Improving the way organizations run through participative planning and management.
Malden Mills Weaves Success From Strong Ties to Workers and Community

Malden Mills has somehow managed to keep beating the odds. The company has thrived in a hostile textile industry. It has been successful in keeping its main operations in the Merrimack River Valley of Massachusetts, where tens of thousands of jobs were relocated to southern states and foreign soil after World War II. It has overcome adversity, has been able to treat its community and employees well, and has rebounded from disaster and held its ground as a market leader.

The Malden Mills story is one about leadership, partnership, and spirited determination. It’s about a CEO who produced a profitable company in an industry and location where “experts” said it couldn’t happen. And it’s about how an entire community rallied behind him, the business, and its workers after a disastrous fire last year.

This article will consist of five parts: (1) An introduction and overview; (2) A brief background on Malden Mills Industries; (3) A description of the devastating fire that struck the mill and the damage that resulted; (4) How the community and government rallied to support the company; (5) A few words from CEO Aaron Feuerstein.

Introduction

Malden Mills is an extremely successful, global leader in the textile market. It is a multi-million dollar business that keeps growing in an industry that has been sluggish (the number of workers in the U.S. textile industry, about 700,000, has not changed much since 1989, according to the American Textile Manufacturers Institute). This has been especially true since the development of Malden’s wildly popular product, Polartec® fleece. The innovative, synthetic thermal fabric, used in everything from socks and scarves to pullovers and wetsuits, accounted for about half of the total company sales of $400 million this year.

Headquartered in Lawrence, Massachusetts, about 25 miles north of Boston, Malden Mills is also a leader in the local community. The company has continued to pay its workers better than the industry average, enjoys an amiable relationship with its...
Achieving success, continued

union leaders, and spends much of its earnings on Research and Development, unheard-of in a typical textile company. The mill established a program with a local bank to help employees purchase homes and rebuild deteriorating neighborhoods, supports homeless shelters, soup kitchens, police and fire departments, and encourages its employees to contribute to charitable organizations.

Disaster strikes in the midst of success and growth

Two weeks before Christmas, on the night of December 11, 1995, three 250,000 sq. ft. mills at the Malden complex were destroyed by a devastating fire. Several employees were injured, some critically. About 1,400 people (almost two-thirds of the workforce) were suddenly out of work. One of the region's largest employers, and the main source of hope and optimism in the city of Lawrence, where one fifth of the population is on welfare, was knocked to the ground. Most people worried that the mill would never recover. One worker watching the flames engulf the mill summed up the sentiments of an entire community, one where everyone knew somebody who worked at Malden: He said, “This is our livelihood. Without Malden Mills, Lawrence is a ghost town. It makes me cry.”

A surprising vow to rebuild

What happened next has been a source of local and national media praise and public adoration: Aaron Feuerstein, whose family has owned and operated the company for almost a century, immediately announced that he would continue to pay his employees and extend health benefits through the new year, even as the buildings continued to smolder. He also vowed to rebuild, crushing rumors that the company would move to the Sun Belt or overseas in search of lower labor costs, like so many mills of Lawrence had done, or that Feuerstein might just sell the business and retire.

The CEO just wanted to “do the right thing”

To members of the community, and especially to the employees of Malden Mills, Feuerstein is a hero. However, he still maintains that he had no choice but to “do the right thing” for the community, for his workers, and for his family's legacy. Friends, neighbors, people in government and customers immediately rallied in support of the workers and the company. As one employee put it, “When you have a boss like this, you have to stand behind him.”

A hundred times every day I remind myself that my inner and outer life depend on the labours of other men, living and dead, and that I must exert myself in order to give in the same measure as I have received. —Albert Einstein
The Malden Mills Story

The early history of Malden Mills

Malden Mills Industries, Inc., is the leading U.S. manufacturer of high-performance fabrics. This family enterprise was founded by Henry Feuerstein in 1906, who set out to produce wool sweaters and bathing suits. He built his company in Malden, Massachusetts, and had much success during the second World War supplying clothing to the U.S. government. With the end of the war came a general decline in the textile industry, with many of the major mills surviving by moving to southern states and foreign countries to save labor costs.

The post-war era and the move to Lawrence, Mass.

The city of Lawrence had long been a hub of textile mill activity, but in the late '40s and early '50s it had declined into a shell of gigantic, vacant mills and a skilled, yet largely unemployed, work force. In 1956, Malden Mills decided to take advantage of the under-utilized area and move a portion of its operations to the Arlington Mills building, hiring about 250 workers. In time, Malden Mills would occupy three mills, several warehouses and offices at its Methuen/Lawrence headquarters, which eventually employed 2,400 people.

Some setbacks, then a breakthrough product

The company had setbacks in the years that followed, suffering from high interest rates, a recession and a failed move into the fake fur market, that culminated in bankruptcy court proceedings in 1981. However, the seeds of success had been planted long before that. Led by grandson Aaron Feuerstein, in the late 1960s the company began experimenting with synthetic fibers because of the advantages they offered—warmth without weight, excellent luster, ability to withstand repeated laundering and a better acceptance of dye than natural fibers. By 1984, after almost two decades of refinement and research, Malden had a major breakthrough: comfortable, functional, fashionable synthetic pile fabrics that resisted pilling. The company's new pile fabrics, originally called Polarfleece®, and known today as Polartec®, were largely responsible for the company's current success.

A different way of doing business

While most of their competition competes on price, Malden Mills relies on its skilled work force, offers higher quality, has more diverse and innovative products, and listens carefully to the needs of its customers. They spend much of their revenue on Research and Development, and pay their workers an average of $12.50 an hour, compared to an industry average of just $9.44. They have moved from $5 million in sales of Polartec in 1982 to $225 million in 1996. Their total sales are over $400 million a year, with customers in more than 50 countries. Their number of employees peaked last year at 3,200, and they expect to hit sales of $1 billion by the year 2000.
A Devastating Fire Destroys Three Factory Buildings

A six-alarm fire

One of the worst fires in state history, a six-alarm plus blaze struck the Malden Mills complex in Methuen and Lawrence, Massachusetts, on the evening of December 11, 1995. An apparent boiler explosion set off the fire, which reduced three buildings and 750,000 sq. ft. of space to rubble. The actual cause of the fire is under investigation.

Massive aid

The initial blast was followed by a series of explosions which caused the fire to spread quickly. Massive mutual aid was sent to the scene from neighboring towns in northern Massachusetts, southern New Hampshire and from as far away as the southern suburbs of Boston. In all, 35 communities pitched in to battle the fire.

The human toll

There were 700 people working in the complex at the time of the explosion, and 33 people were injured in the blaze. Eight victims were reported to be in critical condition, and the most seriously injured were airlifted to hospitals in Boston and Worcester.

A difficult blaze to fight

Firefighters were hampered by temperatures that were near zero degrees and winds that gusted at 45 mph. State Fire Marshal Stephen Coan said, "This is the largest fire I have seen in a long time." In fact, it was the largest in the state this century.

Initial damage

The damage report was extensive. Three mill buildings were completely leveled. The entire flocking division, which made upholstery products, was destroyed. Finishing, processing, screen-printing, inking and woven finish divisions were also destroyed. About 1,400 employees were put out of work, literally overnight.

The quick reaction of the CEO

Feuerstein quickly announced the following day that displaced workers would not be abandoned, promising continued pay and health benefits for all employees. He also vowed to rebuild, and rehire all displaced employees as the company got back to production. He immediately recalled 200 employees, and pledged to recall more. Figure 1 consists of a timeline of events since the fire, tracing the process of bringing the company back from the disaster.

Planning to rebuild

Feuerstein, true to his principles of high quality, has not settled for an adequate, and possibly outdated, replacement, but has insisted on building the best. Plans for the new, state-of-the-art facilities, estimated to be on line by February 1997, show it to be...
Planning to rebuild, continued

the most technically and environmentally advanced textile plant in the world. Malden Mills plans to produce over one million yards of Polartec® and Polarfleece® fabrics a week. To date, the company has ordered more than $50 million of new equipment for these facilities.

**Figure 1. A Timeline of Events after the Fire at Malden Mills**

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### Figure 1, continued

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<td>MARCH 18</td>
<td>Community officials approve construction plans for Malden Mills' new manufacturing building in Lawrence.</td>
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<td>The United Way begins distributing food and clothing vouchers from the Malden Mills Employee Relief Fund to displaced workers.</td>
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<td>APRIL 23</td>
<td>State Fire Marshal Detective Lt. Robert A. Corry and a team of investigators begin the physical excavation phase of the fire investigation to determine the cause.</td>
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<td>MAY 9</td>
<td>Malden Mills holds the official opening of the first-ever Polartec manufacturing facility in Europe (based in Görlitz, Germany) to produce fabrics exclusively for its European customers.</td>
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<td>JUNE 5</td>
<td>The United States Department of Labor announces that it will provide up to $1 million for retraining Malden Mills workers on new textile manufacturing equipment.</td>
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<td>11</td>
<td>Malden Mills begins the erection of its new manufacturing facility for Polartec and Polarfleece fabrics (anticipated to be complete by September and open in February of 1997) in the footprint of the buildings that were destroyed. Malden Mills announces that 85 percent of its total work force is back on the job.</td>
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<td>JULY 11</td>
<td>Aaron Feuerstein meets with the remaining workers who have been without jobs since the fire to explain that he is still dedicated to returning as many people back to work as soon as possible, but that the estimated timetable is still 18-24 months. Malden Mills announces an additional 90 days of health coverage for people out of work, as well as a dedicated person in human resources to help people find jobs in local businesses until they can return to jobs at Malden Mills.</td>
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<tr>
<td>AUGUST</td>
<td>Massachusetts State Legislature approves $4 million to retrain Malden Mills employees.</td>
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**Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young. The greatest thing in life is to keep your mind young.** — Henry Ford

**A leader is a dealer in hope.** — Napoleon Bonaparte

**Imagination grows by experience, and contrary to popular belief, it is more powerful in the mature than in the young.**

— W. Somerset Maugham
Community and Government Support

Overwhelming amount of aid

When Malden Mills suffered one of its biggest setbacks, Feuerstein quickly led the charge to keep on working as best they could and rebuild. People responded to his leadership and rallied to help. The influx of charity and support from friends, government agencies and even customers of Malden Mills was enormous. On the night of the disaster, neighbors, cab drivers and local business owners could be seen serving coffee, doughnuts and bowls of soup to exhausted firefighters. Everyone seemed to pitch in, with one city councillor even offering room and board at his home to anyone that might need it.

Donations poured in

When one Malden Mills customer in South Dakota heard about the fire, he sent $30,000 to start the rebuilding effort. The Bank of Boston provided $50,000 to start a relief fund for the newly unemployed workers. The local hospital offered free care to the victims of the fire. Many local restaurants offered displaced workers and firefighters a hot meal. The Red Cross launched a blood drive, and Massachusetts General Hospital received a “phenomenal” number of donors. In support of their employer, who had done so much for them through the years, the laborers’ union donated $100,000 to help out the rebuilding effort. The local Chamber of Commerce raised more than $150,000 to aid the employer that, in the words of Chamber President Joseph Bevilacqua, has “a major impact on the many small businesses that provide services.” The United Way distributed food and clothing vouchers to displaced workers to ease the shock of losing their jobs two weeks before Christmas.

The state stepped in with relief

Governor William Weld declared a State of Emergency for the cities of Methuen and Lawrence, which made the National Guard and State Police available for assistance in the area. “It’s up to us to do the best we can to contain this tragedy and ease the suffering of the communities for which Malden Mills was a lifeline,” he said. To help ease the burden on workers, the state provided $100,000 in Industrial Services Program emergency funds for job relocation efforts; sent officials to the area to provide information on unemployment benefits, temporary job assistance and job search efforts; and worked toward making vacant mill space in Lawrence available to Malden Mills for immediate relocation of the company’s administrative facilities. The Massachusetts Legislature approved $4 million for retraining of employees.

The federal government offered help

The federal government stepped in as well. The U.S. Department of Labor pledged $3.7 million in emergency assistance funds for job retraining, job search and other employment support efforts. It also provided $1 million for retraining employees.
The federal government offered help, continued

Support was surprising, but deserved

According to Jeff Bowman, a brand marketing manager at Malden Mills, the amount of support was a welcome surprise. “We knew we had strong bonds in the community,” he said, “but I don’t think anybody expected the kind of outpouring of help that we’ve seen.” Certainly, Aaron Feuerstein was surprised—after all, he was simply doing what was best for the profitability of the company, for the workers, and for the community. But the series of events at Malden Mills shows that most people will do whatever they can to support a leader willing to do the right thing, especially in the face of adversity. 5
A company with strong ties to the community and its workers

Being successful through creativity and innovation, and caring for our people

Value systems have changed in this century

Why rebuild after a devastating fire?

Concluding Comments by CEO Aaron Feuerstein

Malden Mills is healthy and plans to stay right where it is. Almost a half a century ago, the Feuerstein family moved into Lawrence, and that legacy is extremely important to us and we have no plans whatsoever of leaving. Almost a century ago, our family moved into Massachusetts, and in 1906, our grandfather incorporated our company in Malden. We're here to stay, because we have wonderful people here, and they have enabled us to thrive in our business. We have good workers who make the difference in our products. They help us to make better quality and better performance.

Many people ask, “How is it possible to pay an average of $12.50 an hour, when most of the mills left some time ago for cheaper labor down South?” I think the average pay down there is around $9.00 today, and many of them are fleeing today for Mexico for $2.00. So how do we do it? First of all, we wanted to stay here because this is where our roots are, and this is where our good workers are. Therefore, we had to get away from the idea of just making the same fabric that everybody else makes, and making it for a penny cheaper or selling it for a penny more. We concentrated on better fabrics, better performing fabrics, and innovation, R&D, and creativity. And I’m sure, in the long run, that will give us a profitability that all the mills who fled for cheaper labor will not enjoy.

My wife gave me an old book about the Arlington Mills, the very complex where Malden Mills is now situated. In that book, I read that the first mill was built in 1866, 130 years ago, and it was a beautiful structure. In 1867, it was totally destroyed by a devastating fire, exactly what happened to us. Do you think they rebuilt? Of course they rebuilt. That was the value system of that time, that we all have inherited from our parents and grandparents. I wonder if the proprietors of the mill received the type of publicity that I’m receiving, if they rose up to celebrity status as I have. I’m sure not, because in those days, there was a different ethic, and we have to try our damnedest to bring that ethic back.

The fire that we had was really devastating. Three major mills, 250,000 square feet in each, were totally destroyed down to the ground, nothing left. As CEO I had the responsibility at that time to make a decision, and I made it: To rebuild as fast as humanly possible. And I am asked by professionals and by some of the modern CEOs, why did I do it? According to them, I really wasn’t doing what was best for the shareholder, and the shareholder is king today. Perhaps I could have made a much better deal with the insurance company, and cashed in all the stock and all the hard labor and sweat that went into three generations of work.
There are two answers to that kind of criticism: One, it's wrong. What we have
to do is the right thing; and two, from an economic point of view, if you look at the long
run instead of the short term, I'm sure I did the right thing for the profitability of my
family, the shareholder. I equally had a responsibility for the workers who really partici-
pate with us to make our products the very best in the industry.

