Applying Total Quality Management Concepts To The Security Assistance Community

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I. INTRODUCTION.

As long ago as the 1930s, two men at the U.S. Department of Agriculture, Walter A. Shewhart and W. Edwards Deming, developed techniques to bring industrial processes into what came to be called "statistical control." Under this approach to management, limits of random variation in any aspect of a task were defined, establishing acceptable highs and lows in order to detect, study, and correct causes and effects in any process that affected the quality of a product resulting from that process.[1] Dr. Deming later joined the Supreme Command for the Allied Powers to help prepare for the 1951 Japanese census.[2] Within a relatively short period of time his philosophy and influence expanded into virtually every aspect of Japanese industry, and the rest, as the saying goes, is history. Thirty years after he first taught the Japanese his methods, Dr. Deming and the concept of Total Quality Management (TQM) was finally "discovered" in America.

The environment of the 1990s, complete with changing business bases, newly emerging technologies, expanding capabilities in information management, restructuring of national boundaries, newly evolved consumer markets, and the emergence of growing numbers of world-wide competitors demands the U.S. change its approach to production and management. For the most part, our industrial base has recognized how dramatic these changes have been, and at the very least, has given verbal commitment to the need for Statistical Process Control (SPC) and the TQM approach to business operations. In some very significant instances, U.S. industries and government have made dramatic changes in the way they conduct business and produce goods and services. Both, however, have much more to do in order to actively apply Deming techniques to their day to day business operations. The Security Assistance (SA) Program, because of its potential effect on our domestic industrial base and influence on the international marketplace, is in a unique position to serve as the "flagship" for the TQM revolution in government and to lead the way with actual applications of Deming management techniques. Despite some critics, TQM can indeed be implemented in government. It is the objective of this paper to show how this management approach can be instituted and specifically applied to the SA work environment.

II. TQM PRINCIPLES.

W. Edwards Deming developed 14 management principles (i.e., the 14 Points) which, when followed, hold the potential for improving both our management practices and the quality of goods and services provided through the Security Assistance Program.

1. Create Constancy of Purpose for Improvement of Product and Service. The real purpose of an organization should be to stay in business and provide jobs through innovation, constant improvement, and maintenance.

[1] Walton, Mary, *The Deming Management Method*, Putnam Publishing Group, New York, 1986, p. 7.
[2] Ibid, p. 10.

2. Adopt This New Philosophy. We need a new religion in which mistakes and negativism are unacceptable.

3. Cease Dependence on Mass Inspection. Improve the process to preclude the need for quality inspection after the fact. This is both wasteful and expensive.

4. End the Practice of Awarding Business on Price Tag Alone. Seek out the best quality in a positive, long term relationship with a supplier.

5. Improve Constantly and Forever the System of Production and Service. Improvement is not a one time effort.

6. Institute Training. Too often we learned our jobs from one another and that may not be the correct way to do things.

7. Institute Leadership. Management's responsibility is not to tell people how to do their job, but to lead.

8. Drive Out Fear. Establish a work environment in which questions can be asked, and different positions on issues affecting the organization can be taken without fear of retribution.

9. Break Down Barriers Between an Organization's Departments. Encourage the development of a team approach to business.

10. Eliminate Meaningless Slogans, Exhortations and Unachievable Targets. These never helped people do a better job. Let the workers create their own slogans.

11. Eliminate Numerical Quotas. Quotas take into account only numbers, not quality or processes.

12. Remove Barriers to Pride of Workmanship. People do take pride in their work. Too often misguided management assistance, faulty equipment and processes, and defective materials stand in the way of good performance.

13. Institute a Vigorous Program of Education and Retraining. Both management and workers must be educated in the new methods, including teamwork and SPC.

