Improving the way organizations run through participative planning and management.
Faster Company
Building the World’s Nuttiest, Turn-on-a-Dime, Home-Grown, Billion Dollar Business

Patrick C. Kelly, Chairman and Chief Executive Officer, PSS/World Medical, Inc.

Patrick Kelly co-founded Physician Sales & Service, Inc. (PSS), now known as PSS/World Medical, Inc., in 1983 in Jacksonville, Florida. The company was founded on a vision of fulfilling the needs of the office-based physician with a unique and innovative distribution approach and the industry’s highest caliber sales force. Today, PSS/World Medical’s annual revenues are $1.9 billion, and it is the largest distributor of medical supplies, equipment and pharmaceuticals to office-based physicians in the United States. Through its merger with Gulf South Medical Supply, Inc., the company is one of the largest national distributor of medical supplies and related products to the long-term care industry. In addition, the company is the largest distributor of medical diagnostic imaging supplies, chemicals, equipment, and services to the acute care and alternate-care markets.

With approximately 1,200 sales representatives and 107 service centers, PSS/World Medical now serves more than 130,000 customers in all 50 states, and in five European countries.

I want to tell you what it means to be a faster company. First of all, a faster company grows quickly, and Lord knows we’ve grown quickly—we’re a $1.9 billion business today. But being a faster company is not only about being quick and growing fast, it’s about doing unique things, knowing where you’re going and how you’re going to get there, and stressing flexibility in seeking opportunity.

PSS/World Medical began as Physician Sales and Service in 1983 with four employees. Today we have over 5,000 employees. We’re a Band-Aid company, not a very complicated business, but the things that we do are things that will work for other industries.

It hasn’t been an easy road. There were four founders who started the company, and I’m the only one left. I’ve been personally involved in 20 lawsuits. We’ve been thrown out of five banks as a privately held company and Wall Street’s beat us up three times.

But the reality is that we’re bringing extraordinary value to customers, and over the long term, the banks and the stock market will like us. But this is about a business model, one that can work in any company and in any industry.

I encourage you to take ideas from us. I’ve never had an original idea in my
What a faster company is all about, continued

The meaning of speed

Speed is an essential component of being a successful company. The people who can figure out how to get a product or service to their customers faster than anybody else will be the ones who win the day.

Our sales representatives can take an order from a physician, a practice, a nurse, or a nursing home, and through using two-way radio, the order prints at our local distribution center. Our truck delivers the products on the same day. We're faster than any of our competitors.

In the process of delivering on the same day, we track the order and can tell our customer exactly where their package is at any point in time. Speed is essential if you're going to be a distribution company, and it helped us come out of nowhere to become the market leader in three segments of health care distribution.

A culture of discipline mixed with chaos

Our organizational culture has been described as a cross between Animal House and the U.S. Marines. We're very disciplined and consistent in what we do. Just imagine delivering six million packages to physician offices in America last year alone, and if we don't deliver the same day, we pay a $10 penalty. That would be pretty costly, and I don't think Wall Street would like us very much. But in the process, we've got to be a little crazy in our execution.

“Buddy Day” celebrates the making of a reluctant entrepreneur

I'm a reluctant entrepreneur. Imagine being 35 years old holding the world by the tail. I had just taken a company and transformed it, and for the first time in 11 years it made money. How did I transform it? I saw a need for a focused distribution. I saw that hospitals had different requirements than nursing homes and physicians. So I convinced the management of my company to let me focus their company. In 1982 my company became the first national physician's supply company. We made that company profitable for the first time in 11 years, and they sold the business to a company called British Tire and Rubber in the United Kingdom. In the U.K., however, everything is done at a hospital, so there was really no market for doing only physician's supply. On February 8th, 1983, I was fired. Fortunately for me, two people I had worked with convinced me to start a company with them, and we reluctantly started this company called PSS.

I'm telling you this story because in 1995 we bought our largest competitor, Taylor Medical in Texas, and as I was looking down the employee roster, I saw the name of the director who had fired me in 1983. His name is Buddy. I decided to call the personnel department at Taylor.

“Is this the same Buddy that fired me in '83?” I asked.

“Yes, I think so.”
“Buddy Day” celebrates the making of a reluctant entrepreneur, continued

“Could you give me his home phone number? I’d like to call him tonight. Would you tell him I’d like to call him?”

So, I called him later that night, and when he picked up the phone he seemed a little timid.

“Hello?” said Buddy, barely audible.

“Buddy, this is Pat Kelly.”

Now how many people would be tempted to say something like “look, we’re just not compatible, I have to let you go.” That’s what he said to me the day he fired me. But I didn’t do that.

“Buddy,” I said. “Welcome to PSS World Medical. Anything I can do to help you be successful, let me know. By the way, don’t get your feelings bruised, because on February 8, we’re going to celebrate your day.”

Ever since then, on February 8th, we celebrate Buddy Day. You can go to any of our divisions and you’re guaranteed to have cake and ice cream. It’s the greatest thing that’s happened to me, and everybody else in our company loves it. Buddy’s now one of our top sales reps in Galveston, Texas.

Jim Collins wrote in Built To Last about having “Big Hairy Audacious Goals,” and our company has stepped to the plate every time. The big, audacious goals have gotten other companies like us on the map, and today they’re industry leaders.

PSS/World Medical has had some pretty aggressive goals over the years, but it didn’t start that way. We were reluctant entrepreneurs at the beginning. Then in 1988 we were named by Inc. Magazine as one of its 500 fastest growing companies in America. We grew from nothing to a $13 million company with five branches. The only way you’ll ever accomplish anything in life is to visualize your dream, and once you see where you want to go, you’ll build the resources to put it in place. We made the decision in 1988 to become the first national physician’s supply company. The odds were against us, just as they were in 1983 when we started. We should never have been able to thrive in this industry, but we did. By 1994 we were the first national physician’s supply company with 45 locations throughout America. We now have 56 locations and over $750 million in sales. In 1994 I told our sales force we’re going to be a billion dollar company by the year 2000, and they laughed at me. They’re not laughing now.

Big goals are important, and once you have goals you’ve got to put a competitive edge in place. We put our competitive edge in place and we did it pretty quickly. We made the decision that no matter what competition entered our market, we were going to do better.

Today, that decision is represented by our PSS Guarantee, which goes on every invoice. We’re selling to about 132,000 customers per month right now, and every
The PSS Guarantee: Our competitive edge, continued

one of them gets a packing slip with their order. Each packing slip has my signature on it, and it says if you’re not 100% happy with us we’ll do whatever it takes to make you happy. Even if you bought your product from the competition, we don’t care! We’ll give you credit for it if you do business with us. It’s a philosophy that the customer is always right. It’s also a competitive edge that demonstrates the commitment that you must make to be successful.

Driving empty trucks to take over new markets

Here’s an example of what I mean. Most people know the story of Federal Express, that when they first started, those first few planes weren’t quite full, and they didn’t do very well. It was the same with us. In 1993, we began to do business in Houston, Texas, where our largest competitor was dominating the market. Their home office was in Beaumont, about 90 miles outside of Houston. The people in that area had never heard of us, so we started with very few customers and our trucks were mostly empty. One morning I went into the warehouse and I saw the driver who was going to drive the PSS van to Beaumont. I said, “Listen, at 12:15 today whether or not we get an order, I want you to get into this van and drive to the city limits of Beaumont and turn around and come back. I’ll be back to check the mileage.” The manager came over to see me about 20 minutes later.

“Pat, the driver just said you told him something pretty stupid. He said you told him even if he doesn’t have a package to drive to the city limits of Beaumont and come back.”

“That’s right,” I said.

“But why would we do that and spend the money?” he said.

“The problem is that if we don’t send that truck every day to Beaumont, and he only sells one item to one physician, we’ll start rationalizing that we can’t afford to do it. Besides, I want that sales rep to know we’re spending that money, and we’re sending that truck, and it’s his obligation to fill it up.”

We did it. We were successful in Houston, Texas. Today we own our competitor in Beaumont, Taylor Medical, a $125 million dollar company.

Customers’ needs can change overnight

You’ve got to know what your customers are thinking, and we survey our customers a couple of times a year. We do on the telephone. We also send little report cards for them to tell us how we’re doing. Thank God we did, because it saved our bacon in 1993.

In 1993, President Clinton had just been elected and there was a lot of change going on about health care. Most physicians were scared, and I don’t blame them. We were positioned to be the Mercedes of the industry. Same day service, quick delivery, no hassle guarantee, whatever it took. But our customers’ needs changed overnight. All of a sudden they didn’t care about Mercedes. They were thinking about Yugos. Incomes were going down. We didn’t know it yet, and our sales reps
Customers’ needs can change overnight, continued

were thinking everything was going great.

All of a sudden a survey picked up on it. Our sales reps had been valued consistently over and over again. About 82 percent of our physician offices said they valued our reps and our service, and only 18% ever questioned price. This one survey came back and the numbers were flipped, with 80 percent questioning the price, and 20 percent valuing service and the relationship. We had to change as a company very rapidly.

We recognized that we were the largest company of our kind, so we made the decision that we’d also have the lowest prices. It’s one of the major paradoxes of doing business today—you’ve got to do it all. But in the process we changed, and we’ve done great ever since.

You’ve got to be flexible. You’ve got to know how you’re going to change. The old model said that if quality and service go up, price can go up. But in reality that doesn’t work anymore, because today the customer wants it all.

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Everyone is a CEO

We have a saying in our company— we don’t hire truck drivers, we hire CEOs. We also promote from within. I like to visit the branches as often as I can, and I like to go in the warehouse and meet our new employees and ask them, “Who’s the CEO?” They always screw up and say it’s me. But occasionally one will catch on, and they’ll know the story and they’ll say, “Oh, it’s me, I’m the CEO!” When they get that question right they get about $100 richer, so news travels pretty quickly. Our truck drivers have the title of CEO on their business cards. When they go into a physician’s practice today, whatever is asked of them, they have to agree. They can make decisions on the spot, and do what it takes to make that customer happy.

If a doctor had bought $100,000 worth of equipment the day before and the truck driver showed up and the doctor said he didn’t want it, the driver’s got to get it out of there. The sales reps don’t like that policy, but guess what? Physicians who buy from us love it. They know this company stands behind what they sell.

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Open book management

We were an open book company long before other companies were. In 1983 we ran into our first banking issue. We were thrown out of our first bank within 60 days of starting the company. We had trouble making payroll. That’s how we decided if we’re going to sell stock, let’s sell it to our employees. We made that decision and we became an open book company. Once your employees own stock, you’ve got to share the information with them. We hold town hall meetings with our employees, we ask dumb questions and we reward them. We do this thing called “on the spot,” where I show up at any point in time and I ask a question about the business. If anybody knows the answer and knows what’s going on they get $20 cash, on the spot. We want our people to know what’s going on, and this method works pretty well for us.
Open book management, continued

They also meet monthly in what’s called a challenge program, where we share financial information with them. They can ask any question. Today, 80% of our companies hit their numbers consistently. That’s not because we tell them what they’re going to do. It’s because the employees are motivated to do it, and they make the financial decisions themselves.

Employees can fire their leaders and we have soft landings and leadership school

We delegate responsibility. We encourage our employees to make a mistake. It’s easier to ask for forgiveness than permission. Do what you have to. In the process we made some mistakes, but I can tell you we learned from it, and we grow our people.

Leadership is essential in our company, and we have a program at our PSS University called Leadership School. Employees can sign up for it if they want to. Today there are 300 leaders throughout our organization. Notice that I don’t talk about managers. We don’t manage people, we lead people and manage things. Clearly in today’s environment with low employment statistics you had better find leaders. In our organization we teach people how to lead, it’s sort of a Ghandi approach, you serve your people, and in the process you bring value to your people. That’s easier said than done, but guess what? We’ve got a cop on the beat—our employees. At any point in time, anyone can pick up the telephone and get that person out of here. It doesn’t happen very often, because our leaders understand they’ve got to bring value to their people.

Ultimately your employees will fire you, too, if you’re not bringing value. We’d rather see it happen sooner than later. If you’re a leader who’s not serving your people, your people are going to fire you three ways. One, they literally pick up the phone and say, get him out of here. Or two, they leave your employ. Or three, they don’t perform for you, and ultimately somebody else has got to come in and do the firing.

About four to five times a year I have to fly into a branch, sit down with the employees and the leadership team. Sometimes that leader gets fired, sometimes that leader doesn’t get fired, his employees decide they are now communicating better.

If we fire somebody, we have something we call a soft landing. As a matter of fact, to be a successful leader you’ve probably been fired once or twice in your career. You’ve learned how to continue to come back and grow. We guarantee that our leaders can always go back to what they were doing before.

You have to grow your leaders. About 300 leaders and 32 officers have all been promoted from within. You’ve got to commit to performance. In our organization, commitment is the key. We simply do that by sitting down at each local branch and forecasting. Every sales rep signs off on a forecast what they’re going to achieve.

Simple values like trust, honesty, caring and teamwork are essential

Values are essential to making a company work, and these are issues like trust, teamwork, honesty, caring. Show your people you care and that goes farther than money ever will. We have a top 20 list that spells out what we stand for as a com-
Simple values, continued

You must have a value statement that says how you treat your employees and customers. For us it's very simple—we ask how you expect to be treated and treat people in a similar fashion.

No closed doors

We have an open door policy in our company. In fact, there are no closed doors. They're not allowed. Many times, a leader has gone in and started closing doors. Their employees will take the doors off the hinges and throw it into the dumpster. That happens all the time. We say if you've got to have a serious, private discussion, we want you to go off site, go to lunch, to have those conversations. Because every time you close the door people start suspecting you're talking about them.

Hire well

There are several keys to what we call “hypergrowth.” First of all, hire well. Wow, real tough, huh? Everybody knows that. We start with good basics, and we're more interested in hiring behaviors rather than résumés. There's a four-step interviewing guide for any potential sales rep. The interview includes one officer of the company, one traveling sales rep and two leaders. We ask them questions about how they would react to situations, because we're interested in how they're taking care of people, and how they would take care of customers.

We create a process for ongoing learning through the PSS University. We spent $6 million on it this year. We teach everything to our sales reps, and we have a unique selling approach that teaches us to sell customers what they value.

Build in rewards

We reward our people. Imagine if you're a truck driver for us and you make an average of anywhere between $18,000 to $22,000 per year, and you earn another $8,000 in bonus money. You'd be a highly-motivated truck driver, and that's why we create an environment where they can grow.

Foster creativity

Creativity and innovation are critical. We have a Creativity Week where we get our new leaders together in the Florida Keys. We'll talk about how different books impact them, how they're continuing to learn and grow. All 32 officers of the company are fired, and the officers have to justify why they're coming back, and why this company should keep them around. For some reason they keep me around, but I haven't figured out why.

Pour it on

You've got to pour it on as a company. I think that philosophy has to do with me being raised at the Virginia Home for Boys. I am so committed to making sure we grow our company and providing unique services to the marketplace. We're committed to doing what we have to do. When you're five years old and you're put
Pour it on, continued

into a home with 60 other boys, and the youngest one there is nine, guess what happens to you? The other kids like to beat up on you. Everybody sees that, and soon you become a target. I was a black and blue kid when I first got there, and I wasn’t a very happy camper. But I figured out real quickly how to fight back. Any time a kid start pounding on me, I would simply grab a hold of him as hard as I could, and I’d squeeze so tight, and then I’d sink my teeth into him. It wasn’t long before the kids would say, “don’t mess with him, he’ll bite you back.”