Again, they ask, "In what way are you helping the shareholder by taking care of
the worker? You surely can move to other locations where you can have cheaper labor
and you really are not doing what a CEO is supposed to do." Well, if you think of the
laborer as a pair of hands, as a fixed expense that's cuttable, then yes, the criticism is
right. However, the philosophy we have at Malden Mills is that the laborer is an asset,
and he participates with us in making our products, and his loyalty and trust is ex-
tremely, extremely important.

I dare say, that immediately after the decision was made to stay in business here
and to rebuild, I can't tell you with what kind of dedication and self-sacrifice, not only
my management team, but my laborers as well, did. They worked unbelievable hours to
bring us back into business. I'm proud to say that today, as a result of their efforts, our
Polartec® operation is operating at the same level it was prior to the fire. Our woven
home furnishings area is operating at 100%. It's quite an accomplishment, and it's
because the people are treated the way they ought to be treated, and the way you would
like to be treated yourself.

I've been acting the same for 50 years, and 50 years ago, it was normal to have
this kind of attitude. What happened is that the ethics and the value systems that we
used to have no longer exist, so today the media is giving me all kinds of credit for it.
But I haven't changed, and I only did what I thought was right.

I have a hope for some of these newfound CEOs who care very little about their
workers and their communities, and only about the so-called "shareholder." I only hope
that in time there will be a reaction, and that they will change and assume more leader-
ship in their communities.

Aaron Feuerstein is the President and Chief Executive Officer of Malden Mills
Industries, Inc., owned by the Feuerstein family. He directs all major strategic, financial,
manufacturing and sales/marketing decisions for the company, which is an international
leader in the textile industry. He has also preserved the family spirit of Malden Mills by his
concern for the welfare of his employees, on the cardinal principle that they are the company's most valued asset.

Mr. Feuerstein grew up in Brookline, Massachusetts, where he still lives. He is an observant Jew and a charitable man, contributing greatly to community, religious and educational charities, acting as Treasurer of his synagogue, The Young Israel of Brookline, founded by his father in 1930. He graduated in 1943 from The Boston Latin School, and in 1947 received a Bachelor of Arts degree from Yeshiva University in New York. In 1996, Mr. Feuerstein received Honorary Doctorate degrees from Middlebury College, Boston University, Merrimack College, and Yeshiva University. Over the last year, he has received countless honors and awards for his actions during and since the tragic fire at Malden Mills, including an invitation to attend the State of the Union Address as a guest of President Clinton in January, 1996.

References

Systems Thinking in a Knowledge-Creating Organization

Maury Cotter, Director, Office of Quality Improvement, University of Wisconsin-Madison

Introduction

The University of Wisconsin-Madison is a world-renowned research university. With nearly 40,000 students and about $370 million in research and development expenditures, UW-Madison is ranked consistently among the top universities in the United States. Our mission is to create, integrate, transfer and apply knowledge. We, and institutions like us, have been doing this for hundreds of years.

Now, the continuing demand for the creation of new knowledge is having numerous effects on our universities. It is driving our need to advance more knowledge at a faster rate. The society we serve has growing needs and expectations for knowledge. That is challenging some of our traditional and valued approaches, such as careful sifting and winnowing of knowledge. It is a demand we ignore at our peril. Yet it is possible to respond at our peril, if we do so without understanding and preserving our strengths.

We began to approach this by asking ourselves two questions: How can we meet the expanding needs of society while preserving our strengths? How can we create innovative strategies that have broad, institution-wide impact, while preserving academic freedom? As we strive to address those issues and challenges, we have found that systems thinking is a helpful approach, which I will illustrate through a number of examples.

Systems thinking as an approach to balancing our mission

First, what is systems thinking? In Systems 1: An Introduction to Systems Thinking, Draper Kauffman, Jr. defines systems thinking as a “collection of parts which interact with each other to function as a whole.” According to Dr. W. Edwards Deming, “A system is a network of interdependent components that work together to accomplish the aim of the system.” Both definitions emphasize the importance of the interaction of the pieces to form a new whole. Kauffman goes on to distinguish a system from a heap. A heap is something made up of a number of parts and it does not matter how these parts are arranged, such as a pile of sand. A living organism is a system. You can divide a pile
A definition of systems thinking, continued

An organization is more effective if it functions as a system, instead of a heap. While that may seem obvious, the reductionism that has advanced science over the last century has taught us that to understand something, you break it down and understand all the parts. We have carried that thinking into how we organize and run our organizations. We organize ourselves into small units or disciplines and design and deliver our products within that narrow piece. Add up all the pieces and you have a heap. Students may graduate with a heap of courses that gain them a degree. With the specialization of knowledge, a professor in mechanical engineering is more likely to know and work with a mechanical engineer in a peer institution than an electrical engineer across the hall.

At the university, we are more like a loose confederation of independent components—and for good reasons. In Mintzberg on Management, Henry Mintzberg talks about structure and culture in “professional organizations,” which include schools, universities, hospitals, law and accounting offices, consulting firms, and social work agencies. These organizations have systems that allow their expert workers to perform independently what can be exceedingly complex functions. These organizations disseminate power directly to the workers, giving them autonomy in carrying out their professional responsibilities.

However, with the strengths come challenges. According to Mintzberg, the professional organization is more likely to face “problems of coordination, of discretion, and of dealing with innovations that arise.” Indeed, how can an institution simultaneously foster independence while ensuring coordination? And if each individual is innovating separately, how can the institution innovate at an organizational level? These are complex challenges with no easy, seven-step solutions. However, we have found systems thinking to be an approach that has helped UW-Madison begin to address these challenges.

Five examples of systems thinking at the University of Wisconsin

Specific examples are always useful, so I will now describe five examples where systems thinking has helped us advance our mission, while maintaining the strengths of our autonomous structure and culture. Three of the examples are institution-wide and two are departmental.

Example 1: Aligning While Fostering Chaos in a Research University

The first challenge is alignment of the overall direction of the institution while ensuring autonomy where it adds value. You’ve seen it before—the series of diagrams...
A typical model of alignment and chaos, continued

using arrows to represent functions and parts of an organization getting aligned. First there is the picture of arrows pointing every which way. Then the big arrow drawn around it, but still chaos within. This represents the existence of an institutional mission and vision, but one that is being ignored by the functional units. Then the finale: all the arrows inside going the same way as the big arrow; alignment in an organization; the ultimate goal (see Figure 1).

Figure 1. The Aim of Alignment

Our chancellor, David Ward, says, “That's a good Japanese car company. That's not us.” That would destroy the autonomy of a professional organization that is our strength. Imagine the waste of human capital to narrow the scope of thinking by great minds into a channeled, uniform direction (assuming you could do it if you tried).

A better model shows boundaries being broken

We create knowledge. To create knowledge, you must be free to explore and discover the unknown. You need to foster the ability to break out of current thinking. It isn't just a matter of managing chaos. To be truly successful at knowledge creation, you need to foster it by creating conditions that encourage people to challenge long-held assumptions, take risks, and venture into the unknown. Revisiting our diagram, for this part of our mission the aim is to have the arrows that represent chaos break through the boundaries of current knowledge. The arrows that shoot out of the circle may be the Nobel Prize winners (Figure 2).

Figure 2. One Aim of a Research University
Alignment and direction is also necessary

However, the institution would not run well if all of us just went in whichever direction we pleased. Some parts of our mission do require alignment. And some functions in our institution need to be aligned in order to provide the foundation and resources for creative and innovative efforts. Our administrative services, operational functions, space and facilities management, and many other functions must be aligned to be effective.

Some alignment is also needed in teaching. To obtain mastery in a discipline, certain skills and knowledge must be obtained through a series of courses or learning opportunities. The progressive development of those skills and knowledge often requires a systemic, aligned approach.

How might one illustrate the co-existence of chaos and alignment in an organization? Our chancellor created a diagram. (See Figure 3.) It simply illustrates the need for the coexistence of chaos and alignment. The overall system represented by the large arrow illustrates that the institution as a whole has a general mission and vision. The smaller aligned arrows represent those functions and systems that need to be aligned to make the overall aim work. The overlaid ellipse of chaos represents the need for a university to foster creativity and innovation, encouraging people throughout to challenge assumptions, search for knowledge, sift and winnow, and break through the boundaries of existing knowledge. Clearly this is important for a research university. But, more and more, with the explosion of knowledge and the rapid increase of change, this concept is becoming important to any organization.

An architecture for the future

How are we trying to manage this balance of creative chaos and alignment? Our chancellor worked with faculty, staff, and constituents to develop what he calls an “architecture” for the future. His architecture consists of three themes for the future (Figure 4). Building on these themes are nine priorities (Figure 5). These themes and priorities provide faculty, staff, and constituents with “an architecture,” or a foundation, on which to build.
An architecture for the future, continued

Much of this architecture is aimed at creating and linking systems in new ways, and we've found that learning is a theme that connects everything. We also recognize that addressing the priorities requires an emphasis on crossing disciplines, serving the constituents of the state, and planning our buildings and facilities with a campus-wide systemic approach.

Architecture fosters creative ideas to advance the mission of the university

This architecture seems to stimulate creative responses. We are finding that many grassroots efforts are springing up around campus that advance the vision and priorities. Within the general architecture, people in zoology, housing, engineering, police and security, history, agriculture, dean of students, etc. are identifying how they fit into the whole picture and trying to advance the vision through their own missions.
CASE STUDY

Architecture fosters creative ideas to advance the mission of the university, continued

One example is the Bradley Learning Center, developed by the Division of Housing. It is a freshman residence hall where learning is integrated into a community environment. Faculty from a variety of disciplines work directly with students in a community setting. Space is designed for group learning and technology is in each room. All three of the chancellor's themes—the learning experience, the learning community and the learning environment—come to life for first-year students.

Another example is a cross-campus effort to advance knowledge and its application in the area of food systems. Faculty and staff from Agriculture and Life Sciences, Medicine, Social Sciences, etc., are working together with a broad representation of the statewide community to advance food systems to better serve the underserved population of the state and, eventually, the world.

Both of these examples are representative of the concept we are striving to promote: A general sense of direction that fosters creative, innovative ideas to advance our mission.

Example 2: Time-to-Degree or Satisfactory Progress: A systems view of degree completion

The length of time-to-degree is an issue of concern shared by many higher education institutions. When time-to-degree increases, there are systemic effects, including increased costs to students (and parents), loss of earnings, and reduced access for other students who wish to enroll. An increasing number of institutions are offering guarantees to students that they will be able to graduate in four years. Bureaucratic and legal systems are preparing to handle the record keeping and potential litigation.

Our provost, John D. Wiley, noted that if the ultimate aim is to shorten time-to-degree, that can be accomplished in a variety of less than desirable ways—raising tuition, raising entry standards, increasing course load requirements, prohibiting changing majors, requiring early selection of major, or lowering required credits to degree.

The increasing length of time-to-degree is one outcome measure of a very complex system. Getting a degree is a process within a complex system. Putting the focus on time-to-degree is like inspecting at the end of the conveyor belt. Did they make it? How long did it take? Speed up the line, it's taking too long. And we don't ask about those who don't make it to the end of the line.

Designing the system for speed may not be best for everyone. Traditional quantity production measures have little regard for quality measures and have the potential to destroy the quality that does exist. Granted, time-to-degree is an issue, just as productivity is a legitimate issue in manufacturing systems. We also accept that speed or efficiency is a natural outcome of a quality focused system. Creating a quality advising system, for example, would have a natural outcome of speeding time-to-degree. But we also know that a system with speed as the aim can sacrifice quality, which, in the end, results in more inefficiency. A speed focused system might choose to increase course load...
The issue of time-to-degree, continued

requirements to reduce time-to-degree. But this could lead, instead, to dropouts, failures, and ultimately to greater inefficiencies.

The point I want to make is this: To focus on quality, you need to look at the process of creating the product, from beginning to end. You build in steps all along the way to ensure the success of the whole.

Substituting “Satisfactory progress” for a speed based measure

So, on what should we focus if not time to degree? “Satisfactory progress” is one term UW-Madison has used. It recognizes that getting a degree is a process. It forces us to think of the steps and processes along the way toward an ultimate goal. It recognizes that those steps are critical to success. And it also recognizes time, in that for students to progress in a satisfactory way, barriers and problems in the system need to be removed. This will automatically speed up the process.

Mapping out the steps involved in satisfactory progress

What does this system of satisfactory progress look like? What are the steps that students go through to get a degree? The graduate school pulled together a team of faculty, advisors, students, and administrators from biology, math, economics, education, and history to examine the system. One of the first steps was to flowchart the process of getting a graduate degree. They began this step with an attitude that graduate students are adults and they should be able to figure it out. We shouldn’t have to hold their hands. When they were done flowcharting the process, however, they could see that students had to wind their way through fifteen units or players for various advising and approvals.

Then we asked the question, “Who knows this process?” Our answer was “graduate students, after they are done.” In Once Upon a Campus, Dan Seymour says “An organization is a relay team; the better the handoffs, the better the results.” Each of the 15 units or players through which students wind their way are doing their individual jobs. They are largely unaware of what the whole system looks like from the students’ perspective, and thus are not providing the handoffs that would help students through the maze. A student moves along one short step at a time, unsure which way to turn at the next corner, what lies along that path, or if it just ends with a wall saying “turn back.” Adding to this complexity, each department’s maze has a unique design.

Identifying barriers in the system

Our next step was to identify barriers and complexity in the system (Figure 6). The flow chart made earlier helped us identify several. We also held focus groups of students to learn their views. We compared the similarities and differences between departments in requirements and systems to support and guide students. From these processes, we have identified a number of changes. Some of those included: better mentoring and advising, orientation programs for new graduate students, feedback.
Identifying barriers in the system, continued

systems to inform students about the content and progress toward their degree, and physical resources such as rooms that enable students to network and connect with professors and others students (Figure 7). There is much work yet to be done, but we hope that changes in these areas will improve satisfactory progress, and, as a result, time-to-degree.

Figure 6. Suspected Causes of Failure to make Satisfactory Progress in Graduate Studies

Figure 7. Suspected Causes of Satisfactory Progress in Graduate Studies

Example 3: Advising: A Systemic Problem with Systemic Responses

As an institution, we face a number of issues and problems not unlike any similar institution today. Teaching quality is a national issue. Students were complaining that they were unable to get into classes required for their degrees. As costs rise and demand for our institution increases, our valued tradition of access for our state's
Challenges facing higher education today, continued

Students is becoming a greater challenge to meet. There is pressure to reduce time-to-degree for economic and access reasons. An undesirable percentage of our students leave, including a disproportionate percentage of minorities. Where to start?

Looking at relationships within the system

We need to recognize first that these problems are not independent of each other. They are all part of a system. Therefore, it is useful to look at the interrelations between these factors and ask the question “which drives the other?” When we looked at the relationships between advising, teaching quality, class access, institution access, time to degree, and retention, we found that advising drove the others.

