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Comprehensive Quality Management

Statement of
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Subcommittee on Science, Research, and Technology
Committee on Science, Space, and Technology
U.S. House of Representatives



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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss with you the progress of our ongoing study of comprehensive quality management systems in the private sector. This study, undertaken at the request of Representative Don Ritter and endorsed by 29 other Representatives, will assess the impact of formal quality management on the productivity and profitability of American companies. The study is important because comprehensive quality management has significant implications for the international competitiveness of U.S. industry.

Until a few years ago, U.S. business believed that performing final inspections of a product was the way to ensure quality. General industry practice was to accept a certain level of defects because the highest level of quality was thought to be too costly. However, intense foreign competition in general and Japanese competition in particular have forced some American companies to reappraise their traditional views of quality.

In prior GAO work we have noted how foreign competition has stimulated attention to quality management in U.S. companies. In September 1988, we testified on our work on foreign investment in

the U.S. automobile industry.¹ We concluded that the management systems used by Japanese auto assemblers operating in the United States were the primary source of their production efficiency and product quality. Japanese assemblers' success in the United States is having a demonstrable effect. U.S. automakers, recognizing the benefits of Japanese production and management methods, have begun to implement many of these same processes.

Our observations today are based on our initial work on Congressman Ritter's request, including a review of current literature on the subject as well as interviews with national quality association officials, corporate executives, and quality experts. We note that there is no single formal definition of what constitutes a comprehensive quality management system. However, we did find agreement that such a system involves designing the product for customer needs, producing the product to consistently meet the design specifications, and achieving total customer satisfaction. In addition, virtually all of the people with whom we talked said they regarded the criteria used in the Baldrige award process as excellent guidelines for a comprehensive quality management system. The Baldrige award, as you know, recognizes the achievements of U.S. companies that significantly improve the quality of their products and services.

¹Foreign Direct Investment in the U.S. Automobile Industry, Testimony before the Subcommittee on International Economic Policy, House Committee on Foreign Affairs, September 22, 1988. Also see Foreign Investment: Growing Japanese Presence in the U.S. Auto Industry (GAO/NSIAD-88-111, March 7, 1988.)

DEVELOPMENTS IN THE QUALITY MANAGEMENT AREA

A number of developments over the past several years have advanced the level of skills, knowledge, and implementation of quality management in America companies.

- Major corporations, such as Westinghouse Electric Corp., have established quality and productivity centers;
- National associations, such as the American Society for Quality Control, the American Productivity and Quality Center, and the Association for Quality and Participation, are continuing to enhance knowledge of quality management;
- The Baldrige award winners and the Florida Power and Light Company (the only American company to win the Deming prize) have achieved great success in institutionalizing comprehensive quality management practices; I will elaborate on both of these awards later;
- The Society for Quality Control and the Productivity and Quality Center, in cooperation with Department of Commerce, are successfully publicizing the Baldrige award and its criteria;

- The federal government has set up a quality management institute to develop skills and knowledge;
- Organizations such as the Conference Board, PIMS Associates, the Society for Quality Control, the General Systems Co., and the Productivity and Quality Center have conducted a few studies of quality management and its benefits; and
- Further studies, such as the Joint International Quality Study, commissioned by the American Productivity Foundation, are underway.

In addition to the reports of quality management successes achieved by the five Baldrige award winners and the Florida Power and Light Company, we found a few corporate case studies describing similar achievements. However, despite such success stories, the vast majority of chief executive officers have not embraced a comprehensive quality management system for their companies.

BARRIERS TO IMPLEMENTING A
COMPREHENSIVE QUALITY MANAGEMENT SYSTEM

In the course of our work, corporate executives and quality management experts told us that there are substantial barriers to implementing a comprehensive quality management system. These include:

- A belief that no change is necessary. Some chief executive officers are not convinced that they need to focus on comprehensive quality management practices because their companies are doing well financially;
- An absence of change - inducing competition;
- A short-term view of the need for profits. This view creates an unwillingness to commit resources to establish a culture and systems in which quality management can flourish. Furthermore, available data show that such a commitment can take years before the full benefits are realized;
- A reluctance to change the corporate culture. Examples of such changes include giving employees greater authority to effect change and reducing multiple layers of management;
- A perception that raising quality means increasing costs, such as higher expenditures on training, and hiring more consultants;
- A view that comprehensive quality management is just another fad and will go away; and
- The need for committed and involved leadership by top executives, which takes a large investment of their time.

