LEADERSHIP for

TOTAL ARMY QUALITY

GIVES US THE EDGE

VISION STATEMENT

America's Army is a partner in freedom which the Nation can count on... A total force trained and ready to fight... Serving our Nation at home and abroad... A strategic force capable of decisive victory.

AR 5-1

SIX ENDURING IMPERATIVES

- *A Quality Force*
- *Dynamic, Realistic Doctrine*
- *Proper Force Mix*
- *Demanding, Realistic Training*
- *Continuous Modernization*
- *Competent, Confident Leaders*

FOREWORD

America's Army now operates in an environment of historic change, evidenced by the disintegration of the Warsaw Pact and the Soviet Union as well as the end of the Cold War. Because of these changes and related considerations, we are heavily engaged in downsizing the Army for the fifth time this century. As we continue the reshaping process, it is essential we "break the mold" of previous drawdowns. "Breaking the mold" requires more than desire--it requires an unprecedented ability to transform the resources allocated to the Army into combat readiness.

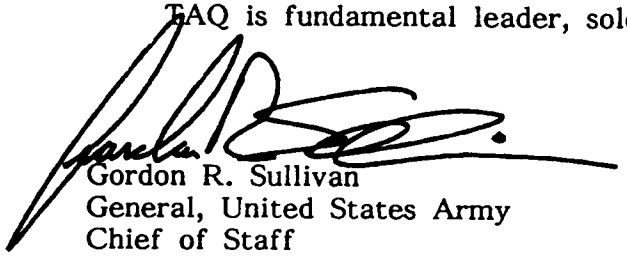
AR 5-1, Army Management Philosophy, dated 12 June 1992, established Total Army Quality (TAQ) as the Army's management philosophy. TAQ provides the methodology, tools and techniques to perform the systematic analyses of organizations, business and work processes to achieve the requisite improvements.

This Leadership for Total Army Quality Concept Plan builds on the foundation laid by AR 5-1 and addresses Army-wide implementation of TAQ. The Plan provides sufficient detail for consistency in the Army's overall approach, while giving commanders maximum flexibility in developing an implementation plan for their organization.

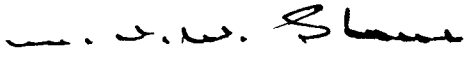
Effective implementation requires a clear and unrelenting focus on providing world-class support to internal and external customers; empowering people; improving effectiveness and efficiency; reducing waste and duplication; streamlining organizations; and doing the right things, the right way, for the right reasons. Training is essential for success--timely training for the Total Army: active and reserve, military and civilian leaders, soldiers and civilian workers. Implementation requires personal participation and full commitment by leaders; it also requires hard work, time, resources and the support of every individual and organization.

TAQ recognizes the enduring nature of change and emphasizes its creation, management and exploitation to improve ongoing operations and shape the future. We are dedicated to Total Army Quality.

TAQ is fundamental leader, soldier and civilian business!



Gordon R. Sullivan
General, United States Army
Chief of Staff



M. P. W. Stone
Secretary of the Army

LEADERSHIP FOR TOTAL ARMY QUALITY
CONCEPT PLAN

EXECUTIVE SUMMARY

The Leadership for Total Army Quality Concept Plan addresses the implementation of Total Army Quality, the Army's approach for Total Quality Management. This plan was largely developed by an all Army team hosted by Forces Command 10-13 February in Atlanta, Georgia.

Total Army Quality is designed to channel the energy of every Army organization towards achieving the Army leadership's vision through accomplishment of the goals established in the Army Strategic Planning System.

The plan lays out a four phased approach (Awareness, Assessment, Team Building, and Action) for implementing Total Army Quality. This approach is all inclusive. It involves the Total Army - every organization.

Although TAQ is not a program, the plan envisions organizations following a generally similar implementation strategy. Sufficient standardization is required to ensure that we can effectively communicate and coordinate activities between different organizations. However, great care must be taken to ensure commanders at all levels have the maximum possible flexibility in developing management systems which are right for their unique organizations. We will avoid establishing another bureaucracy.

Regardless of the level of the organization, TAQ implementation involves:

- leadership's commitment and personal involvement;
- development of a customer focused organizational environment;
- encouraging universal participation in continuously improving work processes;
- establishment of a tailored infrastructure;
- a meaningful assessment process focused on measuring progress towards achieving goals;
- empowerment and teamwork;
- universal education and continuous, requirements based training;
- meaningful recognition;
- and most importantly, achieving planned results.

HSC(Veterinary Services)

Ration Review Process Action Team

Industry Complaints - MRE Specs "GOLD PLATED"

38 Tests For "Major Defects"

11 Tests Eliminated

8 Tests Downgraded

RESULTS:

No Compromise In Safety
No Decrease In Quality
Major Cost Avoidance

I. SITUATION.

Total Army Quality (TAQ) is the management philosophy of the United States Army. It is a comprehensive, disciplined, structured, customer focused, management system which enables people to continuously improve organizations and processes. Its applicability to the Army is clear.

After receiving an increasing number of complaints from suppliers about "nonvalue added" Meals Ready to Eat (MRE) inspection and testing requirements, Health Services Command's Veterinary Services had a team study the MRE manufacturing and inspection processes. The team identified thirty-eight (38) tests to check for major defects. Analysis of the inspection and testing requirements led to the elimination of eleven tests. Eight other tests were downgraded to "minor defect" status. The elimination of one dye test saves the government $426,000 a year. As a result of the team's process improvements, the government has benefited from a major cost avoidance with no compromise in safety or quality.

In July 1992, Information Systems Command's Software Development Center at Fort Lee had forty-one (41) active process action teams which had completed over 400 projects. One team, streamlined the process for installing and validating the Integrated Facilities System - Mini/Microcomputer, eliminated travel and overtime expenses, improved morale and customer satisfaction, and reduced fielding costs by $395,000. The savings from this one project are more than three times greater than the cost of all the TAQ related training which had been presented at the Software Development Center at Fort Lee.

The Army's application of TAQ is action oriented. Experience convincingly demonstrates that increased effectiveness and improved efficiency are accomplished project by project through the participation and contributions of every soldier and Department of the Army civilian. All these improvement efforts translate directly into continuously improving training, unit readiness, and combat effectiveness.

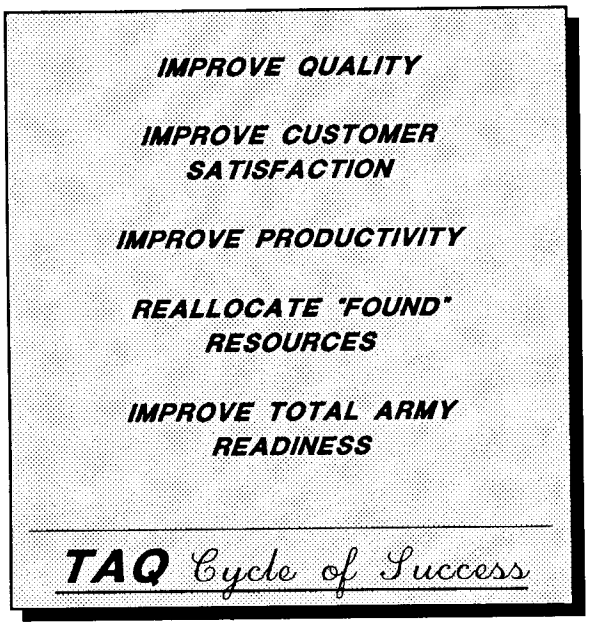
The Army strategy is to weave quality management into the fabric of the Army. This begins with leadership and is accomplished through the training base and in our organizations. TAQ requires a reassessment of current management practices and procedures and, in some cases, learning new skills and new behaviors. The knowledge and skills which are integral components of the TAQ methodology are being incorporated into all of the Army's professional development courses and will be applied in operational assignments.

ISC(SDC-L)

Integrated Facilities System
Mini/Microcomputer Team

$395,000 Savings
Reduced Overtime
Improved Morale
Improved Customer Relations

Adopting the philosophy and practices of Total Army Quality is not optional. However many organizations are unique or differ in a number of ways. Therefore, each organization's leadership must tailor their



own TAQ strategy and implementation plan to best fit their own circumstances. Making TAQ the "Army Way" will take time.

THE ARMY PLAN
FY 1994 - 2009

"Total Quality Management must become the management philosophy of every command and installation."

