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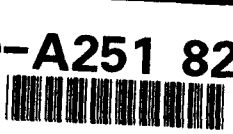

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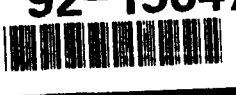

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Leadership and Total Quality Management

An Individual Study Project

by

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Abstract

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I. Introduction

"Leadership is very different. It does not produce consistency and order, as the word implies; it produces *movement.*"

John Kotter – *A Force For Change*[1]

As individuals rise to positions of senior leadership, they leave the world of certainty, small group environments, focused mission areas, familiar technical competencies, and enter a world of ambiguity and complexity. Specified tasks lead to many interacting implied tasks which often generate unintended consequences. Whether you are a corporate leader attempting to maintain market share and profitability or a senior/general officer serving in a non tactical environment, ambiguity is the norm rather than the exception. The job of leading becomes one of goal setting, persuading, visioning, motivating, and constantly communicating so that everyone moves in the same or similar direction. The leader's job is to counter the threat of confusion.

It is only through better performance with existing resources that more work can be accomplished whether the work is supplying parts from a depot, processing travel vouchers, or building rockets. There are no more additional people to be thrown at the workload. Leaders must make do with the people who remain on the rolls after reductions in force and early retirements and they must figure out new ways to get the mission accomplished. Today's austere resource environment demands we 'work smarter'—a fact of life for today's leader anywhere. The TQM philosophy advocated by W. Edwards Deming and others, and subsequently adopted by the DoD, yields productivity through improved quality, but not without first causing an organizational culture change. A participative employee/management relationship is at the core of the TQM philosophy, combined with strong leadership commitment to change—change for the sake of improvement.

The leadership and management skills required today at the top of large and complex organizations require extraordinary leader commitment, innovation, and new ways of working to meet the resource challenge of doing more with less. For leaders to survive the future, they must understand what skills and tools are needed to lead and get the job done. The payoff for the leader is better organizational performance, mission success, and organizational survival. The larger and more complicated the organization, the more important it is for the organization to have a philosophy and culture which continuously points it in the direction of improvement. Whether or not leaders choose to implement TQM, their organizations demand and expect good leadership to guide them through rough times. Failure to do so will eventually lead to the organization's downfall.

This paper will focus on four things: First, the leadership skills required of senior level leaders (leaders at the top one or two echelons of an organization[2]), and the role of leadership when implementing TQM in an organization. Second, two examples of successful TQM implementation, one in government (DoD) and one in a defense-related industry, will focus on leader actions which contributed to organizational improvements. Third, the paper will suggest actions and techniques which may prove helpful to leaders when implementing TQM. Finally, given a leader's desire to implement TQM, some comment as to why it will not succeed without a strong leadership commitment to TQM at the highest level of leadership within the organization.

"The bigger any bureaucracy becomes, the more it is apt to yield to a kind of incestuous relationship with itself, with middle management devoting its time to justifying its existence to itself and losing touch with the outside world."[3]

II. Leadership, Management, and the Balancing Act

The photograph of an Army officer clad in Battle Dress Uniform (BDU) clutching a briefcase as his unit boards a C-5 airplane for a deployment depicts the essence of MacNamara era policies that caused a recognition within the Army that officers must manage as well as lead. Senior leaders in the Army are more apt to find themselves leading large bureaucracies, which are predominantly civilian organizations, and not troop units which are about to deploy. Leaders appointed to command or direct non-tactical activities, such as a large acquisition or logistics command or Army Staff field operating agency, often become mired in the complexities of a management information system, find themselves directly leading a handful of the several thousand people in their activity, and are continuously challenged to accomplish obscure and difficult tasks. What then should leaders do to create the necessary movement to accomplish the mission successfully and how can they keep improving the organization to prevent it from becoming preoccupied with itself?

Army Field Manual 22-103, *Leadership and Command at Senior Levels*, comments on management as "...the conceptual aspects of behavior in activities such as planning, organizing, or budgeting."[4] In the mid-seventies, Harvard University professor Abraham Zaleznik began writing about the differences between management and leadership. He described the manager as essentially an organizational problem solver. No matter how competent the manager is, the leadership ability of managers is limited. Managers tend to lack the ability to visualize, communicate goals, and generate value in work.[5] Warren Bennis of UCLA, a noted authority on leadership in both the private sector and government, characterizes leaders and managers this way "...leaders are people who do the right thing; managers are people who do things right."[6]

Bennis' description of managers and leaders may be simplistic because it doesn't allow for a balanced treatment of management and leadership. Craig Hickman argues both leadership and management are needed by organizations to be effective. He describes management and leadership in terms of the mind of the manager and the soul of the leader. The manager thinks in terms of strategy and policy formulation, worries about business problems, and prefers incremental strategic gains. The leader looks forward to strategy implementation, is concerned with culture building, and welcomes problems. The leader embraces sweeping change and worries more about how much influence he can bring to bear to shape direction and organizational priorities.[7] Hickman summarizes "...to create empowered environments and organizations, managers and leaders need not betray or ignore their unique talents and abilities, but they must learn to orchestrate every different perspective and orientation along the management/leadership continuum into a harmonious symphony."[8]

Charles Manz espoused the concept of "superleadership" which is a behavior based way of influencing others to lead themselves.[9] He described superleadership as "...leading others to lead themselves".[10] Manz's thoughts on self leadership are at the core of the TQM philosophy which focuses on empowering individuals and management to work together in a participative environment. As stated by Secretary of Defense Carlucci in his TQM posture letter of 30 March 1988, "...TQM is a concept that demands top management leadership and continuous improvement in the process activities."[11] In TQM, people become empowered to fix processes and serve as process action team members and leaders to analyze processes for improvement. A leadership theory which closely matches the Army's definition of executive leadership is that of Harvard University's John Kotter, who believes good leadership moves people to a place in which both the led and the leader are better off.

