TOTAL QUALITY LEADERSHIP AT SUPERVISOR OF SHIPBUILDING

By

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B.S. Marine Transportation
Massachusetts Maritime Academy
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June 1994

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Abstract

With the close of the cold war and a shrinking defense budget government organizations are seeking to reduce the cost, while increasing the productivity of its operations. The Supervisor of Shipbuilding (SUPSHIP), within the Naval Sea Systems Command, is attempting to use Total Quality Leadership (TQL) to reduce redundancy and strengthen its position as auditor, accountant, and quality assurance expert for the design, construction, and delivery of naval vessels.

This thesis reviews the mission and organization of SUPSHIP and what role TQL is playing in that organization. The author sent surveys to nine SUPSHIP offices, eight of which replied. Three offices were chosen for further examination and on-site visits were conducted. The survey results for all eight of the respondents is enclosed as is a more in depth analysis of what was found at the three site visits. The thesis then analyzes progress made and concludes with recommendations for improvement.

Thesis Supervisor: Professor Henry S. Marcus

Title: NAVSEA Professor of Ship Acquisition
Acknowledgments

I would like to extend my grateful appreciation to Professor Hank Marcus, NAVSEA Professor of Ship Acquisition, for all of his support and encouragement, his insight and knowledge in this area is unfathomable.

I would also like to thank all of the personnel from the three SUPSHIP offices that we visited specifically: David Lynch, SUPSHIP Bath; CDR. Steve Leeson, SUPSHIP Groton; and Jerry Newton, SUPSHIP San Diego.

My thanks to the members of 13.64 for information and perspective provided.
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CHAPTER 1
Introduction to SUPSHIP

1.1 Mission:
The Supervisor of Shipbuilding (SUPSHIP) under the command of the Naval Sea Systems Command (NAVSEA/SEA 07) exists to carry out three main mission functions:

1) To manage Department of Defense (DOD) shipbuilding, design, conversion, and facility contracts.
2) To procure and manage overhaul/repair contracts.
3) To carry out other assigned mission tasks.

Figure 1 is a rough schematic of the basic processes that govern the way SUPSHIP does business. More specifically, to manage DOD shipbuilding, design, conversion and facility contracts the following tasks must be accomplished:

- perform the functions of an Administrative Contracting Officer;
- conduct engineering, technical and design oversight, evaluation and surveillance;
- budget, administer, and account for funds for direct operations and projects;
- provide management coordination and oversight of contracts to ensure requisite quality, schedule attendance, and cost propriety;
- monitor and evaluate integrated logistics, supply support, technical documentation, training and fleet introduction interface, Government Furnished Material (GFM) procurement, outfitting;
- incorporate all headquarters-initiated technical changes to contracts;
• serve as a technical authority except where military characteristic changes are involved;
• process all ECP’s;
• conduct at-sea testing/trials;

To procure and arrange overhaul/repair contracts the following tasks must be accomplished:
• perform Procuring Contracting Officer (PCO) and ACO functions;
• budget, administer, and account for funds;
• develop specifications necessary to solicit contract proposals and bids for assigned PCO functions and NAVSEA procurement;
• provide planning and estimating, workload forecasting, and oversight for planned and unplanned availabilities;
• conduct engineering, technical and design oversight, evaluation, and surveillance;
• provide engineering and design services in support of waterfront (emergent) technical issues;
• monitor and evaluate integrated logistics support (ILS) and procurement of GFM

Other mission tasks can include the following:
• Provide technical guidance to area coordinators and Military Sealift Command (MSC);
• ensure a comprehensive security program;
• perform mobilization logistics planning;
• train Navy reserve units for mobilization requirements;
• administer facilities contracts covering government-owned material in private shipyards;
• administer real property and Navy facility leases;
• administer government-owned drydocks leased to private shipyards;
• perform berthing and messing program administration;
• execute civilian personnel services as assigned;
• perform class planning for SUPSHIP responsibilities;
• develop standard specifications;
• serve as PCO/ACO for Commercial Industrial Services (CIS);
• Serve as APO's for availabilities awarded to public shipyards as a result of public/private competition;
• perform annual inspections on Navy ship memorials
• administer hazardous waste management

1.2 Organization:

In order to maintain consistency the surveys were focused on SUPSHIP offices that are administering contracts for new buildings. Figure 2 shows a standard organizational tree for SUPSHIP offices involved in acquisition/new construction. The "Supervisor", (Code 100) is typically an Engineering Duty Officer (EDO) holding the rank of Captain; the length of his tour is usually three years. The Deputy Supervisor (Code 101) is a civilian employee and has no fixed rotation schedule. Figure 2¹ serves as a guide, but changes above the division line must be submitted for approval to NAVSEA 071. Changes below the division line do not require submission for approval, but must be documented and copies of local organization forwarded to NAVSEA 071.

¹ SOSINTRO, 3.4.3, 10/15/93.
ORGANIZATION

SUPSHIP (ACQUISITION)
"Double billeting of personnel is permitted and should be used to meet specific operating conditions within existing personnel allowances and budgets."\(^2\)

Figure 3\(^3\) provides a look at how the SUPSHIP offices are spread geographically and which yards they are working with.

Figure 4\(^4\) shows SUPSHIP civilian funded end strengths from FY 90 through FY 99.

1.3 TQM/TQL Evolution in the U.S. Navy:

The evolution of TQL in the Navy can be traced back to the early 1980's. In 1981 Laurie Broedling was working as a team leader studying organizational improvement at Naval Personnel Research and Development Center (NPRDC). The mission of NPRDC "was to find better ways to attract, select, train, and deploy naval personnel."\(^5\) Broedling attended a conference on labor relations whose featured speaker was W. Edward Deming, she came away from the conference mesmerized having heard Deming's philosophy on quality and the role that management must play. One of Deming's philosophies that hit home was the use of performance appraisals, a subject that NPRDC was constantly asked to examine and find a better way to do. "According to Deming, there was no better way to destroy people than to rate them."\(^6\) Laurie Broedling returned to NPRDC and began urging other researchers to attend Deming seminars while lobbying the Navy to become more involved with the quality concept and the tools it provided for continuous process improvement.

\(^2\) The Supervisor of Shipbuilding, Conversion and Repair Operations Manual (SOM), Department of the Navy, Naval Sea Systems Command, Washington, D.C.
\(^3\) SOSINTRO, 3.4.3, 10/15/93.
\(^4\) Ibid.
\(^6\) Ibid.
SUPSHIP CIVILIAN FUNDED END STRENGTH

Figure 4
In the late 1980's the Department of Defense (DoD) through former GM executive Robert Costello, who was in charge of acquisitions, took a leap forward into quality management. On 30 March, 1988 Secretary of Defense Frank Carlucci issued a memorandum "pledging top priority to the DoD Total Quality Management effort as a vehicle for attaining continuous quality improvement in our operations".

The Navy had been trying various quality improvement methods since the early eighties. The most successful of these was a program at North Island Naval Aviation Depot that combined the depot with NPRDC to improve productivity and reduce costs. The depots as a whole had lost $300 million between 1981 and 1984 and Admiral John Kirkpatrick, appointed commander of all Naval Aviation Depots in August of 1984, was eager to reduce this $100 million per year loss. Adm. Kirkpatrick along with a team from NPRDC were able to make great strides in areas such as process control and rework that resulted in a profit of $2.3 million in 1985 and $125 million in 1986.