II. MISSION.

America's Army will implement the Army Management Philosophy (Army Regulation 5-1): Do the right things, the right way, for the right reasons, and constantly strive for improvement. The objective is to serve our customers better and to encourage behavior and develop management systems which will result in the continuous improvement of all business and work processes and the quality of all products and services produced or procured by the Army. The intent is to develop and institutionalize an organizational culture which ensures every soldier and Army civilian has the opportunity to effectively participate and contribute to the Army's continued success. The desired outcomes are mission accomplishment and vision achievement by continuously improving training, unit readiness, and combat effectiveness while optimizing the use of available resources.

ARMY MANGEMENT PHILOSOPHY

Do the right things, the right way, for the right reasons, and constantly strive for improvement.

AR 5-1

III. CONCEPT OF OPERATIONS.

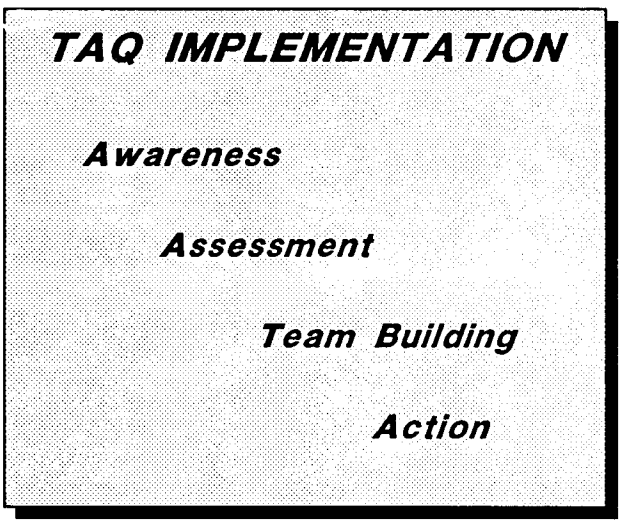
A. General. Total Army Quality is a comprehensive, structured, disciplined system for improving work processes. TAQ applies to every organization soldier and Army civilian. It is structured to ensure internal and external customer requirements are understood and satisfied and continuous process improvement is institutionalized. The intent of TAQ implementation is to simultaneously improve quality and increase productivity. Correctly implementing TAQ translates directly into continuously improving training, unit readiness, and combat effectiveness.

The Army's approach to implementing Total Army Quality is decentralized. The necessary level of standardization will be achieved by embedding the principles and concepts of TAQ throughout the Army's training and education systems, using a "common language," and incorporating TAQ into existing structures and systems. This approach provides commanders maximum flexibility to adapt TAQ to their own organization and develop a system of vertically and horizontally integrated efforts which support accomplishment of organizational goals and objectives.

The Army seeks to fully utilize the creativity, ingenuity, and initiative of its exceedingly dedicated and highly skilled soldiers and civilians. Therefore, whenever

practical and prudent, commanders will assign responsibility, decision making authority, and accountability to those who actually perform the work.

Commanders and leaders at all levels will ensure their actions demonstrate their personal commitment and encourage universal involvement and participation in continuous improvement efforts in support of Department of the Army plans and goals. Implementing Total Army Quality must reduce, not generate bureaucracy. The Department of the Army will not require any new reports for TAQ. Commanders need no special or additional authority from the Department of the Army prior to taking action on this initiative.

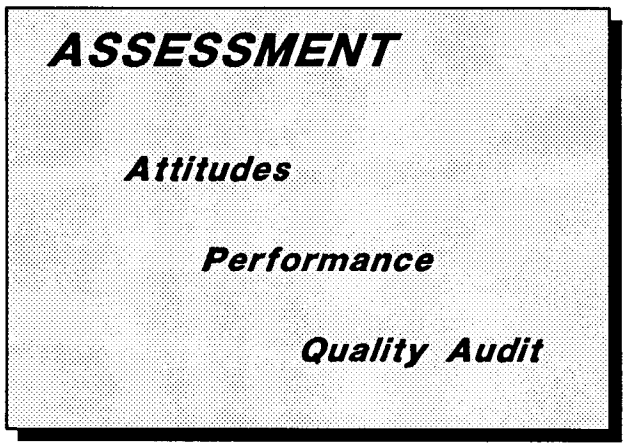


B. Concept of Operations. Implementation of TAQ generally follows four phases: Awareness, Assessment, Team Building, and Action. These phases are, for the most part, sequential. TAQ implementation is more like a "column" maneuver than a "flanking" maneuver. Different parts of the organization will frequently make progress at decidedly different rates based on many variables such as size, mission, availability of resources, ongoing activities, etc. The senior leadership of the organization should make a conscious decision concerning the need to synchronize implementation activities and construct their implementation strategy and plan accordingly.

1. **Phase I Awareness.** Implementing Total Army Quality (TAQ) requires the leader's personal support and participation. Increasing mission effectiveness while decreasing costs in order to posture a leaner, more capable Army for the future requires that we "break the mold" from the traditional way we do our business. This involves constancy of purpose, teamwork, and commitment to long term continuous improvement. We must work to establish adaptive management systems and business and work processes which endure and transcend the tenures of individual commanders.

a. During phase one, leaders learn what Total Army Quality is, why it is important, and how it works. This requires training and an investment of personal time and effort. Leaders then determine how to best apply TAQ to their organization and how they will lead the implementation effort.

b. With this commitment made, deployment throughout the organization is essential. This can be accomplished in writing, by personal appearances, video recordings, individual letters, etc. In this, as in other leadership roles, personal example is the most effective way to demonstrate commitment.



2. **Phase II Assessment.** Assessment always precedes action. Leaders should concentrate organizational assessment activities on three key areas:

a. Attitudes - how members of the organization view their working environment and their work. This assessment should cover values, beliefs, opinions, and perceptions.

b. Objective Performance - what is done, how much it costs, and how customers (both internal and external) assess the value of the products produced and services provided.

c. Quality Audit - how is quality managed within the organization. The President's Award for Quality criteria, the Malcolm Baldrige National Quality Award criteria, and International Standards Organization (ISO) 9000 Standards or American National Standards Institute/American Society for Quality Control (ANSI/ASQC) Q90 Standards are useful guides for designing and conducting a quality audit.

"Quality organizations are those where people are constantly learning and growing; where risk-taking and reward are present in abundance and honored; where individual creativity and innovation are treasured; where individual responsibility for quality is insisted upon and is a matter of pride; where it is simply more meaningful, satisfying, and fun to work."

3. Phase III Team Building.

a. Most organizations have discovered it is essential to establish an explicit organizational infrastructure (i.e., task organize) to initiate, accomplish, and sustain the social and technical changes required by Total Army Quality. It is composed of teams which are focused on the quality management/process improvement effort. This infrastructure is the engine used by the leadership to produce the energy, provide the resources, and manage the activities throughout the organization. The ultimate internal customer is the soldier. The ultimate external customer is the Nation. We must continually improve to meet or exceed their expectations. Leaders should consider the following as they weigh the advantages and disadvantages of TAQ task organization alternatives:

(1) An effective TAQ infrastructure facilitates TAQ implementation and strengthens the chain of command. It increases the time available for top leadership to spend on strategic issues and shaping the future.

For example, cross-functional teams, analyzing and reengineering an organization's processes, identify and fix many systematic problems. This often frees resources for investment in other critical areas and reduces or eliminates "turf" issues, fostering a proactive organizational culture.

(2) Some organizations have found it advantageous to "overlay" the TAQ organization onto the existing management structure. This allows the organization to use existing lines of communication and authority to manage the quality improvement efforts. It facilitates leadership involvement and minimizes disruption of the organization's ongoing processes.

(3) Leaders of large organizations, such as Major Army Commands, should consider establishing a temporary position or a small staff within the commander's/director's office to promote, coordinate, and evaluate the organization's implementation of TAQ. The people occupying these positions should be thoroughly trained. They often serve as "in-house" consultants and trainers and should have direct access to the head of the organization.

In smaller organizations, e.g., staff directorates, TAQ coordination functions can often be performed on a part time basis. However, the requirements of adequate training and direct access to the leadership are constants. Regardless of how coordination tasks are handled, it must be clear that everyone in the organization is responsible and accountable for quality and continuous improvement. Whether and how to staff the TAQ implementation effort is the leader's decision.