14. Take Action to Accomplish the Transformation. Management must develop and carry out a plan of action to achieve the quality mission. Neither management nor workers can succeed with the TQM revolution alone; each needs the other's understanding and commitment to the principles of improvement. [3]

III. THE PAST ENVIRONMENT.

In the early years following World War II, what was later to become known as security assistance was then essentially a "grant-aid" program consisting of military articles and services provided to recipient countries and international organizations as outright gifts from the United States government. The Security Assistance Program emerged in the mid- to late 1970s as a more

[3] Walton, Mary, *Deming Management at Work*, Putnam Publishing Group, New York, 1991, pp. 17-19.

business-like relationship between supplier (U.S.) and client (foreign purchaser) based on cash sales of military articles and services through the Foreign Military Sales (FMS) program. The 1980s continued this business relationship, evolving in the later stage of the decade to more of a full-partnership, with FMS foreign participants engaging in the actual manufacturing of U.S. defense materiel through coproduction and business reciprocity in offset agreements.[4]

The relationship today has matured to one in which the customer determines what the supplier will or won't provide. For many who have spent years in the security assistance business in which the supplier determined what articles and services a client would be allowed to purchase and when these articles and services would be available, this is a new reality which may be difficult to accept.

IV. TODAY'S ENVIRONMENT AND THE NEED TO APPLY TQM TO THE SA PROGRAM.

To appreciate fully the need for a quality management approach to the SA Program, it's necessary to relate the effect that Department of Defense (DoD) budget cuts and "downsizing" have on our business operations. As DoD reduces its military and civilian forces and ceases to receive appropriations for financing renewed orders of previously developed weapon systems, as well as funds for new development and production starts, the domestic industrial base must downsize in like manner, or secure new customers to maintain its previous business base. The MacDonnell-Douglas F-15 aircraft sale to the Kingdom of Saudi Arabia in the fall of 1992, is representative of the need for the U.S. defense industry to look to a new customer base beyond the traditional DoD in order to maintain it's production line and remain technologically competitive in the future. The Saudi Arabian sale is for more than $9 billion and guarantees continuing jobs for approximately 40,000 aerospace workers for several more years.[5] An official U.S. government publication provides the following relevant data.

> Based on several studies of the benefits of military assistance and sales, we estimate that each $1 billion spent on new procurement in the United States for foreign military sales, whether FMF or foreign national funds, directly creates or preserves over 20,000 man years of employment. This $1 billion generates in excess of $1.8 billion of income as well as significant exports to help balance U.S. trade with foreign nations. That $1.8 billion of income, in turn, produces over $400 million of tax revenue for the U.S. Government.
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> These sales also result in economies of scale (e.g., longer production runs) which reduce the costs of weapon systems of continued interest to our armed forces. Moreover, the continuation of a number of DoD production lines depends on foreign sales. These production lines constitute part of DoD's mobilization base in the event the USG must respond quickly to a military conflict. As these production lines close, our ability to mount or sustain a rapid response will decrease.[6]

As important as is the continuance of jobs, so too is the continuance of the industrial base and the development of improved processes and technological advancements which inevitably come with long term manufacturing, as well as the strategic value of having these capabilities available to the U.S. should it become necessary to employ them in future contingencies. For example, such a

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[4] Samelson, Louis, ed., *The Management of Security Assistance*, Defense Institute of Security Assistance Management, Wright-Patterson Air Force Base: Twelfth Edition, May 1992, pp. 1-26.

[5] PEACE SUN IX, Letter of Offer and Acceptance; McDonnell Douglas Pamphlet.

[6] U.S. Department of State and Department of Defense, *Congressional Presentation for Security Assistance Programs, Fiscal Year 1993*, p. 6.

"safety net" would not be available to us had it not been for a security assistance customer keeping the F-15 production line open after DoD requirements had been met. Foreign competitors such as Britain and France have products which can compete with U.S. products (in this instance, the Tornado and Mirage 2000 aircraft as competitors to the F-15) and are more than willing to meet the demands of the new international marketplace.

Further, as DoD "downsizes" due to budget cuts, the effect on the "critical mass" (i.e., the technical expertise and data, facilities, specialized equipment, transportation and distribution systems, and spare parts—all the elements necessary to do organic maintenance and repair and even refabrication) at our depots will be equally severe. It is estimated that DoD depots do $13 billion worth of maintenance and repair work each year. This workload is projected to require more than 120 million labor hours in 1995/96.[7] As budget cuts continue, this business base, so dependent on Congressional appropriated money, will be reduced. In turn, this will mean fewer repair sources for both DoD and security assistance customers. By the end of FY 1997, DOD expects to reduce total civilian end strength by 229,000 positions, or 20 percent from FY 1987 levels.[8] Reductions in defense spending in the future will undoubtedly translate into additional lost jobs with a concomitant effect on the "critical mass" at our organic depots. The loss of our organic "critical mass" may affect our ability to respond strategically to future worldwide emergencies.