Kotter writes that leadership in a complex organization achieves change by:

- Establishing direction—developing a vision for the future.
- Aligning People—creating coalitions of people to accomplish the vision.
- Motivating and Inspiring—keeping people moving in the right direction

by appealing to basic, untapped, human needs. Kotter's view of successfully led organizations are those that meet their current commitments by combining the three leadership elements described above with the traditional functions of management:

- Planning
- Budgeting
- Organizing
- Staffing
- Controlling
- Problem Solving[12]

In a TQM environment, leaders provide a direction for the future by mutually developing with their workforce a vision statement of where they see the organization in the future. Leaders align their people to the vision through relationships with them in executive steering committee meetings or through interaction with quality management boards. Leaders continuously motivate and inspire their workforce by praising improvements rather than causing fear when things go awry. The Army's pamphlet on executive leadership parallels Kotter with the exception that visioning is specifically defined as "...in a time frame well beyond 10 years."[13] The similarities in leadership principles found in the writings of Kotter, Hickman, and in the Army, suggest a balance of management and leadership are required to be effective. More importantly, when implementing TQM, all facets of leadership and management apply. Both industry and the Defense Department are in various stages of implementing TQM believing it will lead to improved quality and greater productivity. Leaders of organizations undergoing a TQM transformation will be required to use both leadership and management skills but because TQM demands a culture change, is a

philosophy and not simply a program, there is a strong emphasis on leadership during the TQM implementation phase.

III. Total Quality Management and Leadership

Dr. W. Edwards Deming, an accomplished statistician within the government and private sector, revolutionized post war Japanese managerial thinking by advocating continuous quality improvement by reducing process variation. His teachings caught on in Japan to the point where Japanese products eventually became synonymous with good quality. Deming maintains increased quality is obtained through the process of continuous improvement. He believes it's nothing but folklore that in America the notion of quality and production are incompatible. In its simplest application, by reducing waste in a manufacturing process man hours poorly spent can be transferred to the manufacture of quality goods. To illustrate his theory, Deming offers this example:

> "Defective output of a certain production line was running along at 11 percent (news to the management). A run chart of proportion defective day by day over the previous six weeks showed good statistical control of the line as a whole. The main cause of the problem could accordingly only be ascribed to the system. This was also news to the management. The statisticians made the suggestion that possibly the people on the job, and inspectors also, did not understand well enough what kind of work is acceptable and what is not. The manager of the production-line and two supervisors went to work on the matter, and with trial and error came up in seven weeks with better definitions, with

examples posted for everyone to see. A new set of data showed the proportion defective to be 5 percent. Cost, zero. Results:

Quality up
Productivity up 6%
Costs down
Profit greatly improved
Capacity of production line increased 6%
Customer happier
Everyone happier

...an example of gain in productivity accomplished by a change in the system, effected by management, helping people to work smarter not harder."[14]

The lesson of this Deming illustration is that the simple act of *clarification* of expectations can make a great difference in the outcome of a process. Through statistical analysis of a process, and by graphically portraying the defects for all workers to see, as progress is charted, both workers and management benefit through the gradual and continuous process of improvement. But the leadership implications in the brief Deming vignette are the *willingness of management* (read "leader" support) to improve the process. Multiply the Deming example a hundred fold over many different processes and the potential gains become significant. Also, the Deming philosophy has an egalitarian appeal to American workers. It sends the message management (read "leader") is receptive to change, and wants to lead in a participative manner; thus creating an environment where employee suggestions to improve the process are always considered.

Deming's theory is codified through the fourteen points (italicized below) contained in his book *Out of the Crisis* :[15]

1. *Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business and provide jobs.* The leader must initiate the action and take the first step by expressing the desire to improve through visioning. Also, mutually developing a vision statement with

employees, causes them to buy into the vision of continuous improvement which becomes the mechanism to remain competitive and to survive.

2. *Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, learn their responsibilities, and take on leadership for change.* Just performing the functions normally associated with management—planning, budgeting, staffing, organizing, controlling, and problem solving, is not enough. With TQM, managers must also be leaders. They must be receptive to the challenge of incorporating change, empowering their workforce to make improvements, and they must become involved with process analysis.

3. *Cease reliance on mass inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.* "Inspecting in" quality doesn't work because by the time the inspection function is performed, the product has already been built or the service provided. Process analysis provides points in the process where quality can/should be designed in to reduce a variation in quality.

4. *End the practice of awarding business on the basis of price tag. Instead minimize total cost. Move toward a single supplier for any one item, on a long term relationship of loyalty and trust.* This is a major change in accepted business practices. It will take strong leadership to counter the tendency to buy cheap because paying less may seemingly make more sense; however, repetitive buys of materials that non-conform, or materials which require replacement or rework, in the long run cost more.

5. *Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.* Deming wants management to consider everyone involved in the process "...improvement of the process includes better allocation of human effort."[16] Leaders divvy up the resources, appoint people to leadership positions, and decide how the organization functions. It's

a leader's decision to get everyone involved, review procedures, gather comment for improvement, and then act on the suggestions

6. *Institute training on the job.* Leaders approve budgets and establish priorities for training and education. If the leader is not committed to a TQM implementation, then resources may be withheld. Leader commitment to ensuring everyone in the organization is educated on the philosophy of TQM typically entails a commitment to provide a one week introductory course to several thousand people. The leader must support the start-up education costs.