(4) New reports and additional reporting requirements should generally be avoided. Leaders are encouraged to use existing reports and performance indicators for evidence of progress as long as these indicators incorporate customer feedback. Since measurement is an important aspect of TAQ, it is critical the right things be measured. While implementing TAQ, many organizations discover better, more meaningful performance indicators than those currently used. Leaders should be receptive to modifying the existing reporting system and performance indicators as knowledge of work processes and customer requirements improve.

(5) As indicated in paragraph IIIB, TAQ implementation usually proceeds with individual organizational elements progressing at different rates. However, it is essential improvement efforts ultimately be integrated throughout the organization.

QUALITY...

"Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives."

b. Responsibilities for implementing TAQ are often divided into top management, middle management, and worker roles and tasks. These groupings correspond to the three commonly established elements of the TAQ infrastructure: the Executive Steering Committee/ Council/Group (ESC or ESG); the Quality Management Board (QMB); and the Process Action Team (PAT). What these groups are called is not important, but the role they perform is. Using existing structures to perform those roles is encouraged, since it strengthens the chain of command and minimizes bureaucracy. All of these elements are frequently assisted by a group facilitator.

(1) **The Executive Steering Committee** is an executive level team which is usually composed of the head of the organization and key subordinates. Normally, there is only one ESC in an organization. Typical responsibilities of the ESC include:

(a) Develop the organization's vision statement.

(b) Policy guidance/direction for overall TAQ improvement efforts.

(c) Establish strategic goals for quality/performance improvement.

(d) Provide support and resources for TAQ training, improvement projects, recognition and rewards.

(e) Evaluate the effectiveness, value, and priority of improvement projects.

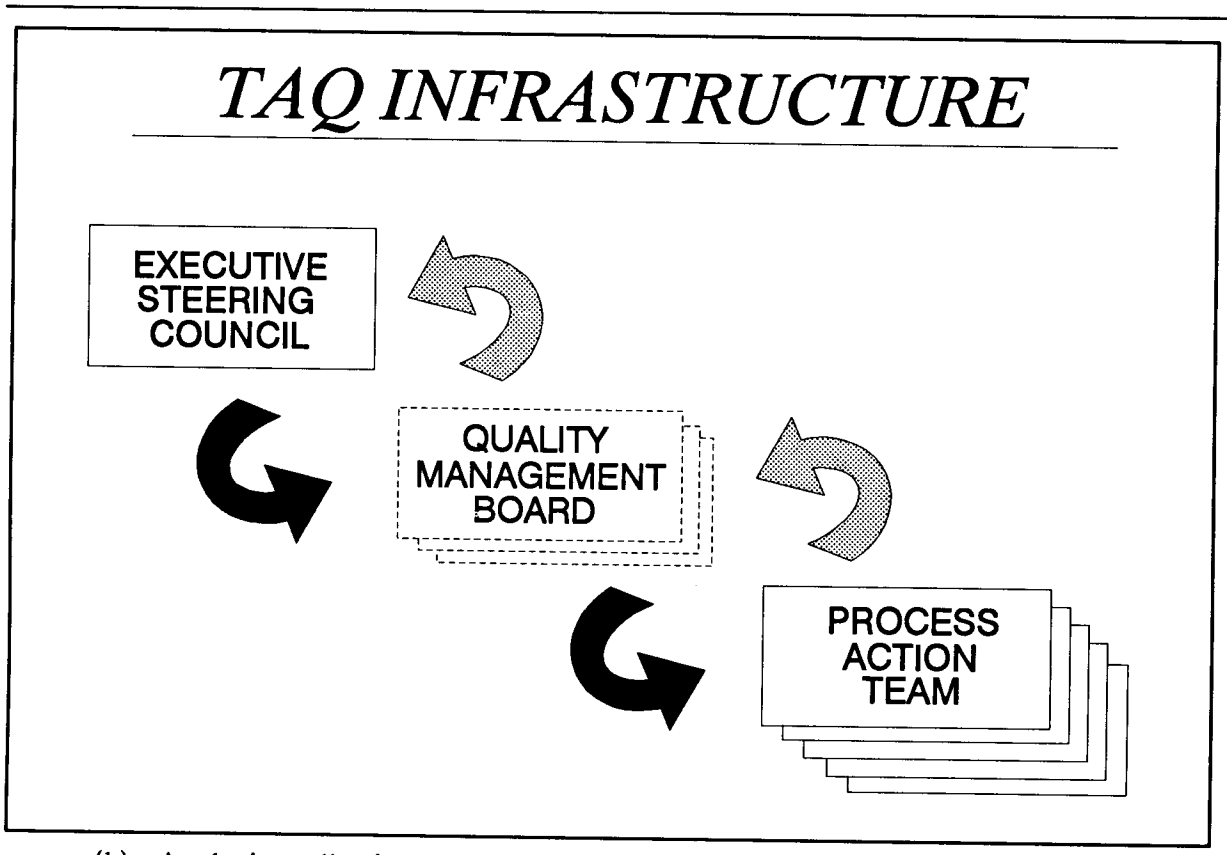
(f) Manage the improvement process and ensure efforts are aligned with the strategic goals of the organization.

(g) Empower all to participate in and contribute to the organization's success.

(f) Identify and remove organizational barriers to continuous improvement.

(2) **Quality Management Board (QMB):** The QMB is a permanent cross-functional team made up of top and mid-level managers who are jointly responsible for a specific product, service, or process. The structure of the board is intended to improve communication and cooperation by providing vertical and horizontal "links" throughout the organization. Normally, at least one member of a QMB is also a member of the ESC. Typically, large organizations will establish multiple Quality Management Boards. Common responsibilities of a QMB are:

(a) In coordination with the ESC, carries out/ oversees the majority of the organization's continuous process improvement efforts in their assigned area.



(b) Apply its collective knowledge to identify and select specific processes for improvement which offer the greatest potential return.

(c) Approve and implement changes, within its scope of authority to improve performance.

(d) Continuously monitor process performance indicators to assess the impact of changes.

(e) Charters, supports, and manages process action teams to accomplish specific improvement projects.

(3) Process Action Team (PAT): TAQ emphasizes teamwork and process over individual and task as the way to improve work processes and solve problems. Teams that work on specific improvement projects are Process Action Teams and normally are composed of people who are involved in the process being studied. They often include suppliers and customers as well as organizational personnel. The primary consideration for PAT membership is knowledge about the operation of the organization and the process being studied. PATs use basic statistical and other problem solving tools to analyze and improve work processes. Process Action Teams report their findings to a QMB, the ESC, or an individual as specified in their charter. The effectiveness of teams is determined by the qualifications of their members and the adequacy of their training in TAQ methodology, tools, and techniques. Each team should have a team leader, access to a facilitator, and an assigned management sponsor who is capable of providing necessary resources and removing obstacles to the team's work. Typical responsibilities for a Process Action Team include:

(a) Perform approved improvement project.

(b) Determine how the process is currently performed and measure the existing process capability.

(c) Apply a disciplined problem solving methodology (PLAN - DO - CHECK - ACT) to improve process performance and attain or exceed the objectives of the improvement project.

(d) Present recommended improvement actions, which are beyond the scope of the team's authority to implement, to the appropriate QMB, the ESC, or other designated group or individual for approval.

(4) Facilitator/Trainers: The benefits of knowledgeable facilitator support cannot be overstated. Facilitators assist teams at every level of the TAQ infrastructure. Effective facilitators are an extremely valuable resource. They can often make the difference between a successful project and a negative teaming experience. Facilitators assist teams in identifying key outputs/products, determining the critical characteristics of those products, establishing a creative, positive problem solving environment, selecting or developing meaningful measurements, and performing analysis.

(5) Vertical linkage characterizes traditional organizations. The vertical linkage from the ESC to the QMB and from the QMB to the PAT, through both membership and responsibility, facilitates unity, direction, and empowerment throughout the TAQ infrastructure. However, horizontal linkage is the source of much of the power in the TAQ structure. Process Action Teams and Quality Management Boards are designed to establish and facilitate cross-functional, horizontal linkage throughout the organization.

c. Structure. There is no universally ideal organizational model which suits the needs of every organization. However, successful TAQ implementation efforts frequently share some common characteristics:

(1) Committed, active, personal involvement by leaders.

(2) Shared values and beliefs.

(3) A clearly articulated and completely deployed vision and supporting goals.

