United States General Accounting Office

GAO

Briefing Report to the Honorable Donald Ritter, House of Representatives

October 1992

QUALITY MANAGEMENT

Survey of Federal Organizations

GAO/GGD-93-9BR

GAO
United States
General Accounting Office
Washington, D.C. 20548

General Government Division

B-249779

October 1, 1992

The Honorable Donald Ritter
House of Representatives

Dear Mr. Ritter:

This briefing report is the first in a series in response to your October 1991 request for us to examine Total Quality Management (TQM) in the federal government. At the outset, you asked that we perform a survey to obtain information on the status, scope, and benefits of federal TQM, as well as the obstacles that agencies encounter during implementation. We briefed you on the results of this survey on October 1, 1992. This briefing report contains the information we presented.

BACKGROUND

TQM is a management approach that strives to achieve continuous improvement of quality through organization wide efforts based on facts and data. The methods for implementing this approach have been advanced by the teachings of such quality leaders as W. Edwards Deming, Armand Feigenbaum, Kaoru Ishikawa, and J. M. Juran. For purposes of our survey, quality improvement efforts which have the same basic goals and processes as TQM but have different names, such as Total Quality Excellence and Total Quality Leadership are encompassed by the term "TQM."

Early interest and efforts in TQM in the United States occurred primarily in the private sector, where firms spurred by intense competition from Japan began to examine Japanese approaches to management. In the late 1970s and early 1980s, this enhanced competition stimulated U.S. attention to the role of TQM systems in improving quality. The increased interest in Japanese management methods was soon accompanied by research in the United States that documented that firms can also reduce their costs by improving quality. Although the federal government does not have the same type of competitive pressures that exist in the private sector, federal managers have begun to look at TQM as an approach that can help solve governmental management problems.

We surveyed federal installations to examine the extent of TQM in the federal government. Installations, as defined by the Office of Personnel Management, are units with a specifically designated organization head who is not subject to on-site supervision by a higher level installation head and has been delegated some degree of authority in the performance of personnel management functions. Installation personnel management authority would include hiring for civilian employees and rewards and recognition for military and civilian personnel. Typical installations included Internal Revenue Service Centers and Air Force Logistics Centers.

RESULTS IN BRIEF

TQM is being implemented by a significant number of federal organizations; about 68 percent of the federal installations we surveyed reported they were working on various phases of TQM, with the greatest activity concentrated in the early phases. The remaining federal installations are not currently implementing TQM, although about half said they plan to in the future.

Although TQM is being initiated on a fairly wide scale, the depth of employee involvement is still thin. The 68 percent of federal installations that reported implementing TQM also reported that about 13 percent of their employees were involved in TQM activities at the time of our survey. Various respondents reported barriers to greater implementation of TQM, including employee issues and funding issues.

We analyzed the reported TQM activities, barriers and benefits in terms of the installations' reported TQM maturity phases--in other words, their degree of development and maturity. This analysis showed that installations that reported being further along in terms of implementing TQM also reported more involvement in TQM activities, such as training, improvement teams, and measuring performance than those which were in the early maturity phases. Also, respondents reported both fewer barriers and more employee involvement as they progressed further into TQM implementation. More importantly, although many respondents reported that they are achieving benefits as a direct result of their TQM activities, the level of reported benefits achieved both externally and internally increased substantially for installations that have progressed further in TQM implementation.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objective was to obtain information on the status and scope of TQM implementation in the federal government, the barriers to implementation, and the benefits being realized through the adoption of TQM practices. To accomplish our objective, we sent

questionnaires to the heads of more than 2,800 civilian and Department of Defense installations. We asked the installation heads to self-assess their status and report on barriers to implementation and internal and external benefits realized as a result of TQM activities. We also made follow-up visits to a judgmental sample of 30 installations to determine the extent to which documentary support for TQM implementation efforts was available and to validate certain questionnaire responses. We did our work between March and September 1992 and in accordance with generally accepted government auditing standards.

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As agreed with your office, unless you publicly release its contents earlier, we plan no further distribution of this report until 5 days from the date of this letter. At that time we will send copies of this report to the heads of departments and agencies included in our survey; interested congressional committees; the Directors of the Office of Management and Budget, Office of Personnel Management, and the Federal Quality Institute; and survey respondents. We will also make copies available to others upon request.

