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## Stuck on Change

*A new culture evolves at 3M, thanks to a corporatewide commitment to a new direction  
and a well-recognized  
Management concept known as Six Sigma.*

By Frank Jossi

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This article was the March 16, 2004 cover story.)

Kay Grenz recalls well the December day in 2000 when James McNerney spoke to an audience of 85 top executives at 3M's sprawling St. Paul, Minn., headquarters. The rumblings about McNerney, the first chief executive officer and chairman ever to come from outside the company's own ranks, dealt with the fear of change and the likely introduction of Six Sigma, the well-recognized total management/metrics concept aimed at improving overall productivity and business processes.

The manufacturer of everything from Scotchgard and Scotch tape to Post-It notes and audiovisual projectors offered a nurturing, comfortable environment in which employees seemed to stay forever and in which scientists had a relatively free hand as they went about improving products and inventing new ones. The company has been extraordinarily successful, becoming a corporate icon with more than 50,000 products and a peerless international reputation for innovation.

Still, 3M's stock price through the 1990s lagged slightly behind General Electric and other marque-name competitors.

McNerney, who arrived from GE, did not come to save a wounded company; he came to upgrade a strong one.

After all, 3M has been cited time and again, from Thomas J. Peters' and Robert H. Waterman Jr.'s *In Search of Excellence* to a raft of other business books, as a legendary hothouse of creativity and exceptional executive competence. And although Six Sigma has been wired into the brains of nearly everyone on the GE staff, he understood he would have to sell it differently at 3M.

"He talked to us about his interest in coming to 3M, and it was a very upbeat, rah-rah presentation," recalls Grenz, senior vice president of human resources and a 35-year veteran of 3M. "In the middle of it, he said, 'Of course we're going to move to Six Sigma,' and we all started looking around; it got our attention."

“And he said, ‘You know what Six Sigma is? It’s a management development program.’ Because he had positioned it that way, [the reaction] was relatively minor. There wasn’t much push-back, distrust or apprehension because he positioned it so positively.”

Still, perhaps nothing in decades has transformed 3M more than the arrival of McNerney, Six Sigma and other GE-inspired programs he borrowed and molded to fit the company’s unique culture.

Grenz and her staff have had a busy four years under McNerney’s leadership while reworking the human resource department and helping lead the charge for change through the 67,000-employee company with a far-flung workforce spread across nearly every continent.

3M was once a different place. Al Vicere, a Penn State University strategic leadership professor who has worked with the company on several projects, says prior to McNerney’s arrival, it had an “insular culture” in which operating units were not integrated, often failed to share information or expertise and rarely used global sourcing or attempts to create synergies.

The company had a great entrepreneurial sensibility and hired exceptional employees, he points out, but it was run more like a huge research laboratory than a well-oiled, goal-driven corporation.

Grenz has had a bird’s-eye view of the change. “I think, from a cultural perspective, what Jim wanted to do was preserve and sustain the strength of our culture while, at the same time, building on other aspects which he thought could be better,” she says. “So when I look back at where we were in 2000 and where we are today, I think if you were to interview employees, they would say, ‘I’m raising the bar on my performance every year,’ which is one of our values, and that’s really important. They would say, ‘I’m feeling energized, and feeling more valued and engaged in the business than I ever used to be ... and I never worked so hard in my life.’”

## **Developing Leaders**

Part of Jack Welch’s obsession with developing leaders within GE’s ranks rubbed off on McNerney, one of the three contenders for his former boss’ job. “The premise is simple,” McNerney told a University of Minnesota audience last year. “If we can grow our leadership, it’s the most direct way to grow 3M.”

McNerney described to the audience how a group of several 3M executives, among them Grenz, initially spent time together in a hotel debating the definition of leadership. Then, they broadened the input pool to include 100 employees. Leaders at 3M, they agreed after countless meetings, have six key attributes: They chart the course, raise the bar, energize and stimulate employees, innovate, deliver results and do not cut corners. Those attributes would become the platform for future leadership training.

One of the first orders of business was to create a “leadership center”—something like GE’s fabled Crotonville campus, but located no further than five minutes from

McNerney's office. A building that once housed a laboratory, and before that a squash club, was refashioned into an elegant learning center on the 3M campus.

Groups of 40 high-achieving 3M employees from around the world arrive after being recommended by their managers and vetted by their division's management team. They spend an intensive 17 days in the company's Accelerated Leadership Development Program, which provides basic leadership training along with 10 days of "action learning," the company's phrase for having participants confront and propose strategies for handling real 3M business challenges. Such changes can range from manufacturing utilization to increasing a business unit's sales by 6 percent over two years, says Cindy Johnson, leadership institute manager.

