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## Malcolm Baldrige National Quality Award 1991 and 1997 Recipient Solectron Corporation

Through a deepening and broadening commitment to quality and performance excellence, Solectron Corporation, an electronics design and manufacturing services firm headquartered in Milpitas, Calif., has doubled its market share since 1992 and achieved a compound annual sales growth rate of 47 percent. Careful execution of this commitment on a global scale also has earned the rapidly expanding company its second Baldrige Award.

Solectron has sustained its rapid growth with something new -- 12 additional production and design facilities -- and something old -- satisfied repeat customers who have greatly increased their outsourcing business with the contract supplier. Contract spending levels by Solectron's 11 key, long-term customers increased 600 percent between 1992 and 1996, a solid indication of high levels of customer loyalty and satisfaction.

To maintain its corporate-wide emphasis on quality as it expands globally, the company has designed a "new site start-up process" based on the Baldrige Award criteria, helping to ensure that the new facilities are aligned tightly with regional customers' requirements and expectations.

### The Business

Solectron Corporation is a worldwide provider of electronics design, manufacturing, and support services to leading original equipment manufacturers. It offers a broad range of pre-manufacturing, manufacturing, and post-manufacturing solutions. It also oversees materials logistics, managing customers' supply chains to meet product schedules.

Founded in 1977, Solectron is a publicly held company with revenues of \$3.7 billion in fiscal year 1997. Dr. Ko Nishimura is chairman, president, and chief executive officer of the company, which employs more than 18,000 employees at 17 sites around the world.

### Pursuing Excellence

Solectron aims to provide its outsourcing customers with significant competitive advantages: access to advanced manufacturing technologies, shortened time-to-market, reduced cost of production, and more effective use of assets. To do this, it must be intimately familiar not only with customers' immediate needs but also with their long-term product and market plans. Effectively responding to today's and tomorrow's requirements is the goal of Solectron's three-pronged planning process. It encompasses an annually updated three-year strategic plan, an annual operating plan, and an annual improvement plan that sets, among other goals, stretch targets for all units and processes within the company.

Annual corporate business goals and improvement targets are set by Nishimura. At the same time, regional executives and the general managers at each production site determine their targets on the basis of their knowledge of customer requirements. Another round of planning aligns corporate goals with regional and site targets, while the company's global account managers ensure that the requirements of customers served by several Solectron facilities will be met.

The result is an "entrepreneurial" annual operating plan. Individual plans for each account and each site support Solectron's strategic objectives for building markets and strengthening capabilities. Yet, managers have considerable freedom in determining how best to achieve goals for financial performance, customer satisfaction, and employee satisfaction.

Opportunities for improvement are identified through the Solectron Total Quality Excellence Award Program, an internal version of the Baldrige Award assessment process.

### Customer Focus

For over 10 years, Solectron has tracked customer satisfaction on a weekly basis, with an 80 percent to 90 percent survey response rate. Scores for delivery, quality, and service are at or nearing the 90 percent satisfaction level. This level of satisfaction is particularly noteworthy given the company's stringent rating scale in which a "C" receives a score of 0 and a "D" receives a score of minus 100. Grades of "B-" or lower trigger Solectron's Customer Complaint Resolution Process. Within 24 hours, the account's program manager contacts the customer to acknowledge the issue and to gain additional information, and within 72 hours, a corrective action plan is submitted to the customer.

Customer-satisfaction report cards are reviewed weekly by managers and employees at each site. Nishimura reviews composite scores at each site during his quarterly visit.

Through an annual, third-party survey of executives at customer companies, Solectron again evaluates satisfaction levels and gathers information on customers' future business plans and manufacturing requirements. Respondents also are asked to rate Solectron relative to its competitors in the areas of quality, delivery, service, technical capability, material management, and overall satisfaction.

Survey results point the way to improvements in manufacturing and service capabilities that Solectron must make to meet future expectations and

build new business. An example of customer-driven improvements is the newly added capability for automating exchange of customers' computer-aided designs. The technology has reduced the start-up time for new projects by a factor of five. Another is greater emphasis on EDI (electronic data interchange) to link suppliers and improve on-time delivery rates. Use of EDI has yielded savings ranging between \$25 and \$260 per transaction.

### **Supply Chain Management**

Soletron's purchases of materials and other items from suppliers total more than \$2 billion annually -- over 75 percent of company revenues. A key goal is to create value through supply chain design and management. The company issues quarterly report cards preferred to suppliers, marking them on key performance and price measures and issuing a "total cost of ownership" score.

### **Encouraging Employees**

Soletron aims to create a work environment in which individuals can maximize their potential "by working both hard and smart, and doing what it takes to satisfy the customer."

Soletron University, established in 1990, drives management and employee skill development, supporting Soletron's philosophy to "hire for traits -- train for skills."

The company's variable compensation plan extends to all members of the workforce. Employee payout is based on individual, team, site, and corporate performance in the areas of revenue, profit, customer satisfaction, and operational performance.

### **Results**

Soletron's commitment to manufacturing quality products and its strong performance management are reflected in key measures of financial performance, such as revenue growth and earnings per share. Since 1991, revenue growth has averaged well above the company goal of 25 percent annually and the electronics manufacturing services industry's average annual growth rate of 10 percent. As a result, Soletron's market share has doubled since 1992. In addition, over the past six years, Soletron's stock performance has significantly outpaced its largest competitor and the S&P 500 increasing sixtyfold since its initial public offering in 1989.

Social responsibility is a foundation for improvement efforts. The company has reduced hazardous wastes and chemical emissions and now recycles 94 percent of materials. Because of its proactive approach, Soletron facilities in California, Texas, France, and Malaysia received local awards and recognition for environmental responsibility. In addition, the company has received more than 140 recognition awards from its customers since 1981.

#### **Baldrige Website comments:**

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