The major contributors to this report are listed in Appendix III. If you have any questions, please call me on (202) 275-8387.

Sincerely yours,

J. William Gadsby
Director, Federal
Management Issues

C O N T E N T S

		Page
LETTER		1
APPENDIXES		
I	SURVEY OF FEDERAL TOTAL QUALITY MANAGEMENT ACTIVITIES	5
II	SURVEY QUESTIONNAIRE	47
III	MAJOR CONTRIBUTORS TO THIS REPORT	67

APPENDIX I

GAO U.S. General Accounting Office

SURVEY OF FEDERAL TOTAL QUALITY MANAGEMENT ACTIVITIES

GAO Scope and Methodology

Scope

- More than 2,800 civilian and DoD installations

Methodology

- Questionnaire sent to all installations (80% response)
- Validated questionnaire responses at 30 installations

APPENDIX I

GAO Topics To Be Covered

- Status of federal TQM
- Scope of TQM activities
- Benefits of TQM
- Barriers to ongoing efforts
- Observations

APPENDIX I

GAO Federal Total Quality Management

Reported Status of Federal TQM

STATUS OF FEDERAL TQM

Federal installations reported a wide level of TQM activity. As shown in page 10, about 68 percent of all respondents said they were involved in some TQM efforts. Also, this activity is new since most of these TQM activities were no more than 2 years old. In addition to the installations already involved, about half of the 32 percent of the installations without TQM activities said they plan to implement TQM in the future.

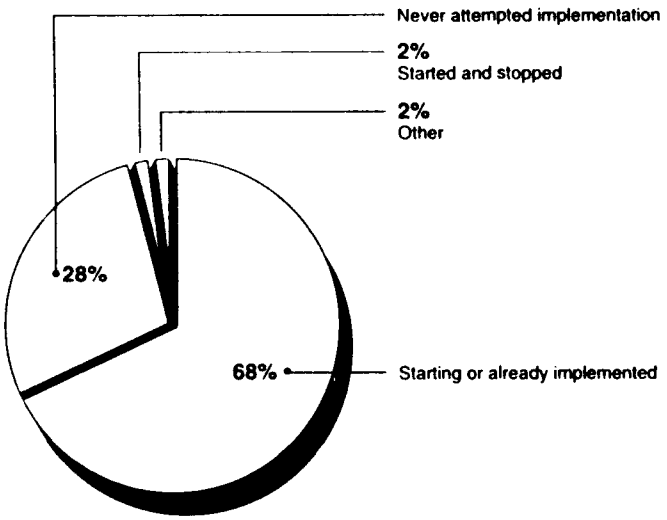
To more fully examine the status of TQM, we presented descriptions of TQM phases in terms of how far along or "mature" installations were in implementing TQM. These were obtained from research into various ways of describing where organizations were in their implementation efforts. The maturity phases are: Phase 1--Deciding whether to implement TQM, Phase 2--Just getting started, Phase 3--Implementation, Phase 4--Achieving results, and Phase 5--Institutionalization (see p. 11 and app. II). Respondents were asked to place their installation in one of the maturity phases. The results of this analysis (p. 12) shows that about half the installations reported being in the early stages--namely Phases 1 and 2. In terms of those organizations achieving significant results, about 18 percent were at Phases 4 and 5; only 40 judged themselves to be actually at Phase 5. Nineteen percent of Department of Defense installations reported being in Phases 4 and 5, and 16 percent of civilian installations reported being in those phases.

Moving from the early start-up efforts through implementation takes time. The number of years installations report that they have been implementing TQM is shown on page 13. The responses indicate that the first year is spent in the decision and start-up phases. The average age for Phase 3 installations was about 2.5 years, and Phase 4 was 3 years. Institutionalizing TQM, however, appears to require fairly long-term efforts. Phase 5 installations reported that they have been involved an average of slightly less than 5 years.

Finally, 28 percent of the installations reported that they never have attempted TQM. They were asked to identify barriers to implementation. We categorized the answers into leadership, training, strategic planning, employee involvement, measurement and analysis, customer focus and other issues. No category was a dominant barrier, as page 14 shows, but leadership issues were the most frequently mentioned category.

