

## Chapter 2: Frameworks for Quality and Performance Excellence

### Discussion Questions and Experiential Exercises

- 1. Design a questionnaire or survey instrument to determine the degree to which an organization is “Demingized.” Explain how you developed the questions.**

Students might develop questions or a list of survey attributes that reflect the 14 Points and Profound Knowledge. How his philosophy is reflected in the questions or survey attributes should be the focus of their explanations.

- 2. Explain the 14 Points in the context of the four categories of Profound Knowledge.**

Many relationships exist. A suggested approach is to use a relationship matrix in which the rows correspond to the 14 Points and the columns correspond to the four elements of Profound Knowledge. Entries in the matrix can reflect whether or not the point relates to the element, or perhaps the strength of association (strong, weak, none). For example, Point 4, relates strongly to understanding the system and variation; point 3 to theory of knowledge; and point 12 to psychology. A good in-class exercise for discussion and debate.

- 3. Why doesn't the Deming Chain Reaction terminate with “Increased Profits”? Would this contradict the basis of Deming's philosophy?**

Deming believes that profits should not be the ultimate goal of business. Business should help its employees sustain a productive and happy life. If this is done, and customer needs are met, profits should follow. The Federal Express motto is "People, Service, Profits" -- in that order -- indicating that employees come first, customers next, and profits third in evaluating any business decision. It *can* be done!

- 4. Provide an example of a system with which you are familiar and define its purpose. Examine the interactions within the system and whether the system is managed for optimization.**

It is not always easy to define the purpose of an organization. Many companies do, and those that have seem to be able to achieve success in TQ. These examples should focus on the students ability to see the interrelationships within the system and whether actions taken are for the good of the system as a whole or suboptimal. Both the instructor and students are encouraged to read Peter Senge, *The Fifth Discipline*, New York: Doubleday/Currency, 1990. This book tells much about systems and their interactions, how they self-destruct, and how they improve.

- 5. Describe a process with which you are familiar. List some factors that contribute to common cause variation. Cite some examples of special causes of variation in this process.**

Many examples exist, both in students general experience with business as customers and in

daily life. Make sure that students understand what a process means. Some ideas include the process of preparing for class, preparing for a test, preparing for a job interview, eating breakfast, coordinating a fraternity meeting, etc.

**6. How does the theory of knowledge apply to education? What might this mean for improving the quality of education?**

Should schools copy the best? Should a public, urban university try to emulate Stanford or Harvard? Students might draw upon some contemporary issues about public education that dominate the news. Another issue is how to teach. The instructor might discuss Bloom's taxonomy of learning and focus on its implications for quality education.

**7. Explain the implications of not understanding the components of Profound Knowledge as suggested by Peter Scholtes.**

Basically, Scholtes' insightful comments define the mistakes and misunderstandings that managers routinely make when making decisions by gut and instinct rather than with facts, data, and a clear understanding of context. With systems, for instance, lack of understanding leads to suboptimization and misalignment of the parts of the organization with respect to strategic objectives. With variation, it leads to knee-jerk reactions rather than rational thought. With psychology, it can create mistrust among the workforce and lack of enthusiasm and loyalty to the organization. And, with theory of knowledge, it can lead to stagnation and ultimate business failure.

**8. Extract three or four key themes in Deming's 14 Points. How might the 14 Points be grouped in a logical fashion?**

Some major themes are manager-worker relations, cooperation, joy in work and self-esteem, elimination of seat-of-the-pants decisions, quantitative management, revolution of management philosophy, and organizational purpose. There are many ways the 14 Points can be assessed against these and other themes. A matrix relationship would be a good exercise to facilitate discussion.

**9. What implications might the 14 Points have for college education? What specific proposals might you suggest as a means of implementing the 14 Points at your school?**

What is the purpose of the university (college, school)? Most faculty and administrators cannot agree on this. Is it managed as a system? Is there continuous improvement? Are faculty trained to teach? What constitutes fear in the university (among faculty, staff, and students)? How are teams used? What about numerical quotas (promotion and tenure models) and MBO? What processes rob faculty and students of joy in work? Who is responsible among all the constituencies? This question alone can constitute a term project.

