Designing a Quality-Based Business

Chuck, a young entrepreneur who has worked in various restaurants throughout high school and college, has decided to develop a new type of restaurant that focuses primarily on takeout of home-cooked meals for busy professionals on their way home from work. The restaurant would also have a small dining area for customers who wish to eat the food there. Because this prospective business will have to compete with national franchises and other traditional local restaurants, Chuck wants to ensure that this business will compete on quality and develop a strong quality reputation. He has asked you to help him understand the issues that he must address in designing and managing this restaurant.

Using the principles of TQ and the six basic areas of management that defined TQ practices as discussed in this chapter, provide Chuck with specific advice on how he might "bring to life" the principles of TQ in this new venture, and what specific practices he should consider to help develop a quality-based business.

Deere & Co.

Deere & Company (http://www.deere.com) (also known as John Deere, after it's founder) is a world-leading manufacturer, distributor, and financier of equipment for agriculture, construction and forestry, and commercial and consumer applications (lawn and grounds care). Deere's objective has consistently been to be the low-cost producer in the markets it serves. However, it seeks to do so while maintaining an image of quality and customer focus. Its company values are quality, innovation, integrity, and commitment. Because of the company's close ties to the agricultural industry, corporate performance in both sales and profits was highly variable over the last several decades due to cycles of low prices and oversupplies of many agricultural products. During that period, the company made various adjustments in its product mix and manufacturing processes to enable it to better compete and survive in the global environment.

The excerpts below come from various Deere annual reports.

1984

In spite of the industry environment of low demand, the challenge is to do what we do better. Provide more value per dollar of purchase price. To accomplish this will require cost-effectiveness in all facets of our business, which includes being more flexible and more aggressive in adopting the most modern design and manufacturing technologies . . . Product design is being systematically reviewed to provide improved performance and quality at a lower cost . . . New manufacturing technologies such as robot welding have enabled Deere employees to become more efficient while producing parts of higher and more consistent quality.

1987

John Deere is determined to be the lowest-cost producer in our industries and to sustain a competitive advantage on a global basis. However, we all must perpetuate the company's reputation for providing the best quality and value to our customers. While we're making structural changes in our operations we must continue to adhere to these business principles . . . John Deere leadership in the agricultural equipment business is based on a line of products that has earned a reputation for excellent quality and reliability, on the skills and services we have to support the product line, and on our strong network of independent dealers . . . In our continuing effort to improve the quality and performance of John Deere agricultural equipment, we have traditionally invested a higher percent of sales in product R&D than any of our major competitors . . . The industrial equipment improvement reflects our strong product line and dedicated organization and our employees' determination to reduce costs, improve quality, and deliver the best value to the customer . . . The total value of John Deere equipment is quality, reliability, dealer support, finance plans, resale value, and the company that stands behind it all.

1989

We must continue to ensure that John Deere products offer the customer the

best value in all respects—in quality, reliability, features, resale price, and especially in value added by an independent network of well-placed, full-servicing dealers people can rely on.

1995

Deere's focus on continuous improvement takes a wide variety of forms, but is based on the simple concept that any product or process can be improved. We have placed great emphasis on enhancing the team-based culture of the company, in which salaried and hourly employees work cooperatively toward the common goal of creating ongoing, meaningful gains in productivity . . . A key component of this operating philosophy is the company's growing utilization of team-based compensation systems that reward continuous improvements in productivity.

1996

As we move ahead in the pursuit of genuine value, we continue to follow twin strategies of continuous improvement—embodying innovation, efficiency, effective business processes and a passion for excellence—and profitable growth, which is being accomplished through the global pursuit of new markets and products . . . Nothing stands as a better illustration of Deere's commitment to continuous improvement than our long record of investment in capital programs and research and development . . . Continuous improvement initiatives are setting the stage for our other strategy—that of profitable growth . . . Our company's pursuit of genuine value as our primary strategic initiative provides a strong point of focus. In reaching to create value for our many constituencies, we have embarked on a series of exciting journeys that are fundamentally remaking our enterprise. For example, a strong company-wide total quality program continues to expand and intensify, yielding improved customer responsiveness, shortened cycle times, and reductions in costs and asset levels.

1999

Highlighting our pursuit of genuine value through continuous improvement is an aggressive series of process-based initiatives targeting six-sigma levels of performance and customer satisfaction. During the year, some 900 projects involving the efforts of several thousand employees, were completed or in progress. Their goal: Streamlining business processes, large and small, and pursuing operational excellence throughout the company . . . In support of the initiative stressing customer focus, our operating divisions are structuring their activities around the core processes of customer acquisition, order fulfillment, product development and customer support.

2003

A totally new compensation and rewards system, which began taking effect in 2003, is supporting the attainment of our goals and promoting true alignment among the interests of customers, employees and investors. Thousands of management employees at all levels are now eligible for a bonus payable when our service to customers earns a return above the cost of capital over a multi-year period.