I guess once I get my teeth into something, I’m not going to let it go either, and that’s what happened in our company. We’re going to pour it on, we’re going to be successful, and continue to grow at about 40% a year.

No bureaucracy

There is no bureaucracy in our company. We tell our field people that they’re only required to read one memo a month. All other memos they can throw in the trash can. How do we get things done consistently? You can walk into any branch and they are all identical. We show up twice a year unannounced at each one of our locations. They’re judged on certain things, and it’s fun. If they get a high score of 95 or better we give them some cash on the spot, and if they’re the winning branch, they earn $3,000. The top ten branches in each division win some money, and the losing branches pay. So it’s very competitive and it’s very consistent.

Kelly appreciation days

Fun is our credo. We have our Kelly appreciation days. Once a quarter, I get all the people in field support and do something unique for them like take them down to the alligator farm to wrestle— that was a fun day. Other times we’ll fly down to Key West and watch the sunset. Wherever we go, whatever we do, it’s always unique and fun.

Our biggest challenges

There are many issues that I face today that are difficult to deal with, but are keys to being successful. Here’s a real important issue that you’re probably facing as a businessperson. CEOs always talk about people as their most valuable asset. It’s so hard to find people and it’s going to get worse. There are no other assets as important as people. We’re a distributor of products, we have inventory and receivables. I listen to our financial people talk about valuable assets on the balance sheet. Your people are your only assets. Our people built this company and made it the market leader.

Service versus price is a major paradox we face now. The customer is more knowledgeable than ever before. You’ve got to provide it all. You’ve got to be the lowest price company in the marketplace. You’ve got to have the best service and top quality. It’s clear we’re at a crossroads, and as in any business you’ve got to figure out how to provide everything the customer wants.

We talk a lot about continuous improvement, but you must make investments
Our biggest challenges, continued

for the long term. Ultimately, you've got to do what's right to take care of customers. Our customers can order before noon and they are guaranteed to get their products by the end of the day. If your X-ray unit breaks down, you can call us and in two hours we'll have an on-site technician there, guaranteed, 365 days a year, 24 hours a day. In our nursing home division, we guarantee everything, when we should be cutting back on services because pricing is so strategically important in that market. We're guaranteeing next day delivery. We're adding 180 trucks all over America. What are we stupid? No! We are thinking about the long term.

We are trying to focus, focus, focus. Yet we want to be a diverse company. How do we get diversity simultaneously focused? That's the real paradox that we have to deal with. We would love to consolidate our divisions and cut our costs, but we won't do it. We need to keep them separate, keep them focused, because the needs of their market place, what customers value, are all different.

How do you get loyalty today from your employee? It's very difficult, but we do it several ways. We sign contracts with employees. We grant stock options to all our employees, which is very unique. As a matter of fact my phone is ringing off the hook because everybody wants options right now. About 16 percent of our employees will get options issued to them this year. If we share with our employees, they will stay with us and continue to make us successful.

Author information

Patrick Kelly was born in 1947 in Richmond, Virginia, and raised from age 5-18 at the 150-year-old Virginia Home for Boys. He is still the youngest boy ever accepted at the Home, and still holds the record as its longest resident. He was educated at Virginia Commonwealth University, and received a B.S. degree in biology. In 1966, he was inducted into the U.S. Army and served in Vietnam from 1968-1969, receiving an honorable discharge. Mr. Kelly was most recently a graduate of the Global Executive Program, Fuqua School of Business, Duke University.
Challenging the Conventional Wisdom of How to Manage People

Jeffrey Pfeffer, Thomas D. Dee Professor of Organizational Behavior, Graduate School of Business, Stanford University, Stanford, California

Over the past decade or so, numerous rigorous studies conducted across several industries have demonstrated the substantial economic returns obtained through high-involvement, high performance, or high commitment management practices. Much of this research validates earlier writing on participative management and employee involvement. But even as these research results pile up, trends in actual management practice are, in many instances, moving in the opposite direction to what this growing body of evidence prescribes. Much of the conventional wisdom about the sources of sustained business success, the “wisdom” that drives the behavior of leaders in organizations, is inconsistent with the available evidence. This conventional wisdom can be summarized as follows:

1. You have to be in the right industry to be successful. A “good” industry is one where there is limited rivalry, barriers to entry, and market power with respect to suppliers and customers. If you hire strategy consultants, they will tell you which industry you ought to be in. Woe to you if you’re in an industry like selling men’s tailored clothing, like The Men’s Wearhouse, or cleaning households and businesses, like ServiceMaster. Those are bad industries, because there are no barriers to entry and no market power.

2. Being large matters. That’s why we have so many mergers. Citibank and Travelers have to merge because having $80 billion of assets is not nearly big enough to achieve economies of scale in banking. There are waves of mergers and consolidations occurring in many industries as companies seek success through scale.

3. Being in high-tech is the path to success. If you’re in some boring, mundane organization like automobiles or electric power plants, it’s not glamorous or high growth. Witness the rush to add “.com” to every business.

4. Downsizing by laying off people and reducing labor costs is important for increasing profits. Reducing labor costs is important for success in this increasingly competitive world, and getting rid of people is a great way to accomplish this.

There’s a lot of evidence about these issues and, like most things in life, we don’t pay enough attention to the data. This article points out the evidence about sources of competitive advantage and illustrates how a firm’s perspective on managing people affects both its approach to its business and, as a consequence, its economic performance.

1. This material is partly drawn from The Human Equation: Building Profits by Putting People First (Harvard Business School Press, 1998).
Evidence against the conventional wisdom

1. Being in the right industry

A number of studies by a variety of consulting firms show a company's ability to create shareholder value is almost completely unrelated to the growth rate of its industry. Moreover, there is almost no correlation between industry growth rate and growth rate for individual companies within the industry. Obviously, since the industry is the aggregation of the individual companies, for the entire industry there would be a relationship. But considering individual companies, there is as much variation in revenue growth within industries as there is across industries. So, does being in the “right industry” matter very much? Absolutely not! The industry you are in does affect your profit margin, but is unrelated to the ability to increase either revenues or shareholder wealth.

2. Being large

Does size matter? Of course not. There are two airlines that have made money every year for the last 25 years—Singapore Airlines and Southwest Airlines. Neither of them is the biggest. Fortune magazine ran a sidebar on the banking industry, listing the 15 banks with the highest return on assets. I don't remember the individual banks on that list because, for the most part, they're not the names you would have heard of. Not Bank America, Wells, Citibank, or Chase.

For many years GM had the highest sales in the auto industry, but Ford earned more money. In 44% of the 80 non-financial industries listed in Value Line, there's actually a negative relationship between size, as measured by sales revenues, and percent earned on total capital. Across all the 80 industries the relationship between size and percent earned on net worth is just 0.11. There are industries in which size matters, and there are industries in which size doesn't matter. Across the economy as a whole, size is not necessarily related to success. You're better off being effective than just being big.

3. Being in high-technology

Do you need to be in high tech in order to be successful? In the Wall Street Journal's 1997 list of top industries in terms of shareholder returns, only three of the top 15 were in high tech. The Wall Street Journal's 1996 list of the best performing industries had some interesting information. Restaurants, at 26, ranked higher than medical devices. Footwear was ranked ahead of pharmaceuticals. And the computer industry ranked 78, behind railroads, automobile parts and heavy machinery. ServiceMaster, from 1987 to 1995, earned an average of 82% return on shareholder's equity, a number that is higher than Intel and Microsoft combined. You do not need to be in high tech to be financially successful.

4. Downsizing

What about the effects of downsizing, the last and perhaps the most harmful myth? It turns out that on a day that companies announce their people reductions their stock price oftentimes goes up. But some of my colleagues have had the sense to look at this over a slightly longer time period, and it turns out that over a two-year time horizon, downsizing does not increase stock price. Companies that
Evidence against the conventional wisdom, continued

downsize underperform other companies in their industry in terms of shareholder return, and underperform the stock market as a whole.

Downsizing does not increase productivity. A large study of about 140,000 firms from the Census of Manufacturing, done by the National Bureau of Economic Research, discovered this fact. Downsizing doesn’t even invariably reduce costs. One reason is that oftentimes the wrong people are lost. Then, not infrequently, management hires back downsized people as contractors. A survey of 720 companies by the American Management Association found that about one third had brought back laid-off employees as temps or contractors. Sometimes, new people are hired that need to be trained and those training costs reduce the benefits of downsizing. Moreover, in many cases you lose customers because the downsized operation can’t provide the needed level of customer service. The bottom line: the data shows that downsizing does not increase productivity or share price, and does not even guarantee that companies will reduce costs.

Summary chart

| Figure 1. Conventional Wisdom Versus the Evidence About Sources of Firm Performance |
| The Conventional Wisdom |
| 1. It is important to be in the right industry |
| 2. Being large matters—accounting for the wave of mergers |
| 3. Being in a high technology industry is the path to success |
| 4. Downsizing and reducing labor costs are important for increasing profits. |
| The Evidence |
| 1. Does industry matter? |
| • Industry growth rates are unrelated to company’s creation of shareholder value |
| • There is no correlation between industry growth rate and the growth rate for companies within each industry. |
| 2. Does size matter? |
| • In 44% of the Value Line non-financial industries, there is a negative correlation between sales and percent earned on total capital |
| • Across the 80 industries, the correlation between size and percent earned on net worth was just 0.11. |
| 3. Do you need to be in high tech? |
| • In the Wall Street Journal’s 1997 list of top industries (in terms of shareholder returns), only three of the top fifteen were in high tech |
| • Servicemaster, from 1987-1995, averaged 82% return on shareholder’s equity |
| • The Wall Street Journal’s 1996 list of industries showed: |
| • Restaurants (#26) ranked ahead of medical devices (#28) |
| • Footwear (#30) was ahead of pharmaceuticals (#47) |
| • The computer industry ranked 78th, behind railroads (#33), automobile parts (#34), and heavy machinery (#29). |
| 4. Effects of downsizing |
| • Over a two-year horizon, downsizing does not increase stock price |
| • Downsizing does not increase productivity |
| • A survey of 720 companies found that 1/3 had brought back laid off employees as temps or contractors, so downsizing doesn’t even always reduce costs. |

The courage to challenge conventional wisdom

We are surrounded by conventional wisdom and management fads, most of which are inconsistent with the data and make no common sense. Those are two bad qualities. To build successful organizations you have to follow something other than
Courage to challenge the conventional wisdom, continued

The conventional wisdom. That takes courage, remember that it is almost impossible to earn extraordinary returns by being average and doing what everyone else is doing. You cannot achieve exceptional results by following the crowd. Southwest Airlines had the courage to fly point-to-point, getting rid of the hub and spoke idea. The Men's Wearhouse became very successful by breaking every rule in the retailing industry. ServiceMaster in its apparently low skill industry (now it turns out to be not so low skill) has been successful by investing in training, encouraging retention, and treating all its people with dignity and respect. SAS Institute, the largest privately owned software company in the world, breaks every rule for how to manage people in the high technology industry. So if you want exceptional returns, be willing to do things differently.

I've talked about where success doesn't come from, but now I'll look at some data about where success does come from. The data are from Chapter 2 of my book The Human Equation: Building Profits by Putting People First (HBS Press 1998).

Perhaps the most wonderful story that I can tell you is one about the GM Plant in Fremont, California. It closed around 1982 as a result of terrible absenteeism (20% on many days), poor levels of product quality, and high levels of alcoholism and drug abuse. Labor relations were terrible, with about 5,000 grievances filed over a three-year contract period.

The plant was reopened in 1985 as NUMMI (New United Motors Manufacturing), a Toyota/GM joint venture. When it reopened, 85% of the workforce were the same people who used to work for GM and the plant had essentially the same capital equipment. The only thing different was the productivity (see Figure 2). Corrected for things such as design for manufacturing, option content, and welding factors, productivity was about 50% higher. It took about 20 hours to make a car there.

Figure 2. Productivity and Quality Comparisons Among Four Automobile Plants

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* Adjusted for engineering and technical differences.
A success story from the auto industry, continued

compared to close to 30 hours in other GM plants, including the Framingham plant that was also studied, which has since been closed.

GM went into the joint venture with the explicit objective of learning the Toyota Production System, and the evidence from a number of sources is clear: GM learned only slowly and with great difficulty, even though there was an organizational imperative and some obvious economic benefits to be gained. The NUMMI story illustrates two important things: how you manage people can make a tremendous difference, and transferring best practices in operations and people management is difficult.

Data on high-performance work practices

I’ve met executives from every major auto company in the world. All have read The Machine That Changed the World. All of them understand lean or flexible manufacturing, and everybody believes that it’s effective. John Paul MacDuffie and Fritz Pil did a study to find out how quickly these proven ways of enhancing productivity were adopted by plants in the industry. They found that some plants undertook only minor changes in the use of high-involvement work practices while other plants showed dramatic increases; still others showed decreases. Between 1989 and 1994, the average change in the adoption of high-performance work practices was just 12.3 (from 34.6 to 46.9 on a 100 point scale), with a standard deviation of 22.2. The same pattern of results found in the auto industry have been found in almost every industry ranging from manufacturing to service. A study by Jeffrey Arthur of 30 steel mini-mills in the U.S. found 7% less turnover, 34% fewer labor hours required to make a ton of steel, and 63% better scrap rate for mills that used a commitment approach as contrasted with a control approach.

What distinguishes the traditional “control” systems from the new “commitment” systems in the steel mini-mills? Higher wages and benefits, lower use of bonuses; the commitment plants are more unionized; lots of people in self-managed teams; the use of work groups; and multi-skilling.

Performance in multisite organizations

A Solomon Associates study of refinery maintenance has a lesson for those who operate multisite organizations. Solomon wanted to understand refinery performance and specifically the relationship between maintenance spending and performance. The first thing they expected to find was that refineries in the same company would perform at around the same level. Guess what? They didn’t. They found that there is essentially no similarity between refineries in the same firm. But they also found large differences in performance. Refineries in the lowest performance quartile expended twice the resources of those in the highest quartile. Refinery performance was independent of refinery age, size, and many technical factors. Improved reliability was actually unrelated to maintenance spending. Performance was, however, positively affected by paying higher wages, sharing information, and training and multiskilling the operators.

In short, organizations that have multiple sites often have as much variation in
Performance in multisite organizations, continued

Performance across their sites as there is between their facilities and facilities of other companies in the industry. If you think very carefully about that statement, it means there is very little learning going on within the organization. If learning were occurring, all the units in a company would perform at around the same level.

Conclusion drawn from the data

There is a tremendous evidentiary base that suggests that how you manage your people does make a difference in organizational performance, and I've cited only a few of the studies reviewed in Chapter 2. The same findings have been found in industry after industry. Many of these studies are quite technically sophisticated in terms of controlling for things like causality (one comment is that more successful companies can do “people first” things, so how they manage people is an effect not a cause of their performance), sample selection bias, other technical issues. If we were doing double-blind drug studies, the studies would have been stopped, because it would be unethical to give anybody a placebo. This, of course, being human resources, the finance types say show me even more data. As Karl Weick has noted, it's not that “seeing is believing;” rather, “believing is seeing.”

High-performance work practices

I now want to briefly cover some information about high performance work practices. If you read the studies and cases, and talk a lot to people, what comes out is a list of common elements. I have my list, others have their lists, but they all have a great deal in common. These lists consist of probably seven or eight elements for the most part.