**10. Discuss the interrelationships among Deming's 14 Points. How do they support each**

**other? Why must they be viewed as a whole rather than separately?**

Deming always insisted that these were all or nothing; you can't just pick and choose which points to implement. The focus here is on systems thinking. For example, Point 7 is related to Points 1, 2, 5, 8, 9, 10, 11, 12, 13, and 14, as leadership is necessary for these to occur. A relationship matrix among these would be rather dense, so discussion might focus on one or two points.

**11. A team of quality professionals has suggested a revised version of Deming's 14 Points "for the 21st century," as given in Table 2.3. Contrast these with Deming's version in Table 2.1. What do you think of the revision? Can organizations today use them effectively to improve quality?**

21<sup>st</sup> Century Version

1. Increase value through products and services that delight customers.
2. Connect customer requirements to key process variables.
3. Prevent, where possible; inspect where necessary; implement process management.
4. Pick the vital few suppliers based on total cost and fit with the organization.
5. Improve processes now; find those that will need it later; sustain gains over time.
6. Build training into jobs so employees can improve their performance.
7. Know employees, listen to them and give them what they need to excel.
8. Set clear expectations for reasonable standards, and hold all accountable.
9. Build cooperation from the top down by reducing barriers between departments.
10. Connect targets and metrics to customer needs; train employees to understand them.
11. Avoid arbitrary goals; prefer ones in which metrics encourage "right the first time."
12. Measure employees against their personal best; use metrics they can track.
13. Help leaders model the right behaviors, and support the firm's goals for training.
14. Align employees with jobs, suppliers with the firm and the firm with the future.

The team of quality professionals who suggested the revised version of Deming's 14 Points "for the 21st century," as given in Table 2.3 seemed to take a more process view, while attempting to retain some of the concepts of Deming's systems perspective. It is not easy to compare these points with Deming's version in Table 2.1, because they do not match point for point. Deming constantly questioned the mind-set of managers, and challenged them to "adopt a new philosophy." Deming was not afraid to suggest that management actions or inactions were at the heart of quality problems, and that behavioral goals needed to be set. The new 21<sup>st</sup> century version of the 14 Points seem to recognize that there are process problems that management can correct, but the critical tone that Deming took, and the management behaviors that he advocated, are avoided by the 21<sup>st</sup> century version.

Opinions of students about the 21<sup>st</sup> century revision will vary. Some may think that the revised version is more practical than Deming's version, which generally reflected the status quo a half-century ago (although still reflects many of today's realities). However, the new version does reflect many of the contemporary concepts of quality: customers,

process improvement, optimizing supply chains, employee engagement, measurement, leadership and a systems perspective.

**12. Summarize Juran's philosophy. How is it similar to and different from Deming's?**

Many themes of Juran's philosophy are the same as Deming's. The major differences are that Juran works within traditional management cultures as opposed to a radical transformation and has a focused approach for achieving the goals; that is, he is more pragmatic and less philosophical.

**13. What is Juran's Quality Trilogy? Is it any different from management approaches in other functional areas of business, such as finance?**

Quality planning, quality control, and quality improvement. The trilogy was proposed by Juran because of the financial analogy, making it easier for managers to accept.

**14. What implications might Juran's Quality Trilogy have for colleges and universities? Would most faculty and administrators agree that the emphasis has been on quality control rather than planning and improvement?**

In most any organization, the major emphasis is on control, with less on improvement and even less on planning. Discussion might focus on what planning, control, and improvement actually mean for a college or university.

**15. How could you apply Juran's Quality Trilogy to improve your personal approach to study and learning?**

Start with your process - plan it out. Develop adequate controls to check and monitor performance. Systematically seek ways to improve both performance and the process. Very few students have ever thought about this.

**16. Summarize the Crosby philosophy. How does it differ from Deming and Juran?**

See the section in the chapter.

**17. Which quality philosophy—Deming, Juran, or Crosby—do you personally feel more comfortable with? Why?**

While this author leans toward Juran, many students initially choose Deming. It might be interesting to study the responses to this question in terms of Myers-Briggs typology. You might even get a publishable paper. (Just give proper credit!)