GAO Status of Federal TQM

Wide level of activity reported



GAO Status of Federal TQM

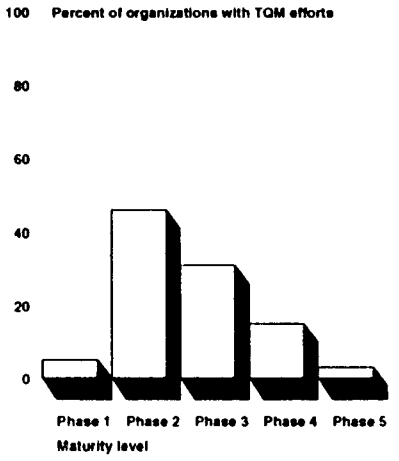
Phases of TQM implemetation

- Phase 1: Deciding whether to implement TQM
- Phase 2: Just getting started
- Phase 3: Implementation
- Phase 4: Achieving results
- Phase 5: Institutionalization

APPENDIX I

GAO Status of Federal TQM

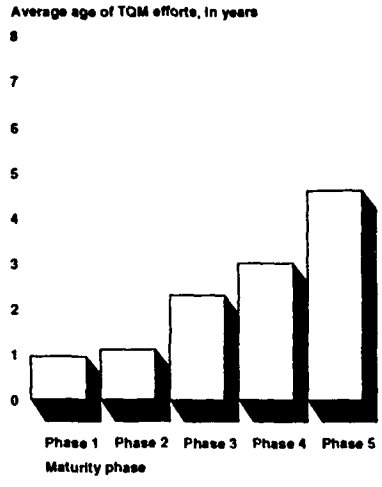
Most installations underway report being in early stages



APPENDIX I

GAO Status of Federal TQM

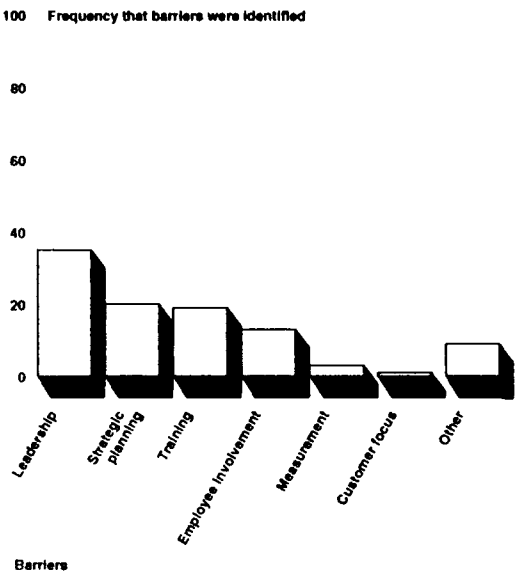
Institutionalizing takes time



APPENDIX I

GAO Status of Federal TQM

Organizations not underway identify several barriers to initiating TQM



APPENDIX I

GAO Federal Total Quality Management

Reported Scope of TQM Activities

SCOPE OF TQM ACTIVITIES

Among those organizations that have TQM efforts, most have put a management and implementation structure in place, as shown on page 17. According to respondents, 82 percent of the installations have established quality councils, and 76 percent have established quality improvement teams.

We asked respondents about the extent of their involvement in 43 activities commonly undertaken by organizations involved in TQM. We used the Baldrige and the Federal Quality Institute Awards to categorize activities expected of organizations involved in quality management. As shown on page 18, the categories were leadership, employee training and recognition, strategic planning, empowerment and teamwork, measurement and analysis, customer focus, and quality assurance. As pages 19-to-25 depict, installations reported that these TQM activities increased substantially with the maturity phase. In general, organizations identifying themselves as more mature in TQM also more frequently said they were doing these 43 activities.[1]

We also asked about employee involvement at the time of our survey. Respondents indicated that about 13 percent of the employees (20 percent of the managers and 13 percent of the nonmanagers) were actively involved in such TQM activities as teams, councils, and teaching, as shown on page 26. Phase 4 and Phase 5 organizations, on the other hand, reported an overall 25 percent employee involvement rate.