2005

Deere employees are tightly aligned with our business objectives and are being evaluated and compensated accordingly. Virtually all 21,000 of our salaried employees worldwide follow detailed performance plans tailored to their own responsibilities and development potential. The plans spell out how each individual's efforts contribute to meeting unit and company goals . . . A prime example of how product innovation is driving higher sales, the John Deere 2500 E greens mower is the golf and turf industry's first mower that uses hybrid technology. Result: Lower noise and better fuel efficiency but plenty of power (18-hp) . . . Building on a tradition of stewardship, the company has continued to develop product solutions that are less disruptive to the surrounding environment. Deere's newly introduced Tier 3-compliant PowerTech Plus engines use the latest technology to deliver better fuel economy and more power while meeting stringent emissions regulations. In another case,

the company in 2005 became the first equipment manufacturer to use biodiesel as a factory fill at its U.S. manufacturing locations.

Assignment

On the basis of this information, prepare a brief report discussing Deere & Company's evolution of quality. Relate your discussion to historical trends, future challenges, the various definitional perspectives of quality, and other issues discussed in this chapter such as the principles of TQ and infrastructure. For example, how has their perspective of quality and the practices used to implement it changed over the years? Update the case by reviewing Deere's latest annual report and include any new information in your analysis.

NOTES

1. *The Cincinnati Enquirer*, January 12, 2002, pp. A1, A9.

2. Early history is reported in Delmer C. Dague, "Quality—Historical Perspective," *Quality Control in Manufacturing* (Warrendale, PA: Society of Automotive Engineers, 1981); and L. P. Provost and C. L. Norman, "Variation through the Ages," *Quality Progress* 23, no. 12 (December 1990), 39–44. Modern events are discussed in Nancy Karabatsos, "Quality in Transition, Part One: Account of the '80s," *Quality Progress* 22, no. 12 (December 1989), 22–26; and Joseph M. Juran, "The Upcoming Century of Quality," address to the ASQC Annual Quality Congress, Las Vegas, May 24, 1994. A comprehensive historical account may be found in J. M. Juran, *A History of Managing for Quality* (Milwaukee, WI: ASQC Quality Press, 1995). Discussions of quality in China were adapted from the first chapter, "Ancient China's History of Managing for Quality," in Juran's book and from Jack Pompeo, "Living Inside China's Quality Revolution," *Quality Progress*, August 2007, 30–35.

3. M. D. Fagan (ed.), *A History of Engineering and Science in the Bell System*: The Early Years, 1875–1925 (New York: Bell Telephone Laboratories, 1974).

4. "Manufacturing Tops List of Concerns Among Executives," *Industrial Engineering* 22, no. 6 (June 1990), 8.

5. Lawrence Utzig, "Quality Reputation—Precious Asset," *ASQC Technical Conference Transactions*, Atlanta, 1980, 145–154.

6. Procter & Gamble, *Report to the Total Quality Leadership Steering Committee and Working Councils* (Cincinnati, OH: Procter & Gamble, 1992).

7. A. V. Feigenbaum, *Total Quality Control*, 3rd ed., rev. (New York: McGraw-Hill, 1991), 77, 78.

8. "The Cost of Quality," *Newsweek*, September 7, 1992, 48–49.

9. Kennedy Smith, "Managers Disagree on Quality's Definition" *Quality Digest*, May 2004, p. 6.

10. Lori L. Silverman with Annabeth L. Propst, "Quality Today: Recognizing the Critical SHIFT," *Quality Progress*, February 1999, 53–60.

11. Reprinted with permission from Seiche Sanders, "What's Up? ASQ's Futures Study Offers Insights into Where Quality is Headed," *Quality Progress*, October, 2008, pp. 42–49. Copyright © 2008 by American Society for Quality (ASQ). No further distribution allowed without permission.

12. Source: http://www.un.org/esa/population/publications/wpp2008/pressrelease.pdf

13. Nabil Tamimi and Rose Sebastianelli, "How Firms Define and Measure Quality," *Production and Inventory Management Journal* 37, no. 3 (Third Quarter, 1996), 34–39.

14. Four comprehensive reviews of the concept and definition of quality are David A. Garvin, "What Does Product Quality Really Mean?" *Sloan Management Review*, 26, no. 1 (1984), 25–43; Gerald F. Smith, "The Meaning of Quality," *Total Quality Management* 4, no. 3 (1993), 235–244; Carol A. Reeves and David A. Bednar, "Defining Quality: Alternatives and Implications," *Academy of Management Review* 19, no. 3 (1994), 419–445; and Kristie W. Seawright and Scott T. Young, "A Quality Definition Continuum," *Interfaces* 26, 3 (May–June 1996), 107–113.

15. Garvin (see note 13), 25.

16. "Lamborghini owner says he got $262,000 lemon," *Cincinnati Enquirer*, June 23, 1998, B5.

17. Gregory M. Seal, "1990s—Years of Promise, Years of Peril for U.S. Manufacturers," *Industrial Engineering* 22, no. 1 (January 1990), 18–21. We also thank Ben Valentin for providing some historical facts about Nissan and Datsun.

18. Alex Taylor III, "Detroit's Used-Car Blues," *Fortune*, September 16, 2002, 147–150.

19. ANSI/ASQC A3-1978, *Quality Systems Terminology* (Milwaukee, WI: American Society for Quality Control, 1978).

20. "Quality Pays at Hilton Hotels," *Quality Digest*, August 2005, p. 9.

21. James W. Dean, Jr. and David E. Bowen "Management Theory and Total Quality: Improving Research and Practice Through Theory Development," *Academy of Management Review*, 19, 3, 392–418, 1994.

22. Ron Zemke and Dick Schaaf, *The Service Edge* (New York: New American Library, 1989), 352–355;