The role of an advisor

Our chancellor met with advisors and asked them what they thought their jobs were. They answered, “Damage control.” They were like the inspectors at the end of a production line, trying to rehammer the parts to fit. There was no one upstream getting students started down the right track. This was especially true for students who spent their first few semesters exploring options with undeclared majors.

Since the problem is systemic, our solutions must be systemic as well. The most significant solution was to develop an early, cross-college advising system. Professional advisors were hired and trained to advise students from day one about majors in all colleges until they determined and declared a specific major. This system needed to be closely tied to automated registration for the advisors to be able to do their jobs.

Moving beyond the traditional advisor role

Advising occurs daily in many forms. Our Housing Division understands its role in advancing the mission of our institution. They understand that the social and living environment is a critical piece of the whole learning experience for students.

One innovation we made, to advance the learning mission, was to create residence hall programs where faculty are linked with students in a learning environment, such as the Bradley Learning Center described earlier in this article. In addition to the learning that goes on, these students receive advice and guidance that is based on a relationship that extends beyond the typical advisor/advisee appointment.

Other efforts to continuously improve advising include the creation of a network of campus advisors, so ideas and methods can be shared. We are also benchmarking and comparing advising methods across numerous institutions nation-wide.

Organizing the department chairs and curriculum committees

Example 4: Engineering Curriculum as a System

The Dean of the College of Engineering assembled the chairs of the curriculum committees of his eight departments to talk about the process of curriculum development in the College. Each department had its own curriculum committee and developed
Organizing the department chairs and curriculum committees, continued

its own curriculum. Would there be any value in looking at curriculum as a college-wide system? That was the question on the table.

Mapping out indicators

The first question was, “What are indicators of an effective curriculum?” A brainstormed list of indicators was generated and grouped (Figure 8). Of the indicators listed, few of the items were discipline specific. Almost all items were college-wide, even university-wide issues, such as “problem solving,” “people and team skills,” and “higher level thinking skills.”

Figure 8. Indications of an Effective Curriculum

Recognizing the need to address curriculum as a system

Each department had been working independently to achieve success with these indicators. The group of curriculum chairs thought they might be able to make more progress addressing them as a college instead of department by department. In this case, the autonomous approach of each department working independently, faculty concluded, was not productive. They could accomplish more by addressing the curriculum as a system.

Learning what others think is important for success

Then they collected data to assess how well we were doing relative to the indicators they had listed. They surveyed alumni to learn how our curriculum had
Learning what others think is important for success, continued

prepared them for their work and lives. They invited their Industrial Liaison Council to tell them what knowledge and abilities they need from our graduates. We expected to hear about needs for technical engineering skills. Those were basic expectations, but we heard much more about the need to have workers be life-long learners, as engineering knowledge and practice is advancing so quickly. The industry representatives indicated they want workers who can work in teams, which is not the way we typically teach them in the classroom. They want workers who understand different cultures, so they can work in Germany or India and understand that communication is more than language translation.

Systematically examining curricula reveals an unknown problem, and opportunity to improve

With indicators, data, trends, and feedback in hand, the curriculum chairs examined current departmental curricula. One of the troubling pieces of data was that about half of those who claimed an interest in engineering as freshmen changed their minds by the end of sophomore year, and the figures were much worse for women and minorities. Yet, as we examined a typical engineering curriculum, we noticed that because the first two years are spent almost exclusively on the basic sciences—most students never entered an engineering door for the first two years. We were losing students without knowing who we lost, and students were giving up potential careers in engineering without knowing what they were giving up.

With all this information at hand, they stepped back and used a process to determine areas of focus for improvement (see Figure 9). Subgroups were selected to work with the math, physics, and chemistry departments to try to integrate those disciplines into the engineering curriculum more effectively. This involved working across college boundaries. In addition, these multi-disciplinary faculty teams consulted with faculty from other institutions who are experimenting with leading-edge teaching methods in order to benchmark their practices.

Figure 9. Reengineering the Engineering Curriculum
Another subgroup developed a freshman survey course to help students get an early understanding of what engineering involves and to help them select a particular discipline. This involved engineering professors from various disciplines working together as a team to design and deliver the course. Students in the course work together in teams to address real engineering problems provided by local businesses. Still another effort involved teams of veteran engineering faculty working together to explore learning techniques and mentor each other to improve teaching methods.

By approaching and improving the curriculum as a college-wide system, we hope to:

- Better integrate math, chemistry and physics into the engineering disciplines
- Give students a better understanding of engineering early, so they make best choices about majors
- Increase retention and success of minority and women engineering students
- Reduce loss of credits from students transferring majors within engineering
- Reduce time-to-degree
- Increase student success in school and their careers.

Example 5: Remaking History: An Academic Department as a System

The academic department is the core of the university. It is where knowledge is created, integrated, transferred, and applied. To carry out their missions, there are core functions that every department much manage. Those functions create the system that enables individual, independent faculty to function effectively as a system. The core functions are managed by the administrative team: the chair, associate chair(s) and the staff. Since the chair role often rotates, the staff become the institutional memory and the base of continuity and consistency essential to running an effective department.

The Department of History at the University of Wisconsin-Madison had its own history of problems with coordination and communication that affected the services provided. When the department secretary left for another job, the department chair prepared to find a replacement, using the same position description. Then he stopped to think. These problems were 20 years old. Yet some of the staff had turned over a number of times in 20 years. Maybe it wasn’t really the people. Maybe there was something in the system that caused the problems.

With that assumption in mind, they assembled the administrative team of the department, including the chair, associate chair, and the eight support staff. They came to the table with a clear understanding of their individual jobs, and a view of their positions as being quite separate from each other’s. The first step was to ask, “What is
Problems in the History Department get dissolved, continued

the mission or purpose of the department of History? and then, “for whom?” The next step was to identify the core functions of the department in carrying out teaching and research. This became a systems flow diagram of the department (Figure 10).

Figure 10. History Department System Flow

Defining the core processes of the department

Next we asked, “What do you do to enable the core functions of the department to be carried out?” Each person listed everything they did to support those processes. Then those individual functions were grouped into major categories. These categories were the core processes for supporting the department (see Figure 11). They consisted of personnel processes, financial processes, coordinating course offerings, and so on. As we considered each major process, two or more of the staff were involved in that process. Each person as an individual saw herself in several core processes. By this time, the individual members were able to see that each of them was an integral part of a whole system. They could see that nothing they did was really independent, but rather connected in many ways to create a system. For each process, we identified the decision maker, process owner, backup, and who needed to be involved or informed of changes in that process. For urgent processes, such as phones and faxes, a second backup was identified.
Defining the core processes of the department

<table>
<thead>
<tr>
<th>Figure 11. Core Processes or Key Areas of Responsibility in the History Department</th>
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</thead>
<tbody>
<tr>
<td>1. Supporting Faculty and Staff</td>
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<tr>
<td>• Faculty/Courses</td>
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<tr>
<td>• Teacher Assistant Evaluation</td>
</tr>
<tr>
<td>2. Prepare Written Materials</td>
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<tr>
<td>3. Coordinating Course Offerings</td>
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<tr>
<td>4. Personnel Processes</td>
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<tr>
<td>• Hiring Process</td>
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<tr>
<td>• Pay Process</td>
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<tr>
<td>5. File and Access Information</td>
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<td>6. Financial Processes</td>
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<tr>
<td>7. Community Outreach</td>
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<tr>
<td>8. Supporting Students</td>
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<tr>
<td>9. General Support</td>
</tr>
<tr>
<td>• Nuts and Bolts</td>
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<tr>
<td>• Traffic and Information Dispersal</td>
</tr>
<tr>
<td>• Mail</td>
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<tr>
<td>• Equipment Management (Use and Maintenance)</td>
</tr>
<tr>
<td>• Supplies and Equipment</td>
</tr>
<tr>
<td>10. Operate &amp; Maintain Lab Facilities</td>
</tr>
<tr>
<td>(Not included for History, but may be relevant in other departments)</td>
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</tbody>
</table>

Process improvement

Next it was time to launch some process improvement. With the list of core processes in front of them, the staff selected those that they felt needed the most improvement. By looking at the responsibility charts it was easy to see who should be involved—the decision maker, process owner and backup(s). With a facilitator, these subgroups of staff flowcharted processes such as timetable preparation, course changes, room scheduling, etc., making improvements as they went.

Defining a clear role for a new staff position

At this point, it was time to think about filling the department secretary position. The staff looked at what they had learned and asked, “What do we want our supervisor to pay attention to? What do we want his/her responsibilities to be?” The new position description includes statements like: serve as liaison and bridge between staff and faculty, lead long-term planning, work with faculty and staff to identify processes needing improvement, apply quality improvement methods to increase department productivity, define and clarify for each staff member how their job fits within the overall department mission, etc. In short, they wanted someone to manage the system as a whole. Then the staff interviewed candidates and hired their own supervisor.
Positive outcomes are achieved and verified

Some of the positive outcomes of this effort include:
- The staff surveyed the faculty and asked how they were doing in serving faculty needs. Most faculty responded and 90% of them gave the staff the highest rating.
- The office space was completely redesigned by the staff, using the understanding of processes as the basis for the new design, making work flow more smoothly.
- When they have problems, they first ask “what is wrong with the process” instead of trying to figure out who to blame. Then they fix the process.
- A model was created for this approach and is now being used by other departments, including Chemistry and Pathology, to improve their administrative systems.

A new attitude evolved

The staff was not satisfied with these changes and found that it takes continual hard work to sustain them. They recently self-initiated an effort to push ahead to regain lost ground and move even further ahead on improvements and team-building.

Conclusion: Looking at problems as systemic leads to better solutions

Systems thinking is helping our research university advance its mission while maintaining the strengths of our autonomous structure and culture. The university as a whole is one big system, and systems thinking can help address particular issues. Some of those issues are institution-wide, but it’s a matter of how one looks at the problem. Looking at it as a system enables people to see solutions that can have greater impact, and avoid unintended consequences.

A system is a like a mobile—touch one part and the whole thing moves. Nothing exists independent of other things. This is true of each person and each function in our organization. In striving to be effective, it helps to understand problems in a systems context and approach solutions in the same way. Yet, we must understand and preserve the independence that is a strength in knowledge-creating organizations.

References


**Author information**

As Director of the Office of Quality Improvement at the University of Wisconsin-Madison, Maury Cotter guides a staff that works throughout campus on efforts to develop and improve systems and approaches to advance the university's mission and vision. She has worked at improving services and programs in the public sector for more than 20 years, and is a co-author of two books, *Real People, Real Work: Parables on Leadership in the 90s*, and *Kidgets: And Other Stories About Quality in Education*. Ms. Cotter speaks on Quality Improvement nationally, and has served as a regular speaker with the Deming Institute's four-day management seminars.
Total Quality and Continuous Improvement at Naval Station Mayport

Authors

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Captain Scott Cantfil, Commanding Officer, Naval Station Mayport, Mayport, Florida

Background

Naval Station Mayport has had much success implementing and maintaining Total Quality. It received an Achievement Award from the President’s Quality Award Program in 1995 and 1996, the public sector equivalent of the Malcolm Baldrige National Quality Award. It also won the Florida State Governor’s Sterling Award for Quality in 1994, the first public sector organization in Florida to be so recognized.

The station borders on the Atlantic Ocean in Northeast Florida (see Figure 1 for more information). Until the summer of 1992, there were two separate bases—a naval station that conducted shipboard operations, and a naval air station that conducted air operations. The two were consolidated under the command of then Captain Tim Ziemer, and 18 months later, Captain Scott Cantfil became Commanding Officer.

This article will begin with RADM Ziemer’s story of how he implemented Total Quality at Mayport, from scratch, in the 18 months he was in command. Then Captain Cantfil will present his thoughts on how he took over and managed their never-ending journey on the road to Total Quality and Continuous Improvement.

Figure 1. Background Information on Mayport Naval Station.

<table>
<thead>
<tr>
<th>Who we are:</th>
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<tbody>
<tr>
<td>• Sea and airport—58 commands, including 23 ships and 5 helicopter squadrons</td>
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<tr>
<td>• 1,400 military and civilian personnel working on base</td>
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<td>• $1.5 billion annual impact on local economy</td>
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<td>• 3,400 acres bordering on wetlands, ocean and river</td>
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<th>What we do:</th>
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<tr>
<td>• 2,000 harbor moves annually</td>
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<tr>
<td>• Housing for 1300+ families</td>
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<tr>
<td>• Day care for 800+ children</td>
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<tr>
<td>• 15,000 meals served per month</td>
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<tr>
<td>• 25,000+ aviation maintenance repair actions annually</td>
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<td>• 458 million gallons of waste water treated annually</td>
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<table>
<thead>
<tr>
<th>Who we serve:</th>
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<tbody>
<tr>
<td>• Sailors, pilots and air crews</td>
</tr>
<tr>
<td>• Military dependants</td>
</tr>
<tr>
<td>• Government civilians</td>
</tr>
<tr>
<td>• Military retirees</td>
</tr>
<tr>
<td>• Jacksonville community</td>
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<tr>
<td>• American taxpayers</td>
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A new commander at a newly consolidated facility

When I assumed command over the station in June of 1992, we had just consolidated two Naval activities. I arrived with 24 years of operational experience in the fleet and no experience in shore station management. I am a helicopter pilot, and had spent most of my Naval career looking for Russian submarines. Furthermore, the merger of the bases was a forces consolidation. Some friction existed; the naval station didn’t want anything to do with the air station and vice-versa.

Some initial problems early on

During the first few days I discovered that things needed to change and I was going to need help. I remember my comptroller saying, “Hey, Captain, we got another $30,000. Where do you want to use it?” My staff Civil Engineer said “Captain, we can’t do both paving jobs. We can either do the main street or down in front of the Officers’ Club. What do you want to do?” And my Welfare and Recreation Officer asked me, “Captain, we’re running a deficit in the Chief Petty Officers’ Club. I just interviewed a guy and I’d like you to talk to him to see if you want to hire him to be the manager of the Club.” I didn’t have the data to answer any of these questions.

At the time, I hadn’t heard of Quality Management. I remember thinking back to June of 1990 when the Chief of Navy Operations talked about Dr. Deming and Quality and how he was going to get Navy leadership to embrace the concept. I simply filed that message. In January of ‘92 my boss asked me to attend the Senior Leadership Seminar on Quality. It was the first time I had been introduced to Dr. Deming, Mary Walton, and her books about his practices. I listened, took notes, brought those back, and put them on the credenza behind my desk.

Quality Management as a tool

When I assumed command of the base in June and started dealing with a number of major issues, it became clear that I was going to need help, so I dusted off my seminar books on Quality and looked them over again. At the same time, I was dealt an ace. A Lieutenant Commander checked into the base who had been a Maintenance Officer up in Norfolk, Virginia. She had come to be my Administration Officer, but I had someone from the civilian side filling that position, so she was in excess. I brought her in and said, “Jean, sit down. I have some great news. You’re going to go back to Norfolk, attend some Total Quality (TQ) training at Little Creek (where the training base was at the time) and I want you to come back and be my Coordinator of Total Quality.” She was not happy. She had come down to be the Administration Officer of
CASE STUDY

Implementing a TQM program

It was the greatest thing that ever happened to me and the base. Jean received the requisite training. Upon her return, we sat down and did some planning. We decided to get moving on our journey. Two months later we had our first Executive Steering Committee meeting of 13 people. Some of the department heads wanted to be part of the program because they were curious. Others didn’t want anything to do with it because they thought it was frivolous.