Incentives and training linked to participation appear to be used more frequently in more mature installations (see pp. 27 and 28). On average, 42 percent reported providing teams with rewards and recognition. The average increases to 79 percent for Phase 4 and Phase 5 organizations. Further, 33 percent of all installations reported having quality goals in employee performance plans, whereas 60 percent of the Phase 4 and Phase 5 organizations reported having such quality goals. Finally, 57 percent reported training in group process and problem-solving skills (p. 28); while 88 percent of Phase 4 and Phase 5 organizations reported such training.

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[1]It should be noted that each category is simply a composite average of all activities within it, and as such does not precisely reflect the rate of change for all activities within a category.

GAO Scope of TQM Activities

Among 68% of installations that have TQM efforts:

- 82% have Quality Councils
- 76% have Quality Improvement Teams

APPENDIX I

GAO Scope of TQM Activities

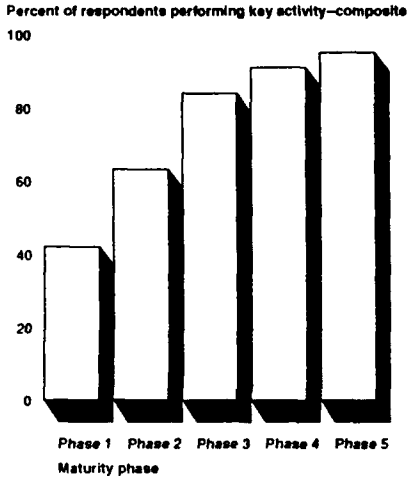
Installations consistently report undertaking more key activities as TQM maturity increases

- Key activities from Federal Quality Institute and Baldrige Award criteria
- Leadership, Training, Planning Empowerment, Measurement, Customer Focus, and Quality Assurance

APPENDIX I

GAO Scope of TQM Activities

Leadership activities increase with maturity phase

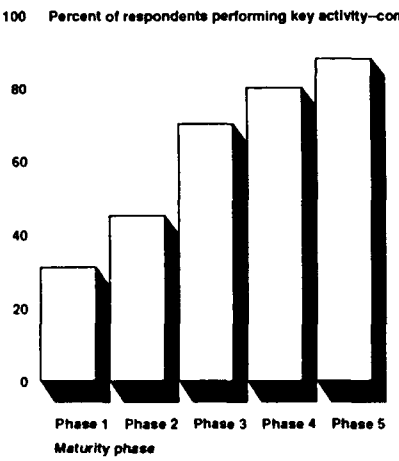


Includes such activities as establishing quality councils and senior management awareness training.

APPENDIX I

GAO Scope of TQM Activities

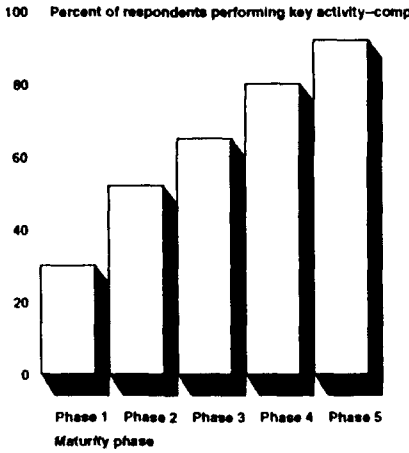
Employee training/ recognition increases with maturity phase



Includes such activities as TQM training needs assessments and formal rewards for teams.

GAO Scope of TQM Activities

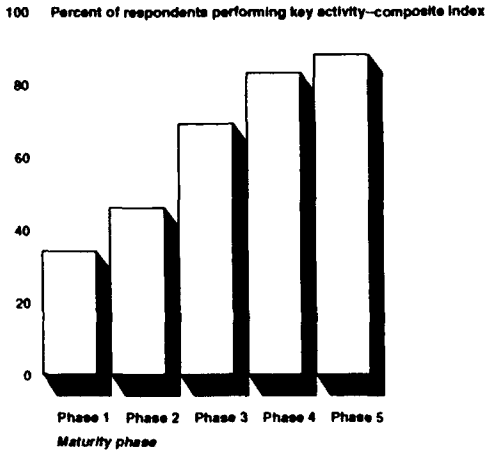
Strategic planning activities increase with maturity phase



Includes such activities as developing quality vision, mission, and policy statements and developing an implementation plan.