Since its conception and throughout the last decade and a half of implementation total quality management in the Navy, or in government organizations in general, has met with some substantial roadblocks. For example, mobility of personnel; Adm. Kirkpatrick's solution for aviation depots was that before serving as Commanding Officer of a depot your previous tour would have been as the Executive Officer of that very same depot. This accomplished two tasks, it provided some consistency in the directional leadership of the command and it elevated pressure on the CO to make drastic changes to "leave his mark" on a certain command. Adm. Kirkpatrick's lead, unfortunately, has not been followed.

The program followed by the Navy today is based on the Deming philosophy. The Navy, seeking to emphasis the role that leadership plays within
the organization opted to change the M, in TQM for management, to L - for leadership. Below, you will see Deming’s Fourteen Points to achieve quality, followed by the Navy’s customized version for achieving TQL:

Deming Version -
1. Create consistency of purpose for improvement of product and service.
2. Adopt a new philosophy toward quality of workmanship.
3. Cease dependence on mass inspection.
4. End the practice of awarding business on price tag alone.
5. Improve constantly and forever the system of production and service.
6. Institute proper training for the workers involved.
7. Institute leadership.
8. Drive out fear.
9. Break down barriers between staff areas.
10. Eliminate slogans, exhortations, and targets for the work force.
11. Eliminate numerical quotas.
12. Remove barriers to pride of workmanship.
13. Institute a vigorous program of education and retraining for management as well as the work force.
14. Take action to accomplish the transformation.

U.S. Navy Version -
1. Understand the mission and principles of the Navy. Have a clear grasp of how your command supports the Navy’s mission and how the principles apply to your day-to-day actions.

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7 Gibson, Andrew E., *TQM Comes To The Navy*, The United States Naval War College, Newport, R.I.
2. Quality is the essence of TQL. Insist on quality performance and material. Do the job correctly the first time.

3. Know your job. Analyze and understand every facet of your responsibilities and those of your people.

4. Words alone don't solve problems. Look first at the process and the system for faults and solutions, not the people. Improve the process, train the people.

5. Quality training is the key to success. People must be fully trained to do their jobs. You are never too senior to learn.
   - To do your best is not good enough unless you are properly trained to do the job.

6. Use analytical methods to understand and improve your jobs. Graphs and charts, properly used, are invaluable tools in this effort.

7. We are a team. We must work together across departments and commands.
   - We must listen to the most junior people. All are charged with making the work place, and quality of life better. All suggestions for improvement must be explained, and action taken, or rejected, by the leadership.
   - The leaders must provide those who suggest improvements and ideas with feedback as to what is being done with the suggestion. The leadership will not necessarily adopt all ideas, but the leadership must provide the feedback on every suggestion.

8. Create an atmosphere of trust and open communication where everyone shares a sense of pride in their work.
   - Get fear out of the work place. Create an atmosphere in which people tell you what is wrong in order that it can be fixed.
   - Unless we recognize the problems we cannot improve.
   - We need to reward people who have the courage to tell us what they see that needs improvement so we can get better.
• Good ideas and lessons learned must be transmitted and shared between departments and commands.

9. Inspect smarter. Inspections should be methods of learning and improvement rather than threatening events.
  • As all learn to do the job correctly first, and every time, the number of inspections will decrease.

10. Demand quality, not quotas.
  • Quality in the work place and in our lives is what we strive for.
  • If we get quality, all the other goals and quotas will follow.

11. Education and self-improvement are just as important as training. We must always get better.
  • Everyone must be involved in training and self education.

12. All improvements, big and small alike, are important.

13. Be a leader. Your job as a supervisor is to guide and assist your people.
  • The leader gets his people the tools and training they need to do their job correctly.
  • It is the leader’s responsibility to insure his people are properly trained for the job before they are placed in a position of standing watch, starting a pump, lighting off a radar, firing a gun, loading a missile, etc...

14. All hands, from seaman to admiral, must learn and use TQL.
2.1 Customer Focus:

One of the most important tenets in TQM is knowing and meeting the needs of the customer. The days of companies operating under the "product out" concept is over. Worldwide competition and economics has forced both industry and service organizations to examine the market-place and incorporate its needs, wants, and desires into the production of goods and services. The "market-in" concept combines work on standard processes and improvement thus allowing for rapid reaction to satisfy the ever changing needs of the customer. The product-out concept had separated these tasks thus delaying industries' recognition of changes in customer preference, staffing requirements, and technology.

Defining the customer is not hard, very simply it is "the person or group who receives the work you do."8 Customers can be both internal and external, they are people who buy your product or service, and the person who sits in the office next to you. A critical concept to remember is that "a business function without a customer should not be performed."9

2.2 Continuous Improvement:

The notion of continuous improvement relates directly to an organizations' ability to recognize and solve problems. Recognizing problems should be accomplished through customer focus as discussed above. By

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8 Shiba, Shoji, A New American TQM. Productivity Press, Portland, OR, 1993, pp. 41.
9 Ibid.
problems I mean product defects, redundancy in task accomplishment, and inefficiency in time, materials, etc.... To recognize problems one must realize that products (goods and services) are a direct result of a process or combination of processes. It is important that organizations focus on the process, not product. Improving the process will lead to increased levels of product quality.

One of the major reasons for the failure of concepts such as "Management By Objectives" (MBO) is that it is based on a preconceived notion of what the objective (product) was. This is similar to the "fitness to standard" concept where, as long as the standard is adhered to, the result is assumed to be acceptable. As with MBO these concepts lack the mechanism for analysis of root causes.

Improvements can be looked at from two different angles: The first being reactive and the second proactive. Reactive improvement is the result of identifying an existing weakness in a process and the problem solving reaction to improve it. Figure 5\textsuperscript{10} shows a comprehensive method for reactive improvement known as the 7 steps:

Step 1: Select Theme - this is by far the most important step, it will answer what the process failure is. It is critical that you focus on the problem; adopting a weakness strategy whereby you look to improve upon a noted shortfall is extremely helpful, i.e. reduce trial card resolution time from X weeks or days to Y weeks or days. Tools to select and focus themes are brainstorming, KJ analysis, and theme selection matrices.

Step 2: Collect and Analyze Data - this step will answer the questions who, where and how: who can be an individual or a department; where could be within SUPSHIP, the building yard, or the facility of a subcontracted supplier;

\textsuperscript{10} Ibid.
and how will focus you on the specific process that is causing the problem. Pareto charting is very helpful in this step.

Step 3: Analyze Causes: this step will answer the question why. Cause and effect or fish-bone diagrams can be used to identify root causes.

Step 4: Plan and Implement Solution: this will preclude the reoccurrence of the root cause. Questions answered in this step are; what needs to be done, who will do them, when they will be completed, and how the action will be performed.

Step 5: Evaluate Effects: almost an exact repeat of Step 2 to check and make sure that the implemented solution is actually solving the problem and improving the process.