7. *Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of an overhaul, as well as supervision of production workers. Only leaders can institutionalize leadership within their organizations.* Deming's focus on institutionalizing leadership is a reflection of the importance he places on it as a mechanism to motivate and encourage the workforce. Leadership is essential when transforming a culture based on participative management. The notion of institutionalizing leadership (something which has been fundamental to the Army) is personified by General Electric Chief Executive Officer Jack Welch, who emphasizes changing managers to leaders "...In the last several years our challenge has been to change ourselves—an infinitely more difficult task that, frankly, not all of us in leadership positions are capable of." Mr. Welch believes the days are gone at GE when management could force work out of people by being tyrannical and autocratic. He desires GE managers to have the self confidence to empower the workforce.[17]

8. *Drive out fear, so that everyone may work effectively for the company.* Leaders cause most fear in the workplace so they can eliminate it. Leaders have the power to cause insecurity in subordinates by criticizing, evaluating performance, stifling promotions, and ultimately terminating employment. They can either tolerate or stifle divergent opinions. Leaders create workplace rules and enforce the rules for

compliance. Employees fear receiving poor appraisals, and officers fear bad efficiency reports. In a climate of fear, mistakes remain hidden less the uncovering of the mistake brings the leader's wrath or the hunt for a scapegoat to get rid of or "fix" the problem. In a TQM environment mistakes are not swept under the carpet. Mistakes are analyzed for corrective action or process improvement. The leader nurtures the workforce and joins it to cause improvement. Fear has no place as an employee motivator.

9. *Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.* Interdepartmental or cross functional rivalry and turf protection, whether on a military staff or within a corporation, impede improvements. The TQM philosophy demands multifunctional participation on quality management boards and process action teams to preclude the imposition of functional barriers. It's the leader's role to ensure subordinates understand the need to remove barriers to communication. If necessary the leader needs to take direct action to remove barriers which detract from the improvement process. Poorly made widgets are not the responsibility of the quality department alone. The engineering and production departments share in the improvement process. Timely delivery of mail in a battalion is as much a function of the S4 ensuring the unit has vehicles available to pick mail up as it is the S1 ensuring he has clerks trained to distribute it. If mail delivery is the process to be improved, then there should be no barriers between staff sections which block the improvement process.

10. *Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, since the bulk of causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.* Only the leader can eliminate workforce targets which have no meaning. Unrealistic targets, such as Geneen's target at ITT in the early 60's to improve profitability annually by 15% was

met by his managers who cut costs by laying off people or by buying cheaper materials of lesser quality. Slogans without substance lead to worker disillusionment because it may be beyond their power to fix something. The banner calling for "zero defects" has no meaning unless each aspect of the process is improved enabling a zero defect environment. Zero defects is much more than worker accuracy in fabricating a widget—it's the totality of the process from design drawing to the quality of the material purchased.

11. *Eliminate work standards (quotas) on the factory floor. Substitute leadership.* No one but the top person in the organization can change or eliminate the quotas. Demanding a level of output or production must correlate to the capabilities of the leaders and workers involved to get the process to yield a certain level of performance. In the example of unit mail delivery, to demand mail delivery to individual soldiers by noon each day may be beyond the scope of the mail clerk's ability to cope with mail volume, transportation shortfalls, or a soldier's availability to receive mail.

12. *Remove barriers that rob people of pride of workmanship. This means abolishment of the annual review or merit rating and management by objectives.* The annual appraisal system is viewed by Deming as an anathema to pride of workmanship and as mentioned previously, can instill fear among workers. Abolishing the appraisal system is difficult to do in both government and industry because of intrinsic compensation formulas used by industry or in the case of government, statutes that codify the civil service system. Nevertheless appraisals and efficiency reports can be modified to contain standards or attributes that are reflective of the TQM philosophy. An employee or army officer's willingness to participate on a process action team or ability to analyze a process for improvement are types of TQM qualities which can be evaluated.

13. *Institute a vigorous program of education and self improvement.* Leaders must make it clear in their communications they believe in the need to

continuously educate the workforce and the organization's leadership. Because TQM is for the long-term, individual training and education must continue. It's important for leaders to capture the implications of continuous improvement as they provide organizational visions for the future.

14. *Put everybody in the company to work to accomplish the transformation.* The transformation from an environment of telling workers in precise detail how the work gets done to an environment which invites their comment and participation to improve, is everybody's job but most importantly the leader's job. The leader will communicate his desire to change through his vision, and by motivating and pushing subordinates to change. Workers during a TQM implementation will be on the lookout for leader actions which may not truly reflect a commitment to TQM. Leaders must communicate their belief in the philosophy through their spoken and written words, by their daily decisions, and by investing time in the transformation of their organizations into participative and process oriented activities.

A quick scan of Deming's points reveals numerous management and leadership implications. Adopt the new philosophy, cease reliance on inspection, training, driving out fear, breaking down barriers, education, self improvement, involving everyone in the transformation, all taken literally add up to an organizational culture change which can only be made possible by the leader. In Deming's words "It is not enough that top management commit themselves by affirmation for life to quality and productivity. They must know what it is they are committed to—i.e., what they must do. These obligations can not be delegated."[18] If the leader is not concerned with real improvement, no one else is.