GAO Scope of TQM Activities

Empowerment and teamwork increase with maturity phase

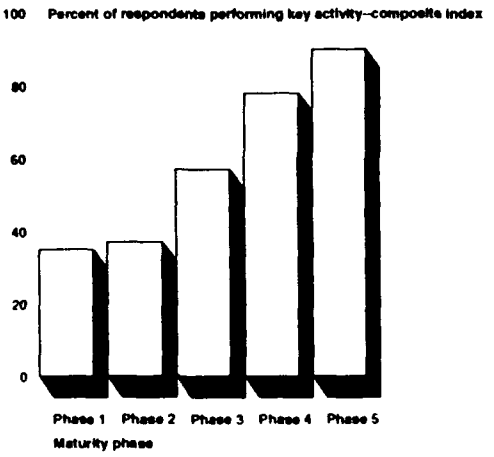


Includes such activities as establishing teams and involving unions.

APPENDIX I

GAO Scope of TQM Activities

Measurement and analysis activities increase with maturity phase

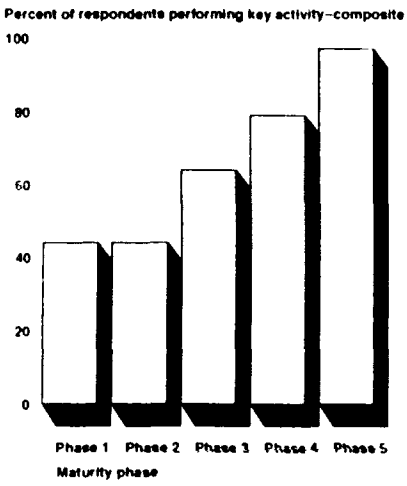


Includes such activities as developing internal and external measures and analyzing systems and processes.

APPENDIX I

GAO Scope of TQM Activities

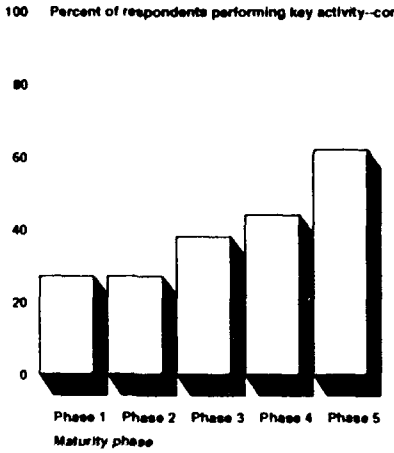
Customer focus activities increase with maturity phase



Includes such activities as identifying external and internal customers and developing methods to monitor customer satisfaction

GAO Scope of TQM Activities

Quality assurance activities increase with maturity phase



Includes such activities as working with suppliers and using such methods as Quality Function Deployment to enhance ability to meet customer requirements

APPENDIX I

GAO Scope of TQM Activities

Current employee participation across units with TQM efforts

- 13% of all employees, 20% of all managers, and 13% of all nonmanagers are involved in TQM activities, such as facilitation, councils, teams, or teaching
- In Phase 4 and Phase 5 installations, 25% of all employees participate

APPENDIX I

GAO Scope of TQM Activities

Incentives for participation vary by phase

- 42% of installations recognize and reward teams (79% of Phase 4 and 5 reward teams)
- 33% of installations have quality goals in employee performance plans (60% of Phase 4 and 5 have goals)

APPENDIX I

GAO Scope of TQM Activities

Training for participation increases with maturity phase

- 57% of TQM installations offer tools or group process training to employees (88% of phase 4 and 5 offer tools or group process training)

APPENDIX I

GAO Federal Total Quality Management

Reported Benefits of TQM

BENEFITS OF TQM

We examined TQM benefits in two ways: (1) effect on external customers as reflected by overall organizational performance and (2) effect on internal customers as reflected by internal operating conditions. We asked respondents to assess TQM's effect on organizational performance in terms of productivity, reductions in costs, quality of products and services, overall service to customers, customer satisfaction, and timeliness. To depict the overall impact, we developed an index that is the average of responses to our questions on the degree of impact.