Step 6: Standardize Solution: replace the old process with the new and assure the widest dissemination of the change.

Step 7: Reflect on the Solution: analyze the six steps that have just been completed and see if the problem-solving process was efficient. Could it have been done quicker, with less disruption, etc....?

Proactive Improvement is more difficult simply because of its nature. It is not a reaction to an easily known or recognizable problem, for example: latent customer requirements, producing a new product, or where to start process improvements. There may be no clear data to identify a weakness, you may only sense that something is not right. From this sense you must explore the situation to try and uncover what it is exactly that requires improvement. As a result of this exploration you formulate the problem to the best of your ability and then often you can move directly into Step 1 of the 7 steps to efficiently eradicate the problem. Proactive improvement is especially helpful in areas such as insuring that customer needs are met in new product development.
2.3 Total Participation:

Traditional organizations followed the methodology of the worker being responsible for labor and management responsible for making improvements in the way that daily work is done. Today, an organization working along these lines can not react to the fast paced changes that occur in customer requirements, technology upgrades, and market competition. Perhaps more harmful is the demotivation of people who feel they have no way of increasing the quality of their output.

The basic concepts of TQM/TQL aim to develop the human element by including the workforce in both the day to day and long term operations of the organization, both in output and improvement. Output or production (daily work) is guided by the SDCA (Standardize, Do, Check, Act) that allows for the improvement of production standards. PDCA (Plan, Do, Check, Act) is used to improve processes that have, as an integral part, standards for work output.

Teamwork for the organization and completion of work is important for several reasons:11

- Cross-functional teams are critical because the complexity of operations has increased.
- To compete in global markets must draw upon the collective experience and expertise of all of its employees.
- Teamwork provides the tools to avoid the division of labor.
- Group learning is more of a benefit to the entire organization than individual learning.
- Teamwork motivates all participants.
- Group learning becomes a group asset as well as an individual asset.

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11 Ibid.
Teamwork gives the labor force a stake in their own destiny. It allows them a voice in a once silent isolation and it makes them part of the process and thus part of the product.

2.4 Networking:

Networking allows for the widest dissemination of TQM/TQL concepts and strategies. However, sharing information and ideas for continuous improvement in a competitive environment is hard for corporations to swallow. Many organizations hold quality improvement tools and techniques as closely guarded secrets that they see as part of their competitive advantage. There are few quality partnerships between competitors and no national coordination to increase the industrial base or increase competitive advantage in the global marketplace.

It has been said numerous times, by numerous people that TQM requires a cultural change. A shift in the thought process away from corporate individualism and toward associating "Made In America" with "Quality Built" is a unique concept. The problem herein lies with dollars, and cents. When corporate gains are being measured in dollars corporate America is willing to take the time and spend the money on quality. When times are tough and corporate gains are being measured in cents, belts tighten, divisions are paired down, and overhead is cut. Unfortunately quality improvement programs are often viewed as overhead and added expense and disappear. When the bottom line is at risk, its every man for himself.
CHAPTER 3
Survey on Quality Management

3.1 Introduction:

Nine SUPSHIP offices were sent a survey on quality management. Eight replies were received; Bath, San Diego, San Francisco, Pascagoula, Seattle, Groton, Charleston, and Sturgeon Bay. New Orleans did not reply. The survey follows, along with a consolidated report of all the command's answers. The following information is provided as a guide, each of the respondents received a copy of the consolidated report and anonymity had been promised.
Once again thank you for the time and effort that you dedicated to answering this questionnaire.

Phone: (617) 253-8769
CAMBRIDGE, MA 02139
RM: 5-207, 77 MASSACHUSETTS AVE
Massachusetts Institute of Technology
Mr. ROBERT E. BLINK

If you have any questions, please do not hesitate to contact:

of the survey, please indicate so at the end of the questionnaire.
We believe that the results of this study will be useful to you. If you would like a copy of the results enclosed envelope:
• Upon completion, please return the questionnaire in the
command. In such cases, please indicate so.
• Some of the questions may not be applicable to your
level, aggregating responses from a number of respondents.
Data and reporting of results will be done in the summary
access to your completed questionnaire. All analysis of
No one in your command or any other command will have

secret confidential.

ask for us. The MIT research team has taken measures to ensure that all responses will remain com-
building, conversion and report of the U.S. Navy. Your voluntary participation in this study is invols-
Ocean Systems Management Program. To examine Naval Quality Leadership within the supervisory or ship-
This questionnaire is part of a research project under way in the MIT Department of Ocean Engineering.

General Instructions

SURVEY ON QUALITY MANAGEMENT

MIT Ocean Systems Management Program
4. When did you start your TOL Program?
   - Minimal
   - Moderate
   - Heavy

3. To what extent was outside expert help used to develop your TOL Program?
   (Please skip to question #47)

   - Other (please specify)
   - Not needed
   - Lack of training
   - Lack of financial resources
   - Lack of human resources
   - Lack of management support
   - None of the above

2. Why have you not implemented a formal TOL Program? (Please rank the relevant reasons below that best describes why)
   - Other (please specify)
   - Not needed
   - Lack of training
   - Lack of financial resources
   - Lack of human resources
   - Lack of management support
   - None of the above
   - Other (please specify)

1. Does your command have a formal local quality leadership?
   - Yes
   - No

Questions

SURVEY ON QUALITY MANAGEMENT

MIL Ocean Systems Management Program
13. If the person is responsible for the quality leadership program:

| Leadership Program? | Yes □ | No □ |

14. What is the role of the person to whom you report?

| Role of Person | Other (please specify) □ |

15. Do you have “Quality Partnerships”?

| Yes □ | No □ |

16. Do different types of achievement/review receive different emphasis in your quality leadership program?

| Yes □ | No □ |

17. Please rank the following areas with “1” for the most important and the “4” the least important (please specify)

| Customer Satisfaction | __________ |
| Environment risks | __________ |
| Product safety | __________ |
| Decreasing costs | __________ |

18. How far along are you in implementing your quality programs?

| Other (please specify) □ |

19. How far along are you in implementing your total quality management program?

| Other (please specify) □ |

20. % of employees who are consumers (check the appropriate percentage) (please specify)

| 100% □ | 90% □ | 80% □ | 70% □ | 60% □ | 50% □ | 40% □ | 30% □ | 20% □ | 10% □ | 0% □ |

21. Is outside expert help being used in the ongoing operation of your quality leader-
25. What kind of reward/incentive system do you use as part of your TQM program activities?

- Civilian work force
- USN work force
- Middle management
- Top management
- Non-monetary

Leadership improvements have resulted in measurable benefits.
22. If possible, please give specific examples where you feel quality has improved.

- Other (please specify) __________
- No results obtained __________
- Cost reduction __________
- Increased internal communication and coordination __________
- Increased internal productivity __________
- Improved product quality __________
- Increased customer satisfaction __________

21. When results have been obtained, how do you report these results?

- Formal report __________
- Oral report __________
- Other (please specify) __________

20. To what extent are you already obtaining the benefits you expected to receive from the program? (Check the appropriate response.)