Number one, the most controversial and, I believe, the most essential, is employment security and mutual commitment. Let me suggest to you that it’s impossible to go to your people and say “I want you to be loyal, dedicated, and work hard for me—and you’re employed at will; when we don’t need you, you’re out of here.” Think about using the following approach as a proposal: “I love you, I think you’re attractive, I think you’re wonderful. Come be with me, take care of me, work with me, be loyal to me. And by the way, on the first day I find you no longer interesting or useful, you’re out.” It probably won’t work. But that is, in fact, what corporations are saying to

“If we were doing double-blind drug studies, the studies would have been stopped, because it would be unethical to give anybody a placebo.”
High-performance work practices, continued

people all the time.

So I go to companies and they say to me, “Wow, our employees aren’t loyal.” I then do an exercise which often makes them very unhappy. I say, “I want you to list, as objectively and clinically as you can, what you have done to your employees in the last two years. Things such as layoffs, cutting benefits, the messages you have sent, and so forth.” They look at such a list and I ask, “Would you be loyal under these conditions?” The answer is usually “no.”

Now you may want to protest at this point: “How can we offer employment security in an age of economic turbulence?” Let me give you an analogy and then suggest how to do it. If you really believe there has to be universal career resilience and flexibility, go home and say to your family: “We’ve learned a new concept called “family unit flexibility. In an era of economic instability, how can I offer you, my family members, guaranteed financial support? We have to become family circumstance resilient.” Your family will of course look at you like you’re crazy, as you should when the company tells you this.

There are lots of things managers can do (see Figure 3). However, surveys by the American Management Association suggest that companies are doing fewer of them every year. What can you do to maintain employment?

You can reduce wages and hours proportionately when needed—the famous Hewlett-Packard nine-day fortnight approach.

You can not hire to meet peak demand. One of the ways Southwest Airlines has never had a layoff or a furlough in its 27 years of existence is it doesn’t hire people to meet peak demand. It only enters markets where it thinks it can actually succeed and stay.

You can encourage people to develop new products and markets. There are always ways of finding new products and new markets if you really have skilled and talented people.

You can have people do other things, like training and deferred maintenance. I love the scheduling of training in the United States. We do training when we have the budget to train. Of course when we have the budget to train, times are good and no one has the time to learn. Then of course when times get bad, people have the time to be trained but we don’t have the budget. This is called procyclical behavior. It’s much more sensible to practice countercyclical behavior. Train people when they have time to be trained so that when times get better, they will then have the opportunity to use their training to take market share from the competition.

Maintaining employment security

Figure 3. How to Maintain Employment Security

- Reducing wages and hours proportionately, when needed
- Reducing outsourcing
- Reassigning people to other jobs
- Not hiring to meet peak demand
- Encouraging people to develop new products and markets
- Having people do other things such as training and deferred maintenance
- Freezing hiring to avoid making overstaffing worse.
There are other things that organizations do to foster high performance management (See Figure 4). If you're going to offer employment security, you want to make sure that the people you bring in will fit the organization well. By the way, employment security does not mean keeping bad people in the organization. It means you do not let people go for things that were not their fault.

Recruiting for fit is even more important than recruiting for skill. Recruit for those things that are hard to change. Select on those things that are relatively unchangeable. Some things are harder to train. You can train skills easily. Also, selectivity requires having many applicants for the position. I believe this year Southwest Airlines will have close to 200,000 applicants for 5000 hires. At a 40-1 selection ratio, it's harder to get into Southwest than Stanford.

Be clear about what qualities are critical to success. Given your strategy, distinguish “nice to have” from “essential.”

Close the selection/recruiting loop by assessing recruiting performance. People recruited into Southwest Airlines have the names of the people who interviewed them on their folder so that whether they work out or not, I can go back and actually ask, “What questions did you ask?” In that way, the company can continually improve the process.

Promote from within. It’s always nice to have someone who knows something about the business running it. It’s also always nice when you don’t make people
Challenging the Conventional Wisdom of How to Manage People

An emphasis on training and skill development is critical if you're going to have high performing people. That means you have to maintain training and skill development throughout the economic cycle. I had the opportunity to work with Singapore Airlines, which is by far the highest quality airline. It's the airline with service the other airlines talk about. Singapore Airlines spends 15% of its payroll on its training, not the 1.5% that is the typical U.S. average. I asked the training manager, "How does Singapore Airlines adjust its training with economic cycle fluctuations." She looked at me and said, "I don't understand the question." So I tried again. Five times it took so she could finally understand the concept of cutting training as the business cycle fluctuates. She said, "You mean there are companies that really do that? The only thing that distinguishes us is our level of customer service. So we never cut our training. This is how we maintain our differentiation in a world in which anyone can buy a 747 and serve airline food, and use the same avionics. The only thing that distinguishes us is our level of customer care. We would never cut that."

High pay is another dimension of high performance work systems. How can you pay well in a competitive environment? Simple. Do not confuse labor rates with labor costs. Do not confuse labor costs with your objective, to maximize profits or performance. Do not believe that competing on costs is the only way to compete. There are thousands of things you can do, including technological innovation, customer service, customer quality, customer care. Consider The Men's Wearhouse. In the difficult, competitive, and challenging business of retailing off-price men's tailored clothing most of their competitors have gone bankrupt. This company has grown 30% per year, compounded, in profits over the past five years. It has done this by violating all the rules. The company trains more, pays more, has many fewer part timers. I said to George Zimmer, the founder and chairman, "But George, this must raise your labor costs." He said, "I don't care what these people cost. I care about what they can do."

The biggest barrier to customer service is people who provide the service being unable to make the decisions necessary to maintain the service when the unexpected happens. George Zimmer says he guarantees it, but George Zimmer lives in California; he's semi-retired; he plays golf. The only way that George Zimmer's guarantee can be maintained is that he and his colleagues empower everyone in The Men's Wearhouse to do what it takes to make the customer happy. By decentralizing decision making and delegating authority, people are actually able to use their training and motivation to make a difference.

Shrewd leaders make sure that those people who actually do the real work get the support, training, information systems, and everything they need to be successful. Team-based organizations have substantially reduced status distinctions. If you read the The Men's Wearhouse proxy, you'll see that George Zimmer makes
High performance management practices, continued

$400,000 a year, and the compensation committee says he’s very underpaid, but he says he’s making enough money. Whole Foods Markets, which is going to do approximately $1.4 billion in sales, has grown dramatically over the last eight or nine years in the business of operating natural food grocery stores. The head of Whole Foods, John Mackey, made less than $200,000 and didn’t get tons of options, either.

Finally, it is important to practice open book management, sharing with everyone the financial and operational performance information as well as strategic objectives. It does no good to carefully select, train, and motivate people if you don’t then give them the tools to do an effective job. One of the most important tools everybody needs is the ability to know what they should be doing and how well they’re doing it. But of course many organizations don’t share information.

At Whole Foods Market all employees have access to a book in the back of each store which lists every employee and his or her salary. John Mackey explained this practice:

You know, we didn’t use to share salaries. And once a year we’d give out raises. Here in Boston we’re very polite. No one will come up and ask how much you’re making. But on the other hand I want to know how well I’ve done compared to you. So we’d hear questions like: “Did you have a good year?” “How did you do?” “Are you satisfied with your raise?” People ask all these indirect questions to find out how much everyone else is making. While people were trying to figure out how everyone else was doing, I realized they weren’t focused on things that were very useful for the company. So I figured we’d release all the data, people might get excited for a while, and then everyone would get on with doing something useful as opposed to trying to figure out how much everybody else was making. Most importantly we have an organization that’s based upon trust. When we keep secrets it says I don’t trust you. I don’t trust you with the ability to use the information. I don’t trust you with the ability to use the information.

Salary issues aside, this is a general principle. When I go to you, as many organizations do, and say, “this is important strategic information, I can’t share it with you,” what does that say? It says: “I don’t trust you to be able to use it, I don’t trust you to keep it secret. I trust you to keep it secret. I trust you to work hard for me. I trust you to be loyal to me, but not to think.” And of course, some people will say, if you share information with all your employees, it’s going to leak. Competitors will know. Guess what? Your competitors already know.

Putting people first

Let’s now look at what it means to really put people first (see Figure 5). First of all it’s not necessary but it’s certainly good to publicly and repeatedly state the importance of people to the organization’s success. George Zimmer of The Men’s Wearhouse says “We put our employees first, our customers second, our suppliers third, our communities fourth, and our shareholders fifth.” He actually does this. Richard Branson of Virgin Atlantic says that he puts employees first, customers second, shareholders third. He knows that to provide a great experience, one that causes their customers to come back again and again, the service has to be delivered by people who are proud of the company and who feel good about being there. The same language comes from Herb Kelleher of Southwest Airlines. Fix the language,
too. Get rid of language that makes people feel second class.

Provide everyone access to the organization’s leaders. Every employee at Virgin Atlantic has Richard Branson’s home phone number. He’d rather hear about problems from employees before customers stop flying. At Southwest Airlines, officers are required to return voicemail to employees in 24 hours, and every employee has the home phone number of every officer.

Invest in people by maintaining commitments to training. Training has two functions. One is the obvious, it teaches people skills and information. It also has another enormously important function. It sends a symbolic message that people matter. What does it say when you cut training? What does it say when you keep investing in capital equipment and cut the training of your people? It says “Machines are more important than people.” They get the message.

Ensure that leaders have people-oriented values. That’s a tough one, but it is perhaps the most crucial. Gather measures that tell you how well you are doing with your people—and use those measures in evaluation, promotion, and compensation decisions. If you’re serious about measuring, measure what percentage of people you’re developing from within. Measure retention. It’s one of the most important things SAS Institute evaluates its managers on. If you can recruit and retain the best, you win. Measure those practices that really matter to your success.

Finally, recognize the importance of all people to success. The companies that will succeed are the companies that recognize that all work is knowledge work. It was Ford, and Toyota, and other companies that recognized the wisdom of the people on the assembly lines. Is selling men’s suits knowledge work? It is to The Men’s Wearhouse, a company that spends more days training its people than some high technology companies. Is cleaning, termite control, and lawn care knowledge work? It is to ServiceMaster, that has an R&D department with Ph.D.s. It trains everybody in the organization on how to do the work, as well as making leadership and sales training widely available. The important reality is that all people are important for your success. You don’t have the knowledge workers and then the rest. That’s a throwback to the idea that managers are paid to think and others are not paid to think. Everybody is an important knowledge worker, and as soon as we recognize that, we’ll all be better off.
The Knowing-Doing Gap

All of what I’ve covered in this article is, of course, common sense. You all know you need to share information. You all understand the concept of selective recruiting. Everybody knows about self-managed teams. The question is, why, with all this knowledge, do so few companies do these things? That is the issue we’ve been working on and is subject of a forthcoming book, The Knowing-Doing Gap: How Smart Companies Turn Knowledge into Action. In the next issue of the Journal of Innovative Management I’ll share some of the preliminary answers with you.

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Dr. Pfeffer is the author of eight books, co-author of one book, and has published more than 100 articles and book chapters. His latest book is The Human Equation, Building Profits by Putting People First, and he is currently working on a new book with Robert I. Sutton, The Knowing-Doing Gap. An article on this topic will be published in the Fall issue of the Journal of Innovative Management.
A Toolbox for Managing in Turbulent Environments

Deborah K. Zastocki, Senior Vice President, Clinical Services and Operations, Chilton Memorial Hospital, Pompton Plains, New Jersey

Today health-care organizations are undergoing extreme and unpredictable change. The typical Newtonian management model, a mechanistic, predictive, reductionist model, doesn't work very well in an organization whose internal or external environment is turbulent. Successful organizations adjust to turbulent environments by continually experimenting—reinventing themselves to ensure their ongoing survival. In order for creative experimentation and adaptation to occur, leaders must create the conditions for people to connect with one another. Individuals coming together share knowledge and create relationships that bring about innovation. Order emerges out of the randomness. Helping managers move from the traditional mechanistic approach to approaching organizations as complex adaptive systems is crucial in unstable environments.

Because of health-care's turbulent environment, I became interested when Curt Lindberg, of the Voluntary Hospital Association (VHA) of NJ, launched a study group on chaos and complexity theory. We invited several research professors to work with us. Ralph Stacey, professor lecturing in Strategic Management at the University of Hertfordshire, England, helped us understand where traditional management models work (under conditions of agreement and certainty) and where they don't (far from certainty and agreement). Gareth Morgan, Distinguished Research Professor, York University, Ontario, helped us understand the power and limitations of metaphor and the concept of minimum specifications in leadership and management situations. The result of this research is a new toolbox and skill set for managers, which are described in the book Edgeware by Brenda Zimmerman, Curt Lindberg and Paul Plsek.

Complexity theory is a very large topic; this article will provide a quick overview of complexity science, and how to apply it to some of the leadership challenges many managers face. I will conclude the article by providing you with an example of how we applied it to a challenge our organization faced.

Overview

In stable environments, management strategies focus on improving organizational performance by increasing efficiencies. In an unstable environment, strategies that increase organizational adaptability and resilience are needed instead. The old organizational model features small, suboptimal working groups that require a rather rigid (and expensive) bureaucracy to manage connections between disjointed groups.
Complex systems contain ambiguity

It is important for managers to remember that complex systems have ambiguity. A table is hard if you hit it, but if you scratch it with a diamond, it's soft. It's not hard or soft, it's both. We find similar ambiguity in organizations. Organizations can be in an uncertain, creative phase at the same time they are operating under normal policy and procedures. Metaphors capture the ambiguity found in organizations. Describing man as a lion is correct in the sense that man can be strong and fierce, yet inaccurate in that man is not a hairy animal walking on four legs. Organizations can run like clockwork at the same time they are experimenting, evolving, and adapting. Managers need to beware of the metaphor or lens they use to view the organization. It can produce insights or distortions.

Managing near the edge of chaos

Most of us have been trained in the methods of Total Quality Management, TQM, which teaches that you must be in control of production systems in order to achieve statistically significant quality on a regular basis. It also teaches that for the organization to learn managers need to allow and promote experimentation. Many people feel out of control learning by experiment. It is often difficult for managers to realize that by shaping critical parameters they are in control, and they are also in control when they promote self-organizing events, experiments, or pilot projects. TQM recognizes that the real world of organizations is full of paradoxes and offers many ways to manage them. Complexity theory offers managers deeper insights into this realm of nonlinear dynamics and new ways to manage.

Many managers have used the tools of statistical control and quality function deployment (QFD). Those are excellent tools to use when the situation is rational; when there is a clear, logical approach; and when there is close agreement and near certainty. These tools work when we are in the lower left corner of Stacey’s model (Figure 1 on the following page), when we are managing process control, administering policy, and auditing. People can get their hands around the data and move with it. The term clockware is used to describe the tools used in this lower left quadrant. They are your organization’s routine policies and procedures. This is bureaucracy at its best (Figure 1, area 1).
Managing near the edge of chaos, continued

Overemphasis on process control can stymie innovation

Decision-making near the edge of chaos

Applying Complexity Theory

When the situation is not ordered and rational, when we are out by the edge of chaos (area 5), we need a set of tools and skills that will help us deal with these
Tools for edge of chaos, continued

issues. Managers must learn to assess the turbulence, the uncertainty and disagreement, in their organization's environment. In area 1, issues are simple. Areas 2 and 3 are complicated, and in areas 5, the issues are complex. We call the processes used in an uncertain environment swarmware: bees swarm by finding their own direction, and termites build their nests without a leader or a plan. In the middle of Stacey’s model, (area 5) is the zone of complexity and creativity. Some of the creativity tools fall very naturally into this area (Figure 2). For example, imaginary brainstorming and the creation of complex analogies to help to describe the scenarios and help create the context. These tools help groups explore the situation and begin building agreement; experiments and pilot projects then take us closer to certainty.