On the other hand, a literal adaptation of Deming's philosophy runs contrary to some basic organizational principles in both the private sector and government. Deming critics typically cite Point 4 as difficult to adopt. The notion of not awarding business (substitute contracts) on the basis of price tag. This has significance for

government procurements which by statute are required to consider cost. Also, mo corporate purchasing departments have similar guidelines, i.e. all things being equal, pay the lowest cost possible for goods. Others take issue with Points 10 and 11—eliminating targets for the workforce, new levels of productivity, and eliminating work standards. Critics argue good managers do evaluate progress through measuring change so that improvements can be tracked, and systems without some established standards would be chaotic. The key is to measure things properly and against standards that have relevance and are understood by the workforce.

How do the Department of Defense and the private sector define, view, and implement Total Quality Management? The DoD Total Quality Management Master Plan outlines TQM as a strategy for continuously improving performance at every level by combining management techniques and specialized tools under a disciplined structure dedicated to continuous improvement. The DoD effort builds on many people but especially Dr. W. E. Deming, Dr. J. H. Juran, and others as well as drawing on private and public sector experience with continuous improvement.[19] The DoD Total Quality Management guide defines TQM:

> "...as both a philosophy and a set of guiding principles and practices that represent the foundation of a continuously improving organization. It applies human resources and quantitative methods to improve the material and services supplied to an organization, all the processes within an organization, and the degree to which the needs of the customer are met now and in the future...Total Quality Management addresses the quality of management as well as the management of quality. It involves everyone in an organization in a systematic long term endeavor to develop processes that are customer oriented, flexible and responsive, and constantly improving in quality...Ultimately, TQM is a means through which an organization creates and sustains a culture committed to continuous improvement."[20]

Concerning leadership, the DoD Implementing Guide advises to demonstrate leadership:

> "TQM depends on people more than anything else, and people lead or are led, they are not managed." The leadership required to implement TQM is demonstrated by leading by example and by putting in the time and dedicating yourself to setting the example. Specifically leaders are expected to:
>
> 1. Take the initiative
> 2. Demonstrate commitment
> 3. Create more leaders
> 4. Guide the efforts of others
> 5. Remove roadblocks and barriers"[21]

Models for TQM implementation vary within DoD and within the public and private sectors. The DoD TQM Implementation Guide classifies the models as either organizational transformational, process improvement, or individual improvement models.[22] A common thread in all the models is that TQM is leader-driven within an organization. The leader must be committed to the process of improvement. Leader support to the existence of executive steering committees, process or project action teams, participative management, and most importantly empowering teams and individuals to make changes is key to the improvement process. Leadership provides the vision of what the organization wants to be and where it is headed and demonstrates long term commitment to the improvement process. Most importantly, leadership provides the organizational framework for the system, provides education and training for the workforce, and approves change. The leadership commitment to TQM is considered the critical prerequisite for successful TQM implementation. "Someone has to be willing to make a career stand on the effort—to lead with a sense of mission, to take the variety of actions required." In a corporation that individual is the CEO. In the Army, the lead must be taken by the Chief of Staff of the Army (CSA).

Leaders subordinate to the CEO and the CSA must know unequivocally that their leader is willing to invest time, resources, and most importantly tolerate the change in the way the organization will function. Per the DoD guide, key roles for the leader include committing to TQM, getting quality expertise, developing an agency vision for change, working on systems issues, and most importantly energizing the effort by constantly communicating support for the philosophy,[23] all the stuff of leadership.

IV. Leadership, TQM, and the Defense Contract Management Command

Background. "A leader does not fear change, but instead embraces it and creates it. He knows that perhaps his most important job is to transform the way the company does business."[24]

Significant change occurred in the Department of Defense acquisition community as a result of President Bush's approval of Defense Management Review (DMR) recommendations to streamline the acquisition process. One of the purposes of the DMR was to reduce the number of people involved in the acquisition process and generate efficiencies through consolidation of functions and activities. As part of the review, it was recommended that virtually all defense contract administration be consolidated into a single command worldwide for the administration of defense contracts. The mission to merge functions, activities, and people was given to the Defense Logistics Agency which was the parent command for the existing Defense Contracts Administrative Services Command.

After a brief planning period between DLA and the Air Force, Navy, and Army, the Office of the Secretary of Defense directed that all contract administration services worldwide be placed under a single flag, with the new command named the Defense

Contract Management Command (DCMC). Army Major General Charles Henry, the commander of DCMC, inherited very quickly several thousand civilian and military personnel from the three services as well as an increase in field activities. Simultaneous with the merger of new people and field activities into DCMC there were significant pressures from the DoD, Congress, and the public to improve the way DoD acquires new equipment. No more $435 hammers, no more cost overruns, no more unaffordable systems that cost more than they were contracted to cost, (such as the A-12 Navy stealth fighter canceled by Secretary Cheney), and no more contract fraud. The public and Congress demanded change. Combined with these pressures was unrelenting direction to consolidate and downsize so that the previously planned for efficiencies could be realized. Add to these daunting challenges the challenge of the cultural assimilation required to blend together Air Force, Navy, and Army procurement and program management people into a new customer base; continue the TQM implementation initially directed by Under Secretary of Defense (Acquisition) Costello, but now with a different and larger workforce.

Concerning leadership and complex organizations, a command of 23,000 people administering $750 Billion in government contracts spread over 30,000 contractors worldwide, could not be more complex. How does General Henry establish direction, align people, motivate and inspire, and what about TQM?