- Absolutely __________
- Almost __________
- Somewhat __________
- Not at all __________

23. For each group of employees, please indicate approximate number of days:

- Work force (civilians) __________
- Middle management __________
- Top management __________

24. How do you form groups for training?

- Work force (civilians) __________
- Middle management __________
- Top management __________

- Other (please specify) __________

26. What percent of your work force can read and write?

- 100% __________
- 90% __________
- 80% __________
- 70% __________
- 60% __________
- 50% __________
- 40% __________
- 30% __________
- 20% __________
- 10% __________
- 0% __________
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. How often do you perceive your key customers?</td>
<td></td>
<td></td>
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<tr>
<td>29. Do your customers participate in the process if they want 10?</td>
<td></td>
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</tr>
<tr>
<td>28a. Are your customers aware of your quality improvement?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28b. Do you perceive these key customers?</td>
<td></td>
<td></td>
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<tr>
<td>27. If &quot;Yes&quot;, what is your approach?</td>
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<tr>
<td>26. Do you use Quality Teams?</td>
<td></td>
<td></td>
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<tr>
<td>25. How do you perceive your customers communicating to you?</td>
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<tr>
<td>24. When is the last time you conducted a formal survey of your customers?</td>
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<tr>
<td>23. Are you looking for input from dissatisfied customers as well?</td>
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<td>22. Do your customers participate in the process?</td>
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<td>21. Are your employees aware of your quality improvement?</td>
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<td>20. Do you look for input from disatisfied customers as well?</td>
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<td>19. Do your employees believe in your culture?</td>
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<td>18. What does your culture encourage?</td>
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<td></td>
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<td>17. What are your core beliefs?</td>
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<td>16. What drives your culture?</td>
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<td>15. Are you committed to your core beliefs?</td>
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<td>4. Are you committed to your core beliefs?</td>
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<td>3. Are you committed to your core beliefs?</td>
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<td>2. Are you committed to your core beliefs?</td>
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<tr>
<td>1. Are you committed to your core beliefs?</td>
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<tr>
<td>□ NO □ YES</td>
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<tr>
<td>Ship Program?</td>
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<tr>
<td>39. Is your non-union labor involved in your total Quality Leader?</td>
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<tr>
<td>□ NO □ YES</td>
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<tr>
<td>38. Is your union labor involved in your total Quality Leadership?</td>
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<td>□ NO □ YES</td>
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<tr>
<td>37. Does your campaign have both union and non-union labor?</td>
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<td>□ NO □ YES</td>
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<td>36. Is the combination of specie employees affected by these measurements?</td>
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<tr>
<td>□ NO □ YES</td>
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<tr>
<td>35. How often are these measurements taken?</td>
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<tr>
<td>□ NO □ YES</td>
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<tr>
<td>□ Other (please specify)</td>
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<tr>
<td>Secretariats</td>
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<td>Check Sheets</td>
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<td>Cause/Effect Diagrams</td>
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<td>Prevalence Charts</td>
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<td>Histograms</td>
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<td>SPC (cont’d charts)</td>
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<tr>
<td>Process</td>
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<td>34. What tools have you used to identify and track improvements?</td>
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<td>□ NO □ YES</td>
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<tr>
<td>33. Is benchmarking in the market place a part of your Quality</td>
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<tr>
<td>□ NO □ YES</td>
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<td></td>
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<tr>
<td>□ Other (please specify)</td>
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<tr>
<td>Customer focused (to improve service to a particular</td>
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<tr>
<td>within the company)</td>
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<tr>
<td>Internal process oriented (to improve the process)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ NO □ YES</td>
<td></td>
<td></td>
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<tr>
<td>□ Other (please specify)</td>
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<tr>
<td>&quot;Yes&quot;, what is your approach?</td>
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<tr>
<td>□ NO □ YES</td>
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</tbody>
</table>
If answer is "YES", please attach business card here.

☐ NO  ☐ YES
42. Would you like to receive a copy of the summarized results of the survey?

☐ NO  ☐ YES
43. Would you be willing to be visited by Prof. H. Magnus and a small group of employees (3-5) to discuss further your proposal?

☐ YES
44. When is the approximate number of employees in your company?
1. Does your command have a formal TQL program?

![Pie chart showing 11% Yes and 89% No Reply.]

Eight out of nine commands responded to the survey. All of those that did respond had some sort of TQL program. (See Fig. 1)

2. Why have you not implemented a formal TQL program?

All respondents have.
3. To what extent was outside expert help used to develop your TQL program?

- 38% Heavily
- 13% Moderately
- 49% Minimally

To this question, one command answered as "Heavily", three as "Moderately" and the other four commands answered as "Minimally".

Question 4 What year did you start your TQL program?

<table>
<thead>
<tr>
<th>Command</th>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>Command 1</td>
<td>1991</td>
</tr>
<tr>
<td>Command 2</td>
<td>1989</td>
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<tr>
<td>Command 3</td>
<td>1991</td>
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<tr>
<td>Command 4</td>
<td>1990</td>
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<tr>
<td>Command 5</td>
<td>1991</td>
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<tr>
<td>Command 6</td>
<td>1989</td>
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<tr>
<td>Command 7</td>
<td>1990</td>
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<td>Command 8</td>
<td>1989</td>
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<tr>
<td>Command 1</td>
<td>Command 2</td>
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</tbody>
</table>

5. Please rank the relevant reasons below that best describe why you selected your NOL program.

- Other (please specify):
  - Described by higher command
  - Pressure from customers
  - Pressure to improve quality of operations
  - Described by higher command
  - Other (please specify):
6. What were your initial objectives in your TQL program?

**Command 1:** Improve efficiency, enable SUPSHIP to continue to provide a quality product/service as resources (money, manpower) dwindle.

**Command 2:** To better do ship repair and planning.

**Command 3:** Process improvement, morale improvement.

**Command 4:** To modernize our management approach and empower our workforce.

**Command 5:** Improvement of processes.

**Command 6:** Execute the command vision in the best and most efficient manner - continual improvement in all processes to get the job done & satisfy the customer - involve all team members at all levels in the process of improvement.

**Command 7:** To have a program.

**Command 8:** (1989 Vintage)
1) Develop vision statement, principles & goals
2) Develop TQM structure
3) Develop TQM training
4) Evaluate & process employee suggestions
8. If "YES", what is/are your objective(s)?

Command 1: Ensure understanding & compliance with environmental reg's.

Command 3: -Increase awareness via training/communication.
       -"Team" to conduct impact studies and address environmental issues.

Command 4: To improve our working and home environment and to educate and involve our workforce.

Command 8: -Be at the forefront in environmental protection.
           -Assess current environmental posture and focus resources on continuous improvement.
           -Develop environmental expertise.
9. Please choose the TQM guru below whose principles best describe your approach to TQL?

