



COMDTINST 5224.7

10 JAN 1991

COMMANDANT INSTRUCTION 5224.7

SUBJ: COAST GUARD TOTAL QUALITY MANAGEMENT (TQM) GENERIC ORGANIZATION

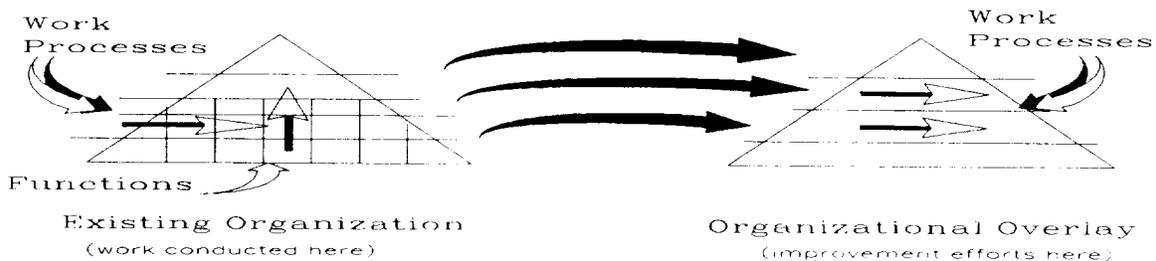
1. PURPOSE. This instruction provides basic guidance for building a Coast Guard Total Quality Management (TQM) organization. It provides a list of common terms and definitions along with the basic philosophy. It describes the approach the Coast Guard will use to improve quality and productivity.
2. DISCUSSION.
  - a. This is the first in a series of instructions on TQM. It outlines the Coast Guard's strategy for TQM implementation. Others in this series will address a specific organizational structure, policy, procedures, and the implementation plan. As our body of knowledge and experience in TQM matures, we expect to combine our TQM directives into a manual instruction.
  - b. Total Quality Management (TQM) is both a Philosophy and a set of skills for managing and improving work. It will help us achieve the Commandant's goal of bringing quality management principles into our day-to-day activities. Total Quality Management integrates basic management techniques, existing improvement efforts and technical tools under a disciplined approach focused on continuous improvement. TQM leads to increased customer/user satisfaction. A customer can be someone

- 2. b. (cont'd) inside or outside the Coast Guard. An internal customer is a military or civilian employee of the Coast Guard. An external customer is someone outside the Coast Guard who requires our service. A customer receives products and services through work processes.
- c. The Coast Guard's TQM philosophy and basic principles are:
  - (1) focus on the process as the key to producing and delivering quality products and services, and
  - (2) achieve customer (internal and external) satisfaction and exceed their expectations.

3. TQM ORGANIZATION PHILOSOPHY.

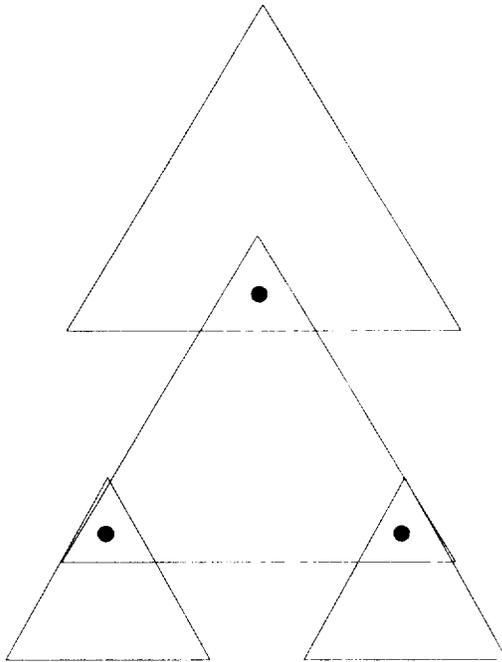
- a. In order to better focus on customers and processes, the Coast Guard needs to create a parallel organization which will be an overlay on the existing organization. The existing organization structure exists to Carry out the mission -- to get work done. The TQM organization we are about to create -- staffed by existing personnel -- will exist to improve the work processes through which we deliver services to our customers. Since the TQM process is an overlay on our existing organization, no reorganization will be necessary to carry out TQM.
- b. The TQM organizational overlay links all parts of the Coast Guard vertically and horizontally. It is a simple design and will reinforce our chain-of-command. It will also allow us to control and to coordinate the improvement activities of our people as they participate in quality action teams.