Leadership. "Leaders articulate and define what has previously remained implicit or unsaid; then they invent metaphors, and models that provide a focus for new attention."[25]

The higher up one goes the simpler the vision must become. A case in point are General Henry's comments,[26] "How or why a buying command paid $435 for a hammer is a complicated procurement issue which must be simplified to the point where anyone not familiar with the language of procurement can understand the

issue." The vision of procuring items at a reasonable cost and at a price that makes sense to the American public must be understood many layers down in the organization. "Can my mother understand this?" as General Henry commented, is a good test of simplicity—simplicity on the far side of complexity has real value to an organization. Take complex issues and make them simple, then communicate the message verbally. General Henry is a good speaker who travels extensively. His method of communicating personal thoughts in correspondence, to distinguish from the staff prepared correspondence, is to write notes in his own hand alongside the margins of letters. Concerning alignment, General Henry believes it's important to develop a "significant emotional event" to get the staff and people aligned in the desired direction. Implementing TQM is such an event. "Define ahead of time what you want as an output, then give a deadline, and demand the output." Hold people to a deadline and then you'll have organizational alignment.

Concerning motivating and inspiring, it's all about people. "It's most important for the leader to develop interpersonal relationships with people—that leads to success. Organizations can't accept dichotomy—people demand an honest commitment. It's important to manifest the feeling you care about people. Demonstrate you care about people." Caring about people in a sincere way, allowing them to participate in the process of improvement, interpersonal relationships, creating and communicating organizational vision, are types of things leaders do during TQM implementation. "I have yet to meet the employee who wakes up in the morning and says I'm going to mess up today."

Total Quality Management. Concerning TQM at the Defense Contract Management Command, General Henry believes it's his responsibility as the leader to endorse TQM because in large organizations people look to the leader for signals of support for new ways of doing things. His belief relates back to Deming's 14th Point—

Put everyone in the company to work to accomplish the transformation. "We can't let TQM become another slogan like zero defects."[27]

The Defense Logistics Agency and the Defense Contract Management Command have been involved in various stages of TQM implementation since 1988. Although not touted by DLA as specific derivatives of TQM, one can make some observations of programs on-going at the agency level and at district and field level activities. Perhaps most significant is a major program to evaluate quality within the contractor's facility. In Plant Quality Evaluation (IQUE) fosters a climate of continuous improvement at contractor facilities, aims for customer satisfaction, embraces the TQM philosophy, and ultimately reduces the life cycle costs of equipment. The Defense Logistics Agency Quality Directorate was recognized by the President's Council On Management Improvement in 1991 for its development and implementation of IQUE. Tangible results include one Texas plant's first pass yields in assembly increased by 20%, defects per unit declined by almost half, and the scrap rate was reduced by 30%. At a missile plant in Georgia, reject rates for actuator arm assemblies fell from 40% to 0% and delivery delinquencies declined from a high of 111 per month to 9 per month.[28]

Of significance is the Quality Improvement Prototype award to the Defense Contract Management District Northeast (DCMDN), a subordinate command of General Henry's, headquartered in Boston. Central to the awards evaluation of the activity was the assessment of Quality Leadership. A review of some comments from the DCMDN award nomination package: "One of the six elements of DCMDN's vision is: *to provide management commitment.* Colonel Cashman, the DCMDN Commander, ensures commitment to all employees in the following highly visible ways: "...Executive Steering Committee, ...Videotapes, ...Meetings, ...training, ...Presentations, ...Newspaper Articles." [29] An extraordinary amount of leader support goes into successful TQM implementation. Some of the payoffs for DCMDN include: reducing annual reject rates on Level I/Subsafes (critical piping systems used on naval vessels)

from 10.7% to 8.9%, across the board reductions in non conforming materiel, improved data base integrity, and improved timeliness of contractor deliveries.[30]

Other Defense Contract Management Command TQM initiatives include those at the Defense Contract Management District West, headquartered in El Segundo, California. In the words of its TQM staff proponent, Russ Beland, commenting on the TQM implementation, "...it has resulted in an anticipation of future events rather than being a reaction to them."[31] Russ Beland further commented on the nature of the transformation by reflecting that TQM also meant that organizational performance takes precedence over individual performance. Beland's comment refers to the team approach inherent in TQM where teams focus on process analysis to improve a function.

The Western District is engaged in a number of initiatives which get their impetus from the TQM implementation: The creation of Centers of Excellence for various processes to include a Travel Service Center, creating a bulletin board to share TQM information, a TRW Defense Plant Representative Office/TRW initiative for factory controlled satellite testing which saved an estimated $3.2 Million, a Hughes Defense Plant Representative Office/Hughes team that saved $18 Million by improving the payment system, and there are other cost avoidance initiatives that were worked jointly between the contractor and the government in a TQM fashion resulting in saved taxpayer's dollars. Other leader sanctioned TQM programs in the Western District include a joint government/contractor Performance Based Management Program which uses a TQM approach to improve and streamline government oversight of contractors. Again citing leadership, TQM implementation was sanctioned by the leader—it never gets going without his/her approval. Could these Defense Contract Management Command field activities have made these improvements without TQM? The answer is yes but then the improvements didn't take place until leaders pushed for a TQM implementation.

V. Leadership, TQM, and McDonnell Douglas Space Systems Company

Background. "Our vision: A company of leaders. We are recognized by our customers, employees, suppliers, and competitors as the world's preeminent space systems company. We do things right the first time while continuously striving for improvement."[32]

McDonnell Douglas Space Systems Company (MDSSC), located principally in Huntington Beach, California, has business centers operating in Huntsville, Houston, Cape Canaveral, Colorado Springs, Pueblo, Washington, D.C., and has marketing representation in Europe. Its main business is space products and strategic defense systems, ranging from rockets such as the Delta II which launched the Global Positioning Satellite system, to the building of never done before platforms like Space Station Freedom, to a variety of exotic Strategic Defense systems. All of its manufacturing and production work is state of the art; 'one of a kind must work the first time it's used' type of stuff, provided mainly to DoD and NASA (85%) with the balance to the commercial sector.