Management approaches in each of the areas

Dr. Stephen Larned, VP Medical Affairs of the Maine Medical Center, added to Stacey’s model (Figure 3). He suggested managers apply the following actions for each area.

1. Direct workers to complete tasks.
2. Change work processes to facilitate self-organization.
3. Modify structure to increase diversity, information, and connections.
4. Bring agents from different complex adaptive systems (CAS) groups together to intervene and seek change.
5. Bring agents from different CASs groups together to facilitate self-organization.
6. Examine and describe patterns that are beyond the leaders’ influence.
7. Scan the system for patterns (sense making).

Human nature is such that when things are complex, uncertain, and far from agreement, and the level of anxiety is running high, that’s when we tend not to use a new skill set. Instead we tend to fall back on what we are most familiar with—our old skill sets. Unfortunately, those tools are not very functional in this area. Too often we end up trying to impose linear solutions that cannot be forced into a nonlinear situation. At worst, misapplication of clockware tools can push the organization closer to chaos, instead of pulling it closer to agreement and certainty.

It is clear that this is a dynamic situation in the middle zone. You do not use clockware or swarmware exclusively. It’s not an “either/or” process. Your organization needs to know what approach to use and when to use it. A clever swarmware idea will eventually be incorporated into the procedural part of the organization, and then evolve into a more clockware-like process or policy. At the same time managers need to create space for experimentation and other new ideas, creating innovations. There’s a constant tension between both of these activities. Managers want to move into that lower left zone, but they have to be able to help people deal with the ambiguity in the zone of complexity. Understanding the relationships and connections between people within and outside of your organization will help you better understand your organization.

In order to circumvent the bureaucracy that blocks innovation, people may use the shadow organization, what Ralph Stacey calls the organization’s informal systems and networks. This is an area for management to work with to promote information flow and encourage diversity of thought to create innovation. Shared and/or distributed control is also encouraged in contrast to traditional management practice that controls information, forces consensus, and works down through the hierarchy. One of the objectives is to release the energy and creativity of the shadow system. It allows for self-organization and the emergence of more adaptable processes and structures.

Brenda Zimmerman compares “traditional clockware strategic planning” to “complex swarmware strategic management.” In dealing with uncertainty, the traditional response is absorption/reduction as compared to creation/expansion. Traditional approaches are controlling as compared to self-organizing. The role of a senior executive in the traditional management model is as the leader, the strategist, and the person who has the answers. This is in stark contrast to the desired role of the leader who acts as a catalyst and who enacts strategies developed by members of the organization. The strategic sequence in traditional terms is formulation first, followed by implementation, compared to concurrent formulation and implementation in a complexity approach.
Managers must create context of trust

The role of the leader in the middle zone (area 5) differs from his or her role in the zone of order (area 1). First, the leader must create a context of trust. The level of trust is positively correlated with innovation and creativity. The more people trust one another in the group, the more likely they will be able to move forward and create something innovative and novel. People need to feel that they're not going to be tossed out on their ear if they fail.

Morgan suggests that managers need to create and manage the context that is unique to each situation. Creating context begins with building trust by generating new understanding of a situation or engaging in new actions within the reference points, developing and operating with a set of minimum specifications. We have to create a safe space for experimentation, innovation, and creativity.

Managers must contain anxiety

One of the clear challenges for leaders is to contain anxiety when the organization is far from certainty, and far from agreement. We know how anxious we feel—imagine how that ripples to the people that we work with. In complexity, the manager is not the answer giver, and not the “knower” of what the outcome will be. His or her role is to help people acknowledge that anxiety exists and to work together to keep it bounded in spite of a future that is unknowable.

Morgan suggests one way of containing anxiety is to focus on the 15% of the work that we have control over and not become overwhelmed by the 85% we cannot control. We can experiment and make small-scale changes that might lead to another change. We constantly build on these small changes and eventually a large-scale change may result. Large-scale changes that occur all at once often stimulate resistance. People like their familiar work patterns. By starting with small groups, implementing small changes, new work patterns develop, enabling the organization to move forward.

Managers must surface contradictions

The leaders must shift their roles from giving answers to asking questions. Leaders must ask the “wicked questions.” We must surface contradictions and expose the assumptions; for example, management wants to create a new system but isn’t prepared to take on the political implications of two feuding factions. One can dance around the key issue and create all sorts of implementation strategies, but if there’s really a significant contradiction that’s going to stand in the way, “Yes, but...,” you must bring it to the surface. Too often organizations waste time on something that will never produce a desired outcome, even though the contradiction was there to see all along. The challenge is to bring the contradictions forward, begin discussion, and surface patterns of thought and differences in the group. In this way, you will reveal the fork in the road.

As managers, we must not let ourselves be seduced. Too often, we allow people to lull us with feedback that we want to hear, rather than what we need to hear. Managers must develop the personal discipline to create an environment in which people feel safe bringing contradictions forward that may result in choosing a new path.
Endorsed leverage points
and new attractor patterns

Managers need to recognize and use leverage points and new attractor patterns. Almost unknowingly, we allow ourselves and the organization to continue following the same path (patterns of thought and action). Everyone knows how hard old habits are to change. These attractors are the underpinnings of a system's behavior within a particular environment. The most obvious example is, “We've always done it this way.” Managers must have the discipline to change their own patterns of thought and action and encourage their staff to change.

Story telling is a very powerful organizational tool to help establish new attractor patterns. Story telling engages the listeners’ emotions and imagination. Failure stories are important to share. Sharing the stories reinforces new organizational patterns of working together and tolerance for failure. By focusing on groups who are positive and are engaging in new behaviors, managers do not waste important time and energy on the resistors. The goal is to help people gracefully disengage from the old pattern of behavior by connecting with the new. Promoting experiments, using story telling as a tool, and communicating the vision, help to create the critical mass that leads to organizational change.

Distributed control

The people at Lucent Technologies consider themselves a complex adaptive system. They learn, adapt, and grow as they go forward. Complex adaptive systems have distributed control. Morgan uses the metaphor of a spider plant to describe this type of control. A spider plant has a main body with many smaller plants that tether from it. Each one of the tether groups can grow independently while still remaining connected to the main plant. The growth of the whole plant is unpredictable.

Managers don't know the outcome in organizations with distributed control. Complexity theorists have developed a notion of GEPO—Good Enough to Push On. If we can agree on where we need to be, we don’t need to have all the predetermined steps planned in detail. We’ll learn as we push forward. One of the most important concepts in complexity science is that of minimum specifications—the set of principles that will allow you to push forward. Minimum specifications apply to both the process of how the project should be accomplished, as well as to what is to be accomplished—the goal.

The number one question managers have is how to define minimum specifications. Minimum specifications are those essential specifications that the group must meet. They must not be overly prescriptive or create a context that is too narrow. Innovation is inversely related to the amount of specifications placed on the group. Specifications that are very restrictive will encourage more replication and little novelty. Fewer and very clear specifications increase the degree of novel and innovative thinking. Like the Ten Commandments, minimum specifications that are descriptive of the vision can be easily applied by individuals to their particular circumstances.

Flocks of birds and schools of fish move by following a few simple rules; they maintain a minimum distance from each other, they match the speed of the others.
Develop good enough vision and min specs, continued

and they move toward the center of the group. Their movements are quick, responsive and adaptive because they follow these few rules. Minimum specifications are liberating for all: you as a leader do not have to work so hard to organize everything. By providing your people minimum specifications, you provide the team creative space and boundaries. You enable your teams to self-organize.

Managers must create connectedness and space

Leaders need to create space for people to connect, experiment, and to innovate. Consider the analogy of the farmer growing crops. He must first create the conditions for the crops by preparing the soil, then he must support the conditions for growth. Managers today need to understand how people come together (create the conditions for growth) and to help them connect within and outside of their organizations (support the crops). The challenge of moving forward is to create the space where people come together. What emerges within the established context and minimum specifications is the essence of creativity. It allows for accelerated incremental change.

Case Study

The Chilton Memorial Hospital Neighbors for Health Coalition represents nine rather homogenous communities about 25 miles from New York City. We created a coalition of community leaders to respond to the data from a community health-needs assessment. There was concern at the start about what would happen when we assembled this group. After all, leaders like to control; and they indeed had a very clear need to be in control. Many community initiatives apply traditional management strategies that replicate what is known and currently practiced. The groups quickly become obsolete.

To help this group of leaders lead themselves to innovative approaches, we used the theories of complexity science. One of the things we did was to be inclusive, not exclusive. We enrolled a diverse group of people to serve as an advisory group, thereby creating as many new connections as possible among people who might not normally interact. They included local employers, social service agency representative, an insurance company representative, local health officers, a family-practice attorney, a school nurse, a clergy member, a community-health professor from a local university, and hospital staff representatives.

Amazingly, when we told them they could create whatever they wanted, they retreated to that left-hand corner of Stacey’s chart. “Let the hospital be the center: tell us what the research shows; you design the plan; we’ll help you implement it.” They wanted to replicate what was done in the past. We did not want this result, so we had to return with various techniques to focus the group’s efforts in the zone of complexity.

New techniques to refocus the group

One technique we used was brainstorming to identify several themes for group formation. We encouraged them to get involved in their self-selected group, and we
New techniques to refocus the group, continued

created a steering committee model where information was fed back to the larger group. We used the spider plant metaphor to reinforce that each group could grow independently as long as it periodically fed information back to the core. Our job was to nurture and allow these little sprouts to grow and do whatever they needed to do. We let them focus on the unique pieces that they had an interest in. By explaining the concept of minimum specification (boundary setting) we allowed the distributed control to be effective. It also produced rapid responses, and allowed their talents to really benefit the group. We used a “paper tear” exercise to demonstrate the futility of trying to provide maximum specifications to guide performance. In this exercise, each person was given a sheet of paper, asked to close his/her eyes, to not talk, and to follow the directions exactly. They were then directed through a series of steps of paper folding and tearing. At the end, everyone was asked to open his eyes and hold up his sheet of paper. After the laughter quieted down, we explained that we did not expect to have identical paper models despite the fact that they all heard the same directions. This exercise greatly lowered their anxiety.

A novel solution

The solution that the coalition developed was an exciting plan called the Gatekeeper Model. The community assessment revealed a high-level of psychological health needs. While this was eye-opening, it isn’t unusual. We did not address the issues in a typical way such as, “OK, we’ll give health education programs on the top ten health needs of our organization.” Instead, the coalition focused on the overlooked gate keepers in the community. They first focused on those people the adult population would most likely communicate their concerns to: clergy, hair stylists, family physicians, family-practice attorneys, and bartenders. Most health care organizations would never think about enlisting hair stylists and bartenders in the system. But in reality, conversations about the difficulties of coping with life often take place in a beauty salon. We do not expect these people to become therapists; we look at them as gate keepers. We are now teaching them to be aware of the signs and symptoms of psychological stress points, and to encourage people to connect to the health-care system. After educational sessions with the staff, business cards with the signs of stress printed on one side and ways to seek help on the other, have been placed in the reception and changing areas of many establishments. In addition, a pocket-size resource directory was developed that provides a more comprehensive reference for gate keepers and community agencies. Numerous requests for copies have come from many parts of the state.

Conclusion

In the purest sense, Chilton Neighbors for Better Health created the connections. We pulled the people together, and they were the creative forces. The efforts continue with the model. The group remains active and committed.

The people who were involved in this group initially had a very clear notion of the traditional processes of running things. By creating connections, pulling diverse people together, and allowing small self-selected groups to work creatively with minimum specifications, the “control issue” in the group was sidestepped. Complex-
Conclusion, continued

General systems theory science and the complex adaptive model allow constant learning and interaction between and among agents and the environment.

References


Author Information

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Participative Curriculum Planning: Including Student and Company Voices

Author

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Introduction

Total Quality Management (TQM) is going to college. Majors and concentrations in TQM are showing up in business school curricula around the country. New chapters on TQM have become a standard in textbook revisions across business disciplines. Faculty everywhere are “talking the talk” about the “Quality Philosophy” and the “Quality Revolution.” It is time to seriously consider how to translate the quality philosophy into a real quality curriculum—one that enables graduates to “walk the quality walk” as they move from the classroom to the corporation. What better tools to use in this complex endeavor than those provided by TQM itself? This article reveals how one university has done just that. Quality management faculty and students, relying on quality management tools, comprehensively reengineered their own Master of Quality Management (MQM) degree program. The result is a model curriculum easily adaptable to the varying needs of a broad spectrum of academic and training programs. There were also some new and valuable insights into the general benefits of TQM in curriculum design, and the reciprocal value of the voice of the student.

Some History

The Joseph A. Butt, S.J., College of Business Administration at Loyola University New Orleans was the first business school to offer a full curriculum culminating in the Master of Quality Management degree. Our program began in 1993 as a consortium with STAT-A-MATRIX Institute, the non-profit education and training arm of the SAM GROUP of New Jersey, which had accumulated thirteen years of experience with TQM training in industry. Courses were then, and are now, delivered on campus by teams composed of professional quality management consultants/trainers from SAM and faculty of Loyola University College of Business. Students learn both on campus and at their own employment (distance learning) sites.

An essential part of this program from the beginning was the use of mentors, usually the student’s immediate supervisor, to assist the student with obtaining the required resources for completing projects and to evaluate the program on a yearly basis. Comments from these yearly evaluations included many suggestions for topics...
Some history, continued

which should be added to the curriculum. The vast majority of these were for "soft-side of quality" or business topics like organizational change, leadership, employee development, customer satisfaction, competitiveness, strategy formulation, and budgeting. These same topics were requested as additions to the curriculum by the students.

In response, we formalized a Curriculum Improvement Program (CIP) in 1996 focused on evolving curriculum (product) development in response to the many voices of our growing customer (student and employer) population. By this time, we had sufficient history to apply both the typical American "reactive" approach to identified customer concerns and the Japanese "proactive" approach to future oriented product planning (Day 1993).

The voice of our student customers

The most direct customer of our higher education programs are our students (Rubach 1994, Turner 1995, Walker 1995). They decide to enter and remain in our programs. Our MQM students represent an ideal set from which to review "the requirements, expectations, and preferences of target and/or potential customers and markets" as required by the Malcolm Baldrige National Quality Award Criteria.

First, our MQM students possessed a high level of motivation to complete questionnaires which would be used in revising the MQM curriculum since their input would accrue to their own benefit (Sjobiom 1995). Second, our students could speak to the issues in a global voice since the Loyola Master of Quality Management Program draws students from around the world. The student/alumni group came from across 27 of the United States and seven additional countries. Third, our students represented the field of quality management in many different industries and organizations. Our student/alumni group included employees of 102 companies and represented 70 different job titles ranging from Project Engineer to corporate Vice President for Quality. This mature population demonstrated an overall mean of 16.2 years of work experience and a mean of 6.9 years of experience directly in the field of quality. All were working in the quality management field at the time of the study. The majority of them held or aspired to a position equivalent to that of "Chief Quality Officer." All of them used quality processes on a daily basis in their work, and associated daily with other experienced practitioners.

