware development or market research than manufacturing checking calibration dates, we will know that real progress has been made to advance the quality profession.

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