As shown on page 32, most organizations said TQM has enhanced organizational performance--about 60 percent reported a positive to very positive impact, although a third said it was too early to judge. Of particular note, no significant negative effects were reported. One example of customer service improvement was noted during our installation visits to the Veterans Affairs Insurance Center in Philadelphia. This office had reduced from 11 percent to less than 6 percent the frequency that veterans had to make follow-ups on their inquiries regarding such things as insurance benefits, and improvements were continuing. In another example at the Ogden Air Logistics Center, the failure rate on a bomb release was reduced from over 80 percent to less than 5 percent after an employee simply called the customer to determine if there were any problems with the item.

Also, the reported impact of TQM on organizational performance increases as maturity increases. Pages 33 and 34 show the six different organizational performance measures and the pattern of greater impact as organizations mature.

For internal operating conditions, we asked the installations to identify the impact of TQM on each of 13 internal operating conditions, such as communications and labor-management relations (see app. II for a complete list). To view the benefits, we developed an index in the same manner as for the organizational performance indicators. As shown on page 35, respondents said that TQM was affecting internal operating conditions in a positive manner, but not strongly. Also, about one-third of the respondents said it was too early to judge the impact.

One example of the benefits of improving internal operating conditions was provided during our visit to the Internal Revenue Service's Ogden Service Center. According to Center officials, group process and problem solving-skills were used for 2 years by a team that worked on taxpayer payment problems. During that period the team addressed a series of problems such as the posting of taxpayer payments to the wrong accounts. This effort

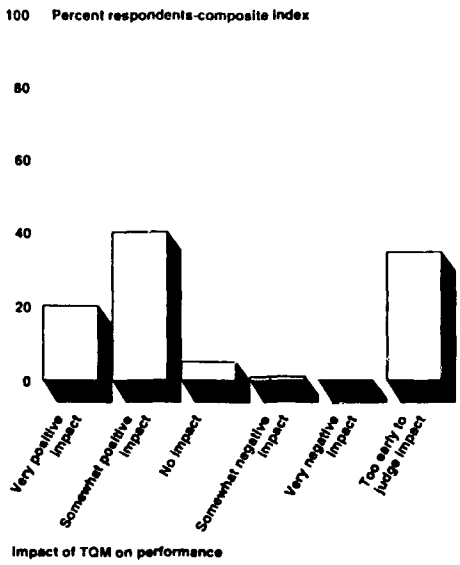
helped reduce payment tracers by over 1 million and also reduced erroneous payment due notices to taxpayers.
In another example of quality improvement team activities, officials at the Defense Industrial Supply Center in Philadelphia described how a team has been given the task of identifying and reducing unnecessary reports and paperwork. The Center reported that the team's efforts have reduced paper consumption by millions of sheets.

Internal conditions also improve with TQM maturity, according to respondents. Pages 36 and 37 show the top six internal conditions that were reported as affected positively to a moderate or very great degree by TQM. They are attention to customers' requirements, group process and problem-solving skills, internal communication, participatory management style, timeliness of internal processes, and efficiency. Similar to the organizational performance area, benefits reported by mature organizations were double and triple the benefits reported by Phase 1 and Phase 2 organizations.

APPENDIX I

GAO Benefits of TQM

Most installations report positive impact on performance

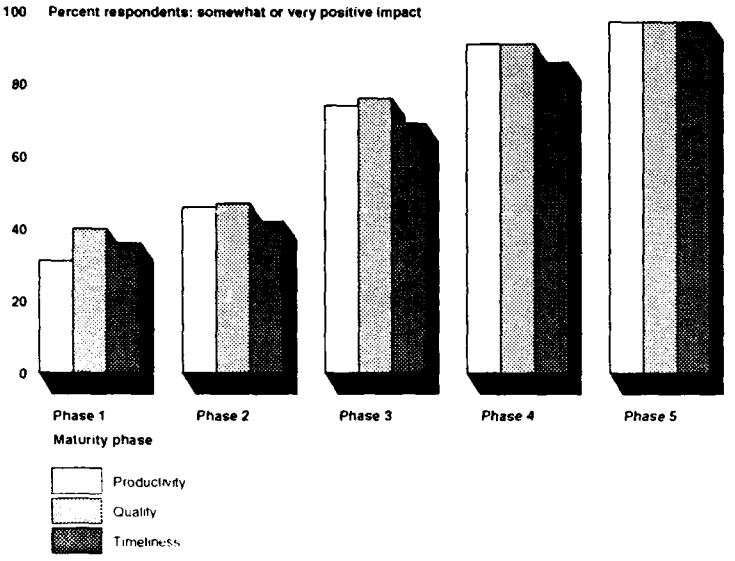


Organizational performance is defined as the composite of productivity, quality, timeliness, cost reduction, overall customer service, and customer satisfaction factors.