## ORGANIZATIONAL OVERLAY



4. THE LINKING STRUCTURE.

a. The figure below briefly describes the generic linking structure. See enclosure (2) for a more thorough description of the linking model.



(1) The organization allows Horizontal linkage by having members of different working groups serve together on cross-functional teams called Quality Management Boards (QMB). The members of the QMBs coordinate activities and communicate across organizational boundaries.

(2) The organization allows Vertical linkage by having a member of a higher level group serve as chairperson of the next lower group. This ensures vertical alignment of goals and activities and allows communications to flow up and down.

b. This structural linkage offers several benefits to our TQM efforts, among them -

- (1) Helps the Coast Guard stay focused on pursuing the same goals rather than have different departments unknowingly working at cross purposes;
- (2) Fosters better teamwork and less internal competition;
- (3) Improves communication throughout the organization and better understanding of how all the pieces fit together; and

4. b. (4) Improves the ability to copy ideas and standardize solutions which apply to processes in other areas of the organization.

c. The basic premise underlying the Coast Guard's TQM process is -

(1) If the Coast Guard ...

-- does the right things, on time, every time ...

... it will be *effective*

-- the right way, with the right amount of resources ...

... it will be *efficient*

-- properly manages customer satisfaction and the upstream, internal, and downstream processes ...

... it will achieve its mission and strategic goals in a more *productive* manner with higher *quality*.

(2) But the Coast Guard's TQM process must go further and capture the *quality of work life* and *innovation* dimensions essential to a total quality environment. If we can do this, we can *achieve organizational excellence and continue to provide valued services to our Nation and the world* as we enter our third century of service. That is our shared challenge.

5. ORGANIZATION.

a. The TQM Implementation Planning Team (IPT) chartered by the Commandant is now studying alternative organizational models based on this linking structure concept. The IPT will identify and recommend the most appropriate model for the Coast Guard. The results of this effort will be the subject of a subsequent Commandant directive.

b. This paragraph provides a brief description of each element of the TQM organizational overlay. The new entities of this organizational overlay are the Coast Guard Quality Council, the Executive Steering Committee, the Quality Management Board, the Guidance Team, and the Quality Action Team.

5. b. (1) Coast Guard Quality Council (CGQC). This is the highest level forum within the Coast Guard responsible for launching, coordinating and overseeing the total quality management effort. Its focus is on quality strategy and broad quality policy issues. There is only one Quality Council for the Coast Guard.
- (2) Executive Steering Committee (ESC). This is the highest level group within major commands. The ESC develops implementation policies and charts the strategic course for the command, subject to the overall guidance of the CG Quality Council.
- (3) Quality Management Board (QMB). The QMB concentrates on tactical issues associated with the TQM process. This involves coordinating and helping improvement efforts through process improvements, problem solving and exploiting improvement opportunities. There is usually one QMB for each significant organizational element within a command. Thus a command may have several QMBs chartered, depending on its maturity in the TQM evolution and the number of teams it forms.
- (4) Guidance Team (GT). This is an optional, temporary group that serves to guide the Quality Action Team (QAT) in its analysis by relieving the QMB of certain tasks. When there is no formal Guidance Team, the QMB serves as the guidance team. The Guidance Team serves as a sounding board for ideas and suggestions generated by the QAT and helps them clearly define problems and boundaries. It encourages the free flow of ideas, provides "reality checks" and facilitates the removal of obstacles, while serving to channel the QAT's efforts. The guidance team, if formed, contains the following members:
  - (a) The Quality Action Team leader,
  - (b) The member of the convening Quality Management Board who "owns" the process, (This individual is often responsible for coordinating the efforts of multiple OATS working on different parts of the same process.)