In the business environment of today, new competitors have emerged for the security assistance business base which used to be the purview of U.S. industry and our own organic depots. At the same time, new markets and needs have emerged in the global community. These new markets require a new approach to the way we do business, otherwise those of us engaged in security assistance will become increasingly irrelevant as increasing numbers of security assistance customers seek suppliers and repair sources outside our domestic industries and DoD depots.

The mission of DoD in the emerging new world order has not yet been clearly defined. Following World War II, the mission of DoD was to be postured to fight a major conventional war in Europe and half a war somewhere else (e.g., Operation Just Cause in Panama in 1990). Due to the collapse of the Soviet Union and the fall of communism in Eastern Europe this mission is no longer valid. Unfortunately, a new mission has yet to be clarified. Is it DoD's mission to engage in drug interdiction in Latin and South America? Is the mission to participate in peacekeeping operations on the horn of Africa, or to fight a conventional desert war in the Persian Gulf? Until DoD knows what its mission really is, it is impossible to determine accurately what the force structure should be—i.e., "rightsizing" as some call it rather than "downsizing." "Rightsizing" can only be used correctly when a mission statement is finally adopted by DoD which reflects its role in this new world order. Until such time, "downsizing"—reducing force structure based on budget cuts rather than strategic planning—is the only correct term. Until our force structure can be "rightsized" based on strategic planning, the active pursuit and expansion of our business base among the security assistance community is one way we can maintain both our industrial base and the "critical mass" at our organic depots. We must ensure that both are available to meet future challenges and threats to the nation.

One thing we must recognize however, is that we are not alone in our interest to expand our business base among what was traditionally U.S. security assistance customers. Other nations are actively pursuing this potential market. The customer base of tomorrow belongs to those who can provide the best quality product and service on time and at a competitive price. The security assistance customer has other options, something not available a decade ago. We will be able to

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[7] Defense News, "U.S. Depot System: The Struggle Ahead", March 22-28, 1993, pp. 8 and 10.

[8] Report of the Committee on Arms Services, House of Representatives, *National Defense Authorization Act for Fiscal Year 1993*, Washington, DC, U.S. Government Printing Office, May 19, 1992, p. 199.

maintain our industrial base, our "critical mass" and remain competitive in the new world order only if we become better than we are now.

V. APPLYING TQM TO THE SA WORKFORCE AT HOME.

This section offers a "how to do it" primer on putting TQM to work in the security assistance work environment. This primer, in fact, reflects the efforts of one Air Force organization— the Arabian Programs Division at the Air Force Security Assistance Center (AFSAC) at Wright-Patterson Air Force Base, Ohio—to make TQM a real part of day-to-day business relationships, and is based on Dr. Deming's 14 Points as outlined above. Some of the approaches discussed below have already been implemented in the Arabian Programs Division; others are still evolving.

A. Institute a True Management Open Door Policy. One of the more positive actions management can take is to create a sense of trust between itself and the workforce. The knowledge that anyone can talk to management on any subject without fear of retribution is one of the greatest values management can instill in the work environment. A closed door policy precludes new and innovative ideas originated by those closest to an issue or problem (e.g., the technical and functional experts) from surfacing to management. People in management need to hear the truth about what's happening in the organization, regardless of whether that truth is complementary to a particular manager, or to the management style being employed within the working environment. Only through open communications offered without fear of management's retaliation can problems truly be solved (rather than covered over), and more innovative approaches to business strategies and practices emerge.

B. Allow People to Manage Their Own Work Responsibilities. Management's responsibility is to plan and lead the organization into the future, not to act as technical leads and tell the workforce how to do its job. The most evident action management can take to dramatize its commitment to the TQM approach is to cease "micro-management" of technical and functional issues, and trust the workforce to take responsibility for its own work. It will. This "blind trust" is one of the hardest steps for management to take, but the response from the workforce is worth the commitment. Without this trust from management and response from the workforce, the success of the TQM revolution is at risk.