**18. Summarize the framework of the Baldrige Award. What are its key philosophical underpinnings?**

See the framework in the text. The instructor should have the current year's criteria for

discussion. The emphasis should be on the systems aspect and linkages among the criteria categories. Underpinnings are explained in the guidelines through the "core values." These are discussed in the context of organizational culture in Chapter 11.

**19. Describe the key issues addressed in each of the seven categories of the Criteria for Performance Excellence.**

This can be extracted directly from the Criteria. Note that the Criteria need to be purchased and are no longer free as had been in the past.

**20. Study the questions asked in the Baldrige Criteria. Select what you believe are the "top 10" most difficult questions for an organization to answer and justify your reasoning.**

This creates some interesting discussion. It is designed to first get students to actually *read* the Criteria questions (!) and second, to think of Baldrige as a "stretch" standard. Some questions are quite easy to answer (e.g. from the 2011-2012 Criteria: How do you listen to customers to obtain actionable information?) Others are quite difficult for organizations to address (How do senior leaders create a sustainable organization? How do you use performance review findings and key comparative and competitive data to project future performance?)

**21. What might be some "best practices" evident in the Performance Excellence Profile of K&N Management? How do these practices align with the first six categories of the Baldrige Award Criteria for Performance Excellence?**

*Leadership category:* governance process; culture of quality and excellence

*Customer focus category:* vision "to become world famous by delighting one guest at a time;" focus on "guest delight;" EyeClick system

*Strategic planning category:* key guest requirements (KGRs) that are aligned with key business drivers. Performance gaps and opportunities are funneled into appropriate planning approaches.

*Workforce focus category:* comprehensive set of above-market benefits to team members; workforce performance management system

*Measurement, analysis and knowledge management category:* All leaders carry a personal digital assistant (PDA) that alerts them of guest comments and complaints and daily performance results

*Operations focus category:* relying on innovation and technology to create product offerings that meet or exceed guest requirements; "group meal" service pick-up pavilions; "Jacuzzi" hand-wash machines

**22. Refer to the example of how K&N Management addressed some of the questions in the Senior Leadership category of the Baldrige Criteria in this chapter. Explain what practices address each of the specific questions:**

**a. How do senior leaders set your organization's vision and values?**

The mission, vision, and KBDs [key business drivers] were originally set by a group of senior leaders and managers as a result of a benchmarking visit to Sudden Service in 2002. Our vision reflects the passion for guest delight while our mission defines the role of each team member in achieving that vision. If team members guarantee each guest is delighted, we will be recognized world-wide as being excellent in hospitality, processes, and performance. The core values were set by senior leaders with input from team members about what they felt was most fundamentally important about our culture. Our passion for guest delight is integrated into our values, which are thoroughly deployed throughout the organization.

**b. How do senior leaders deploy your organization's vision and values through your leadership system, to the workforce, key suppliers and partners, and to customers and other stakeholders, as appropriate?**

Senior leaders refer to the mission, vision, values, and KBDs throughout key leadership process deployment, measurement, data analysis, evaluation, and performance improvement. The mission, vision, values, and KBDs are reviewed annually by the SLT during the strategic planning workshop to decide if any changes should be made. Our commitment to excellence is evident in our people selection and development processes, concept design, and operational management. The mission, vision, values, and KBDs are first deployed through the Foundations session, then reinforced through training, shift meeting communication, and performance appraisals. The first flashcards in every set of training modules communicate the key elements of our culture to TMs [team members]. During Foundations, TMs receive a culture card that contains the mission, vision, values, KBDs, and the Building Blocks of FISH [a team member morale and motivation philosophy]. Our mission, vision, and values are deployed to key suppliers and guests in a variety of ways. The mission and vision are printed on all business cards. Our guests can easily view our mission, vision, values, and KBDs posted on the walls of our restaurants, the Mighty Fine website, and demonstrated through the attitudes of our team members.

**c. How do senior leaders' actions reflect a commitment to the organization's values?**

Our values are communicated to our key suppliers through a key vendor scorecard conducted annually by the executive director. The criteria of the scorecard essentially holds suppliers accountable to our product and delivery standards. We require our suppliers to provide us with product that meets our quality specifications at the scheduled delivery time in order for us to maintain our KBDs. Suppliers who do not meet the standards of the vendor scorecard are replaced.