5. b. (4) (c) One or more other representatives chosen by the QMB to reflect the customers' interests in the process under study.
- (5) Quality Action Team (OAT). The Quality Action Team is a small (3-7) group of people brought together to address just one issue. The QMB charters the QAT. The members of the QAT are those who know the process under consideration from the "hands on" level. The team has a beginning and an end. The QMB fully supports the team with training, meeting facilities, and facilitator support. The QMB provides time for the QAT away from their "normal" jobs to meet and to do the work of the QAT. The team is not a decision-making body. It works to understand a process, gather and analyze data, determine facts and recommend process improvements. Approving and acting on the recommendations are management responsibilities that reside with the respective QMB. Team membership is not voluntary -- quality improvement is part of everyone's job.
- (6) TQM Coordinator (TQMC). Person or group of people who arrange, organize and facilitate ESC and QMB meetings. The TQM Coordinator tracks QAT efforts inside and outside his organization and coordinates with others. Commandant (G-CPE-3) serves as the overall Total Quality Management Coordinator for the Coast Guard. Each organization within the Coast Guard (i.e., Area, District, Office, etc.) with an ESC or QMB will have a TQM Coordinator.
- (7) Natural work groups (NWG). The foundation for each command's Total Quality Management is the individual and his/her natural work group. The primary difference between the activities of the natural work group and a formally chartered Quality Action Team is the cross-functional, multi-level nature of the issue. There is no difference between NWGs and OATS. Both use the same tools; management by facts and data, participation by everyone, management by priority and use of the Plan, Do, Check, Act (PDCA) cycle for continuous improvement.

6. RESPONSIBILITIES.

- a. I encourage all commanders to prepare for implementation of TQM. You should identify areas for improvement within your command and become more familiar with the philosophy and concepts presented by this instruction. More detailed information and guidance is forthcoming, but to help with start up I recommend the following reading materials:
  - (1) The Deming Management Method by Mary Walton.
  - (2) The Goal by Eli Goldratt.
  - (3) The Team Handbook by Peter R. Scholtes.
  - (4) The Memory Jogger by GOAL/QPC.
  - (5) How To Get Started Implementing Total Quality Management by the Federal Quality Institute, Washington, DC.
- b. You may purchase these materials locally. If you need further information on reference material, contact LT Tom Graham, Commandant (G-CPE-3), 267-2773. Address comments on the instruction to CDR Ron Frazier, Commandant (G-CPE-3), 267-2353. (EMAIL: R. Frazier/G-CPost,)
- c. Within the Coast Guard, Total Quality Management is, by definition, continuously evolving and improving. This is our initial effort. I welcome your suggestions and expect improvements!

7. ACTION. Area and district commanders; commanders of maintenance and logistics commands; unit commanding officers; Commander, Coast Guard Activities Europe; and Chiefs of offices and special staff divisions at Headquarters shall become familiar with the terms, principles, and philosophies provided in this instruction. This vocabulary shall be the standard for the Coast Guard's TQM implementation effort.

ROBERT T. NELSON  
Chief of Staff

- Encl (1) Total Quality Management Glossary.  
(2) Generic TQM Organization Linking Models.

*Total Quality Management*

*GLOSSARY*

<u>Term</u>	<u>Definition</u>
Total Quality Management (TQM)	A strategic, coordinated management system for achieving customer satisfaction that involves all managers and employees and uses quantitative methods to continuously improve an organization's processes ... TQM's foundation is participative management and total involvement.

Encl: (1) to COMDTINST 5224.7

TOTAL QUALITY MANAGEMENT ORGANIZATIONAL OVERLAY DEFINITIONS

CG Quality Council [(CGQC)]	Overview:	This is the highest level TQM forum in the Coast Guard. There is only one Quality Council in the Coast Guard.
	Membership:	Commandant, Vice Commandant, Area Commanders, Chief of Staff, and the Resource Director/Comptroller as an adjunct member.
	Functions:	Develop the vision.  Develop TQM philosophy and policy guidance for CG wide TQM effort.  Establish strategic goals for quality and performance improvement.  Develop a plan for TQM implementation CG wide.  Provide resource support.  Establish overall priorities.  Establish quality indicators.  Help to identify and remove obstacles.  Provide appropriate recognition.  Sponsor OATS directly as needed.