C. Create a Vision Statement. People need to know why they're important to the success of the organization; who they are (vis-a-vis their work responsibilities) not only today, but in future years as well; who do they want and need to be in the future, and what steps must be taken now in order to get to that future goal. Allowing the workforce to determine its own vision statement of who and what it is, what its mission is, who its customers are, where it wants to be in the outyears, and what business practices it needs to evolve in order to achieve that vision has merit. The vision statement developed in the Arabian Program Division is stated below.

> We are the Arabian Programs Division. We seek to set the standard for Total Quality Management in the Air Force Security Assistance Center by:
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> - Involving our people in the decision-making process;
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> - Institutionalizing the principle of participatory and consensus management;
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> - Committing to improved communication and support to our customers and with our suppliers;
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> - Representing our customers' interest by finding for them the best value, product, or service at a competitive cost;

- Improving our logistics management processes through continuous analysis; to guarantee the timely acquisition and delivery of logistics support for the world's finest weapon systems.

This vision is more than a slogan; it's a charter for management practices, business relationships, and the way of accomplishing day-to-day business.

D. Matrix People, Integrate Functions. One important way to break down the parochial barriers which can occur in any organization is to integrate people into functional teams which cut across formal office structures. For example, in the Arabian Programs Division, the Aircraft Branch has the responsibility for acquisition, activation and initial support planning for Prime Mission Equipment (PME). Due to its mission, this branch tends to operate within its own organizational structure, and has more interface with the Air Force's weapon system program managers under the Integrated Weapon System Management (IWSM) concept at either the air logistics center (if a mature system), or with the system program office (if a developing system), than with other offices within its own organization. In years past, there had been little cross-feed to or with the other branches in its division. Yet, the Follow-on Support Branch in the Arabian Programs Division has the responsibility for planning support requirements for that same PME in the outyears once the system is deployed. How can they possibly know the customers' requirements five years downstream if they aren't aware of what's happening in the initial planning process during activation and deployment? By the same token, how can the managers of the PME fully appreciate the full range and depth of logistics support necessary for successful activation of a new weapon system if they don't know the support capabilities and requirements of existing customers' infrastructure and the demands currently being placed on those capabilities even without the demands of new PME? To achieve the necessary communication flow, functional teams have been established (e.g., engine management, aircraft management, computer resources, etc.) with people responsible for follow-on support to engines, aircraft, computer resources, etc., participating in monthly update meetings with the division chief. Each group reports the status of its activities during the previous 30 days in an open forum so all the participants hear what the others have been doing. These meetings are preset on the division chief's calendar for the same day and time each month. The meetings are limited to 30 minutes and are based on no more than a one page talking paper format. Although this gives the division chief a better understanding of the issues being worked in the division, more importantly, it allows various functional teams in different branches the opportunity to exchange information on what each has been doing, and how one group's activities affect the other.

E. Develop a Sense of Team. Using the techniques of the approach (especially the matrix management of functional groups stated in paragraph D above), a stronger sense of belonging to a team with a greater focus than one's own area of responsibility can be fostered. It is essential to develop this team approach to daily business practices to take advantage of the synergism an expanded work group can bring to problem-resolution.

1. Team-Building Exercises. Another important way of achieving team-building is to call on the Quality Program (QP) Office within the AFSAC to conduct formal team-building exercises (including conducting the Myers-Briggs Type Indicator exercise within each branch). Part of the approach is to ensure such team-building exercises are conducted on a regular basis at both the branch and division levels.

2. Off-Sites. A third aspect of the team-building approach is to conduct branch and division off-site gatherings on a regular basis (at least twice a year at each level). Again, part of the approach involves calling on the expertise of the QP Office in the AFSAC for assistance in planning and conducting these off-sites. Only through constant reinforcement of the TQM

approach to business can management hope to change the culture of the division. Team-building exercises and off-sites are mechanisms for accomplishing this reinforcement.