The voice of employers

Organizations that employ our students are also important customers of our higher education programs (Artzt 1992, Bailey and Bennett 1996, Sirvanci 1996). These customers were represented in several ways during the Curriculum Improvement Program:

1. Comments from the students' mentors provided part of the initial impetus to change our curriculum, as mentioned above
2. Experts in the area of quality management participated in brainstorming sessions to generate a list of topics that should be included in the curriculum
The voice of employers, continued

3. To supplement their own knowledge, our students were requested to query their company mentors about topics that needed to be covered.

The result was a good representation of our employer customers' viewpoint. Our students and alumni also play the role of employer for future students; in fact, several have already sent people who work for them to the program.

Hearing the student voice

In this research, a multi-step methodology was used. Initial qualitative information was gathered through interviews, brainstorming sessions, and two open-ended questionnaires. A subsequent quantitative questionnaire was designed to solicit data on the relative importance of varying curriculum components. The first questionnaire was distributed to the students in the Master of Quality Management program in January 1996, and contained four open-ended questions:

- What is your long-term (10-year or more) vision for yourself and your career?
- What do you need (to learn) to get there?
- What can the MQM program provide to help you get there?
- What was your main reason for enrolling in the MQM program?

The results of the survey were tabulated by question, maintaining the original wording of the respondents, and forwarded to a team charged with determining the direction of the MQM program. The team was comprised of four highly-experienced members of the SAM Group, two faculty members of the College of Business Administration, two students from the MQM program, and two outside experts in TQM who had prior experience in curriculum development with the American Society for Quality. After reviewing the responses to the questionnaire, the team decided that “developing Chief Quality Officers for tomorrow” should be the primary function of the program, with the vision of becoming the graduate program of choice for any organization that wanted to prepare individuals for that role. The team also reviewed student mentor comments on topics that should be covered in the program; they then brainstormed a list of topics to be covered in the program.

On the basis of this identified program mission, a second questionnaire was developed and distributed to the students in the MQM program in July 1996. This survey contained two open-ended questions:

- What specific skills and knowledge would a Chief Quality Officer need to guide an organization in the 21st century?
- What would be the role and activities of the Chief Quality Officer of your company in the 21st century?

MQM students solicited input from other individuals in their organizations who were knowledgeable in TQM, in addition to their own ideas. The original wording on both surveys and from the team meeting was examined by the three-member curriculum development team, deleting only items that were clear duplications. From this survey we produced a list of 144 items, used the affinity diagramming technique, and produced 12 categories, each with 3-14 specific need items.
Prioritizing skill needs

To fully interpret these data, a new “importance rating” questionnaire using a constant sum technique was distributed to MQM students in September 1996. Respondents were asked to assess the 12 categories according to their relative importance to a CQO. Rating directions stated:

The following 12 categories are knowledge and skill areas identified by Master of Quality Management students, their mentors, and area experts as being essential to the Chief Quality Officer (CQO) of the future. Please assign points to each area indicating the relative importance you believe they will have to the functions of the CQO in your industry. You may assign any number of points to each area, but the points for all areas must sum to 100.

Sub-items comprising each of the 12 categories were listed on subsequent pages of the questionnaire, and the respondent was asked to divide 100 points among the items within each category, again according to their relative importance for a CQO. Instructions similar to those above were at the top of each page. In total, each respondent distributed 100 points among the twelve categories, and again for all sub-items within each category. This “constant sum” design was selected because the technique works well with long lists, gives results that are as valid as ranking and direct (Likert) scales and superior to measures of frequency of mention, and provides an interval scale which can be validly used in multiplication.

A total of 64 completed importance surveys were received, representing a response rate of 75.9% from the MQM students. The importance ratings for the categorized items were calculated by determining the mean number of points assigned to each item, multiplying by the importance for the category, dividing by 100, and multiplying by the number of items in the category. The resultant importance ratings were thus free of bias from the number of items in each category and were weighted by the overall importance for the category (Day 1993).

Need categories, need items, and importance ratings were examined to facilitate decisions on the topics to be covered in each course. Brainstorming among the curriculum development team produced six logical groupings that were confirmed by experienced MQM faculty as appropriate groupings for the development of integrated course content.

Utilizing these data, a matrix similar to that used in the “first house of quality” in quality function deployment was developed (Day 1993). The topics were listed as the “whats” in the rows and the course groupings were listed as the “hows” in the columns. The relationships indicated the relative amount of coverage to be given to each topic in each course. The topics covered in the new courses included the following: Analytical Skills & Knowledge, Business Results Analysis, Communication Skills, Customer Focus, Information Management, Leadership, Organizational Change Management, Problem Solving, Quality Methodologies & Tools, Regulations & Standards, Strategic Planning, and TQM Philosophies. This matrix is presented in Figure 1.
Quality methods yield a new quality curriculum, continued

<table>
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<th>Topic</th>
<th>Weighted Importance</th>
<th>New Courses (Quality Management)</th>
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<td>Sampling Concepts and Error</td>
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<td>Design of Experiments</td>
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Quality methods yield a new quality curriculum, continued

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In the final step of our curriculum revision process, the course groupings were given titles, narrative course descriptions, and university registration numbers which also signified the sequence in which students should take the courses.

Feedback

In November 1996, the proposed curriculum was circulated to all MQM students and alumni requesting feedback on the design. Although some concerns were noted about the lack of electives in the final curriculum, the response was overwhelmingly positive. Two students expressed concerns that one of the classes in the original curriculum would be changed to include significantly more material; they were worried that the original material would not receive enough emphasis. Only one topic was suggested as needing to be added to the curriculum, Goldratt’s Theory of Constraints.

Another form of feedback received on the new curriculum was from the student’s mentors. As mentioned above, every student was required to have a mentor in the employing organization who would complete a yearly evaluation of the program through its effects on the student. The mean scores on numerical items showed a dramatic increase from before to after the implementation of the new curriculum, as can be seen in Figure 2 (implementation taking
The result is our 36-credit-hour, six-course Master of Quality Management degree program. This curriculum, totally redesigned through quality management methods, was implemented beginning in June 1997. The major changes were the addition of many business and “soft-side” topics and the elimination of electives. The latter change was made to allow us to provide the breadth of coverage requested by our customers to all students. The courses in the new curriculum are listed in Figure 3.

Figure 3. New Curriculum Course Descriptions

QMGT 605 – Customer Focus and Satisfaction
The major concepts of quality management are introduced through readings in the major theories of Deming, Juran, and others. Major emphasis is given to the concept of customer focus, with coverage of techniques for obtaining customer needs, measuring customer satisfaction, and maximizing the benefits of customer feedback. An analysis of organizational change is begun in this course with coverage of consensus building, conflict resolution, and the “universal translator.”

QMGT 615 – Business Process Management
This course covers business quality improvement concepts and tools to study and improve existing processes, design new processes, or make radical process changes through reengineering or reinvention. A variety of advanced quality management and planning tools are studied. Through a combination of readings, discussions, and exercises, the student learns to use these tools to advance the organizational change process.

QMGT 625 – Quantitative Analysis for Process Improvement
This course covers techniques to study complex operations, situations, and problems. Students learn to use statistical thinking and such techniques as exploratory data analysis to identify opportunities for improvement. Control charts, process capability studies, and design of experiments are covered as techniques to identify underlying causes and improve processes.

QMGT 635– Business and Operational Results: Evaluation and Management
This course covers key business performance and evaluation measurements, both financial and non-financial. The student learns to collect, analyze, and interpret data to facilitate desired business and operational results and customer satisfaction. Students learn to develop a balanced score card for their organizations. Participants study the use of measurements to enhance organizational change.

QMGT 645– Self Assessment for Process and System Improvement
Self assessment is presented as a tool for managing organizational change. This course covers system, process, product, and performance criteria to measure and improve customer satisfaction and business and operational results. A number of self assessment criteria sets are discussed with emphasis on those required for ISO 9000 and the Malcolm Baldrige National Quality Award.

QMGT 680 - Strategic Quality Management
This course covers quality management tools and philosophies needed to achieve “world class” quality products or services. The student learns to develop a quality system as a key ingredient in a corporate strategic plan. At the completion of the course, the student will be able to develop a plan that integrates quality, productivity, cost, and consumer awareness with the overall business objectives of the organization.
Figure 4 provides a comparison between the old and new curricula by course name with indications of where the topics from the original courses are now covered in the new courses. No standard curriculum for a degree in quality management exists in the market place today. In comparison to other programs, though, our new curriculum includes considerably more business and “soft-side” quality topics. It represents total quality management and the Baldrige criteria much more than many other programs that tend to cover primarily the hard topics of quality assurance and quality control.

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<th>Old Curriculum Required Courses</th>
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<td>QMGT 610 Philosophies of Quality Management</td>
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<td>QMGT 605 Customer Focus &amp; Satisfaction</td>
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<td>QMGT 630 Strategies for Quality Management</td>
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<td>QMGT 645 Self Assessment for Process &amp; System Improvement</td>
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<td>QMGT 720 Quality Auditing as a Management Function</td>
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<td>QMGT 750 Statistical Inference and the Design of Experiments</td>
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<td>QMGT 760 System Design and Reliability</td>
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Based as it is on a form of “universal” customer voice representing many organizations and a variety of countries, our revised curriculum can be adopted with confidence by other institutions seeking to create or revise a TQM curriculum to prepare chief quality officers. Caution must be exercised when applying this list of topics to programs designed for other customers. Where the offering of a full degree...
From universal voice to model curriculum, continued

program in TQM is not feasible, courses could be phased into existing programs as the necessary resources become available. Alternatively, items rated as highly important in Figure 1 could be included in survey courses at the graduate or undergraduate level. This latter approach could also be used by organizations seeking to provide TQM training customized as appropriate for various employee groups.

The value of our curriculum planning matrix as a model stems not only from the detail provided in Figure 1, but also from the uniquely broad chorus of voices from which it was derived. Unlike consumers who become customers by virtue of buying a product, students are customers by virtue of participating in a production process. Indeed, students are both the raw material and the outcome of the process. Their voices speak to wants and needs related to undergoing transformation while the other voices, such as those of employers, speak to wants and needs related to the utility of the “end product” after graduation. The two voices may contradict each other. For example, students may be concerned with reducing the time, pain and effort of being transformed, while employers are more interested in the end performance value of preparation. We were fortunate in that our students were mature and experienced quality practitioners who were able to incorporate both perspectives in their collective voice.

Conclusions

Learning the value of the voice of the customer

Borrowing from our broad and experienced chorus of student voices could be of great benefit to other institutions in the initial development of TQM offerings. The lesson here is that once student voices are available, they should be cultivated and listened to. A significant benefit of our experience was discovering that the value of the voice of the customer is clearly reciprocal in the academic arena. Typical TQM studies view the company as the ultimate beneficiary of the voice of the customer. A company that is so well informed can improve its product appeal and its market position. However, in the academic setting, we observed that the act of expressing customer voice brought a benefit to the student as well as the institution. Systematic examination and expression of their needs increased our students’ “ownership” of the program. To the extent that students were participants in creating curriculum design, they now focus more on experiencing the value of that curriculum rather than just completing and graduating from it.

Seeing the value of participative decision-making

There is a vast body of literature in psychology and sociology that links participation in decision making to improved outcomes in organizational loyalty, employee commitment and employee involvement. Our observations in this effort support those notions in the academic setting. We are starting to see an emerging culture of quality partnership between students, faculty and administrators of the MQM program. One example of this is that we have already benefited from monetary contributions and enthusiastic recruiting support on a world-wide scale, all of
Conclusions, continued

which has been generated by current and former students working to benefit the very program they helped to revise.

Students learn by doing

Finally, we discovered that TQM as a body of knowledge is uniquely suited to experiential “learning by doing” which has long been recognized among educators as conducive to critical assessment and retention of subject matter. In our case, students and faculty relied exclusively on TQM methods such as brainstorming, affinity diagramming, and quality function deployment to redesign the curriculum. They learned how to use the tools in the process of learning about the tools, and benefited from a high level of positive reinforcement for their learning efforts since the curriculum improvements accrued to their own personal benefits in the form of a higher-quality curriculum.

References


Author information

Caroline Fisher is an associate professor of marketing and director of the Master of Quality Management. She is a member of the American Society for Quality and a founding member of the Quality Network and the Chamber Alliance for Quality, and she has served as a lead assessor and a judge for Louisiana’s quality award.

Elizabeth Weymann is an associate professor of management. She is a prize-winning researcher and writer in Organizational Behavior with multiple interests in inter-personal relations, team processes, and leadership. She is a frequent management consultant and a former public administrator, MBA Director, and Management Department Chair.
The Baldrige National Quality Award has evolved into both a prestigious award and a good model for running a business. When he presented the 1998 awards on February 4, 1999 to Boeing Airlift & Tanker Programs, Solar Turbines, and Texas Nameplate Company (the smallest business ever, with 66 employees, to win the award), President Bill Clinton said, “As America’s standard for business excellence, the Baldrige Quality Award has become a driving force in helping U.S. firms achieve leadership in the world’s competitive marketplace.” Speaking to the award recipients, Mr. Clinton added, “America wouldn’t have nearly the problems we have today if everybody was as happy on the job as you are.”

Harry Hertz, director of the Baldrige National Quality Program, says the Baldrige Criteria for Performance Excellence is one of the nation’s most popular business publications. Since 1988, more than 1.5 million copies of the Criteria have been distributed, and wide-scale reproduction by companies and electronic access add to that number significantly. Gordon Black, Chairman and CEO of Harris/Black International Ltd., recently said that the Baldrige Criteria for Performance Excellence is “probably the single most influential document in the modern history of American business.”

The Criteria, however, are not static. Just as the Baldrige program urges other organizations to constantly improve, the Criteria are reviewed annually with that same goal, and the 1999 Baldrige Criteria has been improved to provide an easier-to-use format.

While thousands of organizations use the Baldrige Criteria to assess and improve their performance, going through the application process brings additional benefits. For an application fee of $4,500 for large firms and $1,500 for small companies (under 500 employees), businesses will receive from 300 to 1,000 hours of review by at least six experts on the award’s private-sector board of examiners. All applicants receive a detailed feedback report from these experts on their strengths and areas needing improvement. Gary D. Floss, Chairman of the Baldrige Award’s 1998 Panel of Judges, and Director of Customer-Focused Quality at Medtronic, Inc., said, “Organizations that apply for the Baldrige award get a comprehensive, cost-effective, top-to-bottom assessment by a team of business experts.” Hertz added that “the focus is on helping organizations enhance their overall performance and competitiveness, resulting in marketplace success.”

Single copies of the Criteria are available free of charge from NIST by telephone: (301) 975-2036; fax: (301) 948-3716; e-mail: nqp@nist.gov or via the Internet, at www.quality.nist.gov.
Stock Study: Baldrige Winners Still Outperform S&P 500

NIST’s hypothetical Baldrige Fund outperformed the S&P 500 by 2.5 to 1 for the fifth straight year. The 23 publicly-traded award winners as a group saw a 425.63% increase in their stock value compared to a 173.27% increase made by a similar “investment” in the S&P 500.

NIST tracked a $1,000 hypothetical investment in each of the Baldrige winners’ stock price from the first business day of the month following the award announcement through December 1, 1998. For award winners that are subunits of larger companies, the investment was multiplied by the percent of the whole company that the unit represented at the time of the award announcement. NIST then made an investment of the same amount in the S&P 500 on the same day.