RESULTS OF EXISTING STUDIES SUGGEST QUALITY PAYS

We have identified a few completed studies of comprehensive quality management. The following list describes these studies and their major findings:

-- The Conference Board, Inc., issued a 1989 report based on a questionnaire sent to senior executives of large U.S. corporations. The board found that of the 149 firms answering the questionnaire, 62 firms attempt to measure how improving quality management affects profitability. Of these 62 firms, 47 said that profits had increased noticeably because of lower costs and/or because of increased market share due to better quality management.² Another report, based on interviews with the board's U.S. Quality Council, found a conviction that relying on comprehensive quality management should be the strategy of choice to assure a prime economic position for the United States in the global marketplace.³

-- PIMS Associates, Inc., (a subsidiary of the Strategic Planning Institute, Cambridge, Mass.) correlated data collected on more than 1,000 businesses and concluded that those selling high

²Current Practices in Measuring Quality, The Conference Board, Inc., N.Y., Research Bulletin No. 234, 1989.

³The Road to Total Quality: Views of Industry Experts, The Conference Board, Inc., N.Y., Research Bulletin 239, 1989.

quality products and services were generally more profitable than those with lower quality offerings. They found that both return on investment and market share rose as relative quality increased.

- The American Society for Quality Control commissioned the Gallup Organization in 1986, 1987, and 1989 to conduct telephone opinion surveys of senior business executives about quality management issues. Their 1989 survey found that while executives were aware of the role of quality management in meeting foreign competition, senior executives regarded the greatest challenge as coming from other U.S. companies. In addition, one in five executives had no idea of what producing poor quality products cost their company.

- The General Systems Company, Inc., a quality management consulting firm, has developed a proprietary database of its clients that shows positive long-term results for return on investment following initiation of quality management systems.

- The American Productivity and Quality Center has prepared a number of reports and case studies on individual companies that have adopted quality processes and, as a result, have achieved various degrees of performance success.

-- A 1983 report on Japanese Deming prize winners, published by the Japanese Union of Scientists and Engineers, found that the financial performance of the winners was above the average of their industries.

THE BALDRIGE AWARD AND THE DEMING PRIZE

Both the Baldrige award and Japan's Deming prize are intended to raise the quality levels of industry in the United States and Japan. Criteria for earning these awards are regarded as useful bases for enhancing many companies' quality management processes.

The Baldrige award, named after the late U.S. Secretary of Commerce, is 2 years old. It can be given to large manufacturing firms or their divisions, smaller firms, and service companies. The award process is competitive and requires that applicants meet specific criteria. The criteria are more results oriented than process oriented. Judges of applicants' qualifications must have no consulting relationships with the contestants. Each year as many as six applicants can earn the Baldrige award.

The Deming prize, named after the quality management consultant W. Edwards Deming, is 39 years old. Like the Baldrige award, it can go to a small firm, a large one, or a division of a large firm, although the prize categories differ somewhat from those of the Baldrige award. There are also Deming prizes for individuals for

contributions to quality control. Applicants must meet the specific prize criteria, which stipulate improvement of quality control methods. Judges of contestants' applications are permanent and are certified by the Japanese Union of Scientists and Engineers. As with the Baldrige award, Deming examiners must disqualify themselves from judging companies with which they might appear to have a conflict of interest. In contrast to the limited number of Baldrige awards given yearly, however, there is no limit on the number of applicants that may win the Deming prize each year.

POSITIVE IMPACT OF BALDRIGE AWARD ON CORPORATIONS

In the course of our work, we learned of some positive effects that the Baldrige award is having on corporations. For example, many companies are using the Baldrige award criteria to evaluate the quality management programs of their own business units; to judge these programs' progress; to identify problem areas; and to determine what more needs to be done, rather than just to submit a winning award application. Also, suppliers to corporations that embrace comprehensive quality management have benefited from the spillover effect of being encouraged to increase their own quality control efforts.

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In conclusion, our initial work has shown that public and private interest in and concern about the quality of American products and services is growing. Also, some companies are receiving dramatic benefits from embracing comprehensive quality management systems. While our work is still in its initial phase, it has become clear to us that adoption of comprehensive quality management systems by American companies is one of the most promising ways to strengthen American competitiveness in world markets.

Mr. Chairman, this completes my statement, and I will be happy to respond to any questions you or other members of the committee may have.