3. Social Events. The value of getting the workforce to relate to itself in "human being" terms rather than in purely business relationships cannot be overstated. People will often work very hard to help other people solve problems, but they generally will not perform the same effort for an organization. Personalizing working relationships is a way of getting the "human being" into the equation. After work socials, family picnics, at work chili cookoffs, etc., are ways the workforce can begin relating to itself in human rather than purely business terms.

F. Manage Conflicts. All conflict is rooted in a cause, sometimes hidden and not always related to the work environment but merely exhibited in that environment. Most conflicts can be resolved, provided good communication among the members of the workforce is established and practiced. Getting people to communicate and to verbalize what the problem really is (see paragraph G1 below) is an essential step in resolving conflicts among the workforce. The most important step management can take is to bring such conflicts into the open and deal with them, rather than ignoring the problem and failing to address them directly and immediately.

G. Establish Formal Training. Formal training in TQM and functional areas, from both in-house and outside sources, needs to become an established practice in the division. This aspect of management needs to become a greater focus of the division management team than it has been in the past. Continuous improvement of the workforce's capability is necessary to meet the challenges of business in tomorrow's changing environment. If all the functions performed by management were placed under a single umbrella of responsibility it would be "the hiring, development, and maintenance of the best workforce possible." All activities of management should fit within this category, otherwise management ceases to be management and becomes instead, technical leads. As the DoD workforce draws down, those who remain must be capable of performing more than one function. This increased capability will only be acquired through constant education and retraining in different business disciplines.

1. Communication Skills. Improving the workforce and management's communication skills can aid in reducing the process of selective perception and its effect on the division's effectiveness. Improved communication skills will also aid in conflict resolution (see paragraph F above) within the division and assist in the active listening techniques resulting in more positive, clearly understood feedback among members of the division.

2. Deming's 14 Points. Drawing on Deming's 14 Points and offering them to the division in a formal training environment will allow both the workforce and management cadre to understand and appreciate the strategy at play and the objective desired from instituting and practicing the TQM approach.

3. Formal Education and Professional Certification. Management must consistently motivate the drive for formal education among the workforce. Praise, encouragement, public recognition for those who have made the personal commitment to return to school, or to obtain additional training and certification for competency in various levels of professional disciplines must become a key practice of management. Encouraging and supporting the continuous education and training of functional experts will be even more critical in the business environment of the 1990s.

H. Institute TQM. See paragraph G above. Only by the continuous reinforcement of the principles of TQM and the actual practice of those principles by management, can the culture of the organization be changed.

I. "Factualize" the Business Processes. Transformation of the culture in the division to one of true quality management requires decisions based on fact with people closest to the problem taking the lead in improving the processes, and teams instead of individuals working improvement strategies and problem-solving efforts. Some of the better techniques available to achieve this effort are represented in seven basic tools suggested by Dr. Deming, especially that of flow charting the business process in order to graphically portray the division's business functions. The other six basic tools are: (1) cause and effect diagrams; (2) pareto charts; (3) run or trend charts; (4) histograms; (5) scatter diagrams; and, (6) control charts.[9] Process action teams have been established (more need to be established) to examine the division's business functions and to offer improvements to that process through the use of these seven basic tools.

J. Continuous Evolution of Steps A-I. Only by constant reinforcement of the TQM principles can management change the culture of an organization. Once the approach has taken hold, it will be necessary for management to reinforce continuously the techniques and show the workforce this approach *is* an institutionalized way of doing business, and is not merely the paying of "lip-service" to a new "buzz word" coming from academic circles.

VI. APPLYING TQM TO THE SA CUSTOMERS' BUSINESS REQUIREMENTS

"It depends" is one of the most common answers to questions students at the Defense Institute of Security Assistance Management (DISAM) hear during their study of the security assistance process. And one of the major areas "it depends" on is whether or not we focus on the special requirements of a foreign customer. Tailoring a security assistance program within the DoD requires an extraordinary effort, and applying TQM principles to this environment is especially pertinent. The techniques applied to the security assistance workforce in Section V above should be applied to the security assistance customer base as well. Opening lines of communications; listening to what the customer needs; creating a vision statement regarding what we want to achieve with our customers and within a given program (why not bring the customer into the goal-setting process of a program office?); developing a sense of team with our customers as active participants; channeling conflict (which is inevitable) into a positive force for change and improvement; continuously training both US and customer security assistance people regarding one another's processes; and "factualizing" these business processes into measurable accomplishments meeting need dates are all valid applications of TQM practices to follow in dealing with our security assistance customers.