**23. As we noted in the chapter, process items in the Baldrige Criteria are assessed on four dimensions: approach, deployment, learning, and integration. The following are opportunities for improvement that an examiner team identified in the Leadership Category for a Baldrige applicant. Discuss which of the four dimensions are implied in these comments (some may address more than one dimension).**

- a. **The applicant presents limited evidence of systematic evaluation and refinement of several key leadership approaches that may support operational excellence and enhance sustainability. These include approaches for innovation, performance leadership, creation of a workforce culture that delivers a consistently positive customer experience, and an enhancement of leadership skills. Other examples are the Leadership Development Series, legal and ethical approaches, methods used to create a focus on action, and Legendary Service standards.**

Learning

- b. **A systematic process is not evident to create and balance value for the applicant's customers and stakeholders (regulators, shareholders, and the community). For example, the applicant does not describe the activities, people, and steps involved in the Leadership System and in aligning associates to customers through the Performance Management and Development Process.**

Approach and deployment

- c. **Several key leadership approaches do not appear to be fully deployed. For example, it is unclear how the Mission/Vision/Values (MVV) are deployed to key suppliers and partners; how development opportunities are deployed to all workforce members; and whether the MVV, service standard training, and legal and ethical requirements are deployed to support center employees (nearly 20 percent of the workforce).**

Deployment; integration

- d. **It is not evident that the applicant deploys its approaches to ethical behavior to interactions with customers, partners, suppliers, and other stakeholders. For example, the applicant describes only one approach focused on non-workforce stakeholders, and no enabling/monitoring processes appear to include them. This gap may be significant in light of the applicant's numerous supplier and partner relationships.**

Deployment; integration

#### **24. How do the Baldrige criteria support Deming's 14 Points?**

See the section in the chapter on The Baldrige Criteria and the Deming Philosophy. Students might also be asked to point to specific questions in the criteria for more clarification on the ideas suggested in this section.

#### **25. Prepare a list of specific actions that a high-scoring company in the Baldrige Award process might take in each of the seven categories. How difficult do you think it is for a company to score well in all the categories?**

One approach to doing this is to study the practices of past winners. Application summaries are available through the corporate relations offices of all the companies (some may charge a nominal fee) or their web sites. Contact addresses may be obtained through the Baldrige office at the Department of Commerce or its web site [www.quality.nist.gov](http://www.quality.nist.gov). Several books discuss this in detail, particularly Mark Graham Brown (*Baldrige Award Winning Quality*, Milwaukee: ASQC Quality Press, 1991 and subsequent revisions). This book is usually updated each year to reflect changes in the criteria. As just one example, in the Senior Executive Leadership item, key indicators might include:

- senior leaders participate in quality improvement teams
- senior leaders have face-to-face interaction with customers and suppliers
- they budget adequate resources to quality initiatives
- they make presentations on quality to professional groups and publish articles
- they communicate the firm's mission and quality policy through various media and so forth.

Most companies are strong in the leadership, HRM and technical issues. Many are weak in information and analysis and strategic planning. In teaching executive courses, one of the authors has consistently found (as has Juran) that most managers feel their companies are weakest in the planning functions. The Baldrige criteria are stringent. The difficulty of scoring well in each category is reflected in the fact that winners typically score only in the 700s overall.

**26. Create a matrix diagram in which each row is a category of the Baldrige Award criteria organizational maturity with respect to quality:**

- **traditional management practices;**
- **growing awareness of the importance of quality;**
- **development of a solid quality management system; and**
- **outstanding, world-class management practice.**

**In each cell of the matrix, list two to five characteristics that you would expect to see for a company in each of the four situations above for that criteria category. How might this matrix be used as a self-assessment tool to provide directions for improvement?**

This is a great exercise for students to examine the Criteria questions for increasing levels of maturity. It provides a structure for organizations to develop and refine their practices and processes. For example, it makes little sense to measure customer satisfaction if a company doesn't first understand customer groups, needs, and requirements. Thus, on the maturity scale, this would be one of the first things to do. Traditional management practices might not actively seek this information or use manager opinions as to what customers want. The scoring guidelines provide one approach for helping to answer this question. Use the descriptors as follows: 0% traditional, 10-30% growing awareness, 40-60% solid system; 70% and higher world class. These roughly correspond to scores achieved by Baldrige and state award applicants.

