

Measuring for Excellence

How award-winning companies gather the data they need to continuously improve

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MANY COMPANIES SPEND MILLIONS of dollars collecting data, but they don't analyze or use the data for decision making. Others don't measure any of their processes or procedures, don't measure the right things, or don't clearly define their measurement goals.

Companies probably wouldn't take such a nonchalant attitude toward measurement if they understood that how—or if—they measure themselves can determine their degree of success or failure. Simply put, if companies don't effectively measure themselves, they probably won't improve. Companies need a balance between what they are trying to achieve and what they are measuring. So, if a company is trying to achieve excellence, it needs to measure for excellence.

"Since things are always changing, you can't tell if they are moving in the right direction if you don't measure them. Just because something is working well today doesn't mean that it will continue to do so in the future," said Holly Threat, manager of quality and process improvement at Federal Express.

What follows is a look at what four Malcolm Baldrige National Quality Award winners—Federal Express Corp., Ritz-Carlton Hotel Co., Corning Inc. Telecommunications Products Division (TPD), and Texas Instruments Inc. Defense Systems and Electronics Group (DSEG)—measure to continuously improve their organizations.

At Federal Express, more is better

"At Federal Express, measurement is something we do a lot of. We measure everything," Threat said. "Then, we use management by objective to prioritize what processes are considered key to the company."

Threat explained why measuring everything



isn't a problem. "Since we collect a lot of data, we probably measure things that we don't analyze or use for decision making. But things that aren't problems today could be problems tomorrow. We might use the data in the future."

Federal Express also doesn't worry about measuring a lot of data because most of the data are collected systematically and the data collection systems are automated, not manual, which makes data collection fast and easy.

While Federal Express measures things that aren't running smoothly and things that it wants or needs to change, it also keeps a close watch on the things that it does well. Threat said, "Things are always changing, which means that they either

move up or down in their level of performance. We have to make sure that we continue to do well the things that we already do well. We can't become complacent."

To find out what areas are receiving the lowest customer satisfaction, Federal Express uses an internal process quality index and an external service quality index, which includes a customer satisfaction survey that measures 21 elements.

Federal Express strives for its internal measures to be the predictors for its external measures because, while its internal "how" surveys gather quantitative data, the external "why" surveys measure qualitative data, which are harder to interpret. Threat said, "We want our 'how' predictors to be predictors for our 'why' predictors. In our internal surveys, we find out exactly how something is done, such as how many packages were delivered on time, while our external surveys ask why something happened, such as why the customer was dissatisfied."

On benchmarking, Threat said, "We try to benchmark other competitors, but frankly we haven't found any that measure better than us. Therefore, we measure against companies that are proven to be the best, such as Baldrige Award winners."

Federal Express measures its daily activities and combines the data to create a Weekly Activity Analysis and Review, or WAR. In this report, the week's activities are reviewed and analyzed and then reported to management. Management uses these data to set improvement objectives and to decide what continuous improvement activities need to take place during the following week.

Employees receive weekly and monthly reports on what areas are not meeting corporate objectives. Monthly reports usually include more data and more trending analysis than weekly ones. Customer survey results, which are measured daily, are also provided quarterly.

Ritz-Carlton works with a balanced scorecard

"We only measure what we must," said Patrick Mene, vice president of quality at the Ritz-Carlton Hotel Co. "But, we make sure that what we measure is what is important to our customers."

The Ritz-Carlton uses a balanced scorecard approach to measurement: a set of key measures from different performance categories, assembled to analyze the overall health of the organization. Its measurement system collects 50% standard marketing and financial data and 50% employee quality-related productivity data. Mene said, "Since our strategic business plan doesn't just deal with quality data, measuring our financial side is just as important as measuring the quality side.

"We are also proactive in collecting opinions that are important to our customers," Mene said. The Ritz-Carlton has a customer satisfaction system, which includes customer surveys and customer feedback, to identify key requirements of customers. "This system translates what customers want most by asking such things as what their problems were with the hotel and how well their problems were resolved."

The hotel also talks to customers in focus groups. Since people don't always express what they really want, the hotel also performs a language analysis for these focus groups. "We not only ask questions, but also use experts to interpret what customers *really* mean. This helps us to identify what they really need and want."

Mene said the Ritz-Carlton has found its best benchmarking subjects outside of the lodging industry. It benchmarks with other Baldrige Award winners and, internally, it looks at employee performances that are continuously superior. "When we felt that we needed help in the functional aspects of running the hotel, we benchmarked against Xerox's assembly industry.