Command 1: Juran
Command 2: Deming
Command 3: Deming
Command 4: Deming
Command 5: Deming
Command 6: Deming
Command 7: Deming
Command 8: Deming

10. Is outside expert help being used in the ongoing operation of your TQL program?
<table>
<thead>
<tr>
<th>1. What documents exist to support the Quality Program?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. What is the title of the person in charge of the total Quality Leadership Program?</td>
</tr>
<tr>
<td>3. If the person responsible for the total Quality Leadership Program has other duties within your organization, please specify the nature of these responsibilities.</td>
</tr>
<tr>
<td>4. What is the title of the person to whom he/she reports?</td>
</tr>
<tr>
<td>5. CO/WTO Coordinator</td>
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<tr>
<td>6. Business Review Officer</td>
</tr>
<tr>
<td>7. Chief Design Eng/Deputy Head</td>
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<tr>
<td>8. TO/ML Administrator</td>
</tr>
<tr>
<td>9. Quality Assurance</td>
</tr>
<tr>
<td>10. Material Defect Head</td>
</tr>
<tr>
<td>11. Mission/Program Statement</td>
</tr>
<tr>
<td>12. TOL Coordinator</td>
</tr>
<tr>
<td>13. Planning &amp; Estimating Division Head</td>
</tr>
<tr>
<td>14. Command</td>
</tr>
<tr>
<td><strong>COMMAND</strong></td>
</tr>
<tr>
<td><strong>2: Program</strong></td>
</tr>
<tr>
<td><strong>1: Policy Statement</strong></td>
</tr>
<tr>
<td><strong>13. If the person responsible for the total Quality Leadership Program has other duties within your organization, please specify the nature of these responsibilities.</strong></td>
</tr>
<tr>
<td><strong>14. What is the title of the person to whom he/she reports?</strong></td>
</tr>
<tr>
<td><strong>11. What documents exist to support the Quality Program?</strong></td>
</tr>
<tr>
<td>Command 1 (General)</td>
</tr>
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<td>--------------------</td>
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<tr>
<td>Yes</td>
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<tr>
<td>No answer</td>
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<tr>
<td>Other/Specific</td>
</tr>
</tbody>
</table>

15. To which of the following functions does your quality leadership program apply?
16. Do different types of acquisition/repair receive different emphasis in your TQL program?

- Yes: 13%
- No: 12%
- N/A: 13%
- No Answer: 62%

Command 1: No
Command 2: No
Command 3: No
Command 4: Yes
Command 5: No
Command 6: N/A
Command 7: No Answer
Command 8: No
<table>
<thead>
<tr>
<th>Command 1</th>
<th>Command 2</th>
<th>Command 3</th>
<th>Command 4</th>
<th>Command 5</th>
<th>Command 6</th>
<th>Command 7</th>
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<tr>
<td>Command 7 (Quality &amp; schedule, emphasis determined by customer)</td>
<td>Command 6 (Increased internal productivity)</td>
<td>Command 5 (Downsizing issues)</td>
<td>Command 4 (Increase efficiency - enable to do the same job with fewer people &amp; ($)</td>
<td>Command 3 (Customer satisfaction)</td>
<td>Command 2 (Decreasing environmental risks)</td>
<td>Command 1 (Increasing sales)</td>
<td>Command 8 (Decreasing costs)</td>
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<td>Others</td>
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</tbody>
</table>
18. Do you have "Quality Partnerships"?

<table>
<thead>
<tr>
<th>Command</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>Command 1</td>
<td>1,2</td>
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<tr>
<td>Command 2</td>
<td>1,2</td>
<td>1,2</td>
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<tr>
<td>Command 3</td>
<td>1,2</td>
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<td>Command 4</td>
<td>1,2</td>
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<td>Command 5</td>
<td>1,2</td>
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<td>Command 6</td>
<td>1,2,3</td>
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<tr>
<td>Command 7</td>
<td>3*</td>
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<tr>
<td>Command 8</td>
<td></td>
<td>1(formal), 2(informal)</td>
</tr>
</tbody>
</table>

1 with suppliers  
2 with customers  
3 other {specified}  
*Command 3: Other SUPSHIPS

Question 19: How far along are you in implementing your TQM program?

Question 20: To what extent are you already obtaining the benefits you expect to receive from program?

<table>
<thead>
<tr>
<th>Command</th>
<th>Question 19</th>
<th>Question 20</th>
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</thead>
<tbody>
<tr>
<td>Command 1</td>
<td>40 %</td>
<td>20 %</td>
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<tr>
<td>Command 2</td>
<td>&lt;20 %</td>
<td>&lt;20 %</td>
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<tr>
<td>Command 3</td>
<td>40 %</td>
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<tr>
<td>Command 4</td>
<td>40 %</td>
<td>20 %</td>
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<tr>
<td>Command 5</td>
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<td>Command 6</td>
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<td>20 %</td>
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<td>Command 8</td>
<td>40 %</td>
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<td>Command 1</td>
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2. What results has your command seen from quality improvement efforts?
22. If possible, please give specific examples where total quality leadership improvements have resulted in measurable benefits?

Command 1:
- "computerizing" paperwork
- improved quality of life issues for precommissioning units (ships force)
- institute employee recognition incentives & programs
- streamlining some material dept. processes

Command 2:
- joint corrective action instruction
- process control procedures
- planning

Command 3:
- improved work processes:
  * trial card rectification
  * purchase requests
  * Bid Spec packages
  * budget (accounting/payroll)
  * government travel
    - improved communication, especially between union/management
    - more emphasis on cross-functional cooperation

Command 4:
- command reorganization
- automating the planning process

Command 5:
- Processing of contractor invoices has been streamlined and all reports computer generated
- use of Critical Path Method type schedule for CNO availabilities has reduced claims
- many administrative reports have been consolidated/eliminated
Command 6:
- shorter processing time for waivers and deviation
- streamline mail processing

Command 7:
- TQM program recently (fall '93) re-defined and re-directed; expect to see measurable results in 6 months

Command 8:
- in-process inspection
- progressing
- administration of work
- strategic planning in preparation for the new homeport
- managing downsizing
<table>
<thead>
<tr>
<th>Command</th>
<th>1</th>
<th>2</th>
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<th>5</th>
<th>6</th>
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25. What kind of reward/incentive system do you use as part of your TOM program?
28. **Who do you perceive to be your key customers?**

Command 1: NAVSEA, submarine fleet, Local Shipyard  
Command 2: Taxpayers, Navy  
Command 3: Fleet, NAVSEA/PMS 400, Local Shipyard  
       (bottom line customers: taxpayers)  
Command 4: Internal customers, contractors, ship's force rep.  
Command 5: Ships, other activity personnel  
Command 6: Internal SUPSHIP customers  
Command 7: NAVSEA, Contractors (shipbuilders), fleet  
       (ultimate customer)  
Command 8: Type commanders, ship's force, local craft  
       owners, NAVSEA, contractors

28a. **Are your customers aware of your quality improvement efforts?**

29. **Do your customers participate in the process, if they want to?**

30. **Do you look for input from dissatisfied customers as well?**

<table>
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<tr>
<th>Command</th>
<th>28a.</th>
<th>29.</th>
<th>30.</th>
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<tbody>
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<td>2</td>
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<td>8</td>
<td>yes</td>
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</table>
31. When is the last time you conducted a formal survey of your customers' needs?