We started our training program in November 1992, three months after Jeannie returned from her training at Little Creek. Jeannie was my first trainer and we recruited one volunteer. We started out with two, soon we had five, and by the end of 1993 we built it up to 20 part-time collateral instructors who teach Navy Quality courses at Mayport. I’m real proud of this because in a matter of a year we had trained over 2,000 people in Introduction to TQ, the Fundamentals, Team Skills, and the Methods of Management. We had three one-day schools, two three-day schools, and a four-day school. We were able to get the word out and it really started to pay dividends.

Benchmarking and data collecting

Three months after we started training we decided to expand our horizons. We visited AT&T and discovered their Process Improvement Program. The closest program we had at Mayport was a suggestion box, and it was ineffective. AT&T had a process improvement form, and the person who filled it out received an answer from the President. This was our first attempt at benchmarking (Figure 2).

Figure 2. Navstat Mayport Benchmarking Process.

1. Identify process to benchmark
2. Identify comparative organizations
3. Identify critical measures
4. Measure your current performance
5. Arrange benchmarking visit
6. Measure partner’s performance
7. Determine gap between your critical measures and theirs
8. Initiate plan to close gap
9. Check results and take action where appropriate
10. Continue to improve process

We started a similar suggestion program at Naval Station Mayport. Initially we had 100 responses that came in immediately. We accepted over 50% of those. Some required some research, and others we had to turn down because they were bad ideas or simply implausible. This was the first time we started getting data and looking at the concerns of the people we served. We had housewives, active duty sailors, civilians,
Benchmarking and data collecting, continued

retirees, and kids, all providing input to the Executive Steering Committee (ESC) and receiving an answer back from the CO.

Strategic Planning

We started Strategic Planning in December ’92, and it was tough! Because of the complexities of that base, I could not afford to sequester our team of 13 department heads, go off station, hire a consultant to tell us how to do TQ and do our mission, vision, guiding principles and strategic planning. So I decided to do it in place, and it took us three months. It was one of the most difficult things we had to do, but we pounded through it. We implemented it in April of ’93. Our ESC met every Wednesday for two hours, and we designated 50% of the time to Strategic Planning. It took three months. This was the key, and it forced us to identify the critical processes, the customers, and the other items listed in Figure 3 below. This became our doctrine, our flight plan; and later helped us implement TQ at the Naval Station.

Figure 3. Strategic Planning

1. Development of Base Strategic Plan helped get leaders on board
2. Deployed plan to entire Mayport team
3. Departments:
   • Identified customers
   • Identified critical processes
   • Determined issues to monitor
   • Developed supporting strategic plan
   • Developed customer feedback system
   • Set customer service standards

Getting everyone involved

Now that the CO and department heads were on board, the toughest challenge was pushing through the imaginary ceiling between the department heads and the divisions. Obviously the goal was to get everybody on board, understanding the mission, and being part of the solution. That’s a simple concept (Figure 4). However, implementation of that challenge is very difficult and requires a lot of hard work.

Figure 4. Team Concept.

• Provides cross-functional pollination, achieves “buy-in,” and generates more solutions
• 30 teams chartered by Executive Steering Committee or Quality Improvement Councils
• Examples of issues:
  - Recognition
  - Equal opportunity
  - Crime prevention
  - Quality of life
  - Supply support

Journal of Innovative Management
Quality organization

In Figure 5 below, you’ll see the ESC at the top, Quality Management Board (QMB) down the left side, and below that the Process Action Teams (PAT). As we looked around for other models in the Navy, we noted that the USS George Washington under Admiral Nutwell formed Quality Improvement Councils and below that, QI teams. Those were departmental, functioning boards that coexisted with more traditional QMB and the PAT teams. The Naval Station ESC chartered over 20 different QMBs and the follow-on PAT teams. We had over 30 QICs and QIP Teams at one time before I left. It allowed the ESC to look at some of the big issues, and while we initially got the leads on some smaller issues, eventually I saw a migration from the minor issues into more substantive issues, allowing the ESC and QMB to get involved. The bottom line is that everybody started to participate. It involved a buy-in by everybody and it worked very well at Naval Station Mayport.

Examples of success

Let me give you some examples. Armed with a little training, a little strategy, and a little emotional support, we decided to get going. Someone told us about low-hanging fruit, so we decided to identify some small issues to see what we could do.

Improving the check-in process

As a CO, I met with all new incoming people to the Naval base. One of the problems that kept coming to the top was our check-in process. Some of the new sailors took two or even six weeks to get checked into the Naval station. The process involved over 24 steps. The real problem was that the reconciliation of their pay records was halfway through that process. Some of these people were on board for 2-3 weeks without getting a single travel voucher reconciled.

When the PAT team flowcharted the check-in process, it was so ridiculous it would have been amusing except for the fact that the sailors had been trying to use it. A
Improving the check-in process, continued
couple of weeks later the PAT shortened the process to 11 steps and six hours. Since then the new sailors have not brought up the check-in issue again. Anybody could have fixed the process once it was flowcharted because it was so obviously flawed. How did it become so distorted? Over a number of months and years people kept adding more steps to the process, and it was not monitored. Now Naval Station Mayport is going to review the check-in process quarterly, semi-annually, and we’re not going to add any steps. We might actually delete steps as long as it gets the job done. That’s the difference in the process.

Reducing air traffic
Another example was a complaint about too much air traffic at the airport. There were some safety issues at the airfield, and there was a recommendation from the helicopter squadrons to shut the airport down to all fixed wing traffic. The ESC turned it over to the Air Operations Team. I really had to smile, because when the team briefed the ESC, they said, “You know we reviewed the Strategic Plan and it said, ‘We support all DOD aircraft.’” I knew then that people were reading the Strategic Plan! The team came up with a process that enabled us to support all the aircraft that came to Mayport. We made it safer, and reduced the flight hours for training for some of the training flights by 25%.

Communicating with e-mail, saving paper
Another low-hanging fruit example: When I first checked in at Mayport, we didn’t know what e-mail was. We were almost in the 21st century and were still using the pencil and paper. So we turned our ADP QMB onto this. In a couple of months we had e-mail and the department heads were talking to each other and getting all our message traffic, daily messages you get from ships and airplanes. We put all that on the computer and we saved over $7,000 and a million pieces of paper a year. Again, it was low-hanging fruit, but the system worked well for us.

Reducing the cost of tugboat operations
Naval Station Mayport has four tugboats. There are nine sailors on each tugboat, and it takes six tugs (seven in bad weather) to move the aircraft carrier Saratoga or the John F. Kennedy. Each time the carrier or the rest of the battle group moved, 3-4 commercial tugs were hired at $400 an hour. It cost the government about $6,000-$9,000 every time a move was made. Naval Submarine Base Kings Bay used contract tugs, which seemed to be an attractive option. Our ESC sent a team up there and after looking at the data, we found out that by embracing their program, we could save the government $200,000 per year. In addition, Kings Bay ran their tugs with three people, so I could free up nine sailors to do something else, or turn the billets into the Department of Defense so we could help reduce the forces. The sea tractor tug brought twice as much power, so an aircraft carrier could be moved with three of them instead of seven.
Reducing the cost of tugboat operations, continued

conventional tugs, and it used 50% less fuel. The sea tractor tugs had a manatee guard installed, so that helped the Naval Station meet Florida’s Water and Wildlife Program standards.

Creating the Child Development Center

If you came down to Mayport, the first thing we'd probably do is take you to our brand new, state-of-the-art, $6.2 million Childcare Center. Last year we ran a deficit of $80,000, and had to balance the books by subsidizing the center from other welfare and recreation programs. The ESC sent a team to benchmark a successful childcare center in Brunswick, Maine. The team came back with 39 recommendations. We implemented many, and over the last 15 months we've been balancing the books—in fact, we've been able to reduce the fees to some of the families, so they're getting terrific care for less money.

Starting environmental programs

In 1995, the Chief of Naval Operations mandated that hazardous waste would be reduced by 50%. We did some analysis, benchmarked with a navy base in Point Magu, California, and started our own program. I gave a young officer who was leaving the Navy an empty quonset hut, four sailors who were injured and couldn't go to sea, a vehicle and $19,000 to buy some shelving. They set up a program, and last year saved the government over $1.2 million. We basically centralized the hazardous material program on the base. In the old days, every squadron, every ship, every shop had their own inventory of hazardous material. Someone had to manage it, someone had to distribute it, someone had to keep it from spilling, and I had to sweat it because when empty containers were thrown in the base dumpsters, the EPA would fine me. If units had a half gallon of paint they couldn’t use, they’d give it to me and I had to spend $1.85 per gallon to get rid of it. My waste costs had gone up to $800,000 in six months. What we did was to centralize the hazardous material. It freed up all the sailors who ran programs in the other shops. They didn’t have to manage it, they didn’t have to distribute it because we did that on a phone call, no paperwork, and within 45 minutes. Unused material is picked up and redistributed, and all containers are tracked and disposed of properly. It’s a good program, and we would show you that after the Child Development Center if you came to Mayport.

Setting standards

Other tools used to get data and feedback was the C2 form—compliments and complaints. We have one form, and anyone can fill it out with either a compliment or a complaint. The forms go back to the TQ Office. That data is collected and then sent up to the ESC for review as appropriate. It’s really difficult to determine how we’re doing. If you go to the Childcare Center we could tell you we’re making a profit. If you go to the Hazardous Material Minimization Shop they can tell you they’ve reduced delivery time.
CASE STUDY
Total Quality and Continuous Improvement at Naval Station Mayport

Setting standards, continued

from 60 minutes to 45 minutes. How do you do that? You set a standard. It’s very very
difficult to do that. The last three months before I left Mayport, we started doing that.
Now we have over 150 Quality indicators that are monitored and sent into the TQ
Office and then evaluated by the ESC. The real application of this is that if you set a
standard, say 15 minutes for a prescription at the dispensary and you’re making it in 15
minutes, everyone’s happy. If you make it in five, people are real happy, but maybe you
have too many people on that job. This system allows you to monitor where you are.
You might want to take one person off one service and put them somewhere else to meet
the needs of the station. It was easy to generate the concept, but it was difficult to come
up with valid standards.

Measuring up to the Florida Sterling Award: A benchmark of total quality

Florida’s Sterling Award was the mother of all benchmarks for Mayport. In
August of 1993, almost a year after we got into the program, the Sterling competition
was introduced to the ESC. I didn’t think that we could compete, nor did I believe a
DOD or federal installation would be eligible. After calling Governor Child’s office in
Tallahassee the Sterling office encouraged us to participate. It’s patterned after the
Malcolm Baldrige National Quality Award, uses the seven fundamental categories that
Baldrige looks at; there’s a heavy emphasis on leadership and also community responsi-
bility. We applied and received an onsite visit by the Sterling evaluators. In May of
1994 we went down to Orlando, and Mayport was selected winner of the Quality
Sterling Award for the Public Sector. I think the message here is that we took a Navy
program that was on the shelf, dusted it off, and implemented it. We benchmarked with
other Navy installations and civilian companies. We found out that we could compete
with private industry. This is a testimony on where the DOD and the Navy is going.
That’s what we did in 18 months; from then on it was Captain Cantfil’s show.

Captain Cantfil takes over as Commanding Officer, or “mayor” of Mayport

Captain Scott Cantfil—Because of the nature of running a naval station, I’ve
often been referred to as the “mayor” of Mayport. But you have to be careful about the
concept of “mayor.” You’re really chairman and CEO of a large company with subsidiar-
ies and holding companies. I’m in big business—the retail business, the hotel business,
the food service industry, housing. I provide fire and police protection. I run an airport
and a seaport. These are diverse “companies” that must be made profitable and moreover
must serve our main business, fleet readiness.

The only advice was to get training in Total Quality

Before I took command at Mayport, I was a helicopter pilot, which doesn’t
really prepare you for running a naval station, but I was very lucky. I enjoy a close
friendship with my predecessor RADM Tim Ziemer, who was also a helicopter pilot.
What he did at Naval Station Mayport was to lay the foundation for Total Quality, the theory and the structure, and he set the course for the initial successes, which were considerable. When I asked him what I should do to get ready to take command of the base, he told me to get training in TQL (Total Quality Leadership). “Don’t do anything else,” he said. “It’s the only thing you need to worry about.”

I signed up for the Department of the Navy’s senior leadership training on TQL and liked what I saw. Now it’s a mandatory requirement for major commands. Total Quality, or TQ, gave me the philosophy and tools I needed to manage a very large and diverse organization. I was also impressed by the fact that the base had won a quality award from the State of Florida. I wanted to keep the good work going.

TQ is very important to the commanding officer of a shore command simply because he or she cannot be the expert in managing many aspects of the station, such as meeting environmental regulations or negotiating collective bargaining agreements. In the fleet, as a senior officer, you are a recognized expert in your warfare specialty. But naval stations are complex entities, often with diverse functions competing against one another for resources and visibility. The best way to lead and manage is to gather your experts and link them through cross-functional teams so they understand both the complexity and interdependency of the station’s functions. Overall, you must have some kind of executive steering group.

Our Executive Steering Committee, or ESC, is made up of my key department heads and special assistants who are critical to managing command-wide issues. We deal with major policy issues and resources exclusively. People and money issues always require a cross-functional perspective and a business-based approach to making smart decisions.

The ESC meets every week for 2-3 hours. Leave and travel are the only valid excuses for missing a meeting. Since substitutes are not allowed, everyone tries not to miss a meeting, otherwise your voice and ideas will not be heard. We have an agenda, a timekeeper, and a facilitator. We deal with only two or three issues at a session so that we can deal with them in depth. We never interrupt presentations, we take prescribed breaks after each one, and then we regroup to decide what we need to do.

**He is the best sailor who can steer within fewest points of the wind, and extract a motive power out of the greatest obstacles. — Henry David Thoreau**
The ESC assesses itself

We used to do a wrap-up at the end of each ESC, critiquing the meeting itself. Now we spend half a meeting every six weeks assessing our performance and productivity. Each ESC member critiques their own and the overall team performance. We don’t beat ourselves up, but we do look for steady improvement. That’s how I found out as the Commanding Officer (CO) that I initially didn’t listen enough.

The Commanding Officer’s role in the ESC

Major policy and resource decisions are made by the ESC. However, I’m still the CO and wouldn’t hesitate to override a decision if I felt it was necessary. In two years though, I only overrode the ESC once and that was early in my tenure. The key is to keep the ESC focused on major cross-functional issues and not get bogged down in the nitty-gritty or mundane. It may take a while to research or collect data on a tough issue, but in the end consensus is usually reached. And then we have buy-in across the board. I still make unilateral decisions, particularly those that require quick action such as changing the security posture of the base. When these types of decisions impact resources, they persist whether they are discussed at the next ESC where budget or resource allocations may be redirected as a result.