Xerox was helpful, giving us ideas to improve the functional aspects of our business."

Results of the hotel's measures are reported daily, monthly, quarterly, and annually and are used to determine whether a problem needs to be addressed. "For example, the daily quality production report is arranged in a matrix and matched against retrospective data to immediately determine whether the problem is worth attacking."

The Ritz-Carlton also uses its standardized reports to analyze the cost of quality, which is the hotel's No. 1 priority. It looks at whether the improvement is important to the customer, provides a good return, and can be done quickly. The hotel then tries to estimate the cost and value of the improvement. For example, will the improvement save \$50,000 in six months? Mene said, "We go with the top three or four performances and assign them to cross-functional teams; other improvement areas are given to individuals. If the improvement will not save \$50,000 in the next six months, it is either put on hold or given to an individual."

Measurement Has Its Benefits

Companies do themselves a significant disservice by not defining and updating their measures. In fact, a high percentage of measurement-managed companies report outstanding business success in almost every dimension, from financial performance to teamwork, according to a national survey of senior executives in major U.S. companies that was conducted by Wm. Schiemann & Associates, Inc. The survey also found that measurement-managed companies are more likely to:

- Be in the top third of their industry financially (74% vs. 44%)
- Complete their last major organizational change successfully (97% vs. 55%)
- Reach clear agreement on strategy among senior management (90% vs. 47%)
- Enjoy favorable levels of cooperation and teamwork among management (85% vs. 38%)
- Undertake greater self-monitoring of performance by employees (42% vs. 16%)
- Have a greater willingness by employees to take risks (52% vs. 22%)

The study also found that senior executives were better able to manage and lead their organization by establishing measures for six key business areas—customer satisfaction, financial performance, operating efficiency, employee performance, community relations and environment, and innovation and change.

"When top management develops measurement gauges in these six areas, and when there is a balance between traditional hard financial and operation measures and soft measures relating to people and customers, then executives at every level acquire a mind-set that is an unbeatable competitive differentiator," said William A. Schiemann, president of Wm. Schiemann & Associates, Inc.

Employees take part in Corning TPD's measurement selection process

At Corning TPD, the corporate performance goals and measures are selected by a cross-functional GoalSharing Team that consists of eight to 10 people from all levels of the company. The process includes brainstorming measures; researching them; inviting internal and external experts to consult with the team; setting goals, measures, and weights; and testing the measures for three to six months.

The data and information Corning TPD uses to monitor and drive improved business performance are linked to its business strategy, values, and performance analysis. It collects and uses data to support the development of the division strategy, deployment of its strategic initiatives, investment in the company's values, and improvement of results.

Corning TPD aligns its processes horizontally through a balanced system of measures so the relationships among and between measures are understood. For example, measures are selected using the following pattern: two financial measures (a cost-per-unit measure and a process measure), one customer service measure, and one quality measure.

It uses extensive analysis to transform the large quantities of data it gathers into useful information for decision making and long-term planning. Its process for gathering and integrating data and information is to align data and decision making with its strategic initiatives and values to create a road map for analysis.

Corning TPD also believes that cycle time and quality are much better indicators of business excellence and relative performance than financial indicators. Gerald J. McQuaid, division vice president of Corning TPD, said, "We are unique in that we are willing to put our money on improvement in nonfinancial measures, knowing this improvement will link to financial measures. Most companies tell their employees, 'Meet your financials, and then we will pay you for customer service.' We don't do that. We don't have any thresholds in our system; we pay for customer service if our employees hit it, whether or not they meet their financials. That says we believe in the link."

To get employees to understand what the company's measures are, how measures are defined, and how the employees can affect them, Corning TPD now has many methods in place to communicate with employees. McQuaid said, "We are very open with our employees. We communicate measured results freely using many vehicles, such as meetings, videotapes, voice mail, newsletters, charts, and graphs. Our GoalSharing Team members are key to the communication process. Members go out onto the floor and talk to people about goals and measures. Workers go to members when they have a problem or they don't understand."

GoalSharing Team members also talk to the employees at department meetings throughout the year, linking the depart-

What Companies Are Measuring

According to the American Productivity & Quality Center's Corporate Performance Measures System Consortium study of 31 major best-practice organizations, these organizations trade off between using financial measures and using quality and productivity measures. Manufacturing companies use more financial measures than service organizations, while service companies use more quality measures and are moving toward performance measurement systems that contain fewer financial measures.