Command 1: Within last 12 months
Command 2: 1 year ago
Command 3: 1.5 years
Command 4: 1 year ago
Command 5: No answer
Command 6: Have not conducted formal survey
Command 7: N/A
Command 8: Customer feedback on performance and discussion of future needs occur at the end of each availability

32. How do you facilitate your customers' communicating to you their comments on your Quality Management Process?

Command 1: Customer surveys, mutual participation in Quality Management Boards/Teams
Command 2: We meet with them and discuss our services
Command 3: Working on joint teams
Command 4: Ask for their input
Command 5: No answer
Command 6: Informal (verbal)
Command 7: Senior QMB members communicate almost daily with customers
Command 8: Interview combined with assessment questionnaire

33. Is benchmarking in the marketplace a part of your quality process?

Command 1: yes
Command 2: no
Command 3: yes
Command 4: no
Command 5: no
Command 6: no
Command 7: no
Command 8: no
<table>
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<th>Command 1</th>
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</table>

34. What tools have you used to identify and track improvements in processes?
35. How often are those measurements taken?

Command 1: Varies drastically w/the process
           (overall, not enough measurements are taken)
Command 2: No answer
Command 3: Depends on process
Command 4: Whenever we look at a process
Command 5: As need identified
Command 6: During initial eval. & after changes implemented
Command 7: No answer
Command 8: Still struggling with measurement issues

36. Is the compensation of specific employees affected by these measurements?

37. Does your command have both union and non-union labor?

38. Is your union labor involved in your total quality leadership program?

39. Is your non-union labor involved in your total quality leadership program?

<table>
<thead>
<tr>
<th>Command 1:</th>
<th>36.</th>
<th>37.</th>
<th>38.</th>
<th>39.</th>
</tr>
</thead>
<tbody>
<tr>
<td>no</td>
<td></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>Command 2:</td>
<td>no ans.</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<td>Command 3:</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Command 4:</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Command 5:</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Command 6:</td>
<td>N/A</td>
<td>no</td>
<td>N/A</td>
<td>yes</td>
</tr>
<tr>
<td>Command 7:</td>
<td>no ans.</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Command 8:</td>
<td>no</td>
<td>no</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

53
40. **What is the approximate number of employees in your command?**

<table>
<thead>
<tr>
<th></th>
<th>USN</th>
<th>Civilian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average #’s</td>
<td>20</td>
<td>236</td>
</tr>
</tbody>
</table>

42. **Which department are you in?**

- **Command 1:** Coordinator in Material Dept., TQL staff and facilitators are throughout the command
- **Command 2:** Quality Assurance
- **Command 3:** Command & Staff Code 100Q
- **Command 4:** Operations
- **Command 5:** No answer
- **Command 6:** Business Review
- **Command 7:** Engineering - Code 240
- **Command 8:** Staff - Office of the Commanding Officer
CHAPTER 4
SUPSHIP Visits

4.1 Introduction:

Of the eight offices that replied to the survey, six indicated that they would be willing to host a site visit by a team of students from class 13.64 - Projects in Ocean Systems Management under the direction of Professor Hank Marcus. Three sites were chosen for site visits; Bath, Groton, and San Diego. The 13.64 class was broken up into three groups, I attended the first two interviews; SUPSHIP’S Bath and Groton. The third team met in California and conducted their interviews at SUPSHIP San Diego.

4.2 Bath:

4.2.1 Introduction:

The origins of TQL at SUPSHIP Bath can be traced back to 1991 when, then commanding officer Captain Robinson recognized the importance and potential of TQL, and felt that it was a direction in which the navy would be heading. Captain Robinson started the ground work of a program before the May 1991 CNO directive. SUPSHIP Bath is overseeing construction of 10 Guided Missle Destroyers at Bath Iron Works. The current staff level is 526 employees.
4.2.2 Mission:

"We are a team that exists to deliver ships which exceed our customer's needs and expectations."12

4.2.3 Vision:

"We are a team of professionals committed to quality ships and customer satisfaction. We will work together with our customers and suppliers to create an atmosphere of trust and to continuously improve our performance. We will set the benchmark of excellence in all facets of shipbuilding."13

4.2.4 Training:

Teaching employers what TQM really is and making "believers" out of them is difficult, but it is the most important step in achieving a cultural change within an organization. Bath used an outside consultant; Steve Schector to help them design and implement a TQM program when the program began in 1991. He returned to help ease the transition of change of command when Capt. Robinson departed, but is not used on an ongoing basis. It was generally perceived that allocating additional money for outside help would have been a waste.

The majority of the command felt that they had received enough training and that pulling people away from their work to attend training would be detrimental. They also felt that training could be accomplished through on the job use of facilitators and the individual commitment and voluntary involvement of people. Upper management was clear on their feeling that they did not want to push anyone to do something they felt was a waste of time, individuals

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13 Ibid.
needed to embrace the merits of TQ on their own and realize its potential to improve quality.

The command encourages self-education of the work force, enhanced by the availability of quality improvement courses that can be attended at Bath Iron Works.

4.2.5 Implementation:

The preliminary survey indicated that Bath was 40\% complete in their implementation of TQL. The 40\% number was derived from TQL award publications that showed TQ "thermometers" to estimate progress. Overall, the 40\% is more of a gut feeling than a precise measurement; it falls below their expectations as to where they had hoped to be at this point in time. Another factor is that they feel that they are trying to achieve a target that is continually moving. As implementation takes shape, new estimates of what to do and how long it should take are made.

People's impression on management's commitment to TQL varied widely and tended to run parallel to their personal experiences. The experiences of middle management have been consistently negative. Their inclusion, as a group, in terms of specialized planning for middle management has been lacking. As a result they feel that they have been not only left out but excluded; as a result they are wary of any changes that are proposed regardless of expected outcome.

The structure of TQL at Bath can be seen from Figure 6. It combines five different types of teams and facilitators. These teams are the Executive Steering Team (EST), Implementation Team (IT), Process Action Team (PAT), Guidance Team, and Quality Improvement Team (QIT).
SUPSHIP BATH

LEGEND:

Chartered Committee
Support Committee
Reporting Relationship
Advisory Relationship
Continuous improvement efforts at Bath are hard to find. Little or no measurement exists for departmental, or overall command performance. Thus, without a baseline measurement it is next to impossible to identify areas for improvement. One positive step that they have taken is to start the process of identifying all of the processes involved in the day to day operations.

4.2.6 Conclusions:

After almost four years of involvement in the TQL process SUPSHIP Bath still has a long way to go. The number of "non-believers" within the organization remains at approximately 25-30%. They are just now beginning to separate and examine processes and look at ways to improve. It is not surprising that a cultural change has not taken place when you consider the barriers of 1) this being a service organization; 2) it being a government/military organization; and 3) the past, present, and future force reductions that they have faced. The program has seen some successes mainly in the areas of opening lines of communication and relationships with customers, namely Bath Iron Works. A process success has been the partnership formed with Bath Iron Works to improve the way that trial cards are received and handled. A PAT examined the method by which trial cards are resolved and as a result came up with 36 solutions that relieved bottlenecks, duplication of effort, and errors. Implementation has taken place and work appears to be going smoother; tracking and supporting data, however, were unavailable. The ultimate result of this action will hopefully decreased time for trial card resolution and allow for a savings in money due to reduced delays in ship be accepted by the Navy.