(4) An organizational strategy and an action oriented concept of operations for achieving the organization's goals and vision.

(5) Clearly established authority relationships.

BASIC "QUALITY" TOOLS...

Seven Tools of SPC
(Statistical Process Control)

- ***Flowchart***
- ***Cause and Effect Diagram***
- ***Pareto Chart***
- ***Check Sheet***
- ***Scatter Diagram***
- ***Histogram***
- ***Control Chart***

Seven MP Tools
(Management and Planning)

- ***Affinity Diagram***
- ***Interrelationship Diagram***
- ***Tree Diagram***
- ***Prioritization Matrices***
- ***Matrix Diagram***
- ***Process Decision Program Chart***
- ***Affinity Network Diagram***

(6) A plan to execute the organization strategy and supporting plans and management action at every level of the organization.

KEYS TO TAQ IMPLEMENTATION...

- ***Leadership***
- ***Customer Focus***
- ***Shared "Vision"***
- ***Assessment***
- ***Infrastructure***
- ***Empowered Teams***

(7) Open lines of communication and an absence of organizational barriers.

(8) Adequate resources.

4. Phase IV Action. Implementing TAQ involves listening, learning, planning, coaching, collecting data, analyzing, doing, measuring, interpreting, adjusting, revising policies, procedures, and practices to sustain the gains which are achieved; recognizing participation and rewarding success. TAQ execution involves hard work at all levels.

a. Implementation of TAQ always involves change (new technology and new behaviors) at every level of the organization. Training facilitates change. Once leaders have been trained and have developed their implementation plan, they are in the best position to determine what training is necessary for others; how much, how it can best be accomplished, and how to synchronize training activities with the other aspects of implementation. TAQ training should be approached systematically. This will help leaders gauge its effectiveness and make required adjustments. The desired outcomes of the organization's training experience drive the training methodology which, in turn, drives the resource requirements. Quality begins and ends with training. Training is a continuous process, not a one time event. The outputs of this phase provide the organization with the basic elements of success:

(1) A competent, committed leadership team.

(2) A customer focus throughout the organization.

(3) A clear, meaningful, inspiring, shared vision of where the organization is going.

(3) A meaningful and accurate assessment of the organization's strengths, opportunities for improvement, and cultural climate.

(4) A functional, effective management infrastructure.

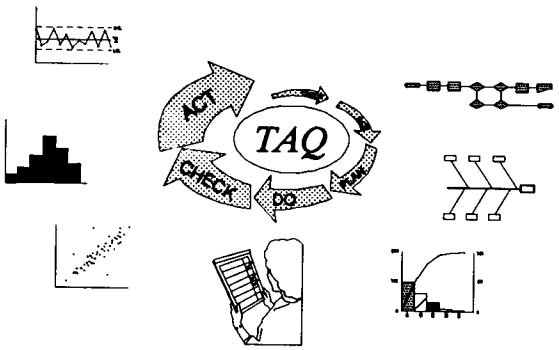
(5) Capable, empowered, multi-disciplined process action teams.

b. A common strategy is to build support for the TAQ methodology through seeking early successes from the first improvement projects. First projects should be "winners." They ideally address an important process with widely recognized negative effects; can be successfully concluded in a few months time; produce useful, measurable

results worthy of recognition; and serve as a valuable learning experience in the continuous improvement solving process. Resistance to change can be overcome by successful demonstrations of how TAQ works in the organization. Conversely, early failures generally hinder the overall implementation effort.

c. The organizational assessment which is typically performed during Phase 2 (Assessment and Training) is one possible tool for identifying meaningful improvement projects. Other sources for identifying potential improvement projects are customers, workers, customer surveys, periodic employee surveys, recent Inspector General Reports, unit training evaluations, the results of annual gunnery exercises, unit readiness reports, suggestion programs, cost of poor quality analysis, and the strategic planning system.

Continuous Process Improvement



SEVEN STATISTICAL TOOLS

d. In general, all teams use some form of the PLAN - DO - CHECK - ACT cycle to approach their tasks. This generic approach is as applicable to the work performed by the ESC as it is to that done by a PAT. The ESC and the QMBs support, empower, and focus the efforts of the PATs as described in Phase 3 (Organization).

e. Leaders should anticipate encountering resistance to the changes associated with TAQ implementation. Significant senior leadership effort is often required to identify and eliminate organizational barriers to implementation.

5. To be of real value, TAQ must become the way we do our work, not an additional or part time activity. The objective of TAQ implementation efforts is for TAQ to become the routine day-to-day behavior throughout the entire organization. TAQ is not self-sustaining. Leadership and long term commitment are required to establish and sustain a supportive organizational environment which encourages participation and innovation.

IV. SUPPORT. In addition to vision, planning, and personal involvement, leaders must provide adequate resources for the successful implementation of Total Army Quality.

The Under Secretary of the Army has Secretariat oversight of TAQ. The Vice Chief of Staff, Army has responsibility for quality management improvement efforts Army-wide. The Director of Management (DM), Office, Chief of Staff, Army (OCSA) is the functional proponent for TAQ. The DM is responsible for facilitating the implementation of TAQ throughout the Army and providing staff support on management issues to the Army Leadership. The DM coordinates with the other Services, all Department of the Army organizations, and others as required, to further the implementation of TAQ throughout the Army.

The Director of Management established the Army Management Division, within the Management Directorate 1 February 1992. A major task of this team is to coordinate and facilitate the implementation of TAQ Army-wide. As indicated in the concept of operations section, large organizations may find that a small, temporary staff is necessary during the TAQ startup period. There is much to do and it must be managed. The following is a partial list of the type of support usually required to implement TAQ:

1. Provide advice and staff support to senior leaders concerning TAQ.

2. Coordinate the conduct of organizational assessments and research.

3. Assist in performing estimates of the cost of poor quality.

4. Coordinate implementation activities within the organization and with other organizations as required.

5. Provide a "Historian" to capture "lessons learned."

6. Establish internal and external (public affairs) communications procedures and systems to facilitate the free flow of information about TAQ.

7. Assist in the development of training requirements and curricula, publicize training opportunities, and monitor the quality of training.

8. Coordinate TAQ training activities.

9. Assist organizations in obtaining technical support such as statistical expertise for TAQ applications.

10. Establish a TAQ resource center.

11. Provide TAQ information briefings/presentations as required.

> *"Quality management is not just a strategy. It must be a new style of working, even a new style of thinking. A dedication to quality and excellence is more than good business. It is a way of life, giving something back to society, offering your best to others."*
>
> **President George Bush**

In general, the executive steering committee or quality management board which charters a process action team will provide the resources necessary to carry out the improvement projects. If that committee or board is unable to fund the project and the project is deemed to be sufficiently important, the project should be referred to the next higher ESC for resource support. The Army's budget is declining and there is no new "pot of money" to support TAQ implementation. Therefore, commanders must redirect resources to meet the requirements of TAQ implementation. Experience indicates the benefits from successful improvement projects greatly exceed the cost of implementing TAQ.

V. COMMAND, CONTROL AND COMMUNICATION.

A. Command.

1. TAQ is the Army Management Philosophy. Commanders and leaders at all levels will implement TAQ by practicing the principles and concepts contained in AR 5-1, Army Management Philosophy.

2. Each organization should establish its own, unique quality management process. The intent of this plan is to provide leaders the maximum possible flexibility as they implement TAQ within their own organizations.

B. Control.

1. A formal separate reporting system will not be established. However, the ESC within each organization must determine what information (feedback) is required to execute its implementation plan and manage towards continuous improvement. Measurement is a key concept of Total Army Quality. Measures based on the goals must be established and used not only to improve processes but to sustain the gains which are achieved.

2. An Army-wide Executive Steering Committee will be established to direct and integrate the Army's quality management efforts.

3. The intent of the feedback system is to provide each person working within the system or process the flexibility to determine, in conjunction with their customers, the critical process parameters and product and service characteristics to be measured and managed. Feedback requirements should be limited to the minimum essential information necessary to manage improvement projects. Feedback is an essen-

tial component for continuous improvement.