The ESC agenda requires constant focus on team building and training

Our agenda covers base-wide issues—the budget, manpower, policy. Once a quarter the entire ESC goes off-site for one or two days, usually where we conduct a budget review, a strategic planning session, or focus on team building. This is essential with our changing membership. Even with a balanced mix of military and civilian ESC members, high turnover requires us to focus on training all the time. A big part of continuous improvement is to assess and analyze your performance. It keeps you from getting too comfortable. Team building helps assimilate new members quickly into the ESC by sharing our culture and clarifying our mission and vision. For older members, team building strengthens commitment.

Mission, vision, strategic planning and budget issues are paramount

Tying together strategic planning and the budget is essential. Strategic planning is the bridge to get from where you are to where you want to go. Consequently we’ve put a lot of time and energy into developing that plan. We took the basic Department of the Navy strategic planning model, looked at mission priorities for the base and asked: if we had one dollar left, what would we spend it on? The answer: harbor and air operations, our primary missions. We didn’t say that the other areas of concern, such as security, aren’t critical, but harbor and air operations are our top priorities. Our bosses must agree, because we rarely get cut in these areas.

But you cannot ignore the other base functions since they also affect our mission and vision. Our mission is fleet support, to provide “the finest service to the finest fleet.” Our vision consists of four important cornerstones: “We are the showcase of excellence...”
and port of choice for customer service, quality of life, environmental stewardship, and community involvement.” Our strategic plan is our guide for realizing both our mission and vision and the budget must be tied to this strategic plan.

**Strategic planning process**

Basically we start our planning year in July-August when we go through the President’s Quality Award application process, a great self-assessment tool. Self-assessment is the first step in the strategic planning process. We then revalidate our strategic plan in September, prior to the start of the new fiscal year and the upcoming budget process. Money is the primary driving force today, and strategic planning helps prioritize all the tough issues. We disseminate our strategic plan in the fall and then use it as the basis for our current year budget execution and coming year budget submission. We’ve developed a closely monitored budget timeline that integrates the various planning and budgeting events over the course of the year.

**Annual self-assessment is a very useful tool**

I’d recommend to any organization that it go through some kind of self-assessment on an annual basis. We use the criteria developed for the President’s Quality Award, which adopted the Malcolm Baldrige Quality Award criteria. You get a very good idea of your strengths and weaknesses. The criteria force you to ask hard questions of yourself and your organization.

**Departmental self-assessments were a critical step**

I’ve found that the more you work with self-assessment tools, the more you realize how valuable this information is. The process has been so beneficial to the ESC that I had every department do an internal assessment and brief the ESC on what they found. This was a critical turning point for the whole command. You have to formalize self-assessment and, for us, it works best as the first step to our annual review of the strategic plan.

**Feedback is also very important**

The reality is that you’re always self-assessing. We have a number of feedback systems in place, some used on a monthly basis, some on a quarterly basis. Data are being compiled throughout the year. The base collects over 200 measurements or metrics monthly, twice the number that the Atlantic Fleet requires us to send up the chain of command. Once a month all my department heads and special assistants review these quality indicators, analyzing the data so that we all have a strong understanding of what’s affecting the base.

*Give me where to stand, and I will move the earth. — Archimedes*
Learning to take and utilize the right measurements

What we need are measurements that capture the use of resources. Measures should be tied to performance, to business-based results, ultimately to the strategic plan. We tend, however, to measure what’s easy to measure, what’s readily available, but those data are not always meaningful. But data collection and measurement are an iterative process and one function that our monthly reviews provide is an assessment of what the data are telling us. So we’ve found that our measurements are slowly evolving, getting more useful.

We’re asked, for example, to measure shipboard movements as a way to determine if we are resourced properly. They’re easy to measure, but what do they tell you exactly? A large increase in ship movements doesn’t necessarily mean I am under-resourced. (And by the way, the number of ship movements has more than tripled between 1994 and 1996.)

We believe there are better measures—we call them proxy measures—to capture resource issues. For example, money spent on supplemental tug contracts and harbor pilot overtime will tell you more about resource allocation than the number of ship movements. If I have to rent civilian tugs to get the job done, I may be under-resourced. The operational tempo may be too high for the resources we have available. I say may be because you must also check the processes involved in scheduling movements to make sure you don’t have any obvious improvements here to be made first.

The importance of solid cross-functional teams

Cross-functional teams are indispensable in addressing big issues. Money and people are the only resources that ESC has to work with. Both are important and both are emotional. However, cutting people is always harder. My superiors directed us to cut our civilian FTE (Full-Time Equivalency) from 390 to 343. We chartered a team to come up with a staffing plan only to experience three false starts because we had both the wrong people on the team and the team was too large. We’d forgotten that team members should be those directly involved in managing the process, not just protecting turf.

We finally brought in five respected base experts from the human resources office, the union, the comptroller, manpower, and a senior department head. I then told them that this was their primary function in life. They were to meet 2-3 hours a day; everything else was secondary. They were told to develop a staffing plan that distributed the 343 civilian billets across the base in such a manner as to optimize Mayport’s goals as enumerated in the strategic plan. Secondarily, they were also directed to develop the implementation plan with this specific goal in mind: that anyone wanting to work at Naval Station Mayport would be found a billet. Clearly that meant that retraining for a different job or reassignment to a different department would be necessary in some cases. As you can imagine, this was a daunting task, given the large cut we were directed to take.

The beauty is that we were able to retain everyone who wanted to continue working here. It took a year to fully implement the changes, but not one single unfair
The importance of solid cross-functional teams, continued

Labor practice charge was filed and not one person was laid off. This illustrated for us the importance of communications, picking the right people for the cross-functional tasking, and coming up with a manageable group. Now we're applying the same strategy to the military side of the house. We haven't been asked to downsize that population, but we're ready if we must.

Environmental issues solved with another ESC

A second example concerns the environment. We actually have another ESC on the base because the issue is regional—environmental stewardship. I chair this ESC as well. Members include commanding officers from major Navy commands which represent all industrial and operational activities at Mayport and, significantly, the local District Director of the Florida Department of Environmental Protection. Without his help we would not be nearly as effective. He knows what we're doing, and we know the State's perspective; that's a big plus in making smart decisions with limited resources, for both the Navy and the state. Under this environmental ESC, one of our primary concerns is to eliminate oil spills. We chartered a cross-functional team to look at oil spills—what was causing them and how we could correct them. To properly study the problem, we didn't just task the shipboard operators to come up with solutions; we included refueling experts from Fleet and Industrial Supply Centers and the Public Works Center, regulators from the Coast Guard and Florida Marine Patrol, and members of my port operations and environmental staff. The bottom line: despite a huge increase in port loading and ship movements, we have dramatically reduced the gallons of oil spilled.

Benefits to the CO of applying quality

There have been a number of specific benefits to me as the CO from applying quality principles and methods to base operations. I'm much more knowledgeable than I would be if I were CO of a base that was operating in a traditional, hierarchical mode. With the team structure here, I have access to unfiltered information. I'm still not an "expert" in many areas, but it doesn't matter because cross-functional teams of experts are monitoring and improving on critical processes continually. That's the beauty of this approach.

I find that I can meet with people from other commands and discuss any subject—housing, budget, security—and speak in depth on these issues. I'm not smarter than the other people there, but I seem to know more because the cross-functional team structure here generates meaningful information.

Top leadership must be committed to the effort

Organizational change depends on top leadership. As TQ practices become institutionalized, committed top leaders are as critical to success as they were in the beginning. I could have easily undermined in days, probably in minutes, all that RADM Ziemer had worked so hard to establish between 1992 and 1994. The CO, or the CEO
Top leadership must be committed to the effort, continued

as the case may be, continues to be the key figure in all of this and remains the one person who can single-handedly destroy the movement. But I told the ESC that as senior leaders the onus is on them also to keep the effort going. A strong, properly functioning ESC will give a new CO a comfort zone while he or she is learning if they are inexperienced with TQ. Still, your actions are everything. I had to make sure that my behavior reflected my commitment to quality. If the ESC was really going to be the major decision-making entity on the base, it had to have power. I had to ensure that all of the difficult issues affecting policy and resources came before the members for decision, support, and execution.

Need to set a good example, show commitment

You need to give validity to TQ practices through your behavior; people pay attention to where you put your resources. We established a Quality Academy in 1994 to train and equip people before we asked them to work on teams. It brought together under one roof all of the TQL course offerings and some other important training we were developing. We also increased the TQL Office's permanent staff and indoctrinate everyone from the start that TQ is how we do business.

The benefits are worth the effort

TQ is difficult, takes hard work and commitment, but the eventual results speak for themselves. The traditional organizational structure won't work for many reasons. The new CO at Naval Station Mayport can look at the notes of the ESC (four years' worth), review the strategic plan, and have an O.K. feel for where the command has been and where it's going. The CO also has the benefit of the various feedback systems that will regularly give him trend data. He'll get to see the failures as well as the successes.

The ESC is the most important component

Most importantly, a key advantage of having an empowered, well-functioning ESC is the breakdown of traditional “rice bowls,” or territorial issues. The members see success as a whole for the naval station, not their individual departments. They may bring different viewpoints to the table on the same issue, but ultimately they understand the cross-functionality of policy and resource issues and the benefits to reaching consensus. The new CO will put his own priorities on issues, but the mechanisms are in place now to execute whatever those priorities are. In the end, the only constant is change and Total Quality lets you manage that change.

Author information

Rear Admiral Timothy Ziemer is Deputy Director for Operations, National Military Command Center, Washington, D.C. At the time of this presentation, he was a Senior Fellow with the Strategic Studies Group at the Naval War College, having recently been
promoted to Rear Admiral and moving on from being Commanding Officer of Naval Station Mayport. Admiral Ziemer entered the U.S. Navy in 1969 and was a helicopter pilot in Vietnam during the early 1970s. He later served as a pilot and commander of several helicopter squadrons before taking command of Naval Station Mayport in June, 1992. He commanded the station for 18 months and instituted a Total Quality philosophy that earned it the Florida State Governor’s Sterling Award in 1994. Some of his decorations include the Legion of Merit, three Meritorious Service Medals, Air Medal with 21 strike/flight awards, two Navy Commendation Medals, Navy Achievement Medal, and the Vietnam Gallantry Cross with Bronze Star.

Captain Scott Cantfil is currently Deputy Commander, Joint Interagency Task Force East, Naval Air Station Key West, Key West, Florida. At the time this article was written, he was Commanding Officer of Naval Station Mayport, a position he held from January 1994 – August 1996. Captain Cantfil is a 1972 graduate of the U.S. Naval Academy at Annapolis, Maryland, and earned his wings in April of 1974. Since then he has served as a helicopter pilot, attended the Naval Postgraduate School in Monterey, California, studied at the Naval War College in Newport, Rhode Island, and commanded several helicopter squadrons. After serving as the USS Abraham Lincoln’s navigator during deployments off the coast of Somalia, he reported to Naval Station Mayport, where he furthered the efforts toward Total Quality. His decorations include the Legion of Merit and Meritorious Service Medal.
From Incremental to Breakthrough Performance

Ellen J. Gaucher, Senior Associate Director & COO, the University of Michigan Hospitals, Ann Arbor, Michigan

Why Breakthrough Performance is Essential

These are tough times for the health care industry. We always need to be thinking of more effective ways to compete. We should be taking care of what really matters—our customers and their satisfaction. We must be prepared for the future. We must continue to focus on world-class quality. Finally, and most importantly, we have to keep our energy level up, sustain our efforts, and keep our eye on the ball. The only way we can accomplish all these things is to move beyond incremental improvements to real breakthrough performance (see Figure 1).

Figure 1. The Road to World Class Quality

A transformational agenda is not the sole solution

Most organizations have something they call a transformational agenda, which focuses on overhead reduction, downsizing, employee empowerment, process redesign, and portfolio rationalization. I understand that these are critical issues, but I do not believe that this agenda is enough to reshape an entire organization and prepare it for the future.
We’ve been successful at the University of Michigan Hospitals, and we’ve been recognized for that success. We won the State of Michigan Quality Leadership Award in 1994. We won the Health Care Forum’s Commitment to Quality Award. We’ve come a long way in changing the organization, and yet I still see a lack of attention to the details we know have to be in place.

I once believed that maybe in five years there would be an endpoint to transforming our organizations (see Figure 2). But transformation is regeneration—it’s not a one-time event. If somebody is not paying attention, always energizing and making sure that the passion is still there, then I think an institution will go into a denial phase. Leadership at all levels in the organization is critical if you’re really going to have a transformation.

**Figure 2. Organizational Transformation**

Key components of organizational transformation:

- Continual regeneration
- Not a one-time event
- Multiple strategies to reshape organization, re-skill people, and meet customer needs.

When I became COO in 1987, I was looking for a way to wake people up and say, “There’s so much more we can do, there’s much more we have to do to be successful.” Tichy and Devanna stated that because of triggers in the external environment, this new global playing field, there is now a need for a three-act play (Figure 3). On the left side of the figure are the organizational dynamics associated with each one of the three acts. On the right side are those individual kinds of things that need to happen in an organization.

Act One is the easy one, or so it seemed at the time: Recognizing the need for revitalization, transformation, and change; but also recognizing that there might be some resistance and an unwillingness to let go of some things that were done in the past; and all the while trying to avoid the quick fix.

Act Two: Create a motivating vision. Develop that vision and mobilize commitment. We began to make visible, sustainable change in my organization. About 20,000 people work on our campus, and many of them say, “You can’t change a place like this.”

They're wrong. Turning around a crisis in a large organization is like trying to turn a battleship. It takes a lot of space and it doesn't happen instantly, and yet we are still making a change.

**Institutionalizing change**

Act Three: Institutionalizing change. This is where we began to lie to ourselves, saying things like, “We no longer need all the trappings of TQM. We have really imbedded the changes into the system, so we'll do away with the Quality Councils and we'll make sure that the management team always has Quality on its agenda. We no longer need the measures, consistency and attention that we've had. We can now move on to other things.” The result was that the play stopped! Nobody seemed to realize that without that constant attention to detail, and following up on things, we did not reach a level of maturity—it was a level of nonexistence. I would walk around the organization...
and hear people saying, “Is our Total Quality stuff over? Have we reached the end of TQM? Now we’re doing reengineering?” That confusion and inconsistency concerned me. The play needs to repeat itself over and over again, every day, if it’s going to help us really transform the organization.

We’ve restructured so many times it’s pitiful. We’ve downsized, and hopefully we’ve done it in a humane and effective way. We’ve reduced the number of administrative people, but we’re not small enough (see Figure 4).

We’ve also become better. We’ve reengineered processes. We’ve looked at reorganizing and reinventing our organization in many different ways. We’ve used the continuous improvement process to help us move ahead. But again, it’s not enough.

Today we need to think about what health care should look like in the next 10 years. We need to think about how we are going to be different in the future, what that future is going to look like, how we are going to keep our attention focused on that difference.

Figure 4. Three Different Strategies for Transforming Organizations

We seem to be very good at first order change (see Figure 5), which are incremental changes within already accepted frameworks. They are logical, rational, minor improvements, but they are reversible and do not change the system’s core processes.