APPENDIX I

GAO Benefits of TQM

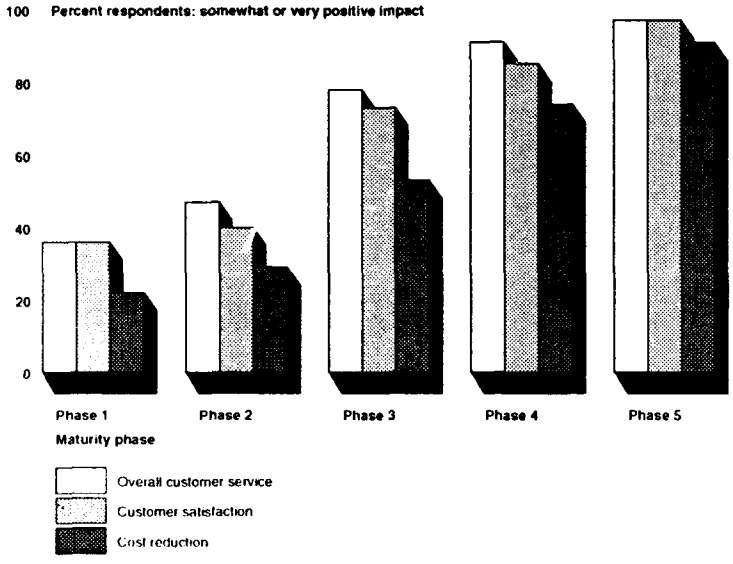
Individual performance factors improve with TQM maturity



APPENDIX I

GAO Benefits of TQM

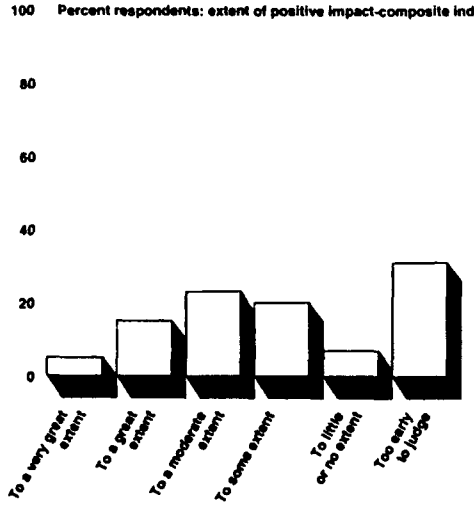
Individual performance factors improve with TQM maturity



APPENDIX I

GAO Benefits of TQM

Most installations report positive impact on internal operating conditions



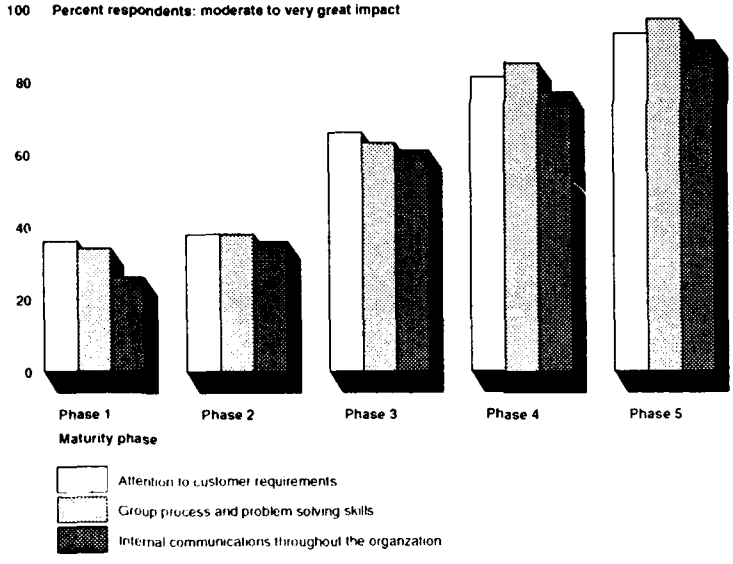
Extent TQM has had a positive impact on internal operating conditions

Internal operating conditions include attention to customer requirements, group process and problem solving, internal communications, participatory management, timeliness of internal processes, and improved management decisions through more information.