4. Implementation is not voluntary. However, organizations are unique. Therefore, a substantial amount of variation in the rate at which implementation progresses is anticipated. Each organization will progress at its own pace. Progress will be monitored at the next higher organizational level. The Army's approach towards Total Army Quality provides great flexibility with respect to how an organization applies the principles of TAQ. TAQ may change the roles of leaders/managers, but it does not replace leadership nor command authority. It provides leadership and commanders with the tools to enhance individual and organizational performance. Commanders at higher organizational levels are still responsible for subordinate units. Commanders and heads of activities are responsible and accountable for both the results achieved and the process used to achieve them.

C. Communication. Embedding TAQ throughout an organization requires effective, open communication. Whenever appropriate, leaders should consider applying TAQ to existing improvement efforts and using favorable results to promote further use of TAQ principles and techniques. "Networking" is a powerful communications technique. Sharing information about what worked and what did not work within the organization and with other organizations strengthens the quality effort and facilitates the creative process.

Appendix A -- References
Appendix B -- Glossary
Appendix C -- Training
Appendix D -- TAQ Training Model
Appendix E -- Roles of Leaders
Appendix F -- Vision and Improvement Goal Characteristics
Appendix G -- Continuous Improvement Cycle
Appendix H -- Key Concepts
Appendix I -- Lessons Learned

25 September 1992

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APPENDIX A (REFERENCES)

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* These references are recommended to gain an understanding of the theory of Quality Management.

APPENDIX B (GLOSSARY)

85/15 RULE: Dr. Deming's observation that management has 85% (or greater) control over the system and workers have only 15% (or less) control. Hence, the bulk of the causes of low quality and low productivity are attributable to the system and not to the work force. Only management can change (improve) the system.

ACTIVITY NETWORK DIAGRAM (ARROW DIAGRAM): One of the seven management and planning tools which is similar to PERT (Performance Evaluation Review Techniques) and CPM (Critical Path Method) charts. It is used in detailed planning by plotting the sequence of steps for accomplishing a job. The arrow diagram indicates which jobs can be worked on simultaneously and shows the longest (critical) path from process start to finish.

AFFINITY DIAGRAM: One of the seven management and planning tools that assists in general planning. It is also known as the KJ Diagram. It is used to make sense out of disparate language by placing it on cards and grouping the cards that go together in some creative way. Header cards are used to summarize each group of cards.

ANSI/ASQC Q90 SERIES: The Americanized (American National Standards Institute/American Society for Quality Control) version of the ISO 9000 Series Standards adopted by the United States in 1987.

BENCHMARKING: An improvement process in which an organization measures its performance against that of best-in-class organizations, determines how those organization's achieved their performance levels, and uses the information to improve its own performance. The subjects that can be benchmarked include strategies, operations, processes, and procedures. The objective of benchmarking is to identify and learn "best practices" and then to use those procedures to improve performance.

BRAINSTORMING: A technique that teams use to generate new, useful ideas on a particular subject.

CAUSE AND EFFECT DIAGRAM: A tool for analyzing process dispersion. It is also referred to as the "Ishikawa diagram," because Dr. Kaoru Ishikawa developed it, and the "fishbone diagram," because the complete diagram resembles a fish skeleton. The diagram illustrates the main causes and sub-causes leading to an effect (symptom). The cause and effect diagram is one of the seven tools of quality.

CHECK SHEET: A simple data recording device. The check sheet is custom designed by the user, which facilitates interpretation of the results. The check sheet is one of the seven tools of quality.

CHRONIC WASTE: The loss due to continuing quality deficiencies which are inherent in the system.

CLONING: The application of a process improvement, derived from a completed quality improvement project, to similar problems elsewhere in the organization.

COMMON CAUSE: Causes of variation that are inherent in a process over time. They affect every outcome of the process and everyone working in the process. Its origin can usually be traced to an element of the system which only management can correct.

CONFORMANCE: An affirmative indication or judgment that a product or service has met the requirements of a relevant specification, contract, or regulation.

CONTINUOUS IMPROVEMENT: The ongoing improvement of products, services, or processes through incremental and breakthrough innovations.

CONTROL CHART: Dr. W. A. Shewhart's chart for continuing test of statistical significance. A graphic representation of a characteristic of a process, showing plotted values of some statistic gathered from that characteristic, and one or two control limits. It has two basic uses: as a judgment to determine if the process is in control and as an aid in achieving and maintaining statistical control. The control chart is one of the seven tools of quality.

COST OF QUALITY: This term should be avoided because of the difficulty in distinguishing between the costs of providing product features from the cost of poor quality.

COST OF POOR QUALITY: The costs (waste, scrap, rework, idle time, etc.) which would disappear if all products and services were produced perfectly (free from defect). These costs include three of the four categories of costs commonly associated with quality: internal failure costs (costs associated with defects found before the customer receives the product or service, external failure costs (costs associated with defects found after the customer receives the product or service), and appraisal costs (costs incurred to determine the degree of conformance to quality requirements). [The fourth cost category is prevention costs (costs incurred to minimize failure and appraisal costs).]

CROSS-FUNCTIONAL MANAGEMENT: A self descriptive term. Cross-functional management is used to ensure all aspects of the organization are well managed and have consistent, integrated quality efforts with respect to quality planning, quality control, and quality improvement. Cross-functional management facilitates horizontal information flow and helps synchronize activity through the organization.

CUSTOMER: Anyone who is impacted by the product, service, or process. Customers may be internal (the person or organization that receives or is impacted by another person's or group's output within an organization), or external (a person or organization that receives or is impacted by a product or service, or process output, but is not part of the organization producing it).

DETECTION: A concept of managing for quality based on inspection and test to detect and remove defects prior to delivery to the customer.

EMPLOYEE INVOLVEMENT: A practice within an organization whereby employees regularly participate in making decisions on how their work areas operate, including making suggestions for improvement, planning, goal setting, and monitoring performance.

EMPOWERMENT: A condition whereby employees have the authority to make decisions and take action in their work areas without prior approval. For example, an operator can stop a production process if he/she detects a problem or a customer service representative can send out a replacement product if a customer calls with a problem. The act of vesting appropriate authority in the hands of the people nearest the problems to be solved.

EXECUTIVE STEERING COMMITTEE (ESC): An executive level team composed of the commander/director of the organization and his or her direct reports. Whereas an organization may have numerous QMBs and PATs, it has only one ESC. The ESC identifies strategic goals for organizational quality improvement efforts. It obtains information from customers to identify major product and service requirements. It is through the identification of these major requirements that quality goals for the organization are defined. Using this information, the ESC lists, prioritizes, and determines how to measure the organization's goals for quality improvement. The ESC develops the organization's improvement plan and manages the execution of that plan to ensure improvement goals are achieved.

FACILITATOR: A person specifically trained to assist teams in carrying out their projects.

FEEDBACK: Communication of data on quality performance to sources which can take appropriate action.

FIRE FIGHTING: The activity of getting rid of sporadic quality troubles and restoring the status quo.

FLOWCHART: A graphical representation of the steps in a process. Flowcharts are drawn to better understand processes. The flowchart is one of the seven tools of quality.

GOAL: An aimed-at target -- an achievement toward which effort is expended.

HISTOGRAM: A graphic summary of variation in a set of data. The pictorial nature of the histogram lets people see patterns that are difficult to see in a simple table of numbers. The histogram is one of the seven tools of quality.

HOSHIN PLANNING: Breakthrough planning. A Japanese strategic planning process called hoshin kanri. Hoshin planning is system that points the organization in the right direction. The common translation for hoshin kanri is policy deployment.

ISO 9000 SERIES STANDARDS: A set of five individual but related international standards developed by the International Organization for Standards (ISO) on quality management and quality assurance to help organizations effectively document the quality system elements required to maintain an efficient quality system. The standards, published in 1987, are not specific to any particular industry, product, or service.

IMPROVEMENT PROJECT: A problem scheduled for solution - a process targeted for improvement. A specific mission to be carried out. A process action team effort directed at improving a process.

INTERRELATIONSHIP DIAGRAPH (ID): One of the seven management and planning tools used to assist in general planning. The ID shows with arrows the cause and effect relationship between items. Important items are easily recognized by the large number of arrows going in and coming out. Items with arrows only going out are usually good places to initiate action.

MATRIX DIAGRAM: One of the seven management tools which assists intermediate planning. The Matrix Diagram compares one set of items against another set and identifies the strength of their relationship.

NONCONFORMANCE: Nonfulfillment of a specified requirement.

ORGANIZATION CULTURE: A system of values, beliefs, and behaviors inherent in an organization. To optimize performance, leaders must define and create the necessary culture.