The command has made good use of an in-house newspaper, The Washington Street Post to spread the word about TQL and recognize quality
acheivements of its personnel. Individual awards for recognizing individual accomplishments is an area that is under review.

4.3 Groton:

4.3.1 Introduction:

SUPSHIP Groton initiated a TQL program shortly before the CNO's mandate in 1991. Working in connection with the Electric Boat Division of General Dynamics they currently are overseeing the construction of three classes of submarine; Los Angeles, Trident, and Seawolf. Groton is also in the process of reviewing plans for the next class of attack submarine. The command had 450 employees in 1991; today they are down to 330. The 1998 projected workforce will number 175. Electric boat currently holds no contracts beyond 1998.

4.3.2 Mission:

"SUPSHIP Groton supports the submarine forces by supervising and administering procurement, ship design, construction, overhaul and repair contracts. We are responsible for the delivery of quality ships in a timely and cost effective manner."14

4.3.3 Vision:

Groton recognizes the link between their existence and that of Electric Boat. In order to succeed they have made several assumptions:

- "SUPSHIP Groton will manage Submarines--as EB will be the sole supplier of submarines to the Navy."

14 SUPSHIP Groton Mission Statement, Ver. 8.27.92
• "In FY98, EBDIV will have the following work: SSN 22, SSN 23, and NSSN; SUPSHIP Groton manning, currently estimated at 172 direct, will be determined by SUPSHIP Workload Forecasting Technique (SWFT)."
• "EB will aggressively pursue overhaul and repair work."
• "Functions will be pushed to SUPSHIP with or without resources attached."

With these assumptions in mind, SUPSHIP Groton has formulated the following strategic objectives:15
• "Implement an assessment of the command personnel skill mix and determine the training requirements to meet the command organizational vision."
• "Address employee concerns to the command organizational vision through two-way communication and education."
• "Provide detail to the command organizational vision through a consensus approach."
• "Identify and resolve customer concerns and bring all customers onboard with our organizational vision."

4.3.4 Training:

The initial training at Groton was performed by an outside consultant who conducted a retreat for upper management at which they developed their strategic plan. Since then the entire command has been given at least one day of in-house training. Other training courses for facilitators, trainers and some dealing with statistical measurement have also been offered. The expertise of the Navy personnel at the command is a very good source for education and training opportunities. The command needs to gain as much knowledge from these members as their stay at Groton is typically limited to 2-3 years before

15 SUPSHIP Groton Strategic Objectives, Ver. 1.31.94
transfer. Once this "civilianizing" of the TQ program takes place it will allow for long term stability.

4.3.5 Implementation:

In the survey conducted prior to the site visit, Groton reported that they were 40% complete on implementation of TQL. As with Bath they stated that this number was an estimate and that they found it hard to quantify progress. The command is of the conviction that TQL must be an ...."evolution, not a revolution...." and introduced slowly.

The structure of TQL at Groton can be seen in Figure 7. The ESC oversees all TQL matters. QMB's are split into two groups; those that deal with strategic objectives, and those that deal with work/process related items. QIC's deal strictly with single department processes. PAT's are problem solving teams chartered by QMB's or QIC's.

Continuous improvement can be seen in the increased levels of communication and cooperation. However, little process identification and examination has been done.

4.3.6 Conclusion:

Three years have passed since the implementation of TQL at Groton and I felt that they could have accomplished more for their efforts. Commitment from top management is not 100%. While talking with a top manager about time and energy spent on getting the program to work he stated that we ..."can't lose sight that we have other work to do....cost time and money....". Top management at Groton agreed that turning more TQL functions over to civilian employees could increase consistency.
SUPSHIP GROTON

LEGEND:

- Chartered Committees
- Support Committee
- Reporting Relationship
- Advisory Relationship
- Special Work Group
Successes have been made in the command's relationship with the crews of the submarines that they are building and how they provision them. A program is now in place that allows female employees to ride the submarines during sea trials. Previously this had not been possible even though it was part of their job.

A huge success for Groton has been the partnership it formed between Electric Boat and Newport News Shipyard to solve problems in Provisioning Technical Data. This was an incredible feat; to get the two yards that compete against each other for building contracts to not only cooperate, but also to sit down at the same table and resolve a problem. The group has used some statistical process control methods to reduce errors in information transfer and is implementing changes as needed.

As with all of the SUPSHIP's Groton faces downsizing and has been hit with one RIF, with more to follow. Again, they have known these numbers since 1990 and are preparing themselves for the reduction.

The command has plans for a computer bulletin board to spread the word about TQL successes and recognize accomplishments of individual employees. As with SUPSHIP Bath individual awards and incentives are under review.
4.4 San Diego:

4.4.1 Introduction:

Jerry Newton, Head of QA initiated TQL at SUPSHIP San Diego in 1988. The initial objective was for use in data control management. San Diego is working with the National Steel and Shipbuilding Company (NASSCO) on new construction of three AOE-6 fast supply ships, one T-AKR RoRo, and the conversion of three T-AKR RoRo's. Prior to a 1993 downsizing they had 508 employees, today they have 452, and by the end of 1994 this number is expected to drop to 420.16

4.4.2 Mission:

"We fill a vital role in our national defense. Through creativity, training and teamwork, we deliver ships to the fleet in the highest state of readiness.

We are committed to the principles of total quality. We will be the Fleet's agent of choice for planning and acquisition of repair and construction of its assets.17

4.4.3 Vision:

SUPSHIP San Diego's vision is outlined in the following Strategic Objectives18:

- Improve communication with customers
- Prepare for changes in business environment

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16 13.64 MIT Project Team, Supervisor of Shipbuilding San Diego, CA TOL Evaluation Project, 10 April 1994.
17 Supervisor of Shipbuilding, Conversion and Repair, USN, San Diego, CA, Strategic Plan, January 1993.
18 Ibid.
• Align work practices with TQM
• Improve contract process
• Improve information transfer

4.4.4 Training:

When the program first began the command called upon the services of an Air Force employee familiar with TQM to introduce the concept. Since that time San Diego has expanded its training to where it can be matched by no one. In 1993 they spent $365,000 on training alone. (Bath and Groton had each spent $70,000) Although the general attitude surrounding the importance of providing widespread training in TQ was evident, it appeared that all levels within San Diego did not receive the same emphasis. Top and lower management appear to be the primary recipients, while middle management was the last to receive training. "Just in time" training has allowed them to spend funds wisely and apply TQ tools to areas that require them the most. Relocation and repositioning of valuable personnel is seen as a way to avoid losing valuable talent.

San Diego is using "teambuilders" to facilitate the creation of working groups and educate them as to the usefulness of of TQL and to help them understand each other's differences. The aim is to first create an accepting mental environment for implementation of TQ by changing attitudes and getting people involved. This approach is very people-oriented as is their TQL program as a whole.
4.4.5 Implementation:

TQL at SUPSHIP San Diego is five years old this year and they report less than 20% implementation. By their own admission they have focused the majority of this time in effecting a cultural change. Major emphasis has gone into breaking down barriers related to the "hero mentality". This hero mentality relates to people solving crisis situation that if they had adequately planned for would not have occurred in the first place. In other words they are fighting fires as opposed to practicing fire prevention.