As we acquire more knowledge, things do not become more comprehensible, but more mysterious. — Albert Schweitzer
From Incremental to Breakthrough Performance

Figure 5. Three Levels of Change and Performance

**First Order Change:**
- Incremental changes within already accepted frameworks
- Minor improvements
- No change in system’s core processes
- Reversible change
- Logical and rational.

**Second Order Change:**
- Change in systems
- Breakthroughs of large magnitude
- Revolutionary “leap frog” jumps
- Irreversible change
- Seemingly irrational change based on “out of the box thinking”
- New paradigm.

**Breakthrough:**
- All managerial activity is directed at either breakthrough or control
- **Breakthrough** = Change, a dynamic decisive movement to a new, higher level of performance
- **Control** = Staying on course, adherence to standard, prevention of change.

Example of first order change: Reduced waiting in Admissions

One of the first changes we made, and one that I think every hospital in the US has done, is reduce time in the Admissions waiting lounge. However, there are so many cycle time improvements that we can make in health care—waiting to see your doctor, waiting for your lab tests, waiting for your x-rays—that we could spend the next 50 years working on cycle time reductions and probably still not meet everyone’s needs. We’ve not had any major changes in the system’s core processes (or key processes). That process in patient care, doctor, patient, nurse, really hasn’t changed too much at all. Reimbursement has changed, which is forcing us to operate in new ways, but we’re still not looking at the real heart of the business and the direction that we need to move in.

Second order change

What we really need is second order change. These are changes in systems, breakthroughs and revolutionary jumps. They are irreversible, seemingly irrational changes based on “out of the box” thinking, and they create a new paradigm.

Example: Redefining Admissions

For example, having people wait in an Admissions lounge is an idea that has no place in our future. Why should we only reduce the amount of waiting time, when the whole concept of waiting should be eliminated? We now register 99% of the people by phone, and if they need urgent care, we bring the Admissions clerk to the hospital room and do it in the room. This was the first quality improvement project that we did back in 1987, when our patients were waiting an average of 180 minutes in the Admissions
lounge. We now meet the people at the front door, just like at a fine hotel. You pay a lot more to come to your local hospital than you pay at a fine hotel, so why shouldn't we provide the same kind of services?

We're still not seeing the breakthrough improvements that we need in our organization. We really need to focus on improvement of quality and improvement of systems, and make irreversible changes. We have to think about incremental improvement, but we also cannot be loading up the processes. The problem is that, particularly in health care organizations, people tend to crawl into their box on the organizational chart and become square. They stay within those boundaries, rely on all the controls in the system, and are not innovative or creative. We need to get people out of those boxes to really create effective changes. We need to break out of that square mind-set and move on to a more effective way of thinking. I believe that we have a long way to go in my organization and in the health care industry to create new paradigms.

Barriers to Breakthrough Performance

I believe the reason that we don't achieve breakthrough improvement is because there are so many barriers, and the world is so chaotic for many of us. We have identified seven major barriers to breakthrough performance in our organization:

1. No perceived need to change.
2. Lack of systems thinking.
3. Avoidance of the need for planning.
4. Unclear, undirected, unmeaningful and untracked goals.
5. Unsupportive culture for change.
6. A weak customer focus.
7. Ineffective training.

Barrier 1: No perceived need to change

Change creates fear that must be channeled into a sense of urgency. We all like to say that we are change agents, that we make things happen in our organizations. However, there have been times when I've thought to myself, "We're going to do that? That doesn't sound like it's going to work too well." If I'm thinking this way, what must other people in the organization be feeling? It might be understated, but there's a tremendous amount of fear in an organization when it comes to change. When we sense that there's no perceived need to change, most of us jump up on the soapbox and give a rousing speech, which might make everyone feel good for a little while, but it won't help the organization change. I think we need to focus on creating a sense of urgency about doing it in little steps where people can follow what we'd like to do, and where we can help people make a difference.
There also is a problem with what I call the trap of success (Figure 6). We’ve been successful at Michigan for many years. We’ve made good margins, we’ve had a lot of money in the bank that we’re saving for a rainy day, and we’re feeling pretty good. But when you have unparalleled success, you also start to develop symptoms. You tend to become complacent, be very content with current performance, have an internal focus, low creativity and innovation, and allow bureaucracy to creep up everywhere. These symptoms can lead to a major disease. You could become the highest cost hospital in the state. You could become an institution that doesn’t focus on its customers, which could be the executives, the physicians, or the corporate leaders in the organization. You could have no innovation and creativity. This would be fine if there were no external challenges, but in our changing world it is easy to get caught up in a death loop. You’ll see a decline in performance, you’ll continue to do the same thing, things get worse and worse, and you’re caught in a downward spiral. You cannot keep doing the same things and still expect to see change.

Figure 6. The Trap of Success

Create a Sense of Urgency

So how do you create that sense of urgency, to get people to do things differently? One way is to focus on urgent, short-term goals to get people energized and focused in a new way (see Figure 7). Instead of talking about your problems and shortcomings, and fighting over whether the data is valid or not, think about creating that sense of urgency. Short term results are all so important. They give you a chance to celebrate, feel good about things, reach a plateau and then be able to go on to the next
Barrier 1, continued

level. It's easier to jump-start an organization that's moving in the right direction, rather than one that's languishing, where you're not able to get people moving at all.

Figure 7. Creating a Sense of Urgency

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<thead>
<tr>
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<th>Instead of:</th>
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<tr>
<td>• Urgent goals</td>
<td>• Problems and shortcomings</td>
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<tr>
<td>• Short term results</td>
<td>• Long term or strategic focus</td>
</tr>
<tr>
<td>• Accountable managers with</td>
<td>• Staff expert.</td>
</tr>
<tr>
<td>ownership for the process.</td>
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</tbody>
</table>

Give Managers Support and Authority

Another way to help people move in the right direction is to make sure that you have accountable managers. It is essential that you give them the authority, money, and tools to get the job done themselves, instead of just relying on experts. Consultants might come in and get things moving in the right direction, but when they go away and people start saying things like, “Is this program over? Aren’t we still doing this other thing,” it’s up to the managers to keep them focused.

Barrier 2: Lack of systems thinking

Focus on improving as a system, not as individuals (Figure 8). A lot of people say they’re systems-thinking, but if that is the case, then why do I hear everyone talking about personal or departmental goals? I was at a budget hearing where we had some big variances in the organization, and three of the executives, almost in unison, said, “My department is doing just fine, thank you very much.” It’s terrific if your little group is doing fine, but what about the rest of the pieces? Aren’t we all in this together, and shouldn’t we also be looking for solutions that go across the boundaries? We really have to be clear about what we want for the organization. We must prioritize our actions and the impact of those actions in decisions on the organization, not just on ourselves or on our divisions. Dr. Deming told us a long time ago that a system without an aim is not a system. When you have a group of unrelated departments and divisions doing their own thing, you’re not going to make the same kind of progress that you can make when you’re all working together. And unless we’re doing well as a system, we’re not doing well at all.

Figure 8. Barrier 2: A Lack of Systems Thinking

- People are primarily focused on personal or departmental issues
- There is a lack of “system” focus or aim
- Must prioritize organizational impact of actions and decisions.
Planning and communication are critical. I have heard so many excuses about why we cannot plan (Figure 9). However, if we want to empower people, they have to know what they're supposed to be working on and where they're supposed to be going. Have you ever walked around behind a team of examiners that's asking your employees: "What's the mission of the organization? What are your values all about? What particular goal are you working on that's going to help the organization do better with their key processes? What's a key process?" It can be downright frightening when you hear some of the answers. We think we've done such a good job, but we're not out there, up front as leaders, talking about the plans for the organization, the direction that we're moving in, or why it's so essential for everyone to know where we're going.

**Figure 9. Barrier 3: Avoidance of Planning**

<table>
<thead>
<tr>
<th>Excuses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Don’t have time; too busy</td>
</tr>
<tr>
<td>• Things are changing too fast</td>
</tr>
<tr>
<td>• Can’t predict anyway, so why bother</td>
</tr>
<tr>
<td>• Whatever will be, will be</td>
</tr>
<tr>
<td>• Don’t feel empowered</td>
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<tr>
<td>• Someone else will do it.</td>
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</table>

**Some Key Leverage Points for Planning**

We've tried to help people use leverage points to think and plan more effectively, to help their departments, divisions, managers, and supervisors, and move ahead. In our organization, there are several things that we think are critical (see Figure 10):

• **Key service factors.** What are the things that customers are complaining about?

We've spent millions of dollars on defining customers and their requirements, trying to fix things, and every time we have a focus group we learn something that we didn't know before. The closer that we get to our customers, the more we find out what they really need and require. So we ask people to make sure they understand the chief complaints in their areas, and to do something to help that's visible to the customers.

• **Diagnosis Related Groups (DRGs).** What are the key, high volume, high cost DRGs in your division, and what are you going to do about it? How are you going to work on those? How are you going to reduce the cost and improve the quality?

• **Cost per unit of service.** How can we reduce the cost per unit of service, which is critical today in health care. With more HMOs and cost cutting measures, we have to be able to compete on cost.

• **Budget overruns.** Where are you in variance, and what are you doing about getting it in line?
Figure 10. Questions for Leverage-Point Thinking

- What are the key service factors customers complain about?
- Which DRGs (Diagnosis Related Groups) are high volume, high cost, and most in need of attention?
- How can we reduce cost per unit of service?
- Where are the biggest budget overruns?

Anticipate, Innovate and Prepare for the Future

In the past it’s been OK for us to take up where our elders left off, to choose a role model, study them and think about learning and managing in the same way. Today that’s just not possible. The world is changing so fast, no matter what industry we happen to be part of, that just doing what someone else did isn’t going to help you. You need to be thinking ahead. Wayne Gretzky was interviewed and asked why he is such a successful hockey player, why he is able to score so many goals. He said, “I skate to where the puck is.” Now how can we teach our managers to be able to skate to where the puck is, to anticipate the changes, the needs of customers, the requirements of customers, the need to make the organization more successful?

Barrier 4: Unclear, undirected, unmeaningful and untracked goals

Create goals that are clear, meaningful and attainable. We have too many goals, many times they’re vague, unmeasurable, or people don’t understand them (Figure 11). We need to make sure that everyone understands how those goals interrelate in the organization. One day I was with the radiology department, and it finally struck me. I said, “One of the key processes we want to improve for the whole organization is diagnosis. How can we diagnose patients quicker and speed up the treatment process?” I asked them to think about processes in a triangle, all leading up to our goals as an organization, and I asked them what they could do to help. It was amazing. One of the chief radiologists said, “We can turn forms around, read them faster.” One of the technicians said, “We can get people through the radiology suite in a reasonable time and cut down retakes.” One of the clerical people saw that they could get the films back to the file quickly so that the physicians and nurses on the floor could use them for diagnosis. I took the triangle model to other department meetings, and it made sense to people.

Many times we talk about concepts. They’re very complex, but we tend to think everybody knows what we’re talking about. By the simple use of that triangle, showing how everything feeds up to that organization goal, I finally had the departments understanding how this could work in our organization.
Barrier 4, continued

Avoid goals that:
• Are too numerous
• Are too future oriented
• Are elusive, vague and unmeasurable
• Have unclear work plans for goal attainment
• Have poor methods of tracking progress
• Have unclear accountability.

Reward System Must be in Line With Goals

Another issue is that we say we have five or six key goals, but the only ones we really reward are those that are financial. I can tell you a story about a hospital I visited, and the people in the intensive care units had done a fabulous job of reducing the length of stay. The problem was that this was not in a very competitive health care market, and the payment basis was still by fee for service: The more you do for patients, and the longer they stay, the more money you get. Well, after they had taken five days off the length of stay on a particular complex case, the clinicians were sitting around the table as the CFO said, “Look at the budget. Look at the revenues. We’re $3 million under. What are you people doing?” They were doing what they had been asked to do; reduce the cost per case. I sat there mystified, wondering why the CEO and the CFO didn’t see it. The workers were thinking about the future. They were reducing costs now so that they could bid on HMO business or contracted business, and basically stay afloat.

Losing revenue for a few months while the organization is changing is fine, that’s the mind-set you want your clinicians to have. How do you think those clinicians felt when they left the executive table? Confused, depressed, dismayed. The financial goals somehow had superseded innovation, change, and moving ahead. It’s sad. This brings me to another sad issue, and that’s the cultural barrier in an organization.

Barrier 5: Unsupportive culture for change

Control and resistance must be overcome. In many instances, our cultures resist change with passion. There are two things that I think come into play: Control, all of our desires and abilities to control, and then the resistance to change.

Managers are Under a Large Amount of Stress

It is a confusing environment for managers today (Figure 12). Study after study has shown that managers’ activities are characterized by brevity, variety, and discontinuity. They’re hearing their leaders talk about things that don’t make sense. They’re bombarded on a daily basis with whatever the change strategy of the month seems to be. They can’t understand how these programs relate together. Therefore, they tend to check
Barrier 5, continued

out, hide out, hope that this is all going to blow over, that all the talk about budgets is
going to go away and they won't be threatened any more.

I was watching a football game recently—the quarterback threw three incom-plete passes in a row, and the team had to punt the ball away. But when he went to the
sidelines, the coach put his hands on his shoulders, and he put his forehead on his
helmet, and he encouraged him. How often do we do that with our managers? We need
to give encouragement to people, help them get to the next plateau, and do it on a
regular and recurring basis.

In times of turmoil, people tend to hide out even quicker. They don't want to
attract any more negative attention. If this happens all across the organization, and you're
seeing this kind of denial and resistance, you're going to go nowhere with your quality
program. And when times are very turbulent, I think each manager is working harder
and harder to be more and more controlling, so they can feel more comfortable. This is
the wrong attitude—we should be encouraging people to step out, to reach out, to get to
that higher playing field, to skate to where the puck is. We cannot have people retreat-
ing, retrenching, and hiding out; that contributes to the resistance to change.

Figure 12. Today's Environment is Confusing for Managers

The rate of change creates confusion because:
• Many new programs don't relate to each other well
• Managers are overwhelmed with data.

In times of turmoil:
• The sense of chaos and unmanageability grows
• Things seem out of control
• Leads to anger, discouragement, and doubt about personal effectiveness.

When times are turbulent:
• Managers work harder to try to control and bring order to their lives.
You Must Have Action to Move Ahead

We have a tendency to be perplexed with this resistance, but it's actually a very human thing. We should expect it, and find out how we can encourage people to get involved, get them excited about changing their job, changing the organization, changing their processes. We shouldn't be just standing back and saying, "Oh, there's resistance to change." We should anticipate it and deal with it if we want to be successful. Juran said that we keep managers so busy, and keep them focused on that desire to control, that they have no time for breakthrough. We should be counseling, coaching, thinking about breakthrough.

We've done cultural audits and learned three things: (1) We've had a strong desire to be perfect, after all we are THE University of Michigan. (2) People who don't make mistakes don't do much else that's exciting, either. They tend to follow the normal routine so that they don't get punished. (3) We publicly chastised a lot of people for screwing up, and then we wondered why people weren't taking risks.

We are changing ever so slowly, but if you ask people behind closed doors, "What are the rewards here for stepping out and doing creative and innovative things?" I think you'll find that there's still some fear and some inability to move ahead.