NIST’s investment of $8,769.02 in the 1988-97 award winners was worth $46,092.40, adjusting for stock splits, mergers, and divestitures on December 1, 1998. The same dollar amount invested in the S&P 500 increased to $23,963.36 over the same time period.

The six publicly-traded whole company award winners outperformed the S&P by an even larger margin, 2.6 to 1, achieving a 459.67% return compared to a 175.43% return made by a similar investment in the S&P 500. NIST’s $6,000 investment in whole-company winners had grown to $33,579.94 by December 1, 1998; a $6,000 investment made in the S&P had grown to $16,526.04 by the same date.

The correlation between the Baldrige Criteria and stock performance extends to the many companies that have been selected to receive site visits since 1990. The 65 companies that have applied for the Baldrige award and received site visits outperformed the S&P 500 by 55%. An investment of $23,103.06 in these companies made using the same methodology and adjusted for mergers, acquisitions and divestitures has increased 206.35%, to $70,776.25. The same amount invested in the S&P has seen a 132% increase during the same time period, to $53,598.28.

While names of the award applicants are confidential, the stock performance of individual Baldrige Award winning companies can be easily analyzed. Two-time award winner Solectron has seen a 1788.5% increase in its stock price since it first received the award in 1990. Motorola, Lucent Technologies, Artesyn (formerly Zytel) have also seen impressive gains in their stock prices since winning the award.
Process and Values Driven Change: Making the Baldrige Criteria Work for Us

The following article is based on presentations made by a Baldrige Chief Judge and the 1998 Baldrige Award winning companies at a GOAL/QPC conference. The authors present their personal experiences and perspectives on the value of the Baldrige Criteria to achieve positive change and continuous improvement.

Gary Floss, Director Customer-Focused Quality, Medtronic, and 1997-98 Malcolm Baldrige National Quality Award Chief Judge

As a Baldrige judge I have seen the Baldrige Criteria help many organizations in ways they never expected. Managers are forced, often for the first time, to understand in-depth how their organization works. It is an exhilarating and humbling experience. Managers usually discover three things about their organization: How they think they operate. How they really operate. How they'd like to operate.

Many organizations are run by managers who are unaware that they are using a confused mixture of these three viewpoints. It is not until managers write it down, and work through it in a systematic fashion, that they come to see which one of these viewpoints they are actually using to run the business. The Baldrige process provides a framework for managers to illuminate their organizations inner workings, integrating a set of fragmented views. Existing surveys, assessments, and measures are given new meaning and relevance to the workings of the whole organization.

The Baldrige's systematic evaluation of the organization provides those who use it a tremendous opportunity for personal and organizational growth. Once completed, it is a remarkable baseline for analysis and improvement. It helps people clearly understand the cause and effect relationships that exist in organizations, especially those that transcend traditional functional boundaries. Performing a Baldrige assessment brings such growth because it forces managers to a deeper understanding of their organization, and a deeper, more thoroughly grounded understanding of business processes and quality improvement.

Since its inception in 1988 the Baldrige model has been used and refined many times. One of the great benefits of using the model is simply that you do not have to spend time and energy inventing a framework to evaluate your organization’s performance. The model is not prescriptive; the questions it asks and the areas it addresses are relevant to every business or organization, including government and non-profit organizations.
At its inception in 1988, the Baldrige Criteria included seven categories to create a model for quality improvement (Figure 1). The model has evolved over the years to the broader, more process-oriented framework that is shown in Figure 2. It still has seven categories although details and scoring weights have changed. The award is now subtitled “Performance Excellence”; the word quality has been re-

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Figure 1. Malcolm Baldrige National Quality Award —1988 System Model

- 7 Categories
- 62 Items
- 278 Areas to Address

- 1. Leadership 15%
- 2. Information & Analysis 7.5%
- 3. Planning 7.5%
- 4. Human Resources 15%
- 5. Quality Assurance Products & Services 15%
- 6. Results of Quality Assurance 10%
- 7. Customer Satisfaction 30%

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Figure 2. Malcolm Baldrige National Quality Award —1998 System Model

*Model now simplified to:*

- 7 Categories
- 20 Items
- 29 Areas

- 1. Leadership 11%
- 2. Strategic Planning 8%
- 3. Customer & Market Focus 8%
- 4. Information & Analysis 8%
- 5. Human Resource Focus 10%
- 6. Process Management 10%
- 7. Business Results 45%

Customer and Market Focused Strategy and Action Plans
Baldrige model has been simplified and strengthened, continued

moved. The model has become more robust over the years; its strength is its systems approach to how a business operates. In 1998 the Criteria were improved by strengthening the systems view of performance management (Alignment of Strategy, Customer & Market Knowledge, Key Company Processes, and Business Results). There is also now an increased emphasis on organizational and employee learning, and an increased focus on innovation.

The evaluation process has been strengthened as well, and rightly so; the quality of the organizations undergoing the assessments has increased substantially over the years. In the early years three examiners were assigned to review the written application, and a recommendation for a site visit was made by a senior examiner with input from the others. There are now 12-15 examiners reviewing an application in the first stage, with a consensus reached by six examiners.

Real awareness of how an organization is managed can only be brought to light during an actual site visit. So a site visit to a 2000-person unit that would have taken four examiners two days, has now been extended to a three or four day visit by a team of six to eight examiners.

This past year I officially rotated off a three-year term on the Baldrige panel of judges and serving a total of nine years with the Baldrige program. I have come a long way on my quality journey, which started back in 1981 when the corporation that employed me at that time invited Dr. Edwards Deming to consult with us. He spoke for four days to an audience of 700 consultants and managers. I had done some work on quality, and on the afternoon of the first day I raised my hand and asked, “You know, I understand how these concepts work on the factory floor, but I manage a software group. Are they equally applicable to the software community?”

Dr. Deming straightened himself up, looked at me, and said, “Young man, it’s clear you’re one of those managers who knows everything except what is important to your job.”

That was the end of his answer. But he caused me to think about the subject of quality more deeply and to become very passionate about it. Understanding quality and the Baldrige model for quality is as important to managers today as it was in 1981. You can take any subject in an organization, no matter how mundane, and find a link to quality, performance, and the Baldrige model. There is a growing body of evidence that shows companies that use the model and stay with it, what I call mature organizations, outperform their competition and have improved business results. [NIST has released a study that shows the Baldrige winners and contenders have significantly outperform the S&P 500 over the last five years. See News & Views on page 46—Editor.]

Baldrige’s core values

At the heart of the Baldrige model are 11 core values that drive performance excellence.

1. Customer-Driven Quality
Core values, continued

2. Leadership
3. Valuing Employees
4. Fast response
5. Design Quality and Prevention
6. Long-range View of the Future
7. Management by Fact
8. Partnership Development
9. Continuous Improvement & Learning
10. Company Responsibility & Citizenship
11. Results Focus

It is in the areas of leadership, valuing employees, partnership development, and continuous improvement and learning that I have seen some of the most significant changes that in turn have presented significant challenges to organizations.

Leadership integrates humanistic approach and maintains balance

A sustained quality journey over an extended length of time requires committed, effective, hands-on, enthusiastic leadership. It requires humanistic leadership—leaders who are convinced that people are at the heart of every organization. These are leaders who wear their hearts on their sleeves from time to time. And because they do they can move their organization along faster than leaders who don’t. Leadership maintains a balance of focus between the long term and the short term. It takes hard work and courage to buck conventional wisdom and sustain progress over the long term.

Systematic problem solving

We live in what some call the “fast-food” society—we want quick results for everything. We cannot constantly focus on the results end of the equation and expect sustained success. Leadership must balance their attention between the immediate problem and the root cause. One of the most important Baldrige values is the focus on the process as opposed to just beating on the results. Albert Einstein once said that insanity is doing the same thing over and over again and expecting different results.

At the heart of any sustained quality process is the Plan, Do, Check, Act cycle. When I talk to organizations I ask, “Do you have little P, big Do, no Check, and no Act? Or do you really have the Plan, Do Check, Act cycle at work. Can you really demonstrate that your organization does systematic problem solving?”

Balanced focus

Sustained success also depends upon leadership maintaining the proper balance between customer focus and operational excellence. To oversimplify, I’ve learned that the quality process is maintaining that balance between them. If you excite and delight the customer, but are unworried about the operational costs, you’ll have problems. If you decide to be the low cost producer, and forget the customer side of the equation, you’re also likely to have problems. Successful businesses with mature
Balanced focus, continued

Processes have key measurement on both sides of the equation.

Systems thinking

Leaders must be able to think systematically. They must be able to take themselves out of the trenches and move up to the 20,000 or 100,000 foot level. Organizations often get stuck by not being able to elevate their thinking to a high enough level. Peter Senge at MIT has done a lot of work in this area, helping managers understand where they are today, where they want to go, what are the steps to get there. This is the change model at work. For organizations to continue to prosper on their quality journey, it is imperative to develop better understanding of the system interactions within the organization; i.e., how does one system process or part of the organization's behavior and results affect the other parts. To accommodate this, an organization has to create dissatisfaction with the “status quo,” create a vision of the “to-be” condition, and identify the first few steps on how to reach the “to-be” condition.

Role of champions

Leadership also includes the role of champions in an organization. Champions are the people who keep teams on track. Teaming is a key component of a sustained quality process. I can't tell you how many times I have seen really dysfunctional teams—teams that have run into a ditch, and don't know how to rescue themselves. Or teams that have taken on world hunger instead of something doable and practical. The role of the champion is to help the team understand what is important to the organization. A champion helps to remove barriers, access the data, customers, tools sets, expert facilitators. I think the role of the champion and the way people pursue initiatives is underdeveloped.

Valuing employees

Another core value of the Baldrige model is that it stresses the importance of employees. Employees are now viewed as an asset of the organization, no longer a resource to be used. To this end, it is important that people find themselves in the mission and purpose of the organization. I have found that people must be connected to the purpose of their work. The statement that happy employees lead to happy customers is as true as its converse. There is an incredible amount of information to be gained in carefully listening to the “voice of the employee.” Most leading companies pay close attention to this information stream as an integral component of strategic and operational planning.

Increasing cross-functionalism

Creating a team environment is very important to create sustained continuous improvement. A while ago I asked 30 first level managers in my company to identify the key critical root problems they had and where they felt they existed. Across this diverse population, more than 75% of all critical problems had roots that carried the managers outside their areas. In most organizations today, issues and problems are increasingly cross-functional in nature and require the in-depth development of team skills.

Empowerment

Employees need to be empowered, an often misused word. Empowerment
Empowerment, continued

Empowerment means more than delegation or even accountability; it means employees really coming to understand priorities. It requires managers to provide appropriate training, access to information, data or knowledge, as well as access to people and customers. Most importantly it requires trust and believability.

Aligning the internal “soft systems”

Valuing employees requires alignment of soft systems, which are the reward, recognition, promotion, and communications systems. Mature organizations are sophisticated in how they connect and align their various systems. It is not unusual to find organizations whose soft systems are not aligned with what is important to the organization. Often they are sub-optimized to reward individuals or teams or the whole organization. Managers must create a balance between them. One company's recipe won't work for another. This is something that must be custom built for every organization (Figure 3).

Figure 3. Alignment of Soft Systems

Partnership Development

Partnership development means developing partnerships at all levels: between employees, departments, across business units. It is developing relationships between customers and suppliers, and to make informed decisions about outsourcing and working with distributors over time. And it involves measuring the quality and productivity of these partnerships and committing to continuous improvement of these relationships.

Continuous Improvement & Learning

As a Baldrige judge I have seen the wheel being reinvented countless times. Continuous improvement and learning is an area that many organizations haven't fully utilized. Learning organizations take the time to delve deeply into root causes and share their knowledge across the organization. Knowledge management is an emerging field that extends well beyond information technology. Organizations must create receptiveness for the development of a knowledge management strategy.

Managing innovation

Innovation is the next frontier for the quality movement. Organizations must
Managing innovation, continued

learn how to systematically manage creativity and innovation without becoming the opposite—stifling, stodgy and slow. Many people in R&D or those who are in the front-end of concept development gag at the thought of a process being applied to innovation. But when an organization examines how their latest creative innovation was made, they can discover the root cause of the stimuli. Then they can leverage the understanding that comes from performing the analysis to develop an innovation process. There is now a growing body of knowledge about how to do this; many organizations are studying their innovation process, and GOAL/QPC has done some interesting research and development also.

Using the quality tools to improve innovation process

The tools developed by GOAL/QPC and others, the Seven QC tools, the Seven Management and Planning Tools and the Creativity Tools are an important part of the innovation and quality improvement process. Understanding how these tools interact and integrate provides insight in how to bring structure to the innovation process without the undesired bureaucracy. Companies with successful, mature processes weave the use of these tools throughout the organization. A tip: As a rule of thumb, there should be one trained facilitator per 40 or 50 employees who can coach teams in the use of these tools and who has the ability to teach the tools. This does not have to be a full-time position. But your organization should have people available for consultation about the quality tools who are comfortable working with senior executives as well as shop-floor employees.

Customer-driven quality: unstated, expected, unexpected

Customer satisfaction is the end-result of the quality improvement process. Noriako Kano developed a model of customer satisfaction that is extraordinarily revealing (Figure 4). The diagram has three curves. The first is that of unstated requirements; these are features or behaviors that customers don’t even bother to state. You’ll get no credit if you do it right here, but if you screw it up you’ll get big-

![Figure 4. Delighting the Customer
Noriako Kano Model](image-url)
Customer driven quality, continued

time dissatisfaction. The second curve is linear. This is what customers tell you they want. You'll move up and down the satisfaction scale to the extent that you meet their stated requirements. The third curve is the most interesting; it is called various names, such as the WOW factor or exciting quality. These requirements aren't really requirements because they are unstated—customers never thought about them to begin with. You'll have no dissatisfaction if you fail to meet them, but you'll win great satisfaction if you do hit them. As time passes, customers expectations will increase, so that what excites a customer one day or one year, or in one product, they will ask for the next, and expect after that.

Mature organizations are working on systems to uncover these exciting dimensions of quality at the same time they are maintaining their existing quality control systems. Organizations can consume large amounts of resources to maintain the quality of stated and unstated performance, when the largest benefit lies in the area of unstated requirements. I encourage business units in organizations to characterize their products by the parameters of exciting, stated, and unstated quality. Mature organizations are linking their strategies to uncovering unexpected quality, and they are using the quality and creativity tools, such as the cause and effect, fishbone diagram, the “five whys,” classic brainstorming, and others to explore what the customer wants.

Plateaus in the quality journey

I describe quality as a never-ending journey. Often times organizations' progress will plateau. The duration of the plateau varies; it isn't necessarily a three, seven, or ten-year cycle (Figure 5). People often make early progress, harvesting the low-hanging fruit. Sometimes they will decide then that they have “done quality,” and it is time to move on to something else. Mature organizations recognize that it is ongoing.

Hurdles along the way

As a Baldrige judge and senior examiner I have seen many organizations stopped or slowed by hurdles in the quality journey. Here are some hurdles and how to avoid them:

- Complacency is a very dangerous thing. When you've had a success, celebrate it—pat yourself and your employees on the back, then raise the bar as fast as you can. When you feel that you are on top of it all, it's time to raise a red flag.
- Weak information systems. This area has now grown to include knowledge management. The organization that has command of the data will enjoy a competitive advantage.
Hurdles along the way, continued

- Delegation of quality. Quality is not a spectator sport. Everybody has to get involved.
- Partial Quality Systems. Everything in an organization can be related back to quality. Quality is not just for the factory. Deming taught this to me in 1981.
- Unclear quality definition. Managers need to be clear about what they mean by quality; this relates a little to the notion of partial quality.
- Lack of alignment. It is not unusual to find organizations whose functional structures not well aligned. The objectives and goals are sub-optimized at the expense of the whole enterprise.
- Failure to use all listening posts. A listening post is any place where you are in touch with your customer, any place where you can obtain a stream of information back to the organization.