One of the prevalent reasons foreign customers choose to purchase military articles and services through DoD is because it is important to them to be part of the DoD system. They value the relationship between their country and DoD, and they recognize the advantage of tapping into the expertise available to them within the DoD system. Historically, our customers have always desired full partnership with us in the Security Assistance Program. Only recently, however, have we begun to view them in this manner. Heretofore, we tended to view the relationship as supplier to client. We need to build on our customers' historical desires for full partnership to ensure a customer base for the future.

Perhaps the first step to take in building this new relationship between customer and supplier is to apply a vision statement which commits an organization to representing the customer's best interest. What is essential is to define exactly what is meant by "best interest." What we believe to be our customers' best interest may not be the same as what our customers believe. Making our customers part of our management team, including participating in goal setting and selecting measurements of actions that have meaning to them can help in identifying what's really meant by "best interest." Gaining input from the customer during the formulation of the total package

[9] Walton, *The Deming Management Method*, op. cit., pp. 96-118

approach to a system sale is an effective means of making the customer part of the program from its very beginning.

Opening lines of communications and establishing personal relationships throughout the security assistance community, both on our side and on the customers' side becomes essential. Combining the politics of international affairs and the military aspects of a defense sale can be one of the major hurdles to overcome in establishing a successful program. International relations and cross-cultural differences can cause serious problems and lead to customer dissatisfaction and may hinder the successful execution of a program. Many times a breakdown in communications between a case manager and the customer counterpart may be attributed to a cross-cultural difference. It is not merely sufficient to understand how the technical aspects of a weapon system may fulfill the military needs of a foreign customer, a basic appreciation (or better still-knowledge) of a customer's language, culture, political and economic situation are also necessary to ensure those requirements are being correctly interpreted. It's very discouraging to think we are responding to our customers' needs, only to have them come back and say we have not answered their questions.

In the Arabian Program Office, a Saudi Arabian Library has been set up with books and articles on Islam, Saudi Arabian history, culture, tourism, and economic information. A complete set of Saudi Arabic language tapes from the Defense Language Institute (DLI) at Monterey is available for check-out. Language classes using the DLI language tapes and other instructional materials have been conducted in the organization during the Tuesday/Thursday lunch hours. This language training isn't intended to teach people in the Arabian Programs Office how to speak Arabic; rather, it's intended to give people an appreciation of their customer's thought processes, how ideas are formulated and expressed and what a speaker really means when he expresses agreement/disagreement, understanding/misunderstanding of what has been discussed at a meeting. Remember, words don't always convey the inference a speaker intended. We may think we've stated our case clearly when in fact our customers may have interpreted something quite different. An appreciation of our customers' languages could help clarify intentions.

The FMS case manager (also known by a variety of other titles such as program manager, command country manager, security assistance program manager, etc.) is primarily responsible for molding the FMS sale to fit into the DoD system and still satisfy the needs of a foreign customer. TQM concepts are particularly applicable to such programs, and the flexibility required to manage an FMS program requires innovation and constant improvement. It's not sufficient to say "This is the way it's always been done," or even "this is the way we did it the last time." Each customer has unique requirements, from administrative to environmental to fiscal, and each program must be adjusted to suit the customers' needs, while still being able to fit into the DoD system. As Dr. Deming has noted, improvement is not a one-time effort. It's incumbent on both supplier and client, management and workers to improve constantly and forever the system of production and service by re-examining the business processes for opportunities for improvement and innovative problem-solving. This constant re-examination of business practices, designed to respond to the uniqueness of individual customers, is essential if we are to maintain our present business base and develop a future customer base as well. Dr. Deming's 14 Points could serve as a template for both our planning strategies and implementing practices.