Executive  
Steering  
Committee  
[ESC]

- Overview: This is the top level group within major commands (HQ, Areas, Districts.) Within each major command there is only one ESC.
- Membership: HQ'S: CCS, all office chiefs Areas: Area Commander, District Commanders, MLC Commander Districts: (d), (dog), all division chiefs.
- The command's TQM coordinator is an ad hoc member and serves as executive secretary and process facilitator.
- Functions: Align improvement efforts to strategic goals; review QMB efforts and select initial processes for action (based on value, visibility, prospects for success.)
- Provide policy guidance and resources to subordinate Quality Management Boards.
- Identify critical internal and external customers.
- Identify critical internal and external customer requirements.
- Identify cross-program work processes that most impact critical customer requirements.
- Oversee TQM efforts underway in subordinate Quality Management Boards.
- Assign to QMBs or OATS cross-program process improvement studies.
- Assign a process owner to each cross-program work process. Each process owner must be on the ESC.

Encl: (1) to COMDTINST 5224.7

Evaluate effectiveness, value and priorities of recommendations for action or change.

Monitor the TQM effort.

Provide support and resources.<sup>1</sup>

Help to identify and remove obstacles.

Direct implementation of approved recommendations within scope of authority.

Share lessons learned to all process owners.

Standardize successes.

Provide appropriate recognition and reward system for improvement efforts.

---

<sup>1</sup>(e.g.. funding, training, staffing, meeting rooms, computers and other equipment)

Quality  
Management  
Board  
[QMB]

- Overview:** This is a permanent cross-functional TOM entity. There is usually one QMB (where needed) for each significant organizational element within a command, so a command may have several QMB's chartered, depending on its maturity in the TQM evolution.
- Membership:** Members of a QMB are cross-functional managers with principal joint responsibility for a range of processes. The QMBs TQM Coordinator is an ad hoc member to serve as facilitator and executive secretary. Linkage to a higher level QMB or ESC is through their QMB leader. A member of the QMB is linked similarly to lower level QMBs or GT/QATs. This provides for the vertical and horizontal linkages needed to facilitate goal alignment.
- Functions:**
- Carry out/oversee majority of continuing process improvement efforts in assigned areas.
  - Use combined knowledge to select specific areas promising highest impact on goals and define quality improvement indicators.
  - Act upon improvement opportunities, referrals from higher/lower level boards, employee suggestions, etc.
  - Carry out assignments that have been delegated by the ESC or higher level QMB.
  - Identify critical internal and external customers.
  - Identify critical internal/external customer requirements.
  - Identify program work processes that impact most critical customer requirements.

Encl: (1) to COMDTINST 5224.7

Assign a process owner for each program work process. Each process owner must be a member of the QMB.

Organize, as necessary, temporary Quality Action Teams (QAT) to work specific issues, collect and analyze data, and make recommendations to the QMB for process improvements.

Establish optional Guidance Teams (GT) to facilitate the QAT's work.

Provide the QAT with all necessary support, a charter clearly specifying the task, advice concerning any special controls or constraints, and direction concerning regular status reports to the QMB.

Act on recommended changes (within authority) to improve performance.

Check process performance to assess impact of changes.

Monitor the TQM effort.

Remove obstacles to continuous improvement.

Share lessons learned with all process owners.

Standardize successes.

Establish quality indicators.

Help to identify and remove obstacles.

Provide appropriate recognition.