The complexities of the products, vagaries of public spending, severe overseas competition for launch vehicles from competitors as diverse as the French, Chinese, and Russians, the challenge of meeting tough, federal acquisition regulations and on-the-premises contractor oversight, are tough challenges. Add to these challenges the regulations from OSHA California, and other challenges ranging from mandatory car pooling to DoD security inspections, to severe economic recession, and the challenge of implementing the corporate directed TQM philosophy. So how does Ken Francis, (president of MDSSC), perform the key leadership functions of establishing direction, aligning people, motivating and inspiring—and what about TQM?

Leadership. "It takes more than teamwork and commitment to succeed in aerospace in the 1990s. We can reach higher levels of performance by applying the right TQM tools and approaches to our products, services, systems, and processes."[33] Francis believes it is a function of leadership to create and share a vision and to establish goals. "Setting goals and direction is crucial. If you're going to succeed, people must trust you. A leader doesn't have to be the best in everything, but he must set goals and be a cheerleader". The application of the leader's vision and his goal setting are integral parts of TQM. Concerning vision, "...the leader's job is to articulate a vision, have others share in its final development, and then everyone involved has taken up ownership". Concerning TQM, "...our way of doing business is to support a participative—not permissive environment. " The company president's endorsement of participative management is key to TQM implementation. If the president doesn't articulate support for a participative environment, then subordinates will not give their full support.

TQM. Ken Francis and TQM, "always support your zealots—in complex activities they carry the message for you!"[34] Improvements since McDonnell Douglas began its TQM implementation have been significant, although as a policy, the company is reluctant to tally up laundry lists of TQM accomplishments. The TQM implementation effort at MDSSC is significant. When Chief Executive Officer John McDonnell described TQM he said: "TQM is not our slogan of the month, or our experiment for 1989. It's a comprehensive approach to how we work together to better serve our customers, culminating eight years of thought, development, and experimentation. It is our new way of life. TQM is founded upon the fundamental belief that everyone wants to do a good job and that overall performance will be greatly enhanced if people are assisted, coached, trained, and supported, rather than controlled. We are going through this traumatic, but exciting revolution because we are in a difficult competitive environment in each of our businesses. Because we must become better than our

competitors. Because we all want to be proud of what we do and what we accomplish."[35]

A recognized benchmark for quality is the Malcolm Baldridge Quality Award. Central to its assessment of a company's performance is its evaluation of the leadership function as it applies to improving quality. MDSSC feels so strongly about its TQM implementation progress to date that it is competing for the prestigious award. The criteria are tough and extensive with 10% of the award points devoted to leadership—recognition of the important role of leadership in the improvement process. Some categories of Baldridge leadership criteria include: Senior Executive Leadership (highest ranking official of the organization applying for the award and those reporting directly to that official), personal involvement, and visibility in quality-related activities of the company: (1) goal setting; (2) planning; (3) reviewing company quality performance; (4) communicating with employees; (5) recognizing employee contributions.

MDSSC feels it is meeting the requirements of the Baldridge. As an example, Ken Francis and his senior executives meet at least twice weekly to provide personal, high-level guidance for improvement efforts by using a network of horizontal teams and the company quality council. The senior level executives spend approximately 70% of their time in quality related activities. These activities include reviewing individual process analyses, gauging customer satisfaction, providing and participating in TQM training and education programs, and the mentoring of their subordinates.

Concerning goal setting, the president and the executive council review progress on the company's three primary goals:

> "*Customer*: To be the preferred supplier in our field. *Culture*: To be a company that is the embodiment of total quality management, and *Financial:* To achieve sales growth greater than 6% per year and to increase after-tax return on investment from 16.4% to over 20% over the next 10 years."[36]

These goals are well-publicized and communicated throughout the company so that the entire workforce knows and understands the goals. Ken Francis believes that to be "...effective in the process of improvement, you must measure things to gauge progress—you only get what you measure." Everything can be measured even subjective factors such as morale or pride. Repeated surveys of employee attitudes are revealing to management. Perhaps most telling of progress to date is an independent survey of company organizations which showed that over 100 teams were established to recommend improvements based on 1990 survey results. The 1991 results showed improvements in 24 of 28 major areas and in over 80% of the total survey answers. Concerning quality values, "Ken Francis provides the leadership to enunciate his quality philosophy regularly, by encouraging employees to go beyond merely satisfying customers to truly *delighting* them with first time quality at the lowest possible cost."[37]

Although the company can cite productivity improvements from cycle time reductions in material review board actions, to reducing the cost of rivets for the MD-80 commercial jetliner, to cost savings in launch vehicle processing time at Cape Canaveral, to reducing cycle times for facilities work orders,[38] the proof of its improvement process will be whether TQM becomes institutionalized and the way MDSSC will function in the future. Its productivity improvements to date can be attributed to its implementation of TQM.

VI. Thoughts on TQM Implementation, Leader Actions, and Techniques

TQM Implementation. There is no cook book recipe for the right way to implement TQM in an organization. The DoD is struggling to kick it off within itself and

each individual service is in various stages of implementation. Admiral Frank Kelso, Chief of Naval Operations, recently announced his intention to drive Total Quality Leadership beyond the depots, rework, and repair facilities, and into the fleet. "TQL—Total Quality Leadership—has no choice but to go to the ships and squadrons of the fleet and ask for help in recasting the way the Navy does business. TQL must be made fleet-relevant now, if the revolution is to succeed."[39]

The Army and Air Force have not yet announced a similar plan to extend TQM to the field but it's probably coming soon, especially as more people in both the public and private sectors implement TQM. Any implementation program requires a well thought out plan, built on a foundation of understanding the TQM philosophy, and a lot of training and education for all—from general officer to sergeant. The long term implementation process, normally considered to range anywhere from 5 to 10 years can be disappointing, unless it is understood by all involved especially the senior leader.