The instructors are mainly 3M executives with a few outsiders--such as Vicere, who helped create the center's curriculum--invited into the mix. Groups of three people each tackle a variety of issues, often working 12 to 14 hours a day and interrupted only by on-site meals or the occasional glance at the television set in the recreation room. A roomful of computers and phones provides a refuge where participants can have access to 3M's own managers for interviews, as well as other informational resources, says Johnson.

Participants in the center's program create their own written and oral presentations, she says, without help from any secretarial or support staff, and often have 30-to-50-page descriptions and appendixes to add to their final products. Near the end of the training, they all present their findings to McNerney and other executives, who serve as a sort of tenure committee. They pick through the data presented, probing the teams for additional insights. The CEO then shares the results with executive staff members, who can cherry pick the best strategies and concepts for implementation in the future, says Grenz.

"The employees say they knew how intensive the training was, but they wouldn't want us to do it any other way because the length and focus lent itself to the learning experience," she says. "People get concerned about work/life balance. What we say is, 'We are not going to ask you to do a 17-day program every year; you may never do another one in your whole career.' But they have agreed the way we do it is maximizing their ability to learn because of the intensity."

Vicere calls the length and breadth of the leadership program exceptional, especially in an era of corporate belt-tightening. "In this day and age, a commitment of 17 days to development and training to take 3M to the next level is phenomenal," he says. "You don't see many other corporations having that kind of ongoing level of commitment. It testifies to 3M's focus on developing a new generation of leaders in the company."

One possible outcome is that when participants return to their positions, problems may arise: Their bosses aren't always on the same pages as they are in terms of learning and knowledge.

To rectify that situation, Grenz had her staff develop a four-day accelerated-learning program for all managers and directors. Several hundred 3M employees globally have been trained now at the leadership institute and are spreading their learning throughout the company, she says.

## **Aiding Reorganization**

Another human resource challenge dealt with transferring the concepts of Six Sigma into the 3M culture and reorganizing the company, including the HR department. Six Sigma wasn't all that hard for many employees to swallow since "we were already a company of engineers" and one division manufacturing dental supplies had won the Malcolm Baldrige National Quality Award, which shares some principles with Six Sigma, says Grenz.

Developed by Motorola Inc. more than a decade ago, Six Sigma mixes a devotion to data designed to reduce error rates and to help in making business decisions along with training based on martial arts' terminology.

A "green belt" at 3M and other Six Sigma companies provides employees with an overview of the philosophy's methodology while serving on a team concentrating on, for example, process or quality improvement. Employees holding "black belts" have the equivalent of an MBA in Six Sigma and often lead projects applying appropriate Six Sigma methods to a process or problem within a company.

Within the past four years, 3M has trained 1,000 black belts and master black belts who serve in full-time positions and has sent more than half its salaried staff through a six-day green-belt training session. Every one of the company's 48,000 salaried employees will be green-belt trained by the end of the year.

To date, 3M has more than 150 Six Sigma projects going with customers in which its staff will gather information and provide them input on specific issues in, say, manufacturing. A long-standing partnership between Ford Motor Co. and 3M Automotive allows 3M black belts to lead Six Sigma projects at Ford sites. A 3M team recently applied Six Sigma principles while studying wind resistance issues in the design of a Ford truck.

These projects offer a window for 3M to begin anticipating and responding to customers' needs by working within a customer's own plants and offices, she says.

Six Sigma helps in other ways. The staff now speaks in "one language" concerning process improvements and routinely collects a mother lode of data "to support decision making," she says. The discipline imposed by Six Sigma led to reduced manufacturing errors while assisting in two of McNerney's initiatives to deliver twice as many new products annually and commercialize ideas at three times the 3M's former development pace.

Along with Six Sigma came the reorganization of 12 technology research centers into one centralized corporate center with a roster of 500 scientists while another 400 scientists moved into 3M's seven business units in an effort to bring product developers closer to marketers and business staff. As it turns out, the reorganization came as a result of research done by participants of the accelerated leadership program.

The new approach to business did not change 3M's unique focus on innovation. Scientists can still devote 15 percent of their work hours to individual projects that may interest them but may not have immediate commercial applications. Since 1984 the company has offered to scientists "Genesis" grants to explore outstanding product concepts and ideas that potentially could lead to the creation of new business for 3M.

“Some people said that, with Six Sigma, among the few negatives you have is that it’s so disciplined, we won’t have time to apply the 15 percent rule but, on the contrary, we said if we are more disciplined and apply common processes for improvement it may allow [scientists] more time for research,” says Grenz.