**27. Interview a quality professional at a local company about their quality management system. Consider questions such as: Do they have a quality manual? Is their QMS**

### **integrated with other enterprise business systems?**

This project allows students to see what a QMS might look like in a real organization and the challenges that a company might have in creating and using it. Students might discover, for example, that a QMS is based on ISO 9000.

**28. Examine the following requirements from ISO 9000. Which directly help control or improve quality, and which do not? For those that do not, why do you think that they are part of the standard?**

- a. “The organization shall determine requirements specified by the customer.”
- b. “Records from management reviews shall be maintained.”
- c. “... documentation shall include ... documents needed ... to ensure the effective planning, operation and control of its processes ... ”
- d. “... shall determine the monitoring and measurement to be undertaken ... to provide evidence of conformity of product to determined requirements.”
- e. “The quality management system ... shall include a quality manual.”
- f. “... establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified requirements.”

Much of ISO 9000 is procedural and focused on documentation and processes. It has been criticized for this in the past. Clearly statements a, c, d, and f are directly focused on controlling and improving quality. Statements b and e are focused on documentation, while helpful from an organizational standpoint, are not directly focused on quality processes.

**29. Search the Web for detailed information about ISO 9000 requirements. Although the language of the standard appears to be primarily for manufacturing, try to rewrite some of the requirements in language that would provide a framework for a typical public school system to use the standard.**

While the Baldrige has criteria versions for different sectors, ISO is written in sterile manufacturing language which can be a challenge for education, health, and other service organizations. Nevertheless, a wide variety of organizations have received ISO certification. Trying to rewrite the requirements would help students to really understand what they are about.

**30. Interview some managers at a local company that is pursuing or has pursued ISO 9000 registration. Report on the reasons for achieving registration, the perceived benefits, and the problems the company encountered during the process.**

This exercise is designed to expose students to the use of ISO 9000:2000 (or its newest successor, ISO 9000-2015) in organizations. Students may find that managers perceive that ISO 9000 is going to be more costly and difficult to attain and keep, based on the need for a more comprehensively deployed system required by the new standards.

**31. Describe the evolution of Six Sigma. What impact has it had on General Electric?**

**What differences must be addressed in applying Six Sigma in service organizations?**

See the text for details. Students might be challenged to find out where Six Sigma is going today and whether it indeed will be sustainable.

**32. What are the similarities and differences among Six Sigma, ISO 9000, and the Baldrige approaches?**

See the last section of the chapter.

**33. What philosophical changes might be required to implement a Six Sigma process in a hospital, government agency, or not-for-profit organization? Are they likely to be easy or difficult?**

Applying Six Sigma requires a process-oriented, information-intensive focus, which many of these organizations typically lack, except perhaps, for hospitals. Thus, implementing Six Sigma should be relatively easy for hospitals, and many examples exist. However, most government and non-profit agencies lack good systems for measurement and processes which will most likely make Six Sigma much more challenging. Training employees in the tools will also be more challenging.

**34. How might the principles of Six Sigma be used to improve a quality process in a school or university? What elements of the Six Sigma philosophy might be difficult to obtain support for in the educational environment? Why?**

There is not clear answer to these questions, as every school will be different. Educational institutions will most likely find it more difficult to implement good measurement systems and get professional employees to buy in to the process and undergo training.

**35. Find a company that has implemented a Six Sigma process. What changes have they made in the organization in order to develop their Six Sigma approach?**

This is a good project to emphasize implementation issues. Many of these tie into subsequent chapters. Some very good papers can be found in ASQ's *Six Sigma Forum* magazine, *Quality Progress*, and its annual Quality Congress Proceedings.