PARADIGM: A pattern or model. Any set of rules or regulations (also called procedures, standards, and routines) which do two things. First, they establish boundaries. Second, they tell us how to be successful by solving problems within those boundaries. Paradigms dramatically affect our judgments and our decision making by influencing our perceptions.

PARADIGM SHIFT: A paradigm shift is a revolutionary way of thinking about old problems - a dramatic, collective change in our perception. A paradigm shift usually occurs when the established "rules of the game" fail to provide effective solutions to our problems. A new insight, an alternative explanation or discovery provides ideas which change our understanding.

PARETO CHART: A graphical tool for ranking causes from most significant to least significant. It is based on the Pareto principle, which was first generalized by J. M. Juran in 1950. The principle, named after the 19th century economist Vilfredo Pareto, suggests that most effects come from relatively few causes; that is, 80% of the effects come from 20% ("the vital few") of the possible causes. The Pareto chart is one of the seven tools of quality.

PLAN-DO-CHECK-ACT CYCLE: A four step process for quality improvement. In the first step (plan) a plan to effect improvement is developed. In the second step (do), the plan is carried out, preferably on a small scale. In the third step (check), the effects of the implementation are observed. In the last step (act), the results are studied to determine what was learned and what can be predicted and appropriate changes are implemented. The cycle is often abbreviated PDCA and is also called the Shewhart Cycle and the Deming Cycle.

PREVENTION: A future oriented quality management strategy that principally occurs in the design of a process. It involves communicating, planning, proofing, and working up front to eliminate opportunities for nonconformance.

PREVENTION VERSUS DETECTION: A term used to contrast two types of quality activities. Prevention refers to those activities designed to prevent nonconformances in products and services. Detection refers to those activities designed to detect nonconformances already in products and services. Another term used to describe this distinction is "designing in quality versus inspecting in quality. Phil Crosby described the system of quality as prevention rather than appraisal (detection).

PRIORITIZATION MATRICES: One of the seven management and planning tools which is used to facilitate intermediate planning. They are used when you want to prioritize tasks, issues, or possible options based on known, weighted criteria. Using a combination Tree Diagram and Matrix Diagram format, they narrow down options to the most desirable/effective choice.

PROBLEM: A visible performance deficiency in an important process, product, or service.

PROBLEM SOLVING: A structured process for acquiring and analyzing data in a way that will identify the root causes of quality problems and remove or reduce those causes.

PROCESS: A systematic series of actions directed to the achievement of a goal. The combination of people, machine and equipment, raw materials, methods, and environment that produces a given product or service.

PROCESS ACTION TEAM (PAT): Process Action Teams are composed of those who are involved in the processes being investigated. The members of a PAT are often chosen by their respective managers on the QMBs. The primary consideration for PAT membership is knowledge about the operations of their organization and the process being studied. The main function of a PAT is the performance of an improvement project, hence customers are often invited to participate on the team. PATs use basic statistical and other tools to analyze a process and identify potential areas for improvement. PATs report their findings to a QMB, the ESC, or an individual as specified in their charter.

PROCESS CAPABILITY: The inherent capability of a process to perform under operating conditions.

PROCESS DECISION PROGRAM CHART (PDPC): A tool for detailed planning used to identify the various things that can go wrong in a plan and appropriate countermeasures for each contingency. PDPC is one of the seven management and planning tools.

PROFOUND KNOWLEDGE: An all encompassing, detailed understanding extending far beneath the surface. A complete awareness of how work is accomplished (the real process), what is important to the customer, how performance compares to goals, what to do about the difference, and how much it all costs.

QUALITY: Defined by the customer. The word has two major meanings: (1) those product features which respond to customer needs, and (2) freedom from deficiencies. Dr. Juran offers the broad term, "fitness for use," to cover both meanings.

QUALITY AUDIT: A systematic, independent examination and review to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve the objectives.

QUALITY CONTROL: A managerial process which consists of the following steps: (1) evaluate actual quality performance, (2) compare actual performance to quality goals, (3) take action on the difference.

QUALITY FUNCTION DEPLOYMENT (QFD): A structured method in which customer requirements are translated into appropriate technical requirements for each stage of product development and production. The QFD is often referred to as listening to the voice of the customer.

QUALITY IMPROVEMENT: The organized creation of beneficial change. Improvement of performance to an unprecedented level.

QUALITY MANAGEMENT BOARD (QMB): A permanent cross-functional team made up of top and mid-level managers who are jointly responsible for a specific product, service or process. The structure of the board is intended to improve communication and cooperation by providing vertical and horizontal "links" throughout the organization.

QUALITY PLANNING: The activity of (a) determining customer needs and (b) developing the products and processes required to meet those needs.

RECOGNITION: Public acknowledgment of participation in successes which are related to quality improvement.

REWARDS: Salary increases, promotions, bonuses, awards keyed to job performance.

ROOT CAUSE: A major factor that is directly and causally related to an observed quality problem. When a root cause is eliminated, the quality problem is also reduced significantly or eliminated.

SCATTER DIAGRAM: A graphical technique to analyze the relationship between two variables. The scatter diagram is one of the seven tools of quality.

SEVEN MANAGEMENT AND PLANNING TOOLS: Also called the Seven New Tools for Management and Planning; the Seven New Tools; and the Seven Management Tools. The seven management and planning tools are the affinity chart and interrelationship diagraph (general planning); tree diagram, matrix diagram, and prioritization matrices (intermediate planning); and the activity network diagram and process decision program chart (detailed planning). See the Memory Jogger Plus+ and Hoshin Planning, The Developmental Approach for more information.

SEVEN TOOLS OF QUALITY: Tools that help organizations understand their processes in order to improve them. The tools are the cause and effect diagram, check sheet, control chart, flowchart, histogram, Pareto chart, and scatter diagram.

SPECIAL CAUSE: Cause of variation that arises because of special circumstances. They are not inherent in the process. Also referred to as assignable causes.

SPECIFICATION: A document that states the requirements to which a given product or service must conform.

STATISTICAL PROCESS CONTROL (SPC): The application of statistical techniques to control a process. Often the term "statistical quality control" is used interchangeably with "statistical process control." However, statistical quality control includes acceptance sampling as well as statistical process control.

SYMPTOM: The outward evidence of a quality deficiency.

STRUCTURAL VARIATION: Variation caused by regular, systematic changes in output, such as seasonal patterns and long term trends.

TAMPERING: Action taken to compensate for variation within the control limits of a stable system. Tampering increases rather than decreases variation.

TRANSLATION: The process of converting the statement of customers' needs from customers' language into suppliers' language.

TREE DIAGRAM: One of the seven management and planning tools used in intermediate planning. The tree diagram is used to break plans down into their component parts. It systematically maps out the full range of tasks/methods needed to achieve a goal. It can either be used as a cause-finding problem solver or a task-generating planning tool.

TOTAL ARMY QUALITY (TAQ): A leadership philosophy and management approach. It is a leadership philosophy which empowers all individuals to build on the aggregate capabilities of our quality Army. As a management approach, Total Army Quality focuses on continuous process improvement to meet or exceed the expectations of internal and external customers.

TOTAL QUALITY MANAGEMENT (TQM): A term initially coined in 1985 by the Naval Air Systems Command to describe its management approach to quality improvement. Simply put, TQM is a management approach to long term success (continuous improvement) through customer satisfaction. TQM is based on the participation of all members of an organization in improving processes, products, services, and the culture they work in. TQM benefits all organization members and society. The methods for implementing this approach are found in the teachings of such quality leaders as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa, and J. M. Juran.

VALUE-ADDING PROCESS: Those activities that transform an input into a customer usable output.

VARIATION: A change in data, a characteristic, or a function that is caused by one of four factors: special causes, common causes, tampering, or structural variation.

VISION: A statement of the desired end state of the organization articulated and deployed by the executive leadership. Organizational visions are inspiring; clear, challenging, reasonable, and empowering. Effective visions honor the past while they prepare for the future.

APPENDIX C (TRAINING)

TAQ Training. The purpose of TAQ training is to provide current and future leaders and every soldier and Department of the Army civilian the knowledge, skills, and ability to continuously improve Army processes and themselves. The focus of training is the accomplishment of improvement projects.