A comparison of change programs—improvement programs which are activity-centered, when contrasted against results-oriented programs, show that results-centered programs can quickly cause the workforce to more readily accept cultural change based on the demonstrated quick improvements.[40] Too many "quickie" improvements can lead to faddism, and a view that the newly implemented culture may not be lasting; but on the other hand, too long an implementation process can lead to massive turn-off. "One manufacturing company, for example, launched almost 100 quality improvement teams "as a way to get people involved." These teams produced scores of recommendations for process changes. The result was stacks of work orders piling up in maintenance, production engineering, and systems departments—more than any of these groups were capable of responding to."[41]

A logical approach is to combine some quick change management strategies with other slower strategies during the implementation phase. An example of a slow

strategy would be the self teaching or mentoring of TQM practices by the leader to his direct reports. An example of a quick strategy would be to have everyone involved in a process, such as processing a travel voucher for payment, analyze the process and improve it. The quick result is that everyone gets paid faster, people are happier, and they begin accepting this new process of improvement. A good implementation strategy is that outlined by Coopers & Lybrand, who have consulted to numerous public and private sector activities beginning TQM implementation:

Assessment—Identification of opportunities

Planning—Developing a structured program of improvement projects leading to TQM implementation

Implementation—Introduction of quality practices and systems

Institutionalization—The internal capacity to perpetuate TQM[42]

Any implementation program will require an enormous investment of time and energy by the senior leader. If the top person doesn't embrace the new culture, stir up the pot of turf protectionism, and settle the inevitable staff squabbles, the program will falter.

Leader Actions. Actions that help with the processes of aligning, establishing direction, and motivating and inspiring, are limited only by the creativity and imagination of the leader. To move people, both General Henry and Ken Francis used the techniques of creating a vision and communication mechanisms such as letters, pamphlets, or personal talks. Fundamental to both leaders was the idea of getting things done through people and taking care of people.

Jerry Bowles and Joshua Hammond in their book *Beyond Quality* evaluated how 50 successful companies use continuous improvement. They commented "...the one characteristic that is common to all these companies is strong leadership—a chief executive who leads the charge emboldened by an unshakable belief in quality."[43]

Central themes used by successful leaders transforming their companies according to Bowles and Hammond include:

Keeping the Faith —An example is the Herman Miller furniture Company which when faced financial crisis stuck to its participative form of management and asked for employee suggestions to trim losing operations. The result was a rebound in productivity and a stronger company.

Set Demanding Goals —Motorola's goal of Six Sigma Quality reduces quality improvement goals to increasingly narrower margins of defects per million products (service included). Its precise definition is no more than 3.4 defects per million products (industry standards are 3 Sigma or 66,810 defects per million). Recall Ken Francis' admonition to measure everything. Measurement provides the baseline, gives the process its focus. Even attitudes can be assessed through good surveys of the workforce.

Walk the talk—is a reflection of actions speaking louder than words. This can be personified by "do as I do" type training by leader to subordinates such as Xerox's Leadership Excellence Program (leader mentors subordinates) or Milliken's devoting a monthly meeting to discuss the company's quality process and improvements.

Encourage Open Communication—use all possible communication mechanisms to break down barriers and bottle-necks that slow the improvement process.

Deliver on Your Promises —The example of Federal Express guaranteeing on time delivery is classic. The company *exists* to deliver its packages on time. All its employees are taught this basic premise by their immediate supervisors.

Techniques. You can see the implications of implementing TQM when applying Bowles and Hammond's analysis of techniques used by the leaders of successful quality companies—leaders must apply themselves or else the transition to a quality

organization may not be successful. Using large charts that depict process progress is a good way of communicating success. Very simple words, and visual images, or words that communicate powerfully, get the leaders message across.[44] Bringing people together frequently to communicate is perhaps the very best medium. People need to hear the leader's words, vision, and get direction first hand. Printing pamphlets, placards, posters, and photographs creates a culture that is organized around leader goals and direction. Most people want to be involved with something, be able to point to a photo or printed message, and know that it conveys what the mission is and what the leader wants done. ConAgra prints up numerous booklets and letters for its employees signed by the top person. Mary Kay cosmetics goes in big for glamour photos of successful sales people. DEC pushes frequent employee-run conferences, and American Express has a Great Performers program. Communicate vision and goals by pasting placards all around the workplace. Tell people frequently what their mission is and how they're doing performance-wise. Publicize individual and organizational successes and use every medium—printed, videotape, and personal talks—to promote total quality implementation program

VII. Summary

"What leaders have to remember is that somewhere under the somnolent surface is the creature that builds civilizations, the dreamer of dreams, the risk taker. And remembering that, the leader must reach down to the springs that never dry up, the ever fresh springs of the human spirit."[45]

The job of getting the mission accomplished falls to the leader. TQM is a tool the leader can use to improve productivity yet not without significant commitment on the leader's part. Because TQM brings with it a culture change, and because of its

demands on the leader, without a total leadership commitment at the highest levels, it will not succeed. The CEO or Chief of Staff of the Army must demonstrate a commitment to TQM through vision statements, letters, and talks. TQM becomes a tool to accomplish things. "No more Task Force Smith's" is the Chief of Staff Army's admonition to all—his desire to avoid the hollowness and unpreparedness that characterized the Army of 1950. In today's era of change and diminishing resources, TQM is a vehicle to help the Army avoid a future Task Force Smith.