## **CASES**

### **The Technical Support Clerk**

**1. What is Melissa's job as opposed to her job description? What might Deming say about this situation?**

Many students will describes Melissa's job description as given in the case. Her "job" is really to satisfy customers. Note the difference between one's job and a job description.

Deming would have said that the numerical quota is contrary to the requirements that her supervisor states. This situation also goes against Deming's point on "pride of workmanship" because she has inadequate technology to do her job.

## **2. Drawing upon Deming's principles, outline a plan to improve this situation.**

Certainly the quota system must go, and Melissa might need improved training and technology to balance efficiency with the need to meet customers' needs. The company might also begin to conduct some customer surveys to understand needs and measure satisfaction as well as to measure Melissa's performance relative to these needs. The company needs to examine its staffing policies and scheduling procedures to ensure adequate coverage so that customers will not have to wait and clerks are not rushed.

## **Nashville Custom Guitars Revisited**

**Read the Nashville Custom Guitars Case in Chapter 1. Explain how Deming's 14 Points are reflected in its management practices and procedures.**

1. *Create a Statement of Purpose.* Passion for guitar making.
2. *Learn the New Philosophy.*
3. *Understand Inspection.* Inspection used judiciously to ensure quality, not indiscriminately.
4. *End Price Tag Decisions.* Selecting highest grades of wood. Using hand processes when needed to ensure quality.
5. *Improve Constantly.* Use written records to try to duplicate outstanding sound results.
6. *Institute Training.* Encourage skill building through external courses or building instruments for personal use.
7. *Teach and Institute Leadership.* Encouraging workers to go out on their own.
8. *Drive Out Fear and Innovate.*
9. *Optimize the Efforts of Teams and Staff.* Not having a formal quality department. Recruiting workers who thrive in a team environment.
10. *Eliminate Exhortations.*
11. *Eliminate Quotas and MBO; Institute Improvement; and Understand Processes.* Not passing work on to the next department until quality is assured.
12. *Remove Barriers.* Skill building helps workers become familiar with the entire process.
13. *Encourage Education.*
14. *Take Action.*

While all points are not explicitly observed, many are clearly there.

## **Power Products, Inc.**

### **1. Which of Deming's 14 Points are violated at Power Products?**

The most obvious ones are

Point 3: Understand the purpose of inspection, for improvement of processes and reduction of cost.

Point 4: End the practice of awarding business on the basis of price tag alone.

Point 5: Improve constantly and forever the system of production and service.

Point 11(a): Eliminate numerical quotas for production. Instead, learn and institute methods for improvement.

Students might also point to the leadership and “take action” points.

## **2. How can Deming’s Profound Knowledge philosophy explain the issues that Power Products has experienced and provide a framework for improving the situation?**

Lack of a systems perspective was probably the most important factor. These comments were provided in the source article:

*Competition and a misguided focus on one set of cost-saving variables nearly sank the product line. The notion of indulging one part of a system to the disadvantage of another did not change until declining sales and a reputation for poor quality led the operations director to resign.*

*Failure to appreciate the organization as a system containing codependent processes became costly for the parent organization. Travel would have been reduced if manufacturing engineering and the quality department were allowed to manage process variability and establish a preferred supplier list based on performance, scrap loss, rework, downtime and problem solving.*

*Similarly, recent recalls issued by some automotive companies are another case in point when maximizing some processes for individual reward and self-preservation at the expense of the whole system led to product failures, costly outcomes and unexpected losses.*

## **TecSmart Electronics**

### **1. Discuss how the practices that TecSmart identified support Deming’s 14 Points.**

It is easy to relate these to Deming’s 14 Points:

1. *Create a Statement of Purpose.* Leaders set company objectives which are cascaded down the organization.
2. *Learn the New Philosophy.* Executives are involved in teaching key courses related to improvement.
3. *Understand Inspection.* Inspection is not explicitly addresses, but employees are trained in problem solving, which suggests a more proactive approach to improvement rather than reliance on after-the-fact inspection.
4. *End Price Tag Decisions.* Suppliers are involved in early stages of a product development program, suggesting a close working relationship where cost is not