1. The training approach should proceed from the top down, beginning with the head of the organization.

2. TAQ training is focused on leadership and continuous process improvement. It adheres to the "just in time" principle, i.e., people receive training just prior to application of training to complete an assignment.

3. Training is an integral part of the organization's improvement strategy/plan.

4. Training is directed to provide specific knowledge and skills needed by the organization and individuals being trained.

5. Typically, TAQ involves training in the following areas.

a. Principles of Quality Management.

b. Planning for Quality

c. Quality Control

d. Quality Improvement

e. Group Dynamics

f. Group Problem Solving

g. Tools and Techniques

h. Meeting Management

i. Specialized Training for Facilitators/Trainers

APPENDIX D (TAQ TRAINING MODEL)

TAQ training can be classified as either STARTUP training or SUSTAINMENT training. The following is brief description of the types of training typically performed in both of these categories:

A. STARTUP TRAINING.

1. Consultation. If available, before starting a TAQ implementation effort, the head of the organization and his or her key people can meet with a consultant (internal or external) to determine organizational requirements and desired outcomes of the startup implementation activities. The output of this phase is a tailored training plan which is aligned with the leadership's approach and designed to achieve the leaders desired outcomes.

2. Executive Training. The organization's executives and senior managers are led through a discussion of the TAQ principles, current organizational culture and business practices requiring change, identification of major systems which drive the organization, and the barriers to TAQ implementation. The output of this training is typically long range goals for TAQ implementation, an implementation action plan, an infrastructure with clearly articulated authority relationships, and identification of the organizations' major systems and the systems owners.

3. Management Training. Middle managers, including first line supervisors, are led through a more comprehensive discussion and exploration of the TAQ principles, identification of critical processes requiring improvement, and application of the basic tools and methodology for process improvement. Typical outputs from this training are the mid-short range goals for TAQ implementation, identification of processes requiring improvement, assignment of process owners, and a self assessment of the existing organizational culture.

4. Process Action Teams. Teams formed to perform improvement projects are provided an in-depth overview of the TAQ principles, problem identification and problem solving methodology and techniques, quantitative tools and techniques for process analysis, and methods for maximizing group interaction and effectiveness. The output of this training should be trained, capable, cohesive process action teams.

B. SUSTAINMENT

1. Train-the-Trainer. This training is designed to develop in-house trainer/facilitators capable of teaching the organization's continuous improvement classes. These individuals play a vital role in the organization's ability to institutionalize meaningful change and improve mission essential systems and processes. These instructors, working with all levels of management, process action teams, and their peers, assist management in developing an environment which encourages innovation, teamwork, and involves everyone in continuous improvement activities. Students should receive instruction in the basic tenets of TAQ, the theories of quality management experts, structured problem solving methodology and analytical techniques used to identify, measure, and sustain process improvement, process definition, team building, and teaching techniques. Emphasis is placed on management and workers working together to eliminate organizational barriers, opening both horizontal and vertical communication, and teamwork. The normal output of this training is a trained cadre capable of developing and executing a training strategy to meet the organizations training needs.

2. Individual Awareness Training. This instruction provides each individual in the organization with an awareness of the concepts of Total Army Quality, the tools and techniques used to achieve continuous improvement, and the organization's approach to implementing TAQ. The objective of this training is the institutionalization of TAQ.

APPENDIX E (ROLES OF LEADERS)

A. Roles of Leaders: These roles and responsibilities are not delegable.

1. Demonstrate continuous personal commitment to quality by their actions.

2. Develop and deploy organizational vision.

3. Serve on the executive steering committee.

4. Establish quality goals.

5. Provide resources.

6. Review and manage progress.

7. Give recognition.

8. Revise the reward system.

9. Sponsor Process Action Teams (PAT).

B. Leaders continuously encourage personnel to meet the quality goals. (Develop a rewards system which relates rewards to performance.)

1. Army leaders lead by example:

a. Leadership through personal participation.

b. Personal day-to-day behavior/decisions.

c. Public appearances.

2. Leaders provide training and recognition.

3. Leaders incorporate improving quality in performance appraisals.

4. Leaders revise the reward system to reward both participation and achievement in improving process quality (rather than just successful fire fighters). As appropriate, recognition and rewards should be group oriented.

5. Leaders hold subordinates accountable for approach (methodology) as well as results.

6. All leaders take action to publicize successes and share lessons learned.

APPENDIX F (VISION AND IMPROVEMENT GOAL CHARACTERISTICS)

A. The leadership at all levels must develop and communicate a vision that shapes the future rather than merely allows their organization to adapt to the future. The process used to develop a vision will normally involve answering three basic questions. Where are we now? Where are we going? How are we going to get there?

1. The vision statement must clearly articulate the desired end state.

2. The vision must indicate a common azimuth to be followed in order to facilitate the coordination of all activity towards achieving shared organizational goals.

3. The vision must be universal (apply to all organizational elements) and be communicated throughout the organization.

4. The vision must inspire.

5. Organization vision statements must support the Army Leadership's vision: "America's Army: A total force trained and ready to fight... serving our nation at home and abroad... a strategic force capable of decisive victory."

B. GOALS

1. Derived from vision.

2. Established by the organization's Executive Steering Committee in support of specific Army improvement goals and the six imperatives.

3. All Army personnel must be aware of the Army's goals and be able to relate how their work contributes to achieving those goals.

4. Achievement of long term objectives will be given priority over short term expedience.

C. Properly articulated improvement goals have the following characteristics:

1. Measurable: Stated in numbers which can be communicated with precision.

2. Optimize overall results: Goals which suboptimize performance of various activities often damage overall performance.

3. All-inclusive: Activities for which goals have been set tend to have high priority, but at the expense of the remaining activities. Therefore, quality goals should extend across the entire scope of activity: the Army mission, the entire process, relations with outside suppliers, etc.

4. Economic: The value of meeting the goals will be greater than the cost of setting and administering them.

5. Legitimate: Goals should have an undoubted official status.

6. Understandable: They should be stated in clear, simple language -- ideally in the language of those faced with meeting the goals.

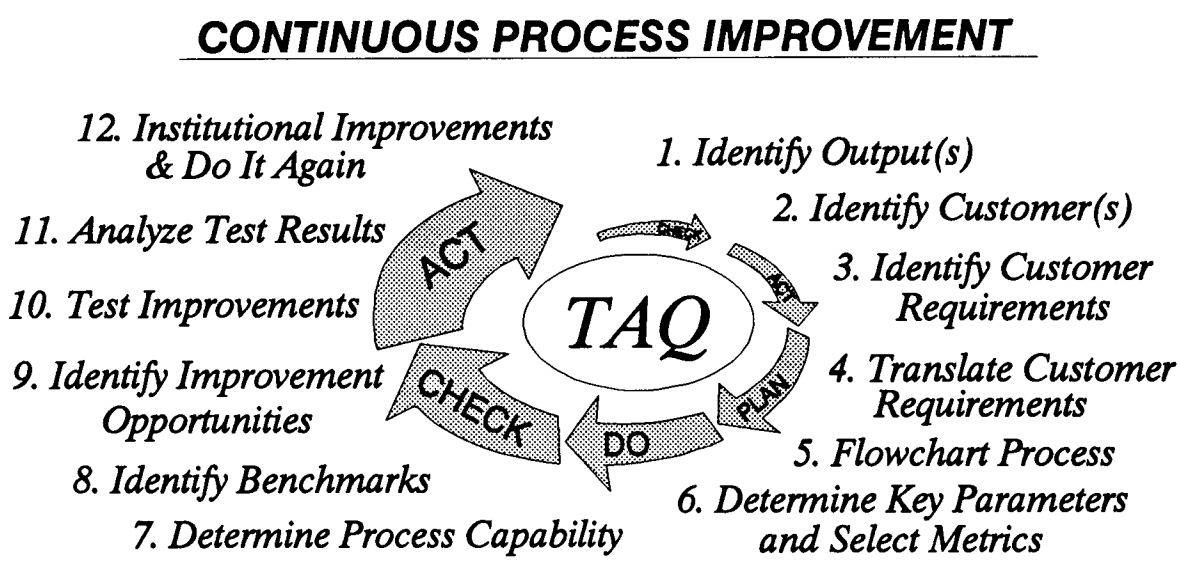
7. Worthwhile: Meeting the goal will benefit those who do the added work as well as benefiting the organization which established the action.