The case manager needs to develop a management team to address all the elements of customer support. Using matrix management as a tool for implementing Deming's principle of "breaking down barriers between organizations," the case management team should be composed of weapon systems experts and country (i.e., customer) experts to integrate effectively the requirements of the program, not only within the DoD, but also within the foreign customers' operating environments. For the acquisition of a new weapon system, this team might be composed of representatives from the Program Executive Office (PEO), the international offices

(SAF/IA, USASAC, Navy IPO) and their implementing agencies. In the USAF, this would translate into a team composed of SAF/IA, SAF/AQ, the designated system program office or system program director, and the Air Force Security Assistance Center working together to fulfill customers' requirements. Successful implementation of an FMS program requires interdependence on the expertise each participant brings to the team. This interdependence demands exceptional management applications, and principal among these applications is communications.

Another key member of the team is the customer representative. The management team's actions will only be effective if they are responding to a customers' needs. It is sometimes very difficult for a team to realize that it does not have complete control of a program and can only proceed as long as the customer agrees to the implementation plan. Overcoming the attitude of treating the foreign customer representatives as interlopers, or even as obstructionists, can be achieved by including them in team development exercises such as social events and off-sites when it is appropriate. In the Arabian Programs Office, the Foreign Liaison Officer (FLO) is an integrated member of the organization. The FLO has full, open, and immediate access to all members of the workforce, from supply clerks to the division chief. Twice each month, the division chief, branch chiefs, and the FLO meet to review the status of all major aspects of the efforts underway in the division, and to discuss any new action concerning the office's responsibilities. The FLO has been brought into the management team by including him in all the activities used for team-building and for improving business processes, as previously discussed in Section V above.

One of the first opportunities for defining a customer's requirements occurs during the site survey for a major weapon system sale. While many regulations or weapon system shops provide a checklist for the major elements of the system, it's necessary to go beyond the obvious points and focus on the customer's special issues. This task is very difficult because the customer representatives, unfamiliar with the new weapon system, may not be aware of elements to propose; and the U.S. DoD weapon system experts may not be aware of the customer's unique conditions. In this case it's incumbent on the team leader to bring these two elements together to develop a cohesive program and a total package sale. Following the TQM principles previously discussed is one way such divergence can be integrated and achieve a positive result.

The goal of an international defense sale, defined as the timely and efficient delivery of all the elements of the sale within the costs allowed to the satisfaction of the customer, will depend on the integration of all the throughput processes of the various elements of the sale, i.e., the lines on the Letter of Offer and Acceptance (LOA). Integrating all the activities associated with a system sale demands a systemic management approach to the process, rather than working each requirement/LOA line as a separate and distinct stand-alone task The same concepts the character Alex Rogo painfully learned from Jonah in the book, *The Goal*, for analyzing manufacturing operations are directly applicable to putting together a total package and managing the creative output of all participants—in other words, to "optimize the whole system."[10] Evolving and implementing such a focus represents an application of Deming's approach on five of his 14 Points (i.e., constancy of purpose; improving the system of production; driving out fear; breaking down barriers; and, accomplishing the transformation). Systemic solutions to systemic problems require an environment in which every member of the team has an opportunity for input without fear of ridicule or retribution.

One specific example of adjusting a program to a given customer's need is through a complete analysis of the customer's in-country logistics system. A smaller customer (i.e., country) may have only one central depot with limited, or non-existent automated capabilities. In

[10]Goldratt, Eliyahu M. and Jeff Cox, *The Goal*, North River Press, Croton-on-Hudson, N.Y, 1986, p. 137.

preparing for the support of a weapon system, it is necessary to take into account storage facilities, warehousing capabilities, transportation pipeline, communications links, electrical power and many other factors. Such factors can't be evaluated on the basis of US DoD standards alone, but must also be considered within the customer's environmental/social/cultural/political/economic context. If, in fact, the customer has limited personnel resources to maintain a weapon system, alternative means of support, perhaps unacceptable to the sponsoring US service in its own deployment/maintenance strategy, must be developed. We must remember, however, it is not our deployment/maintenance strategy we are implementing—it is our customer's. This kind of information can only be obtained through open and frequent discussions with the customer and continuous adjustments to the initial requirements. Indeed, additional spares, over and above what we might consider necessary given our proximity to sources of supply/repair, may have to be ordered to cover for extended transportation flowtimes to guarantee maintenance schedules and the operational readiness of our customer's defense forces.