Guidance Team (GT)	Overview:	This is an optional, temporary, small group that serves to guide the Quality Action Team (OAT) in its analysis.
	Membership:	The guidance team, if formed, is composed of the Quality Action Team leader, the member of the convening Quality Management Board that "owns" the process, and one or more other representatives chosen to reflect the customers' interests in the process under study.
	Functions:	<p>Serve as a sounding board for ideas and suggestions.</p> <p>Encourage the free flow of ideas, provide "reality checks" and facilitate the removal of obstacles, while serving to channel the QAT's efforts.</p> <p>Serves as an informed, empowered facilitating group for the QAT to relieve the Quality Management Board from QAT details and resolvable problems.</p> <p>If the study issue requires multiple, concurrent OATS to study separate sub-issues, the guidance team plays a strong coordinating and alignment role.</p> <p>The guidance team is not in the <u>formal</u> review chain for the work products of the QAT (the team's results are reported directly to the Quality Management Board for further action.</p>

Encl: (1) to COMDTINST 5224.7

Quality Action  
Team (OAT)

Overview:

The team deals with serious organizational problems, process issues or opportunities for exploitation that are important to analyze and that are often cross-functional, multi-level and interdisciplinary.

Membership:

The Quality Action Team is a small (usually 3-7) group of people brought together to specifically address just one issue. The issue usually defines the membership of the team and reflects a creative blending of resources and talents. Primary consideration for QAT membership is first-hand knowledge of the process being examined. Its membership may change as necessary. Team membership is not voluntary ... quality is part of everyone's Job content.

Functions:

The team deals with serious organizational problems that are important to solve and that are often cross-functional, multi-level and interdisciplinary.

Document the process as it currently is.

Data collection/analysis on key process variables to establish baseline process performance and effects of changes; highlight causes of problems.

Identify/recommend areas for improvement to QMB.

Identify common/systemic causes and special causes most critical in process performance.

The team is formed by a QMB and is dissolved on completion of the work.<sup>2</sup>

The team has a beginning and an end and is fully supported in terms of "just in time" training, meeting facilities, facilitator support and time away from their "normal" Jobs.

The team is not a decision-making body. It analyzes data, tracks down facts and recommends countermeasures. Approving and implementing the recommendations is a management responsibility that starts with the chartering QMB and proceeds through the normal chain of command.

---

<sup>2</sup>As a rule of thumb. QATs should not last longer than 6 months and individual team participation should not exceed 10% of their normal work routine.

Encl: (1) to COMDTINST 5224.7

Natural Work  
Groups  
[NWG]

Overview:

The foundation for each command's Total Quality Improvement Process is the individual and his/her natural work group.

The primary difference between the activities of the natural work group and a formally chartered Quality Action Team is the cross-functional, multi-level complexity of the issue.

There is no difference at all in the tools used, the emphasis on management by facts and data, participation by everyone, management by priority and use of the Plan, Do, Check, Act (PDCA) cycle for continuous improvement.

Membership:

Everyone, at all levels.

Functions:

Apply the TQM structured problem solving approach and quality control tools to all job processes, with special emphasis on management by facts and data, management by priority and use of the Plan, Do, Check, Act (PDCA) cycle for continuous improvement.

Participate fully in TQM team projects.

Take the initiative ... aggressively search out opportunities for improvement in all processes.

Encl: (1) to COMDTINST 5224.7

TQM Coordinator (TQMC)	Overview:	Person or group of people who arrange, organize, and facilitate ESC and QMB meetings. The TQM Coordinator tracks ongoing QAT efforts inside and outside his/her organization.
	Membership:	Serves as an ad hoc member of the ESC or QMB as assigned.
	Functions:	<p>Serves as executive secretary for the ESC or QMB. Arranges the times for meetings and prepares draft meeting agenda. Prepares minutes of all Meetings.</p> <p>Facilitates ESC or QMB meetings to ensure meetings follow TQM concepts.</p> <p>Develops a system for tracking the progress of all quality improvement project.</p> <p>Conducts Just-In-Time (JIT) Training for key OATS sponsored by the ESC or QMB.</p> <p>Serves as An advisor for the TQM process.</p> <p>Coordinates with other TQM Coordinators to learn of other ongoing OATS and process improvements.</p>

GENERAL TOTAL QUALITY MANAGEMENT TERMS  
(as used in this instruction)