People demand leadership, and want to follow down the road that empowers them to improve themselves and their work. Simultaneous with the empowerment is the leader obligation to work harder at the task of never accepting the status quo—only continuous improvement will differentiate excellent from good organizations. TQM provides the leader a philosophy to work with—a means to tap the human spirit, and generate the dreams of improvement. Avoiding a future Task Force Smith requires a leadership commitment to ensure we have the best people and equipment used in the most productive ways. TQM can help us become more productive and capable enough to meet the challenges of the future.

Notes

[1] John Kotter, *A Force For Change - How Leadership Differs From management* (New York: Free Press, a division of MacMillan, 1990), 4.

[2] Department of the Army Pamphlet 600-80. *Executive Leadership* US Army, 19 June 1987, 2.

[3] Warren Bennis, *Why Leaders Can't Lead,* (San Francisco, Jossey-Bass, 1990), 145.

[4] Field Manual 22-103, *Leadership and Command at Senior Levels* US Army, June 1987, 43.

[5] Abraham Zaleznik, "Managers and Leaders: Are they different?" *Harvard Business Review* (June 1977): 68.

[6] Warren Bennis, "The 4 Competencies of leadership," *Training and Development Journal (*August, 1984): 16.

[7] Craig R Hickman, *Mind of a Manager Soul of a Leader* (New York, John Wiley and Sons, 1990). Pages 8 and 9 contain Hickman's concept of management and leadership.

[8] *Ibid.*, 262.

[9] Charles Manz and Henry Sims, *Leading Others To Lead Themselves* (New York: Prentice Hall, 1989), 11.

[10] *Ibid.*, 11.

[11] Department of Defense letter. *Department of Defense Posture on Quality* (30 March 1988), by Frank Carlucci, Secretary of Defense.

[12] Kotter, *A Force For Change–How Leadership Differs From Management*, 7.

[13] DA PAM 600-80, 6.

[14] W. Edwards Deming, "Improvement of Quality and Productivity Through Action By Management," *National productivity Review*, (March, 1981).

[15] W. Edwards Deming, *Out of the Crisis,* (New York, Prentice Hall. 1988) contains the Fourteen Points as well as Deming's philosophy on Total Quality Management.

[16] *Ibid.*, 51.

[17] John Holusha, "A Call For Kinder Managers at G.E" *New York Times,* 4 March 1992: 1(D).

[18] *Ibid.*

[19] Department of Defense *Total Quality Management Master Plan*, Department of Defense, August 1988. This plan outlines the concept, methodology, goals, as well as assigns action to implement TQM within DOD. It defines TQM as a DOD strategy with one broad, unending objective–the continuous improvement of products and services.

[20] DOD 5000.51-G FINAL DRAFT, *Total Quality Management Guide - Volume II - A Guide To Implementation*, Department of Defense, 15 February 1990. 1-3.

[21] *Ibid.*, 2-3 – 2-5.

[22] *Ibid.*, Appendix A.

[23] David Carr and Ian Littman, *Excellence in government: Total Quality Management In the 1990s* (Arlington, VA: Coopers & Lybrand, 1990), 128 - 132.

[24] Jeremy Main, "Wanted: Leaders Who Can Make A Difference" *Fortune* (September 28, 1987): 92.

[25] Warren Bennis and Burt Nanus, *Leaders - Strategies For Taking Charge* (New York, Harper & Row, 1985): 39.

[26] Major General Charles R. Henry, Commander Defense Contract Management Command, Defense Logistics Agency, Cameron Station, Virginia, *interview* by author 22 November 1991.

[27] *Ibid.*

[28] *TQM Quarterly*, "PCMI Award: An Oscar For IQUE", Defense Logistics Agency, (Volume Two, July, 1991): 2.

[29] Defense Contract Management District Northeast Quality Improvement Prototype 1992 award submission, 1.

[30] *Ibid.*, 34-35.

[31] Russ Beland, Total Quality Management proponent, Defense Contract Management District West, *discussions* with the author, 5 December 1991.

[32] *Principles For Total Quality Management*, McDonnell Douglas Space Systems Company, 1990, Huntington Beach California, 2.

[33] Ken Francis, as quoted inside front cover of *Tools and Approaches For Total Quality Management*, McDonnell Douglas Space Systems Company, 1991.

[34] *Ibid.*

[35] *Principles For Total Quality Management*, McDonnell Douglas Space Systems Company, Huntington Beach, CA. 1990, 1.

[36] *Ibid.*, 2.

[37] Excerpted from draft McDonnell Douglas Baldridge Quality Award self assessment .

[38] *President's Bulletin,* McDonnell Douglas Space Systems Company, Volume 3 No 8, 1 November 1991.

[39] Captain John Byron, USN, "Welcome To The Revolution" *Proceedings* (October 1991): 30.

[40] Robert Schaffer and Henry Thomson, "Successful Change Programs Begin With Results" *Harvard Business Review*, January-February 1992. This article suggests that results centered change programs show real improvement to the organization and in a timely manner, encourages the workforce, and minimizes workforce cynicism over change programs.

[41] *Ibid.*, 85.

[42] *Excellence In Government*, 207.

[43] Jerry Bowles & Joshua Hammond, *Beyond Quality* (New York: G.P. Putnam's Sons, 1991), 119.

[44] Kotter, *A Force For Change*, 55.

[45] John Gardner, *On Leadership* (New York: The Free Press,1990), 199.

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