The structure of TQL at San Diego can be seen in Figure 8. It contains an ESC, QMB's, Pat;s, Teambuilders, and SWG's. Reporting and advisory relationships connect each group to all the others through this maze, with teambuilders at the center.

Continuous improvement of any processes where tools have been used to change the way business is done appears in little or no processes.

4.4.6 Conclusion:

SUPSHIP San Diego is in its fifth year of TQL. Initially they led the way in embracing the concept and proclaiming its expected returns. Up to this point in time they seem to have focused mainly on effecting a cultural change, or shifting paradigms I feel that it is time to move forward into identifying process areas that need improvement and take corrective actions to make those improvements.

The command utilizes a newspaper to communicate implementation progress, and in recent months story boards have appeared\(^{19}\)

As with all commands San Diego is in the process of downsizing and that has presented barriers to TQL implementation.

\(^{19}\) Newton, J., E-Mail answer to questions on TQL, 11 April 1994.
SUPSHIP SAN DIEGO

LEGEND:

- Chartered Committee
- Support Committee
- Reporting Relationship
- Advisory Relationship
- Special Work Group
4.4.7 SUPSHIP San Diego, Partnerships For Quality:

SUPSHIP San Diego teambuilders define partnering as, "the best way to obtain, and maintain, predictable customer satisfaction. This is done by working with our suppliers to establish a win-win relationship based on trust and respect."\(^{20}\) This philosophy was put to the test in a Sealift conversion project that is underway at NASSCO under their direction.

A Sealift Team was formed to coordinate and control all participants needs and responsibilities. Their statement of purpose reads:

"Our purpose is for the Sealift participants to get to know each other, discuss each other's needs and responsibilities in order to achieve an understanding of what makes a collectively successful program,"\(^{21}\)

Now this may sound simple enough, or you may even assume that this would be a standard procedure, but it had never been done before. It opened lines of communications, put concerns and fears above board, and sought to optimize the project with all of these things in mind.

The team has brought together in excess of 14 different groups that had a variety of interests. Some of those included were; ABS Houston, U.S. Coast Guard, NASSCO, NAVSEA, MSC (Military Sealift Command), OPNAV, and General Electric. Their main thrust of their purpose is understanding. Understanding who the customer is, who the end user will be, what are the needs of each group, and how can they be satisfied within the bounds of technological and financial constraints.

The group has had a monumental task in just its formation alone. The fact that they have been able to connect with all those involved underlines their

\(^{20}\) SUPSHIP San Diego Teambuilders correspondence, dtd 29 April 1994.

\(^{21}\) Sealift Team Booklet, March 1994.
commitment to deliver quality; in the finished product, but most importantly in the processes that will lead to that final product.

4.5 Summary:

Similarities found at the commands visited show that they have come a long way. They have overcome entrenched ideals and paradigms and are seeing a renewed spirit of cooperation. Some significant barriers continue to exist, but progress continues forward. Some examples are:

- Increased communications both within their own organizations and with customers, suppliers, contractors, and other SUPSHIP offices.
- Formation of partnerships to try and include all of those individuals and or processes that are required to deliver the product, i.e. ships and submarines.
- Dealing with Reductions In Force (RIF's):
  - Bath - Fought for and received funding for "early out" incentives
  - Groton - Aided with job placement of those seperated, acheived 100%
  - San Diego - Combines banking attrition and shifting personnel
- Awards & Incentives is an area that the commands are regulated on exactly how much they can do. They all recognize that it needs improvement and are taking steps to improve.
CHAPTER 5

Analysis of TQL Progress in SUPSHIP Organization

Having surveyed eight SUPSHIP offices and then visited two of them for a closer look there are a number of points that are consistent and need attention, the most critical of those are:

1) Time vs. Progress: All of the offices have been attempting implementation for at least three years. A few have been at it for as much as five. There appears to be no equity when comparing the results obtained thus far for the time, energy and money spent on the effort. Many SUPSHIP offices may have to admit negative value.

2) Continuous Improvement: All but one of the offices reported using a variety of tools to measure processes and institute change base on those measurements. Yet of those offices visited little or no measurements were being routinely taken as a result of the TQL program. All of the commands reported success in increased communication and cooperation. This is to be commended as it is a difficult task in the environment they work; a service industry with a government organization.

3) Middle Management: All reported difficulty in getting middle management onboard. Although it is the nature of TQ to open vertical access, understanding of this issue and planning prior to implementation could have avoided a good number of these difficulties.

4) Downsizing: As seen in Figure 5, projected manpower numbers have been known for some time. In many areas they have been planned for, but they are presenting barriers to TQL today.
5) Support: A missing link for all those involved appears to be the absence of significant participation by Head Quarters Command. There is little or no support, guidance or direction offered to them.

6) Spreading the word: Commands need to increase dissemination of progress and accomplishments. People want and need to be informed so that they can provide feedback and learn from others successes and failures.
CHAPTER 6

Concluding Comments On A Top Down Approach

Deming, Juran, Crosby and almost all of the TQM "gurus" I believe would agree that the commitment to, and guidance of, any quality improvement program must come from the top. In the case of the SUPSHIP organization this critical link could be stronger, both in HQ or NAVSEA 07. Little or no outside guidance is given to the individual programs that I looked at. People surveyed or interviewed could not point to a person outside of their individual command who they could turn to for help.

SUPSHIP HQ needs to take command of TQL within its organization, lead the charge and aid any stragglers along the way. Some of the individual SUPSHIP offices are approaching five to six years of attempted implementation and the highest percent reported for overall implementation is 40%. Even when you take into account that you are dealing with a) a service organization, and b) a service organization within a government organization, these results appear to show a lack of commitment from the top.

In order to insure a successful, acceptable and functional TQL program, there are a few things that the SUPSHIP organization, as a whole could do:

1) Identify the process - The mission of SUPSHIP is to:
   a) Manage DoD shipbuilding, design, conversion, and facilities contracts
   b) Procure and manage overhaul/repair contracts
   c) Other mission tasks
For a) and b) processes should be identified and standardized to insure efficient completion and reduce duplication of efforts. For c) use the lessons
learned previously to guide in assigned tasks for which no standard procedures exist. SUPSHIP Bath has begun to do this by looking at each department and identifying what functions guide their day-to-day operations.

Once you have identified the processes necessary to complete these mission tasks measurements can be taken and methods of Statistical Process Control (SPC) applied to insure proper tracking of results obtained. SUPSHIP Groton is applying these methods in the Provisioning Technical Data case that was talked about in Chapter 4 to insure continuous improvement.

2) Drive out fear of job security:
   a) Revamp the personal review process to incorporate and adequately reflect team activities and contributions
   b) Target dates and projected numbers for manpower have been known since 1990. Although the SUPSHIP’S that I interviewed had planned for their downsizing, possibly HQ could do more to assist individual offices during these periods of uncertainty.

3) Sponsor an annual or semi-annual Quality Conference where individual SUPSHIP commands can present successes and failures so that they can learn from each other.

These changes are in line with the data collected and would better facilitate the implementation of Total Quality Leadership.
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