In the health care industry, one must always focus on the patient as a customer, even though understanding what the patients and the customers want is very difficult (Figure 13). We still really aren't as in touch with our customers as an industry as we ought to be. We have to back up from looking at our customer satisfaction surveys, and ask some real deep questions. I've been talking about health care as a non customer-friendly industry for a long time now. Many hospitals treat people like the state treats prisoners. They take away your clothes, they put you in a johnny or uniform for a day, or week, or month. They put you in a room with a stranger, they take away all your valuables, they tell you when you can eat, when you can take care of other bodily functions, and they think this is customer friendly. So what do hospitals do to make up for it? I hear people telling me things like, "These are the big changes we made in our organization. We now deliver the paper of choice to the customer in the morning." Most of them can't even read! They're hooked up and they're in for such a short period of time that that's not going to help one bit. We have to work on making people feel better about being in the hospital, about reducing the fear and the torment of people. We need to better define what people want from us. We have to put the customers in the primary position in the drivers' seats, instead of where they've been in the past, which is in the back seat.
Barrier 6: A weak customer focus, continued

Figure 13. Barrier 6: Weak Customer Focus

Developing a strong customer focus requires:
• Defining customers
• Defining requirements
• Assessing and closing gaps based on results
• Future orientation.

Barrier 7: Ineffective training

Don't just train for its own sake; train effectively and efficiently. I used to joke and say that in the early days of TQM we trained anything that would move. We took a couple of people from each department, trained them, and sent them back to their department. When they left the training program after five days, they were so excited, they had all the tools they really needed to change the organization. But when they got back to their jobs, their boss said, “Oh, you were at one of those Quality programs? Well don't think you're going to do that stuff here. I don't think it will work.” It took us a long time to figure out that we needed to get into those departments and train all the people together, have them work on departmental problems, make them understand the concepts more effectively and appropriately about processes and the key processes, and show them how to identify gaps, set up teams around them and close them up. If you don't teach people to use the tools and techniques with something that's meaningful to them, their skills, knowledge and insights will deteriorate, and you will eventually have to retrain them.

Overcoming the barriers to move from incremental to breakthrough performance

In addition to identifying the barriers, there are several other things one must do to move from incremental performance to breakthrough performance:

1. Develop the role of leaders:
   • Create a sense of urgency, and answer the question “why change?”
   • Create, craft and communicate the vision.
   • Set stretch goals—use benchmarking and goal attainment to challenge staff; also use short-term focused goals.
   • Encourage pilot projects with PDCA cycle to stimulate small wins and constant actions. Success breeds success!
   • Focus the change process by pulling all the pieces together and actively supporting the learning process.

2. Create a change management “tool box.” Include the following:
   • Problem solving skills
   • Seven management tools
   • Seven quality tools
   • Benchmarking process and skills
Overcoming the barriers to move from incremental to breakthrough performance, continued

- Reengineering
- Simulation
- Mathematical modeling
- Systems.

3. Use teams to manage. Include the following:
   - Key process teams
   - Self-directed work teams
   - Benchmarking teams
   - Reengineering/redesign teams
   - Clinical assessment teams
   - Management teams.

4. Focus the change process by pulling all the pieces together and actively supporting the learning process.

5. Assess the skills that are needed to change your organization, value innovation, creativity and flexibility, and recognize change is a constant concern among your employees.

6. Focus on results instead of activities. Many organizational change programs mistake means for ends and process for outcome.

Conclusion: It all starts with the individual

Achieving breakthrough is like any other major strategy. The process begins with the individual (Figure 14). You must begin to think about organizational values, goals and objectives that are above your own personal and departmental issues. You must commit your personal energy for change, and create the burning platform, whether it's at the department, the division, or the executive level. You must craft and communicate the vision of where you want to go with your organization, with your team. You must set stretch goals and expectations for people so they know what they're working towards, and they can celebrate minor successes along the way. You must personally focus on customers. And finally, it's up to you to keep that pressure on, and demonstrate continuous commitment to your actions and decisions. It's just like everything else in life: The transformational process begins with each one of us, and when we commit to making sure that we move from incremental performance to breakthrough, we can have a major impact on our organizations, and make a real difference.

It is the theory that decides what can be observed. — Albert Einstein

The difference between what we do and what we are capable of doing would suffice to solve most of the world's problems. — Gandhi
Figure 14. Achieving Breakthrough Performance Begins with the Individual

- **You** must step above personal interest, consider what is best for the long term for your organization.

- **You** must commit personal energy to:
  - Create the sense of urgency
  - Craft and communicate the vision
  - Set stretch goals and expectations for change
  - Personally focus on customers
  - Keep the pressure on.

- **You** must demonstrate continuous commitment through actions and decisions.

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Author information

Ellen J. Gaucher is Senior Associate Director and COO of the University of Michigan Hospitals, an 886-bed academic health center with several satellite facilities and over $550 million in annual revenues. She has more than 20 years of experience in senior management positions in health care organizations, and is a judge for the Malcolm Baldrige National Quality award. Since 1987, she has led the total quality process for the University of Michigan Medical Center, and most recently has been charged with primary care development for the hospitals. Gaucher is the coauthor of two books, *Transforming Healthcare Organizations: How to Achieve and Sustain Organizational Excellence* (1990, with R. J. Coffey) and *Total Quality in Healthcare: From Theory to Practice* (1993, with R. J. Coffey). She has also written numerous articles and book chapters, and lectures internationally on hospital management, systems development and quality improvement.
You Cannot Lead What You Do Not Understand—You Do Not Understand What You Haven’t Done

Myron Tribus, Partner, Exergy, Inc., Hayward, California

Introduction

It is now 16 years since America “discovered” W. Edwards Deming. GOAL/QPC had a major hand in helping America and the Western world with that discovery. For the first decade, a small band of enthusiasts, attracted by Dr. Deming’s power as a teacher, worked to spread the message. It was an uphill fight. In the first place, most of us were very new and our enthusiasm often out-ran our knowledge. Good judgment comes from bad experience, and we learned. We are still confused, but at least now it is on a much higher level.

Today, things are very different. When we speak of employee participation, no one calls us a bloody communist or a socialist. We can openly use such words as empowerment and worker self-inspection without being treated as hopeless innocents in a world we do not understand. We are all the beneficiaries of Dr. Deming’s life’s work and that hardy group of pioneers who joined him before it was fashionable to do so.

While there are still executives who remain unconvinced that quality is the way to go, there are also many who are persuaded that they must adopt the quality path. They are now in need of someone to tell them how to go about it. What an opening! Now you are invited to tell your CEO where to go!

I was once leading a tour group to Japan, and one of the executives in the group who was a fast learner summed up his needs this way: “What I most want from my management is a desire to learn and to put to work what they learn.” That was eight years ago. His wish is coming true for many enterprises. Learning to lead is an idea whose time has come.

The Challenges for Managers

Probably the most critical barrier to the transformation to a system of management by quality, would be the daunting task top managers face when they try to change their paradigms.
A paradigm is the lens through which one sees the world. If you have been successful at what you do, using a particular paradigm, it will be very difficult for you to change. Even worse, in the beginning you will only know about a new paradigm by looking at it through the old, comfortable one.

Imagine the conversation: “Yes, Captain Columbus, now that you have had a successful voyage, I can accept the fact that the world is round. But tell me, during your trip, what did you do to guard against falling off the edge?”

When you present the view of the world through a new paradigm, people tend to look at it through the paradigm they have. Without help, they are unable to see what you try to show them. It is possible to help them see what was invisible before, but they have to want to see. If they don’t, then it is necessary to develop a strategy that makes them want to see.

When people do not want to learn something, they often pretend they already know it and have nothing to learn. The great quality teacher, Shoji Shiba, often tells people that the biggest barrier to changing understanding is the following word: IAKI, which is not a Japanese word at all. It is an acronym for I ALREADY KNOW IT.

This frame of mind, brought on by too much success in the old paradigm, is one of the most common barriers to letting go of the old paradigms. Professor Shiba then goes on to say: “Yes, you may know it, but you do not know how to do it.

There is an enormous difference between knowledge and know-how. It is not enough to understand; you also need to know how to do. Today almost everyone who is in a managerial position has a college education. That’s part of our problem. The way we have been educated has warped our understanding of the world. That is one of the reasons why I often introduce myself as a recovering academic. College teaching leaves you with the belief you that if you understand something, you will be able to do it. Therefore, too many executives believe that if they listen to a lecture or read a book they will know how to do something. Well, let me remind you, nobody ever became a great lover by just reading a book or watching a video. You have to get in and do it. There are some things you can only learn through experience, and being a leader in quality is one of them.

Changing Paradigms

We form our paradigms in two ways: In school and by living. In school we are introduced to ideas by reading books, by listening to teachers, by taking tests and by experiencing very closely guarded classroom experiments. By living, we encounter stimuli and react to them. We learn, by trial and error, what works for us and we remember. In school, the attempt is made to have us look at the world through someone
You Cannot Lead What You Do Not Understand—You Do Not Understand What You Haven’t Done

On the street we construct our own.

S → I → R

Pavlov's View

When we learn things from the street, we tend to follow a Pavlovian process. You recall that when the bell rang, his dogs salivated. This is the learning pattern of an unfortunate child. Reaction follows stimulus without much thought in between.

One of the great pioneers in understanding how our paradigms are created, and might be altered, is Reuven Feuerstein of Israel. Feuerstein describes the Pavlov approach as producing a “Dog Culture.” Feuerstein draws the following simple diagram to explain the proper role of the teacher, mentor, advisor, consultant—the person who intervenes to help you change the way you see things, to alter the lessons you derive from your experience. In short, the person who helps you develop a new paradigm.

S ↔ H ↔ I ↔ H ↔ R

Feuerstein's View

In the Feuerstein approach we see a human intervening between the stimulus and the individual learner. The human helps the learner to understand the stimulus, to see it in context and to understand its meaning.

The human helps the learner to develop better ways to reason about what response to the stimulus might be most effective. The human also stands between the learner and the response, helping the learner to shape the response to make it consistent with the objectives of the learner.
Don Nordine has suggested a similar view with respect to changing both a person and a culture.

There is one more aspect which comes into play when we think about Feuerstein’s view applied to re-education of managers.

Feuerstein’s work has focused mainly on children and through prolonged intervention, an adult can have a strong influence on a child’s intentions. But when we approach the task of re-educating managers, the intentions of both the learner and the teacher (mentor, consultant, role-model, facilitator, etc.) come into play. These intentions are established long before the mediator and the learner come together.

I do not have the answer to the question of what to do to change the top management intentions. My only advice to the employees in such circumstances is to have a good resume handy. I have written on this problem under the title, “My CEO Does Not Understand Quality: So What Can I Do To Save the Company?”¹

In the remainder of this article, I shall concentrate on defining the problem of helping the manager who does wish to change, who does wish to learn and who wants to provide leadership. The others I leave to a consultant friend of mine: His name is Don Quixote.

What does the manager, skilled in the old paradigm, have to learn? What does
he or she have to unlearn? How will they learn? These are the questions I shall address from here on.

**The First Change... From Managing to Leading**

Jim Dalton of the National Society of Professional Engineers has prepared three video tapes to help engineering managers learn about leadership. In the tapes and accompanying books, Jim makes the distinction between managing and leading this way: Leadership is the ability to develop a vision that motivates others to move with a passion. Management is the ability to organize resources and coordinate the execution of tasks necessary to reach a goal in a timely and cost-effective manner. Again, quoting Dalton, leaders:

- Look ahead in time and see opportunities
- Understand how systems must adapt to take advantage of the opportunity
- Have a value system that overcomes adversity
- Convey the opportunity to others in a way that motivates them by affecting their values.

These descriptions of managers and leaders can apply to any activity, good or evil. However, when we speak of managing for quality or of quality leadership, we mean something more: Leaders and managers are expected to have that set of values and character traits which define decent human beings: Integrity, compassion, courage, and sense of ethics.

But being able to lead is not enough. Leadership without management leads to chaos. Management without leadership leads to stagnation. We therefore need to understand how the role of management is changed under quality principles. Here is a definition of the manager's job:

**The People Work IN a System.**

*The Job of the Manager is*

- To Work ON the System,
- To Improve it, Continuously,
- WITH THEIR HELP.

There are many implications in this definition. It differs from the classical definition of management: Management is the process of planning, organizing, leading and controlling the efforts of organization members and of using all other organizational resources to achieve stated organizational goals.

Considering the two definitions, several differences stand out:

- The word "controlling" is not in the quality definition. A quality manager leads people. A quality-oriented leader controls inanimate objects. He or she leads human
The words system and continuous improvement are not in the conventional definition. The phrase “with their help” is likewise missing from the conventional definition. The differences go deeper. Here is a small list of things managers need to learn if they are to be leaders in quality:

- How to recognize and define a system. How to describe the system to someone else so everyone is discussing the same thing.
- How to define what it means to improve. What does it mean to make a change in a subsystem so that the system as a whole is improved?
- How to go about improving a system.
- How to tap into the brain power of the people who are working in the system.
- How to create an environment in which people feel confident to help the manager, to feel free to make suggestions.
- How to train people so they can be response-able and, therefore, be responsible.
- How to listen.
- How to develop and deploy policies.

This list is not complete, but it is a good enough list for openers!

At the same time, there are implications for those who do the work. Here is a partial list of things they need to learn:

- To make observations and take data.
- To analyze data.
- To work collaboratively.
- To speak and to listen.
- To master the tools and techniques of quality by learning to use them in their own work (7 Methods of Ishikawa, 7 new tools).

Above all, people at all levels require a new self image of who they are and what they are supposed to do. This transformation is especially difficult for people trained in professions, such as engineers, physicians, attorneys, accountants, and especially MBAs. If I include universities, then of course, professors will have the most difficult of all adaptations to make.

The Challenges for the Manager Who Would Provide Leadership in Quality

I can identify three different challenges:

1. To Lead The Transformation Of Culture.
   This challenge involves helping everyone in the enterprise adopt the new paradigm of quality.

2. To Transform a Personal Style and Develop New Competencies
While keeping the ship on course, to learn new ways to navigate and to help the crew to learn new ways to do their duties.

3. To Lead in Continuous Improvement

Develop the ability to gather the data required to set priorities. To be able to plan for the future.

In the Ishikawa diagram above, I have described some of the competencies the
leader-manager of quality will need to develop, in addition to a knowledge of the business and its environment. I do not share the view of those who believe that all you need to know is how to manage and to lead. You also have to understand the business and its technology, or you will be unable to chart its course into the future.

It is true that if someone has established a company, you can move from running Coca-Cola to heading a computer company, but you are unlikely to be able to chart its course into the future if you do not understand how to read the signals from the marketplace and the frontiers of technology and, therefore, do not know how to guide the company into a long range future.

**Guiding the Transformation**

When we speak of a transformation, we have in mind two rather different considerations:

- People seeing things differently and acting differently.
- The enterprise doing things differently.

In the beginning I identified three sets of challenges. The first is to lead the enterprise in a transformation of culture. A successful transformation requires at least nine elements. When they are missing, there are always unfortunate consequences.

