National Institute of Standards and Technology • Technology Administration • Department of Commerce Baldrige National Quality Program

Malcolm Baldrige National Quality Award

Award Winner

Medrad, Inc.

Medrad, Inc. got its start in 1964, when Dr. M. Stephen Heilman created the first angiographic injector in the kitchen of his home near Pittsburgh. An emergency room physician, Heilman realized that being able to precisely inject a liquid contrast agent into blood vessels would make X-ray images clearer, improving diagnosis of cardiovascular diseases.

Today, Medrad is a worldwide leader in developing, manufacturing, marketing, and servicing medical devices that enhance imaging of the human body and enable therapy. A subsidiary of Schering, AG Germany, Medrad has a headquarters and manufacturing facility in the United States near Pittsburgh, Pa., and 14 locations around the world, including Africa, Australia, Canada, France, Germany, Japan, Norway, and Singapore. Led by President and CEO John P. Friel, Medrad has 1,194 employees and realized \$254 million in sales in 2002.

Medrad's sustained success is based on three priorities known as the Medrad Philosophy: To improve the quality of health care, to ensure continued growth and profit, and to provide an enjoyable and rewarding place to work.

The Power of 5

Medrad's mission, "to be a worldwide market leader of medical devices and services that enable or enhance diagnostic and therapeutic imaging procedures," is the guiding principle for how the company operates. To achieve its mission, five corporate scorecard goals guide decision making at all levels: (1) exceed the financials, (2) grow the company, (3) improve quality and productivity, (4) increase customer satisfaction, and (5) improve employee growth and satisfaction.



Highlights

- Medrad has consistently achieved its balanced scorecard goals since 1998, including an average annual revenue growth rate of 15 percent.
- Medrad is the market leader in the United States and Europe for its vascular injection systems and related services, with market shares significantly greater than its best competitor in many product lines and regions around the world.
- Since 1999, overall employee satisfaction has exceeded an industry best-in-class benchmark.
- In 2002, the company reimbursed employees \$487,000 for tuition and budgeted \$535,000 in tuition reimbursement for 2003.

Medrad's Executive Committee uses a systematic strategic planning process to review the company's five goals, to set one- and five-year targets, and to identify annual Top 12 Objectives to achieve those targets. A "Waterfalling Process" is used to deploy the scorecard goals and Top 12 Objectives throughout the organization. Managers create departmental objectives and plans to support the corporate scorecard and Top 12, and then work with employees to develop supporting individual goals. This process results in the alignment of the corporate scorecard goals to the individual employee.

In an industry that is heavily regulated, Medrad has created an environment that fosters legal and ethical behavior on the part of all its employees and suppliers both in the United States and around the world. Training in the Code of Conduct, which defines ethical behavior in all transactions and interactions, is part of the company's employee orientation program and is reinforced through a quarterly Code of Conduct Challenge distributed by e-mail to all employees. In addition, Medrad has an anonymous ethics hotline and e-mail address, a Business Ethics committee, and a Legal Advisory Board.

Quality, Service, Availability Reap Rewards

As a small company in an industry dominated by very large scanner and contrast manufacturers, Medrad's competitive edge is its strong customer focus, which includes continuous direct contact with customers, high-quality products which are compatible with customers' imaging equipment, on-site product training for customers, and responsive field service. Medrad also makes it easy to purchase its products through the customer's preferred source, including its sales force in major countries, authorized local dealers in smaller countries, or through original equipment manufacturing partners and others.

In support of its corporate scorecard goal of increasing customer satisfaction, Medrad uses a seven-step sales process to build customer relationships, acquire customers and meet their expectations, increase loyalty and repeat business, and gain positive referrals. In addition, Medrad uses its Field Force Automation system and InSITE database to capture customer information and complaints, to share that information throughout the organization, and to analyze and improve customer satisfaction, product performance, and sales. "Listening posts," such as surveys, the Field Force Automation system, customer visits by management, and analysis of complaints, help Medrad listen to and learn from current, former, potential, and competitors' customers.

To develop new products or improve existing ones, Medrad uses its Integrated Product Development Process to collect ideas from employees, identify customer requirements, prioritize product development initiatives, and translate those initiatives into specifications. In addition, the process proactively addresses regulatory compliance, product safety, and environmental concerns, resulting in risk mitigation plans that design safety, health, and environmental factors into production and delivery processes.

Strong Performance

The success of this approach is demonstrated by overall customer satisfaction and Medrad's strong financial performance. In a 2003 industry survey, *Medical Imaging* magazine asked readers to rate 57 medical imaging companies, including Medrad, in 10 areas such as product quality, service, support and price, ability to capitalize on new and niche products, and company leadership. Medrad ranked among the top 10 in eight of the performance areas measured, including two first-place rankings. Medrad ranked second out of 57 for overall satisfaction, and was in the top two in price, quality of products, ease of integration, and service and support. As a comparison, the company's key competitor did not finish in the top 10 in any of the performance areas.

Strong financial performance is evidenced by an increase in operating income as a percent of revenue, which reflects the overall profitability of the company, from 16 percent in 1999 to 20 percent in 2002. Revenue growth has exceeded the average growth trend of comparable companies, increasing from \$35 million in 1988 to \$254 million in 2002. Medrad consistently has achieved its growth goal since 1998.

"Improving employee growth and satisfaction," is the fifth of Medrad's five corporate goals; and it is essential to achieving the other four. In 2002, the company spent \$487,000 on tuition reimbursement and budgeted \$535,000 for 2003, an increase from \$325,000 in 1999. Medrad's total training expenditure per employee of \$2,233 in 2002 exceeds the American Society for Training and Development's benchmark of \$1,655.

The semiannual Employee Satisfaction Survey is the tool Medrad uses to measure progress on its corporate scorecard goal of increasing employee growth and satisfaction. Since 1999, overall employee satisfaction has exceeded an industry best-in-class benchmark. Safety is part of this success; since 1994, Medrad has had a lower rate of injuries than the medical device industry's benchmark of five OSHA reportable incidents per 100 employees. Confidence in the company's leadership, also important to employee satisfaction, has improved from about 60 percent in 2000 to 70 percent in 2003, surpassing an industry survey benchmark.

Employee empowerment, innovation, and initiative are pervasive in Medrad's culture, as shown through the many methods of capturing and capitalizing on diverse ideas and thinking. For example, Medrad's VIP process captures, reviews, and acts upon cost-saving ideas generated by individuals and teams. "The Rack" is a team-focused system for identifying problems and issues related to quality, safety, and efficiency. In addition, the Product Innovation and Advanced Design (PIAD) process focuses on new technology and product innovations, including developing an intellectual property portfolio to support business growth.

Community Care

For Medrad, being a good corporate neighbor is a way to share its success, invest in the future, and give back to society. President and CEO John Friel serves on the board of directors for many Pittsburgh area organizations, including the United Way of Allegheny County. Medrad matches 70 percent of employee contributions to the United Way, which have nearly tripled from just over \$60,000 in 1994 to \$180,000 in 2002. Medrad's Points of Light community outreach organization plans approximately 20 events each year, including the United Way Day of Caring, during which the company suspends operations for a day to allow employees to participate. In 2002, 750 employees participated in the Day of Caring, up from 630 in 1998. In recognition of Medrad's support, the United Way presented the company with the Gold Award in 2001 and the Balto Award in 2002.

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