One of the major lessons learned from the Gulf War was the impact of the incredibly fine granules of desert sand on some of the US/Western European military equipment which had been designed, developed and deployed for operational use in a US/Western European environment. The screens and other orifice coverings for sophisticated military hardware simply didn't keep the sand out. Such covers were fine for the beaches of Florida, the desert of Arizona, or the seacoast of Italy, but were ineffective against the grains of sand in the Saudi Arabian desert. This kind of environmental concern has always been key to our FMS customers. Our Middle East customers have been complaining about substandard performance of some items in the desert for years. In truth, substandard performance may have been experienced not because of inferior design or manufacturing, but because these systems were developed to operate only in a US/Western European theater of operations. We weren't responsive to these kinds of problems from our Middle East customers until we experienced them for ourselves.

Program management reviews provide an additional means for listening to the customer. Too often these reviews are considered as merely reports to the customer on the status of a program. These reviews should also be used as a forum to address the customer's issues and concerns. The customer should be encouraged to voice concerns and address issues, and has a right to timely and complete answers to all questions. We must remember this is their program, not ours. In the Arabian Programs Office, bi-annual reviews of the Saudi Arabian supply support posture have become an opportunity for the division to put it's accomplishments openly on the table in front of the customer, a "report card", as it were, on what's been achieved during the past six months. In keeping with Deming management principles of "factualizing" the business processes through the use of basic tools, such as flow diagrams, Pareto charts and trend charts, cause and effect diagrams, etc., these achievements take the form of measurable metrics, such as the number of controlled exceptions closed/number remaining open during the past six months; number of items delivered which had been declared "not mission capable supply"; reduction in the length of time required to create an "H"-coded requisition, etc.

Knowledge of the processes at play and continuous training play an essential role in the success of any FMS program. The special requirements of security assistance, most of them established by law, require in-depth knowledge of the legal/procedural limits placed on FMS case management. DISAM provides several specialized courses taught from a DoD perspective. The military services need to follow-up these classes with service directed applications. Too often these courses are neglected, or aren't considered important. Since there is no special credit towards any career field for attending these classes, they are frequently omitted from a training plan. It's essential, however, to train continuously the SA workforce (both customer and suppler) in the changing rules of the SA Program to ensure effective management of our customers' programs—instituting a vigorous program of education and retraining, one of Dr. Deming's 14 Points.

In addition to formal functional training, it is also important to develop networks of experienced security assistance personnel. FMS programs aren't just governed by DoD policies and regulations; there are also political and cultural impacts to be considered. Each FMS program has unique and special political requirements that may appear to make the program impossible to implement. In these cases it is especially valuable to note how other case managers have taken care of similar problems, and used the resources available to keep the program on track. In this sense, informal training may be just as valuable as formal classes. Along with the informal networks, there is a need for a lessons learned data bank which focuses on security assistance programs. Some elements of FMS are resident in several acquisition and logistics data banks, but there is no one source dedicated to FMS or security assistance programs. A case manager frequently must choose between different alternatives to fulfill the requirements of a program, and must analyze which course would better fit the country's needs, both culturally and politically, yet still reach the desired end. A lessons learned file would help avoid some costly errors that similar programs have experienced.

VII. SUMMARY.

As it matures from a relationship of supplier-client to one of customer-supplier, the Security Assistance Program, because of its potential effect on our domestic industrial base and influence in the international market place, is in a unique position to serve as the "flagship" for the TQM Revolution in government. Deming management techniques (i.e., the 14 Points) can be readily applied to the security assistance workforce and throughout the security assistance customer base. Applying TQM techniques to our business relationships with our existing customers holds promise for maintaining the "critical mass" at our military depots and throughout our industrial base, as well as helping ensure a business base for the future—if we are but wise enough to seize the opportunity this "New World Order" presents us by changing our business practices. It's no longer "business as usual"; our customers now drive the relationship, and there are many competitors "waiting in the wings" ready to support our customers' requirements at a competitive price and in an expeditious manner. If we fail to recognize the full degree to which this business pendulum has swung, not only will we lose any emerging future business opportunities, but we may also lose our existing customer base as well. If this happens, we run the risk of becoming a less relevant player on the world stage. Is anyone listening?

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