Clearing the hurdles

- Everyone in the organization, from the executive level to the workers in the trenches, has to personalize the concept of “working in the process” as well as “working on the process.” Organizations have got to conquer the “too busy” syndrome, the attitude that I’m too busy working in the process to work on the process.
- Management has the special responsibility providing the system that enables, encourages, and rewards working on the process as well as in it.
- Management needs to step back periodically and ask how well is the enterprise working? Are we making progress? Are we staying the same, getting better or getting worse over time? How do we know?
- Conduct a baseline assessment of the “as is” status and commit to ongoing measurement of progress towards a “desired future state.” There is no better way than using the Baldrige Criteria.

High achievers are never finished

Lou Tice of the Pacific Institute (Seattle, WA) once said that a high achiever is someone who never sees himself as a finished product. This applies to individuals and organizations. I don’t consider the Baldrige model a finished product; it continues to be strengthened and improved. One area in which I look for further improvement is in the development of a systems approach to innovation. Another is improved understanding of the relationship between organizational development with the internal systems that organizations put in place to do the work. All organizations, even Baldrige winners can continue to learn and improve their performance by using the model and undergoing the assessment.
Change at Boeing Airlift and Tanker Programs

Dr. E. David Spong, VP General Manager
Debbie Collard, Director of Continuous Quality Improvement

A crisis

Business books say that change is best enabled when you have a crisis—if you don't have one, invent one. In 1991 Airlift and Tanker Programs, which produces large aircraft used for transporting heavy equipment for military and rescue operations, had a real crisis. Our contract for forty Globemaster aircraft was in particular trouble: we had a huge budget overrun, we were behind schedule, and quality was a joke. The Undersecretary of Defense for Acquisition flatly stated that unless we improved, we'd sell those first forty aircraft and no more.

Our crisis was born of a thousand unaligned projects. Everyone had a good idea, but they weren't aligned to benefit the corporation. We had a number of consultants come to look at us, but every one had a different solution.

Leadership implements use of Baldrige Principles

At that time Airlift and Tanker Programs was owned by the McDonnell Douglas Corporation. John McDonnell, son of the McDonnell Aircraft Company founder, launched an initiative to use the Baldrige Principles for guidance and as an internal evaluation process. To get our attention, he also tied executive compensation to the scores we achieved.

While he got our attention, he did not make me a believer. Like most employees in this situation, I simply learned to play the game. I sat in conferences about quality and dozed off, thinking that it's OK for him, but I've got airplanes to build. I thought that we could finesse it: we could talk about quality and performance differently and somehow achieve a different result.

Coming to understand the power of the quality improvement process

Since that time I've realized that to achieve improved results, you must change and you must change dramatically. I have come to develop what I call the Law of Change—If you do what you have always done, then you'll get what you've always gotten. The corollary to this is—If you want a different outcome, you must change the process, the product, or both. Sometime in the middle of our quality journey I began to see the correlation between what we were doing and improved results. Then I started to truly understand the power of the quality improvement process.

Quick benefits of using the Baldrige principles

One of the first benefits we obtained from using the Baldrige principles was that it helped us eliminate a lot of projects that weren't mutually supportive and get us aligned. We pared down our initiatives to three major thrusts that we needed to accomplish in order to survive. Everyone in the company knew what the major thrusts were and their smaller sub-goals. Because we were so far down, we needed to sustain our motivation by celebrating our smaller goals.

Aligning the corporation

By 1995 our strategic vision was well aligned with our values—from the
Aligning the corporation, continued

Executive level through the work group, down to the individual level. Managers must make sure that everyone knows what the direction is and where the organization is going in order to create breakthrough change (Figure 6).

Although we were aligned, we still had serious production problems. Figure 7 shows the schedule performance of airplane delivery. Every plane was behind schedule, which is indicated by a bar descending below the line, up until P-12, the twelfth airplane in production. The airplanes were also over-cost and their quality was poor.

My predecessor solved the problem by saying that we will not move the plane until we finish the work in the station that it's in. It sounds so fundamentally...
obvious that one wonders why we didn’t always do it. But the production people like to move the plane on the day that it is scheduled to move—even if the work isn’t finished. So we’d end up building each plane about a dozen times, taking apart one piece to put something in that hadn’t been done in the previous station. At the General Manager’s announcement, the production people rolled their eyes and said we’ll never deliver on schedule. Of course, since then every plane has been either on time or ahead of schedule. The costs came down and the quality went up. The message is this: if quality is first everything else will follow.

Implementing even such a simple and obvious solution can be difficult because change is often met with resistance in the business world. Employees are not unlike their leaders: they need to see the results of the change. We learned that we could overcome resistance to change by proving and publicizing the positive correlation between change and results. Figure 8 shows how the reduction of non-conformance hours correlates to improved assembly time. We collected and publicized results like these throughout the company. We also surveyed our employees to see whether they thought we were getting better, whether our new priorities of quality over schedule costs were indeed priorities on the shop floor.

When we started our journey Airlift and Tanker Programs had to reinvent our adversarial relationship with our unions. Like many companies, we had a grievance process where the union members could take issue with the way we were working them. We had many, many grievances.

Like so many things it took good leadership to transform the relationship. My predecessor, Don Kozlowski, took the view that we were going to get along with
Reinventing our relationship with the unions, continued

Building trust by settling grievances, changing the rules

One of the first things we did was to let the unions win some. It sounds gratuitous, but we began to establish trust with the unions by settling their long list of grievances. Settling grievances, of course, usually requires the employer to pay money, which we did.

We also changed the rules. We used to have a long list of rules with penalties that we replaced with a very simple set of rules without a set punishment. In short, we learned to treat our union employees like the rest of our staff—like human beings. We realized that it makes no difference that they belong to a union—they are a part of the workforce and without them we have nothing.

When the Baldrige examiners came for the site visit, the union leaders for our two unions, the United Auto Workers (UAW) and Southern California Professional Engineering Association (SCPEA), sat by my side and said nice things about me—and I didn’t have to pay them to do that.

It is possible to build that level of trust. You may have to step over the line and drag them into that relationship of trust, but it is very powerful once you do. Figure 9 shows how we see the relationship between management and our people, and the overall improved results on the production floor.

Applying the Baldrige Criteria enabled continuous significant improvements

In 1996, Harry Stonecipher, who was then CEO of McDonnell Douglas Corporation, said he would like us to apply for the Baldrige Award. We suggested to Harry that we really didn’t want to do that because there was no way we could win. He asked twice more, and we finally got the message. We applied in ’97 and,
Although we did not win the award, we were very proud to get a site visit. In 1998 we reapplied, with some trepidation on my part because I was the one who would have to make the announcement if we didn’t win. Happily we did win. It is important to note that the improvements we made in ‘97 and ‘98 were significant. Our improvement is continuous; the Baldrige process is fully embedded in the way we run our programs. Writing the application is a small part of working on the Baldrige process. In a real sense, we all work full-time on the Baldrige process; it is not something extra we do. It is what we must do to succeed.

Here are some lessons I’ve learned on our quality journey—

- A sustained quality journey requires committed leadership. I have a chart that tracks the progress of an organization’s self-approval rating shown in Figure 10. Most organizations start out at the far right, point 1. You think you are pretty good, but no one else does. As you start to try to get better, and begin to turn over rocks with lots of slimy things underneath, you realize that you were nowhere near as good as you thought you were. **At this point, leadership must hang in there.** Leaders must continue smiling and urging people to keep going, no matter what they feel inside. Eventually you’ll turn that corner and your organization’s performance will get better by the standards of the rest of the world. Your self-approval rating will go up again.

- I’ve learned that all ideas have value. People come into my office on a regular basis with an idea they think is wonderful. Half the time I cannot understand the idea nor do I sometimes take the time to understand it. My usual comment is that it sounds great, go do it. Because the organization is already well aligned, and people know our goals and direction, about 95% of the time they’ll come back with good results. The rest of the time they don’t come back. By merely saying, “that sounds like a great idea,” they go off and do wonderful things.

- Empower teams to optimize results. Self-directed work teams are very committed and very excited about the work they do. We are spreading this concept across the whole factory floor.
Lessons learned, continued

- Manage through systematic processes. Using systematic processes is very important to what we do. We manage our whole organization as a series of processes and we use a common methodology to manage and improve those processes.
- Initiate the Baldrige internal assessment process. You can't get the business result you need unless you do.
- You must integrate quality into every aspect of your business. You must do what makes sense for your business, and nobody can tell you how to do that. You have to do it yourself.
- You must focus on improving process management, and take the time to institutionalize that focus to sustain improvement. Document what you do and how you do it so everyone can understand it and work with it.
- Leadership must be committed in all things. Dr. Deming said most projects are successful when top management takes ownership. Leaders must be out there in front, committed to change.

Change at Solar Turbines

Larry Winegrad, Director of Process and Quality Improvement

Introduction

Solar Turbines, a Caterpillar Company, is a leader in the development and manufacture of gas turbine systems. Our turbine engines use natural gas and other liquid fuels to generate power. We are a total-service manufacturer, providing support services 24 hours a day to an installed base of 10,000 engines operating in 84 nations.

A business awash in waste

Eleven years ago Solar Turbines was a business in trouble. We were an organization in which everyone else was responsible for change. Solar Turbines was awash in waste. We had millions of dollars in assets, but it took us one dollar of assets to achieve a dollar in sales. Our components business used tens of thousands of square feet to store pallets of red tag material—not scrap—discrepant items. When manufacturing was short of production parts, we'd send someone in to find a part and recondition it. We called this “parting the Red Sea.”

Visionary leadership

Fortunately, our leadership saw where we needed to go: they created a clear understanding within the organization that we needed to focus on improving performance. In the late 1980s, we began a cultural transformation that involved everyone. Our leadership succeeded in creating a work environment that aligned, enabled and engaged all employees in continuous improvement. We did things as small as offering free business books to anyone who wanted them. If a manager read a good book and wanted twenty copies of it for his or her staff, they got it. We had brown bag lunches where we talked about what was in those business books. We
Visionary leadership, continued

went to various conferences and set up mechanisms to bring back the ideas. We stole shamelessly. We used Juran, Deming, Crosby, and GOAL/QPC Memory Joggers™. We created on-site learning centers to share business information, and reinforce the practices of a learning organization.

Mission statement and Core Business Principles

Gradually employees began to feel responsible and engaged. We created a mission statement that said our focus was on customer needs. There were other statements in it of course, but what everybody remembered were the first four words—Focus on customer needs.

We used a set of core business principles which acted as a guide for setting priorities and showing us how to do things (quality, employee involvement, global market leadership, global product support, international focus, product development, business performance, social responsibility). Then we started to use team-based solutions and we created a new leadership system.

ISO 9000 certification and MRPII Class A certification

In the early 1990s, we decided to go after ISO 9000 certification and MRPII Class A certification at the same time. This class A certification is for Materials Resource Planning system and all the attendant systems that feed into it, which is very important to a large equipment manufacturer such as Solar. We benchmarked and found that very few companies were pursuing these two certification programs at the same time. Solar had taken a big step forward.

Success brings success

We didn't chase awards in our quality journey. Instead we used our successes as a way of celebrating and reinforcing our goals, whether it was achieving ISO certification at eight sites or winning an environmental or safety award. In the early 1990s we also had improved results in our customer satisfaction record. Between '85 and '95 our market share increased 200%. The saying “success brings success” is true because people need to see results for their efforts.

Leveraging the California award program

The next logical step in the journey would be to adopt the Baldrige process—but that was not feasible. The huge shift and reorganization required to adopt the process outright was just not Solar's culture. So we looked for small leverage points to enable us to shift the company gradually. I found such a leverage point in the State of California Quality Award. Now except for the cover page, the Baldrige Award Criteria and the California Quality Award Criteria are exactly the same. Because we already had customer and market focused plans in place, I knew that using the criteria would not be as difficult as some thought. I convinced the president of the company to apply for the state award by telling him that it wouldn't cost a thing—I'd write the application, submit it, and then we'd get some good feedback. To our surprise we won.

The value of feedback

Although celebrating the success was gratifying, the most important benefit of
Existing certification programs were not applicable to all areas

Another major step in our journey occurred when we tried to certify the rest of the organization to MRPII Class A. We had used an ABCD checklist approach for our operational units for the certification, but found that when we tried to apply items such as material and inventory accuracy to nonproduction areas, they weren’t very useful. Because we didn’t know what to do or how to do it, we benchmarked a number of companies. Then we developed our own internal certification process, and began using it in areas such as human resources, design engineering, IS, and customer service.

Doing self-assessments

The process we developed is an informal, internal Baldrige assessment without the 50-page written application. We asked the functional areas to look at their process management and address all 20 items of the Baldrige Criteria, and to present their evidence in a display, which was usually set up in a conference room (Figure 11). We would allow them about two weeks to prepare their presentations. For example, our Human Resources department would assemble a display showing how they address all 20 items of the Baldrige Criteria, including leadership, strategic planning, and information systems. Then, instead of a report on only the Human Resources category, they would receive a full feedback report on all the items.

For many areas it was an eye opener. The assessment and full feedback report enabled people to really look at their processes: their strategic planning, leadership, customer focus, and how they linked to the rest of the organization. Even our 20-person legal department received a feedback report. Figure 12 on the following page shows our internal assessment process. When the time came for the Baldrige examiners to perform their site visit, they were impressed by how thoroughly these functional areas had been internally assessed.
Doing self assessments

Figure 12. Internal Assessment Process

1. Form Data and Assessment Teams
2. Review Criteria
3. Prepare for Assessment
4. Assemble Data
5. Hold Assessment Meeting
6. Assessment Team Investigate/Validate
7. Assessment Team Completes Individual Assessments
8. Compile Individual Assessments
9. Hold Consensus Meeting
10. Deliver Final Report
11. Use Feedback Report as Basis for Improvement

Using the state programs to train examiners

We have now performed about 15 assessments throughout the company with a cadre of 120 people who are trained to serve as examiners. We accomplish this training by utilizing the state award program. We would host on-site state training, and enroll 10 or 12 of our own people in the class. Several people who participated as State examiners became my team leads, while I acted as coordinator.

We set a threshold for our internal assessment of 550 points, with no item less than 50%, which allowed us to certify areas. The largest difficulty we had with the program was that people became so competitive that they worried about their scores, even though everyone knew there was a certain amount of subjectivity in them.

Benefits of Mini-Baldrige process

This informal, internal mini-Baldrige assessment had many important benefits. It increased understanding of the Baldrige Criteria, model, and process throughout the company. It showed people that the Baldrige process can produce very good feedback. And because our assessment was performed using a cross-functional team of examiners (for example, design engineer and human resource people served as examiners of the sales and marketing department) our mini-Baldrige assessments enabled us to create a real breakthrough in communication, increase understanding of our business, and to set and reinforce our values across the corporation.

Aligned around the Baldrige model

By 1997, we had aligned the company around the Criteria. Because the Criteria are based on using sound data with a strong focus on customers and customer needs, it enabled our internal groups to look at how they satisfied their internal as well as our external customers.