Barriers	Obstacles or impediments standing in the way of a team or natural work group. A team or natural work group usually can not remove these obstacles without the assistance of someone higher in the organization. An opportunity for improvement.
Baseline(ing)	The initial analysis of data on a process to determine vital process characteristics (i.e., mean time, number of defects, etc.). This is required before process improvements are made for comparative analysis at a future time. The data may already be routinely collected, more likely, new data must be collected.
Benchmark(ing)	A comparison of products, services, or processes from one organization with another. Normally, a benchmark is the "best-in-class" that should be emulated.
Coordinator	A full or part-time individual or small staff who provides facilitation services for TQM management boards or committees. They assist in planning and implementing process improvements. He/she can also serve as the board's executive secretary (i.e., each unit that has a board would benefit from having a coordinator).
Customer	Anyone for whom an organization provides goods or services. Anyone who is affected by a process. An internal customer is someone inside the Coast Guard. We all have internal customers; those people or organizations we our work products to; the next step for which we are the supplier. An external customer is someone outside the Coast Guard requiring a product or service. External customers could be recreational boaters, fishermen, environmentalists, members of Congress, etc.
Facilitators	A person who functions as the coach/consultant to a group, team or organization; in quality improvement, the facilitator focuses on the process while the team leader focuses on the content. May provide Just-In-Time (JIT) training to members on TQM process and tools.

Just-In-Time (JIT) training      Training provided to team (Guidance Team or Quality Action Team) on an as needed basis. A facilitator normally provides this training when the team begins to meet.

Organizational Overlay      The boards, committees, and teams responsible for quality management leadership, coordination, and action. The standing boards and committees provide direction, resources, and encouragement to all ad hoc teams they charter. They provide the clout to implement process improvements the teams recommend. The term "overlay" denotes the new duties and priorities given to the existing organization to emphasize quality management and improvement. A new organizational structure or a shadow organization is not desirable. The goal is to change the way we do business, not to add a new layer of bureaucracy.

PDCA      The Plan-Do-Check-Act Process. Also known as the Deming and/or Shewhart cycle or circle. (Deming & Shewhart were both instrumental Americans who pioneered quality improvements as a management strategy.) All process improvement/changes should be:

1.      Planned based on analysis of data.
2.      Done on a small scale or pilot basis to determine feasibility for application on a larger scale.
3.      Checked with data and with the customer to determine if the change was an improvement.
4.      Acted upon by either replicating or standardizing throughout the organization wherever applicable.

The PDCA cycle repeats itself forever to continuously improve work processes.

Process      A group of usually sequential, logically related tasks that use organizational resources to provide a product or a service to internal or external customers.

Encl: (1) to COMDTINST 5224.7

Process Owner	The process owner is the person that has the responsibility for monitoring process results/capability; the authority or ability to effect changes: an understanding of the process end to end.
Quality	Understanding who your customers are, what their requirements are, and meeting or exceeding those requirements first time, on time, every time.
Quality of work life	A measure of how the internal customers in an organization feel about their Jobs and the work environment. Organizations with a high quality of work life can attract and retain the best workers.
"Rice bowls"	Turf. Sacred Cows. Areas within an organization "belonging" to a functional manager which are sometimes protected or optimized at the expense of the entire organization.
"Stovepipes"	Organizational structures that are in place to maximize efficiency and effectiveness within one function or area. Industry examples include marketing, sales, finance, etc. The term "stovepipe" is used to indicate a difficulty or unwillingness to communicate or to see outside the walls of the subunit. Like with rice bowls, stovepipes are ripe for sub optimization.
TQM Awareness Training	A short introductory course (2 to 3 days) on the basics of Total Quality Management given to most senior and middle managers within an organization.
TQM Tools	A collection of graphical and quantitative methods and procedures for analytically describing and measuring a process. Normally the output of these methods is shown in graphs or charts. Some are new and unfamiliar; many are old and time-tested. Most are simple and usable by all CG members; a few are complex and require extensive training.

Vision

A future state for an organization determined by the leadership. It is normally articulated in a vision statement that is recognizable by the entire organization. It aligns an organization so that everyone can work in the same direction. It is differentiated from purpose. Purpose is our current roles and responsibility. Mission is how an organization fulfills its purpose and how the organization moves toward its vision. WThe many goals of the organization's subunits should aid in moving the organization toward its vision.

Encl: (2) to COMDTINST 5224.7