Nine links in the chain of transformation:

- **No Leadership, No Change**: People will not transform themselves nor will they change the way they do their work. They will not exhibit the commitment and passion required to make the change work.

- **No Aim, No Sense of Direction**: Without an aim, understood by all parties, people will not know what to do without asking for specific guidance. They will not be able to align their efforts.

- **No Philosophy, No Followers**: Without a philosophy that attracts people, there will be no followers. The philosophy must go beyond self serving to win their hearts and minds.
**NO VISION**

Confusion: Without a vision of what things are supposed to be like, people will not know what to do.

**NO STRATEGY**

False Starts: Many difficulties of restarting.

**NO SKILLS**

Anxiety: When people are asked to do something for which they feel unprepared, they become anxious and afraid.

**NO RESOURCES**

Frustration: Without resources, the sought-for goals will not be attained.

**NO REWARDS**

Bitterness: If the reward system is contrary to the objectives, people will feel betrayed and ill-used.

**NO ORGANIZATION AND NO COMMUNICATION**

No Coordination: People will find themselves working at cross purposes and unable to cooperate.

The leadership of the enterprise should see that all nine elements are in place.

It is not possible to tend to each of these nine elements on the first day. What is most important is that the top management demonstrate that it is working on all of these elements. This is why it is better to start small in one part of the enterprise and feel your way forward.

**Demonstrating Leadership by Doing**

Managers are apt to say, “Here is what I want you to do.” Leaders will say, “Follow me.”

Some years ago, when they were just starting their quality journey, I had the privilege of working with Tennessee Eastman, a company that recently won the Baldrige prize. I had no doubt they would eventually win it because they started out under two unusual men. Andy Anderson, VP for Manufacturing, and Troy Reid, the General Manager, provided genuine leadership. Andy told his supervisors one day, “We’re going to learn about quality and then we are going to teach it to everyone.” It was at a seminar...
that I heard Troy Reid say to his executives, “I’m learning a lot here and I am so glad you are here with me learning, too.” His commitment to learning was very strong and he displayed it by his actions. They led the way.

In closing, I find that I cannot improve upon what Homer Sarasohn told the Japanese in 1948, at the first seminar on modern management and the importance of quality ever given in Japan. He said:

A leader’s main obligation is to secure the faith and respect of his followers. To do so he must be the best example of what he would like to see in his followers. In the democratic sense a leader does not drive his people, nor does he make his people advance by kicking them in the back. Rather he goes ahead of the others, as if he were lighting the way through a dark tunnel, showing them the path to take and forging ahead so that the others can come after having full confidence that they are treading a firm safe path that will ultimately lead to the desired goal.

The characteristics required for leadership are: Creative power, high purpose, courage, honor, independence, tireless industry.4

I cannot see how to improve on that. He said it forty five years ago. It is time to listen, learn and apply.

Endnotes

Author Information
Myron Tribus, Ph.D., P.E., is a partner in Exergy, an enterprise specializing in the design of advanced high efficiency power production systems. Dr. Tribus retired from MIT in 1986, after 11.5 years as Director for Advanced Engineering Study. Before that he was Senior Vice President for Research and Engineering at Xerox. Prior to that he served for two years as Assistant Secretary for Science and Technology in the U.S. Department of Commerce. For eight years he was Dean of the Thayer School of Engineering at Dartmouth College where he introduced the Unified Engineering Curriculum based on engineering
design and entrepreneurship. For 16 years he was on the faculty of engineering at UCLA, and he spent two years on the faculty of the University of Michigan. He also worked as a design engineer for the Jet Engine Department of the General Electric Company, and, in 1958 he hosted the television show Threshold for CBS in Los Angeles.

Dr. Tribus has published over 100 papers and two books. He has received five awards for technical papers and two honorary doctorates. He holds a BS in Chemistry from the University of California, Berkeley, and a Ph.D. in Engineering from UCLA.

In recent years, Dr. Tribus has become known for his writings on Dr. Deming's philosophy of management, and for actively promoting the growth of quality management in education and in community.
Malden Mills Weaves Success From Strong Ties to Workers and Community

Aaron Feuerstein, President and CEO, Malden Mills Industries, Lawrence, Massachusetts
Michael Clark, Assistant Editor

The Malden Mills story is one about leadership, partnership, and spirited determination. It’s about a CEO who produced a profitable company in an industry and location where “experts” said it couldn’t happen. And it’s about how an entire community rallied behind him, the business, and its workers after a disastrous fire last year.

Introduction:
Headquartered in Lawrence, Massachusetts, about 25 miles north of Boston, Malden Mills is an established global leader in the textile industry. Its success has been mostly due to its wildly popular Polartec® fleece. The patented synthetic fabric accounted for about half of the company’s total $400 million in sales this year. The company is also a leader in community. They continue to pay their workers better than the industry average, work closely with union leaders, contribute to local charities and have established urban renewal programs.

The Malden Mills Story:
This family-owned company was founded in 1906 by Henry Feuerstein, grandfather of Aaron Feuerstein. Malden Mills thrived during the World War II era, but faltered, as did so many others, when the war was over. However, while most of the mills fled New England for cheaper labor in southern states and overseas, Malden held its ground. With the exception of a failed move into the fake fur market in the late 1970s, the company has thrived. While most of their competitors have competed on price, Malden Mills relies on its skilled workforce, offers higher quality, has more diverse and innovative products and listens carefully to the needs of its customers.

A Devastating Fire Destroys Three Factory Buildings:
One of the worst fires in state history, the blaze reduced three buildings and 750,000 sq. ft. of space to rubble. The fire struck the complex in Methuen and Lawrence on December 11, 1995; about 1,900 employees were immediately put out of work, and 33 people were injured.

Feuerstein announced the next day that he would rebuild as quickly as possible, and put everyone back to work as operations got back on line. He also promised to continue paying his employees their full salaries and provide health benefits. The city, workers, friends and neighbors rejoiced.

Community and Government Support:
When the mill suffered one of its biggest setbacks, people responded to Feuerstein’s leadership and rallied to help. The influx of charity and support from neighbors, government, and even customers was enormous. Local hospitals offered free care to victims of the fire, restaurants gave discounted meals to workers, the local Chamber of Commerce raised over $150,000 for the unemployed and the laborers’ union donated $100,000 to start the rebuilding effort. Emergency assistance funds poured in from the state and federal governments.

Concluding Comments by CEO Aaron Feuerstein:
Feuerstein’s value system is the same as it was 50 years ago, and he maintains that his actions, considered heroic by today’s standards, should be the norm. The legacy of his family, the health and well-being of his workers and the community, and long-term profits are all important to him. By rebuilding, and continuing to take good care of his employees, he is convinced that these things will all be preserved for a long time to come. He says that he has and will continue to do the right thing in a moral sense and in an economic sense, because he has a responsibility to the shareholder, his family. “And I’m sure, in the long run, that will give us a profitability that all the mills who fled for cheaper labor will not enjoy,” he says.
As society demands more and more from our universities, and in particular, the University of Wisconsin–Madison, systems thinking has been found to be a helpful approach to addressing these new challenges. The Office of Quality Improvement at the university has found that thinking of their entire organization as a system, rather than a heap of parts, is essential in satisfying students, professors and society in general.

There are five major examples where systems thinking has advanced the university's mission while maintaining the strengths of its autonomous structure and culture:

- **Aligning while fostering chaos in a research university:** In a knowledge-creating organization, researchers must be free to explore and discover the unknown. However, they must also maintain an alignment with the overall mission and vision of the university. In addition, some parts of the mission and vision need more alignment than others, but Nobel Prize winners are the ones who really break out of the barriers. Systems thinking has helped in setting priorities, building themes for the future, and creating innovative learning environments that foster creativity within a general sense of direction.

- **Time-to-degree or satisfactory progress—a systems view of degree completion:** The length of time-to-degree was a problem, and looking at its systemic effects helped to identify and solve it. Simply speeding up the process would not work; quality advising helps, but that’s not the only solution. Mapping out the process and identifying barriers and complexity are critical to allowing students to make satisfactory progress.

- **Advising—a systemic problem with systemic responses:** As the time-to-degree issue was addressed, the issue of advising was seen as integral to the process. The problem was systemic, and the solutions needed to be systemic as well. Professional advisors were hired, a cross-college system was designed to reach students from day one, and innovative, daily advising was created through links between faculty and students.

- **Engineering curriculum as a system:** In order to design an effective curriculum, the university generated a list of indicators. Upon realizing that most of these indicators were university-wide issues, they began to view the curriculum as a system. They identified areas in need of improvement and worked beyond traditional boundaries between departments and colleges.

- **Remaking history—an academic department as a system:** The university's history department had problems with coordination and communication that were 20 years old. Systems thinking helped solve those problems. Individual jobs within the department were once seen as independent, individual, and separate. When core processes were mapped out, necessary improvements could be made.

The university is one big system, but systems thinking has helped address particular issues. A system is like a mobile—touch one part and the whole thing moves. As these examples have shown, there is an interdependency in this organization, like many others, that demands a systems approach to problem-solving.
Total Quality and Continuous Improvement
at Naval Station Mayport

Rear Admiral Timothy Ziemer, Deputy Director for Operations, National Military Command Center (Joint Staff), Washington, DC
Captain Scott Cantfil, Commanding Officer, Naval Station Mayport, Mayport, Florida

Naval Station Mayport has been on the journey toward Total Quality since 1992, having much success along the way. It received the Achievement Award from the President’s Quality Award Program in 1995 and 1996, the public sector equivalent of the Malcolm Baldrige National Quality Award. It also won the Florida State Governor’s Sterling Award for Quality in 1994, the first public sector organization in Florida to be so recognized.

The station, bordering on the Atlantic Ocean in Northeast Florida, was consolidated from two separate bases in 1992 under the command of then Captain Tim Ziemer. He implemented a Total Quality philosophy as a way of managing the change, and 18 months later, Captain Scott Cantfil took over, leading the base even further.

After 24 years in the Navy, Captain Tim Ziemer, a helicopter pilot, was given command of Mayport Naval Station. It soon became clear that with so many major issues to deal with, and problems that seemed unsolvable, he would need help. He had received some training on Total Quality Leadership (TQL) a few years earlier, and decided that this would be the way to make things work.

He assigned a Lieutenant Commander to be his Total Quality Coordinator, set up an Executive Steering Committee and they were on their way. Strategic planning was a big undertaking, but a necessary one. Mayport has many examples of success they can attribute to Total Quality. Ziemer’s success culminated with the station's winning Florida’s Sterling Award for Quality in 1994.

Captain Scott Cantfil took over the station to find that there was more to Total Quality than simply maintaining the status quo. With so many diverse operations to manage, the new commanding officer had to prove his commitment to TQL and become actively involved in leading the organization beyond its perceived limits.

Captain Cantfil worked hard with the Executive Steering Committee and the organization as a whole, demanding constant focus on team building and training. Mission, vision, strategic planning and budget issues were made a priority. Self-assessment was instituted in every department as part of the continuing improvement process. Cross-functional teams were created and were handed difficult, important problems to solve.

The hard work has paid off. In addition to winning awards in 1995 and 1996, he also learned many lessons that can be applied to any complex organization:

• Total Quality is difficult and takes hard work, but the results are worth it.
• Top leadership must be committed and must show that commitment.
• Feedback systems are essential and self-assessment is extremely important
• An empowered steering committee is critical in breaking down territorial issues that can stifle creativity and halt progress.
From Incremental to Breakthrough Performance

Ellen Gaucher, Senior Associate Director & COO, University of Michigan Hospitals, Ann Arbor, Michigan

Health care providers are facing tough times, and are in need of more effective ways to compete. At the same time, they need to be taking care of what really matters—customers and their satisfaction. Incremental improvements are not enough to reshape an organization and prepare it for the future. The only way to do that is through breakthrough performance.

The University of Michigan Hospitals has been working toward achieving a high level of breakthrough performance, but despite winning quality awards in the last few years, Ellen Gaucher says that the organization still has a long way to go.

One way of looking at organizational transformation is to see it as a three-act play. Act One involves recognizing the need for revitalization, transformation and change, but also that there might be some resistance to that change.

Act Two involves creating and developing a motivating vision for the future. Sustaining the change is critical, and the vision can help do that.

Act Three involves institutionalizing change, making change an integral, constant part of the organization. It demands continual revitalization and commitment.

There are also different levels of changes and performance. First Order Change refers to incremental improvements, or things that do not affect core processes and are reversible.

Second Order Change refers to changes in the systems that are not reversible, and may involve some breakthrough. Sometimes new paradigms are set and there are revolutionary “leap frog” jumps.

Breakthrough really refers to all managerial activity directed at dynamic change and movement to a new, higher level of performance. There are no boundaries, and everyone thinks “out of the box.”

There have also been several barriers to achieving this high level of breakthrough performance:
1. No perceived need for change.
2. Lack of systems thinking.
3. Avoidance of the need for planning.
4. Unclear, undirected, unmeaningful and untracked goals.
5. Unsupportive culture for change.
6. A weak customer focus.
7. Ineffective training.

In addition to identifying the barriers, there are other things one must do to achieve breakthrough:
1. Develop the role of leaders.
2. Create a change management “tool box.”
3. Use teams to manage.
4. Focus the change process by pulling all the pieces together and actively supporting the learning process.
5. Assess the skills that are needed to change the organization, value innovation, and recognize that change is a constant concern for your employees.
6. Focus on results instead of activities.

Achieving breakthrough begins with the individual. It requires personal energy at all levels. It demands focused efforts and constant commitment. However, all of these things contribute to making a major impact on an organization, and making a real difference.
In the 16 years since America “discovered” Dr. Deming, much has changed for managers. Empowerment, self-direction and quality are no longer considered radical. But there are still executives who do not believe in the quality path, and those who do are often in need of direction and instruction.

There are many challenges for managers today if they want to adopt a system of management by quality. There is the daunting task of trying to change their paradigm, which is the lens through which one sees the world. Often, a person will learn a new paradigm, but will still view it through their old paradigm. Other times, there is a tendency for a manager to think that he or she already knows something. But there is a difference between knowledge and know-how, and it is not enough to simply understand—one must know how to do.

People learn by responding to stimuli. In most instances, there is human intervention to help the individual understand the stimulus and shape an appropriate response. These concepts can be expanded and applied to changing the attitudes of a person, a culture, or in this case, a manager. They can help a manager learn about quality, and how to apply that knowledge.

For the manager who wishes to learn about quality and shift their paradigms, there are several things they must learn. But first, they must learn the difference between leadership, which is the ability to develop a vision that motivates others, and management, which is the ability to organize resources and coordinate the execution of tasks.

There are three different challenges for the manager who would provide leadership in quality:

1. To lead the transformation of culture.
2. To transform a personal style and develop new competencies.
3. To lead in continuous improvement.

Transforming the culture of an organization requires at least nine elements. When they are missing, the consequences are unfortunate:

- Leadership and change
- Aim and direction
- A philosophy that attracts people
- Vision
- Strategy
- Skills
- Resources
- Rewards
- Organization and communication.

Most importantly, for managers to be successful with quality, they must demonstrate by doing. They must listen, learn, and then apply.