- king.
5. *Improve Constantly.* A process is in place to train employees in a 5-step problem solving process, and new processes are documented and variation in ongoing processes is monitored for corrective action.
  6. *Institute Training.* TecSmart University, customer relationship training, and training for sales, engineers, office staff, and managers all support this Point.
  7. *Teach and Institute Leadership.* Leadership is evident in objective-setting, communication and teaching, planning, complaint resolution, and middle management coaching.
  8. *Drive Out Fear and Innovate.* Routine communication sessions with top management, employee empowerment through self-managed teams, and the annual employee surveys would tend to support this Point.
  9. *Optimize the Efforts of Teams and Staff.* Teams and staff have been organized and are prevalent throughout.
  10. *Eliminate Exhortations.* Specific goals and measurement processes are used extensively.
  11. *Eliminate Quotas and MBO; Institute Improvement; and Understand Processes.* Not explicitly mentioned, but all evidence seems to support this.
  12. *Remove Barriers.* Hourly workers can make process changes with the agreement of only one person, and sales people are authorized to travel wherever they feel it necessary for customer service.
  13. *Encourage Education.* Education appears to be a core process in this company.
  14. *Take Action.* All the points mentioned clearly show this.

**2. How do these practices support the Baldrige criteria? Specifically, identify which of the questions in the criteria each of these practices address.**

TecSmart Electronics' strengths can also be classified as follows.

1. *Leadership.* Bullets 1, 2, 3, and 7.
2. *Strategy.* Bullets 1 and 7.
3. *Customers.* Bullets 8, 9, 10, 11, 15, and 17.
4. *Measurement, Analysis, and Knowledge Management.* Bullets 4, 5, 7, 8, 11, 16, and 17.
5. *Workforce.* Bullets 1, 6, 9, 12, and 14.
6. *Operations.* Bullets 4, 8, 16, and 18.
7. *Results.* Bullets 2, 3, 4, 7 and 17.

**3. What are some of the obvious opportunities for improvement relative to the Baldrige criteria? What actions would you recommend that Tec-Smart do to improve its pursuit of performance excellence using the Baldrige criteria?**

One way to approach this is to compare the strengths to the criteria questions and identify key gaps in what they do. For example, in strategic planning, no mention is made of how goals are set, benchmarks are chosen, or cycles of improvement in the planning process take place. Also, other than managers who are involved in professional and community

organizations, no mention is made of how the company addresses social responsibility obligations.

## **Can Six Sigma Work in Health Care?**

### **1. What would be your agenda for this meeting?**

Chapter 11 addresses Six Sigma implementation and provides some guidelines for getting started. Students should come up with many of these concepts as the basis for an agenda. However, probably the first thing needed would be to address the questions in #2 below to get a basic understanding of the organization before dealing with awareness, training, coaching, and other change management issues.

### **2. What questions would you need answered before proposing a Six Sigma implementation plan?**

The questions might include:

- Why do this? Understand the mission, vision, and values of SLRMC
- Willingness to commit time and money to a Six Sigma process?
- Where do they stand now? Do they have metrics and benchmarks for comparison?
- What “champions” might they identify within the physician and staff communities?
- Why the project areas identified? Are these the “low-hanging fruit” to help motivate the process?

### **3. How would you design an infrastructure to support Six Sigma at SLRMC?**

You might design an infrastructure around the key characteristics of Six Sigma as outlined in the chapter, and develop project goals and activities to address each one:

1. Thinking in terms of key business processes and customer requirements with a clear focus on overall strategic objectives.
2. Focusing on corporate sponsors responsible for championing projects, supporting team activities, helping to overcome resistance to change, and obtaining resources.
3. Emphasizing such quantifiable measures as defects per million opportunities (dpmo) that can be applied to all parts of an organization: patient services, quality assessment, financial management, human resources, and so on.
4. Ensuring that appropriate metrics are identified early in the process and that they focus on health care results, thereby providing incentives and accountability.
5. Providing extensive training followed by project team deployment to improve profitability, reduce non-value-added activities, and achieve cycle time reduction.

6. Creating highly qualified process improvement experts (“green belts,” “black belts,” and “master black belts”) who can apply improvement tools and lead teams.
7. Setting stretch objectives for improvement.