The process will likely, however, force scientists to end some projects that have been in development for years and have little commercial potential. 3M has had a few hits from long-standing projects that eventually led to the creation of some commercial gold mines, but there will be fewer projects such as these in the future.

“If someone has a passion about a particular technology or product and has worked on it for years, but there’s no point at which commercialization seems likely, we’ll ask if the 15 percent could be used for something else,” she says.

### **Six Sigma in HR**

As in many large companies, 3M’s human resource department was once dominated by the typical functional silos, an approach now being discarded.

“We are focused not so much on what everybody’s function is within HR--like compensation, benefits [and] learning,” Grenz says. “Instead, we’re now focused on front-to-end processing. This allows for employees to work cross-functionally in HR and work much more rapidly, much more effectively. We broke down the silos, I’d say, or we’re breaking down the silos.”

For example, Grenz points to the development of an electronic self-service pay system involving the department’s generalists, and communications and information technology staff.

Margaret E. Alldredge, staff vice president of leadership development and learning for 3M, points to the design of a new accelerated leadership program for entry-level supervisors and managers that included input from personnel in other departments. The training will be delivered by business leaders, not by the leadership-development staff.

What’s different about this approach, she says, is that in the 3M of the past, the leadership and learning staff would have owned and delivered the program without much assistance from any other department. Now, the learning staff will not even teach it. “It fits our model of leaders teaching leaders,” says Alldredge.

The human resource department has moved toward creating a corporate portal for the entire company and put benefits and compensation data online. Alldredge, meanwhile, pushed hard for upgrading and expanding e-learning opportunities and placing Six Sigma courses and information online. Now, “3Mers” worldwide can get training online that once only existed in textbooks or in classrooms in St. Paul.

Technology has helped the department deal with a leaner workforce as human resources saw a 20 percent reduction over the past four years. Since McNerney’s reign began, 3M has shed thousands of jobs, although layoffs have been fewer in the past two years.

The HR department’s global offices will also be overhauled as part of a reconstruction effort. 3M operated so autonomously that, until recently, Grenz did not

even have a good global head count of her 845-person staff (a statistic she learned recently).

Now, however, the company plans to build a single database to track all personnel in every department --no matter where they work in the world.

Human resources is standardizing in other ways. The highly individual nature of pension plans and compensation abroad will change as 3M moves to a more common system for everyone, she says. 3M is well behind other companies in globalizing corporate functions and remains a company in which an HR staffer in Europe, in a smaller office, might do several functions in addition to HR, she says. This new companywide initiative encourages all departments to bring order to fragmentation.

“Our new initiative is a global business-process initiative and the purpose is to globalize all corporate functions...” she says.

“In HR, we see every country wants to have its own pension plan, but we’re going to try to offer fewer options and be more involved in offering an efficient benefit program that makes sense to our employees. It’s not going to be as customized as in the past.”

The department has also overseen the revamping of employee appraisals from a seniority-based model to one structured on two measurements: job performance and leadership attributes.

The job performance critique judges an employee’s contribution and his or her department’s performance on a one-to-five scale. The leadership review takes into account the six “leadership attributes” noted earlier and assigns a grade to each of them.

The new model provided “greater differentiation with compensation and rewards,” says Grenz. “Your contribution level is one way of judging; the second is your leadership attributes, which are an integral part of the cultural change that has occurred here at 3M.”

Before replacing the seniority system, McNerney had discussed the idea of grading employees on a curve, GE style.

“We were able to convince, or influence, Jim,” says Grenz. “He thought the way we were doing it would have more impact and create the differentiation that we were looking for and we have proven this to be true.

“By maintaining the good parts of 3M’s culture--the eye on innovation, the collaborative atmosphere among employees, the stellar research and the focus on new products McNerney, Grenz and other executives are attempting to move a huge organization forward without sacrificing the traditions that made it great in the first place.

It’s a hard challenge but, so far, Wall Street and employees have embraced it, and the company’s growth--its chief focus--has been outstanding.

Annual sales since McNerney’s arrival jumped from \$16 billion in 2001 to \$18.2 billion in 2003, the stock price went from \$60 to more than \$80 a share in the same period.

Vicere believes 3M’s ability to adapt to McNerney’s philosophy has been nothing short of amazing.

“Look, I’ve been at this a long time,” he says, “and when I look at the organization today versus three years ago, when this all started, I see a culture that has changed about as fast as I have ever seen one change in business without there being some other transforming event,” he says. “It’s been fun to watch.”