Site visit provides excellent feedback

The California State Quality Award feedback indicated areas for improvement in our process management. For example, we introduced a new product introduction process that is very team-based and innovative. It shortened our product lead times from about 40 months to about 20. We also continued our improvement efforts on our employee development programs, and modeled our production system after the Toyota system.
Solar reworks its union relationships  

Overcoming the productivity challenges Solar Turbines faced required reworking our relationship with our three production unions: the International Association of Machinists, an Electrical Workers Union, and a Welders union. Before the start of our quality journey, Solar had had three strikes in fifteen years.

Solar Turbines transformed its relationship by becoming totally pro-employee. We didn't become anti-union, we just became pro-employee. We did this by breaking down the barriers between people. One of the things we did was to institute a casual dress policy, which literally eliminated the divide between white collar and blue collar workers. While it sounds like an easy idea to implement in Southern California, there was resistance, especially among the engineers. They didn't want to take their ties off. They felt it would look like a demotion or a down grade.

When we took the ties off, we also changed the design of our badges, removing the black stripe that marked an hourly, union employee from a salaried employee. We got rid of the executive parking lot and the executive dining rooms. We went to great trouble to equalize benefits. Union employees, bargaining union employees, salaried employees, all got the same performance share payout.

We discarded the old idea that the blue collar workers were just hired hands who checked their brains in at the gate and increased our training programs. When we investigated the payback for training programs, we found the most important payback was that people started to feel valued. Today about 15% of our payroll cost is spent on training and education across the board.

During the Baldrige site visit, the team wanted to speak to the bargaining unit employees. The employees selected by the union shop steward said that because they were unionized they had a greater desire to show that they are good performers, that they are leaders, and that they are engaged in making Solar a better place to work.

Winning the award  

In late 1997 we decided to apply for the Baldrige Award. We put together a team of 10 people working part time to write the application (To date, no one at Solar works full time on the Baldrige Award.) Though our goal was limited to receiving a site visit— we wanted the in-depth feedback that can only be obtained from a visit— the anticipation was nerve-racking.

When we did get the visit, the examiners not only visited our three facilities in San Diego, but also half of the team visited our four sites in Texas. They video-conferenced with four of our international sites, and even called some of our field service reps, the last node in our value chain.

When the award was announced in November, we accepted it with humility. The first thing we did following the announcement was to call our customers and acknowledge that we aren't perfect and that we need their continued help. We are experiencing a heightened need for effective response to our customers. World oil prices have fluctuated dramatically recently and the oil industry has experienced dramatic mergers: our challenges in 1999 are greater than ever.
Business results

Business results weigh heavily in the Baldrige model and we have them: surveys show 80-85% of our employees like working at our company. Our injury rate has been lowered by 66% in five years, our hazardous waste output has been reduced 80%, and our cost of quality has been reduced 40% over 3 years. When we began our journey, we had a dollar of assets for every dollar of sales. We now have 50.7 cents in assets for every dollar of sales. In the last four years we have exceeded by 50% the NIST published average for Baldrige winners for the compounded growth rate of profit per employee. And our market share has tripled.

Lessons learned

Will Rogers once said, “Standing still is a losing position. Even if you are on the right track, eventually you will get run over.” The lessons we learned about continuous improvement and learning are—

• Improvement efforts have to be made meaningful to the organization. If people can’t see the value of it and how it will help them achieve high performance goals, they’ll reject it.

• You should not be in the business of winning awards; every activity should be based on the context of serving the needs of the customer, employees, suppliers, supplier partners, and shareholders.

• Use the Baldrige model as a tool to identify areas that need to be improved.

• Have at least one person available internally who understands the Baldrige process, the Criteria, and the year to year changes in the Criteria.

• Use the leverage opportunity of a State Award Program. There are now 43 states that have award programs. If you want to learn about the Baldrige process, but don’t want to be a national examiner, become a state examiner. The training we received at the state level was excellent preparation.

• Outside perspective is essential. It validates your own impressions. It enables people to see both the forest and the trees.

• Change can be positive and motivating when everyone shares in developing the strategies for change, rewards for the change, and the recognition of success.

Change at Texas Nameplate Company

Dale Crownover, President and CEO

Introduction

Texas Nameplate is a very small company of 66 people that was founded by my father 52 years ago. We produce the small identification labels found on products such as refrigerators, high pressure valves, and computer equipment. When we began our quality journey seven years ago, we were like many companies. If we lost a few customers, we’d just try to find a few more. If somebody quit, we hire someone else. If we made a few thousand pieces wrong, we’d remake them. We were doing OK, but we weren’t going anywhere.
At that time we were being urged by General Dynamics (now Lockheed Martin Corporation) to meet some new statistical quality control requirements. They said they would cut us off as a supplier if we didn’t meet them. Like many organizations, we wanted to, but we had all sorts of reasons why it wouldn’t work. We had no college graduates working at our company, and less than half of our employees had high school diplomas. Our equipment was old and worn out. We thought that many of our longtime employees were in a little rut, and weren’t willing to change. So I told General Dynamic we wouldn’t. A while later when I went to generate their order, I found out that we had in fact been cut off. Seeing that they meant business, I went back and asked if we could reconsider. Putting our initial reluctance behind us, Texas Nameplate became one of the first seven of 1700 suppliers to General Dynamics to achieve SPC certification.

A few months after we were certified we started to see some real results when our defect rate began to go down. This was exciting for us and it encouraged us to take the next step: Total Quality Management, which we had been hearing and reading a lot about. We then spent three years implementing TQM, involving our people, sharing information, understanding process flow, improving communication. I think it’s a little like being married—the more you communicate the better off you are.

We thought we’d get involved with the ISO Certification process on our own—before somebody made us do it. I didn’t like the ISO process at first, but the more deeply we got into it, the more I realized it addressed some of our problems. We were the first of three nameplate companies in the US to become ISO certified.

The Texas State Quality Award was our next goal. Fortunately at the time I didn’t realize that the State Criteria and the Baldrige Criteria were identical. If I had, I probably wouldn’t have applied. We adopted the Criteria as our business plan in 1994. We won the state award in 1996. We applied for the state award two times and the national award three times, so we have a longer track record losing than winning. We persevered and were able to win the Baldrige award thanks to the help we received from other companies over the years.

The feedback we received from our application addressed every area for improvement as an action plan that flowed from our strategic plan. Our strategic plan is based upon our vision to become the best producer of commercial nameplates in the United States. The examiners found some of our weaknesses and we developed over 90 action plans with over 600 steps.

It doesn’t do an organization any good to write goals and a vision statement if the action plans aren’t deployed. To meet the goals of our quality journey required our people to do things that they had never done before. We had our people attend classes on Statistical Quality Control, the Crosby Quality courses, and teaming skills...
Quality and leadership skills training, continued

given by outside vendors. In 1995 we turned our training focus to meet our needs for ISO 9002 certification. We also used outside trainers to provide our supervisors and leadership team with leadership skills training. We are now training our assistant supervisory level in leadership skills.

Over the years we have changed the focus of our training efforts in response to changes in our strategic focus. We also assess our training needs directly from employee requests, benchmarking, group meeting, state and national quality award feedback, and management suggestions. Since 1995 we have stressed more formal education courses by providing on-site GED preparation classes. We want to allow our employees to grow as people. We are now concentrating on cross-training our people on different jobs and processes.

The senior leaders, managers, and supervisors have encouraged our employees to stretch and build their abilities and opportunities. We hire individuals from our community and focus our energies in teaching them job skills, responsibility, and how to take control of their careers.

Leadership system and teams

Most managers know that the first category of the Baldrige Criteria is leadership. But there is a misconception surrounding the term. It doesn't refer to the actual leaders, it refers to the leadership system that the company has in place. Using the Criteria as a framework, we have been able to build a very effective leadership system at Texas Nameplate. Our system consists of the Business Excellence Leadership Team, BELT, which provides the company goals and strategic direction. Our production supervisors and two members of BELT make up our Daily Operations and Innovations Team, DOIT. They meet twice a month, keep up with all the key measures, and do the real work of running the business. The people on the shop floor are now routinely making better decisions than the leadership team could have made three years ago.

We also make extensive use of teams to push decision-making and authority lower into the organization. We have a number of standing teams: Corrective Actions Teams, ISO teams, and production teams. We also received some feedback from a site visit, so now we have a support services team.

Key business drivers

Every company has key business drivers. Texas Nameplate has seven key business drivers: Customer Satisfaction, Employee satisfaction, Process optimization, Environmental Consciousness, Controlled Growth, Fair Profit, and External Interface, each of which has a champion or owner. These champions report the data of the key measures at our planning sessions. We have learned to love data, and have taught our people how to use it.

Employee satisfaction and motivation

We have seen impressive results in one of our key business drivers: employee satisfaction (Figure 13 on the following page). We determine the key factors that influence satisfaction by asking the employees themselves. Our employee survey asks
Employee satisfaction and motivation, continued

for satisfaction level as well as ranking the factors by importance. When possible we schedule satisfaction surveys to occur following major organizational changes.

Texas Nameplate is well known in the community for its fair and equitable compensation of its employees. We offer competitive salaries, profit sharing, gain-sharing, and paid holidays, and company-paid health insurance. Our gain-sharing program is directly tied to company goals. Employees are provided a percentage of gross billings based upon the cost of non-conformances, their attendance, and performance, shown in Figure 14.

The dramatic improvement in product nonconformance reveals the effect of improved motivation from our gain share program is shown in Figure 15 on the following page.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Fair Pay</td>
<td>57.2%</td>
<td>58.2%</td>
<td>62%</td>
<td>72.7%</td>
<td>84.2%</td>
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<tr>
<td>Job Content/Sat.</td>
<td>87%</td>
<td>87.2%</td>
<td>88%</td>
<td>87.5%</td>
<td>94.7%</td>
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<td>Recognition</td>
<td>59.6%</td>
<td>56.2%</td>
<td>67.5%</td>
<td>78.5%</td>
<td>89.5%</td>
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<tr>
<td>Fairness/Respect</td>
<td>68.9%</td>
<td>65.6%</td>
<td>71.9%</td>
<td>72.2%</td>
<td>84.2%</td>
</tr>
<tr>
<td>Career Development</td>
<td>69.2%</td>
<td>67.9%</td>
<td>75.5%</td>
<td>81.2%</td>
<td>89.2%</td>
</tr>
<tr>
<td>Pride in Company</td>
<td>68.9%</td>
<td>70.2%</td>
<td>76.5%</td>
<td>88.3%</td>
<td>94.6%</td>
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<tr>
<td>Job Security</td>
<td>64.4%</td>
<td>64.4%</td>
<td>69.4%</td>
<td>84.8%</td>
<td>93%</td>
</tr>
<tr>
<td>Committed to Quality</td>
<td>83.6%</td>
<td>76%</td>
<td>N/A</td>
<td>89.1%</td>
<td>98.2%</td>
</tr>
<tr>
<td>Training</td>
<td>78.4%</td>
<td>76.9%</td>
<td>82%</td>
<td>82.8%</td>
<td>96.5%</td>
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<tr>
<td>Safety</td>
<td>73.6%</td>
<td>72.2%</td>
<td>78.1%</td>
<td>86.7%</td>
<td>91.2%</td>
</tr>
<tr>
<td>Communicate Company Goals</td>
<td>80.1%</td>
<td>73.6%</td>
<td>79.5%</td>
<td>83.2%</td>
<td>93%</td>
</tr>
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</table>

**Figure 14. Texas Nameplate’s Risk-based pay (Gain-share) results**

<table>
<thead>
<tr>
<th>Qtr</th>
<th>Avg. Pay Incr/Hr</th>
<th>% Net Earn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2Q97</td>
<td>$.80</td>
<td>5.64%</td>
</tr>
<tr>
<td>3Q97</td>
<td>$1.47</td>
<td>10.40%</td>
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<tr>
<td>4Q97</td>
<td>$1.15</td>
<td>8.09%</td>
</tr>
<tr>
<td>1Q98</td>
<td>$1.63</td>
<td>13.70%</td>
</tr>
<tr>
<td>2Q98</td>
<td>$1.70</td>
<td>15.42%</td>
</tr>
<tr>
<td>3Q98</td>
<td>$1.59</td>
<td>11.43%</td>
</tr>
<tr>
<td>4Q98</td>
<td>$1.40</td>
<td>9.98%</td>
</tr>
<tr>
<td>Total</td>
<td>$1.39</td>
<td>10.65%</td>
</tr>
</tbody>
</table>

Business results

We have had great results using the Baldrige Criteria. We track our lost profits both internally and externally and for ’98 it was less than 1%. A typical organization has a rate of about 15 to 19%. Our gross profits have increased 20%. Net profits
Lessons learned

The lessons I’ve learned are—

- It is the people down on the floor who make the decisions that are so important. And there is nobody any better qualified to make decisions than the people down there.

- Less than half of our people have a high school diploma, so at first I didn’t have as much faith in our people as I should have. Our people on the floor were very willing to change. They want ownership. I found out that no matter what age, education level or culture, people want to improve. I’ve seen people with an eighth grade education do statistical process control. People will succeed if leaders give them a chance.

- Abraham Lincoln once said, “Always let your subordinates know that the honor will be all theirs if they succeed, and the blame will be all yours if they fail.”

Information about the authors

Gary Floss is a seasoned quality expert who has achieved national prominence through his work at Medtronic, Ceridian, and his experience with the National Malcolm Baldrige National Quality Award. He was with Ceridian, formerly Control Data Corporation, for 30 years in diverse positions, including Vice President of Quality for Computing Devices International and three years as Vice President of Corporate Quality. He joined Medtronic in 1998 as Director, Customer Focused Quality. He has served as a
senior examiner for the Malcolm Baldrige National Quality Award for six years, and as a judge for three years, two years of which he was the chairperson for the nine-person panel of judges. Gary is also a member of the Board of Directors for the Minnesota State Quality Award, which is patterned after the Baldrige Award.

Dr. E. David Spong has been Vice President, General Manager for the Boeing Company Airlift and Tanker Programs, Long Beach California, since 1997. He previously served as chief engineer and deputy program manager for the C-17 program.

Dr. Spong also became the site manager for Boeing Aircraft and Missiles Systems—Southern California. Dr. Spong earned a bachelor degree in science from London University, a master's degree from the University of Missouri, and a doctorate in science in engineering from Washington University in St. Louis, Missouri. He is an Associate Fellow of the American Institute of Aeronautics and Astronautics and a member of the National Defense Transportation Association.

Debbie J. Collard is the Director of Continuous Quality Improvement for the Boeing Airlift and Tanker Programs in Long Beach, California. She joined Boeing in 1985 and her responsibilities have included product support, process management, and project management activities. Debbie holds a bachelor of science degree in business management from the University of Phoenix. She is pursuing a master of science degree in organizational development from Pepperdine University.

Larry Winegrad is the director of Quality and Process Improvement at Solar Turbine, where he leads and coordinates the Baldrige activity for the company. He began his career at Solar 25 years ago and has various management positions in the company. He is also a senior examiner for the Malcolm Baldrige National Quality Award and a judge in the California Quality Awards program. He has a bachelor of science degree from Drexel University and an MBA from the University of Redlands.

Dale Crownover was named president and CEO of Texas Nameplate in 1989; he has performed every job within TNC during his years with the company. Dale earned his bachelor of science degree in business management from LeTourneau University, Longview, Texas in 1997. In his recent book Take It to the Next Level, Dale writes about the pursuit of excellence.