8. Attainable: Normally, it should be possible for "ordinary" people to attain the objectives by applying reasonable effort. However, goals which may not be attained using traditional or existing organizations, processes, procedures, tools, techniques, etc., can (and perhaps should) be established in order to achieve "breakthroughs." These are referred to as "stretch goals."

APPENDIX G (CONTINUOUS IMPROVEMENT CYCLE)

The TAQ continuous process improvement model follows the PLAN - DO - CHECK - ACT cycle. It begins by stating a goal for improving a process and proceeds through institutionalizing successful process changes in documented policies, procedures, and standards.

STEP 1: PLAN. During the Plan phase, process selection is made and goals for improving customer satisfaction are stated. Defining those goals requires describing the process flow, documenting current "as is" state, understanding how the process functions, defining the customers of the process, and understanding customer needs and requirements. All process steps are examined to ensure each is necessary and adds value. Clear concise data collection procedures are established. To verify theoretical causes of targeted effects, measures of process performance are identified. When problems are identified, activity in this step involves stating the problem, determining and verifying root causes, and developing solutions to be implemented.



STEP 2: DO. The Do phase is the implementation phase. The solutions identified in the plan stage are put into place to eliminate the root causes of any problems and improve the process.

STEP 3: CHECK. During the Check phase, data collection and analysis are the primary activities. Data collection is focused to determine if the implementation was effective. Did the plan work? Has the process been improved? The goal of this step is verification that the problem either has been eliminated and the desired results obtained or that other action is necessary.

STEP 4: ACT. In the Act phase, effective changes are documented and incorporated into the process. Process standards are modified as appropriate. Finally, process monitoring procedures over the long term are put into place. The process improvement cycle (PLAN - DO - CHECK - ACT) continues forever.

APPENDIX H (KEY CONCEPTS)

1. Leaders comprehend, are committed, and personally lead the effort to transform the organization.

2. The role of management is redefined to capitalize on employees' talents and expertise.

3. All customers (both internal and external) are identified. Customer and supplier requirements are explicitly established and mutually agreed upon. Communications are open and effective.

4. The leadership empowers people through training and recognition of their detailed knowledge of the work processes. Everyone is encouraged to participate and contribute. An underlying climate of ***trust*** is developed.

5. Responsibility, authority, and accountability are synchronized. Ownership of each work process is formally established and positively affected through the execution of plans by the same people who develop and deploy them.

6. Errors are prevented rather than detected and corrected.

7. Near term operations are subordinated to achieving long term (strategic) goals.

8. Uses a formal infrastructure, strategic planning, teamwork, the scientific method, and statistical tools to insure actions taken to achieve management goals are integrated throughout the organization.

9. Measurement and quantitative analysis techniques are applied to achieve continuous improvement of all work processes.

APPENDIX I (LESSONS LEARNED)

These "lessons" reflect the implementation experience of both public and private organizations.

1. The implementation of TAQ requires the personal commitment of the organization's leadership. Unless the head of the organization is willing to devote his or her time and effort to personally lead this endeavor, it is better not to start. However, subordinate/smaller organizations (within the larger one), which have leadership commitment, often experience significant success when they implement on their own.

2. The implementation of TAQ involves changing the culture of the organization. Establishing an environment which promotes and sustains continuous improvement efforts normally requires redefining the role of management, establishing new authority relationships, management based on fact, and more process oriented thinking, and a recognition that most problems are caused by the process which is beyond the control of the individual worker.

3. Everyone in the organization requires training. However, training is tailored to specific roles and responsibilities. Effective training is based on a needs assessment, synchronized with other implementation actions, and performed "just-in-time," i.e., immediately before it is required to be used. Training too soon is a common pitfall.

4. Top management's attendance at training not only improves their understanding of TAQ but sends a strong and clear signal throughout the organization about the importance of TAQ.

5. The ability to communicate about implementation activities using a common set of terms is essential to cultural change. Therefore, training activities should be coordinated across the entire organization.

6. TAQ implementation strategies should be broad and permit substantial tailoring by subordinate organizations. It is important that people at each organizational level develop a sense of ownership for their role and activities within the TAQ process.

7. TAQ implementation is a long term effort. There are no "new" funds available in the aggregate to meet the requirements of TAQ implementation. However, the leader's willingness to commit existing resources to the TAQ implementation effort, when necessary, sends a clear signal about the real importance of TAQ.

8. "Throwing" manpower spaces at TAQ is the wrong approach. Some temporary spaces may be required to perform and coordinate certain implementation functions. However, creating a new and specialized staff element often leads to the misunderstanding that quality is exclusively their job rather than everybody's job.

9. Leaders at all levels must be willing and able to speak frankly about problems and opportunities and must work continuously to eliminate organizational barriers and obstacles to open, effective communications.

10. Leadership must communicate that TAQ is not "business as usual," and not "just another program," but rather a new, routine day-to-day behavior.

11. Leaders must "walk their talk." How they spend their time and every decision they make sends a message about their commitment to quality and the Army management philosophy.

12. There are no short cuts to quality. TAQ uses a disciplined problem solving methodology. TAQ is based on the development of profound knowledge and management by fact.

Leaders must understand that long term improvements in process performance take time. Imposing arbitrary time constraints on process improvement efforts should be avoided.

13. TAQ is not a cost reduction methodology. If it is implemented as such it will fail. The primary objective of TAQ is increasing customer satisfaction. Since use of the continuous improvement methodology results in a constant quest for improved performance and elimination of nonvalue added process steps, cost reductions are a natural by-product of most TAQ improvement projects.

14. Process Action Teams differ from "task forces." Some of the common problems associated with traditional task forces are:

- They often involve people who are not directly involved in the area to be analyzed and who must overcome a tremendous learning curve.

- They frequently generate resentment because they signal a lack of confidence in an organization's ability to improve its own processes.

- They generally suffer from the lack of a standardized methodology.

- They are often encumbered by nonvalue added bureaucratic requirements.

As a result of the perceived exclusion of many of the process participants, task forces often encounter significant organizational barriers. Since they are temporary organizations often operating under a rigid time constraint, schedule rather than quality sometimes becomes the primary driver of their efforts. Consequently, there is frequently little management buy-in or action as a result of task force recommendations.

Conversely:

- Teams are made up of those who are closest to the process - those who actually do the work.

- Team members receive training on group dynamics and problem solving techniques and tools.

- Process Action Teams are usually part time activities. Team members remain assigned to their current organization and continue to perform their assigned work while participating on a team.

- Teams have cross-functional and top management support.

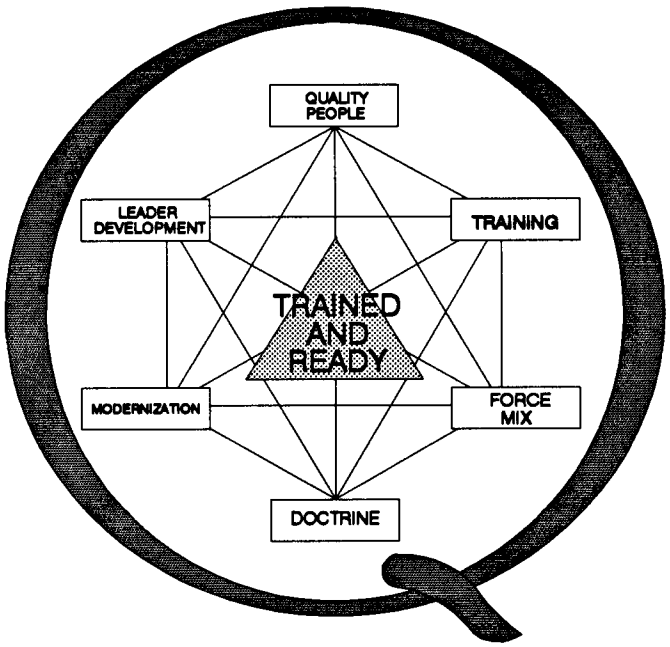
- Teams involve management and the organizations impacted by the process throughout their project.

- Teams promote process ownership.

- Teams use a standard, disciplined problem solving methodology and quantitative analysis tools and techniques.

- Teams generally do not perform their projects under arbitrary time constraints.

- The feedback process keeps management involved in the team's activities and helps develop "buy-in" to the team's recommendations. This makes action much more likely.



FOR MORE INFORMATION ABOUT TOTAL ARMY QUALITY...

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