When asked to define the six measures that are most important to the chief executive officer of the organizations, 36% of the top measures reported were financial measures, 13% were quality measures, 12% were customer measures, 11% were productivity measures, 12% were work force measures, 9% were market measures, and 7% were other measures.

ment goals to the plant goals. Six times a year, Corning TPD produces videotapes called "Corning Line," in which measured results are shared with all of the businesses. One or two units are highlighted and their measured performance results are displayed.

In each plant, GoalSharing teams display what's known as an eye chart, which tracks the progress to the achievement of goals. The chart includes:

- The corporate performance measure
- The weight of the measure
- The number measured for the goal last year
- Increments from 0% to 200% and the extrapolation of the goal across the percentages
- A bonus column
- The bottom-line payout based on employee compensation

Goals and measures are reviewed by the GoalSharing Teams on a yearly basis and can be changed to meet evolving business needs. Since

it is not in the best long-term interest of the business and since management reviews the goals and measures, teams do not set goals that are too easy to reach.

Teams set measures at Texas Instruments DSEG

At Texas Instruments DSEG, establishing metrics and setting measures is a team process. The team starts by identifying what customers care about in the metric set. The team first looks at external customers who want affordability and a product that works. Next, the team looks at business owners who usually care about the convergence of defense and commercial interest, strategic growth, and development cycle time. Then, the team looks at those who are interested in competitive advantage, total quality, and ease of use. The challenge is to establish metrics to satisfy each group.

Teams then select the measures that will evaluate Texas Instruments DSEG's progress against the metric goals. Each quality measure must:

- Show clearly what is required for competitive advantage
- Drive the needed improvement
- Be viewed as value added
- Not be elaborate or complex
- Support the transition from current to future stretch goals
- Be deployable within the specified time frame

The team tries to get buy-in from all levels by developing deployment plans and techniques. To do this, the team defines the measurement, describes the method for raw data collection, and decides in advance how the information will be used. A senior manager is then assigned responsibility for the measure. Next, employees play catchball.

With catchball, employees either accept goals or reject them with documented reasons. Every person down the line must agree that if he or she performs, the goal can be met. If a worker

along the process chain feels unable to meet the goal, he or she identifies barriers to the accomplishment of the goal. Every level requires an input and output, and as the ball (or goal) goes down the line, the output becomes more detailed.

Each ball is owned by a member of the leadership team, who throws the ball all the way down into the organization. As the goals come back up, they are tagged with documented barriers to the achievement of the goal, such as a need for more money, new equipment, or a change in delivery schedule for a supplier.

Next, the owner of each goal presents findings to the metrics subteam. The team decides whether a goal will be adjusted or whether changes will be made so that the goal can be achieved.

To integrate its measurement process, Texas Instruments DSEG uses a balanced scorecard approach in which its top measures are an integral part of its total quality management strategy. Its key performance measures include on-time delivery, defect reduction to six sigma, cycle time, training hours, and revenue growth. The alignment strategy states that business excellence—which is achieved through customer focus, continuous improvement, and people involvement—is measured through the key performance measures. Employees designed this system so they can get a balanced look at the health of Texas Instruments' DSEG.

Employees are currently working to make an organizational maturity measure one of the five key measures. To do this, they have decided to eliminate the training hours measure with the understanding that increased training will be reflected in the organizational maturity of the corporation.

Currently, all of the five key measures are lagging indicators describing historical results, but the organizational maturity measure will be a leading indicator and will measure the behavior that is required to achieve desired results. The measure will include assessments of process maturity; ability to change; and diversity, empowerment, and teaming as behaviors.

Measuring for excellence never ends

As the Baldrige Award-winning companies demonstrate, the measurement process never ends. Companies not only need to measure and set goals for themselves to achieve excellence, they must continue to do so to maintain their level of excellence.

But, why do companies that measure themselves achieve and sustain success in almost every dimension, from financial performance to teamwork? John Lingle, co-director of a survey on measurement-managed companies conducted by Wm. Schiemann & Associates, explained, "Much of the measurement-managed companies' success can be traced back to clarity of purpose and communication. When you begin to define things in measurable terms, they lose their fuzziness. You have a common language to discuss issues and assess progress."

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