APPENDIX I

GAO Benefits of TQM

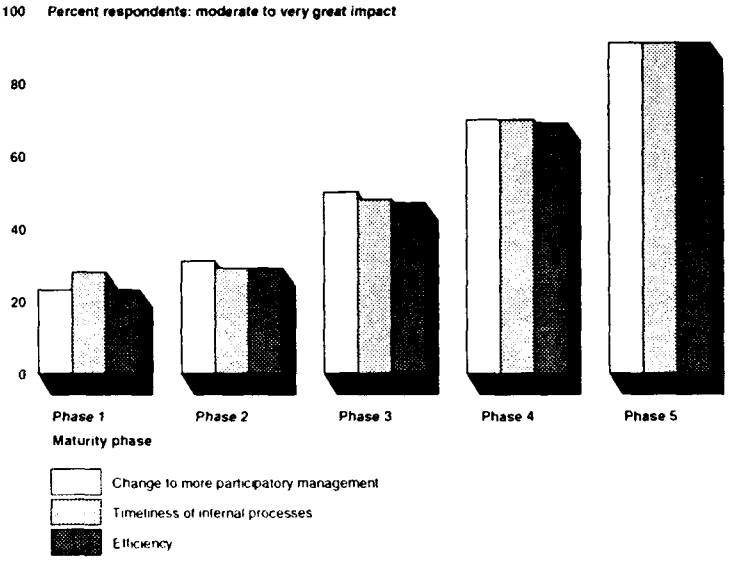
Internal operating conditions improve with TQM maturity



APPENDIX I

GAO Benefits of TQM

Internal operating conditions improve with TQM maturity



APPENDIX I

GAO Federal Total Quality Management

Reported Barriers to Ongoing Efforts

Barriers to Ongoing Efforts

We asked installations about the significance of 21 potential barriers to implementing TQM that had been identified through our research. Page 40 shows the nine barriers said to be a moderate to very major problem by 39 percent or more of the respondents. Many of these key barriers were related to employee issues such as, (1) employees don't believe they are empowered to make changes, (2) employees lack sufficient information on how to use TQM tools, and (3) employees lack information and training on TQM concepts and theory.

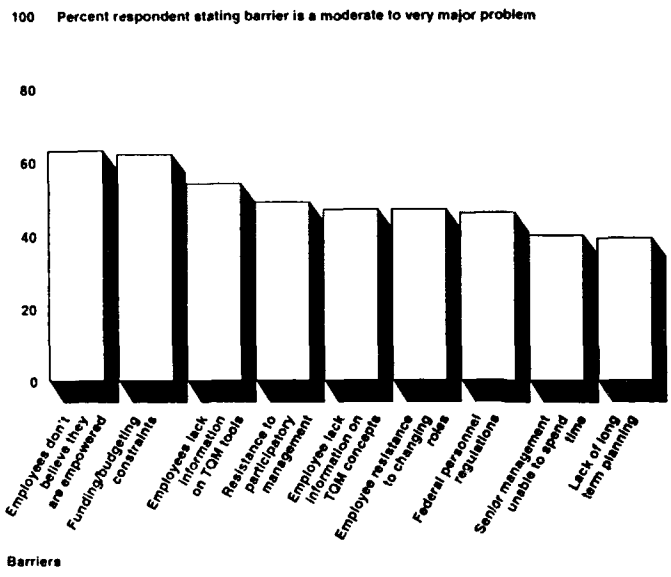
Our analysis of the data also showed that respondents believed barriers decrease as their involvement in TQM increases. For example, for the barrier "employees don't believe they are empowered," about two-thirds of the respondents in Phases 1, 2, and 3 felt it was moderate to very great. However, 47 percent of the Phase 4 installations saw this as a barrier, and only 23 percent of the Phase 5 organizations reported it as a barrier.

Pages 41, 42, and 43 show the nine individual barriers and the percent of respondents in each phase who believed they were moderate to very major problems. Again, responses for all nine barriers show that the barriers are considered less significant as maturity increases.

APPENDIX I

GAO Barriers to Ongoing Efforts

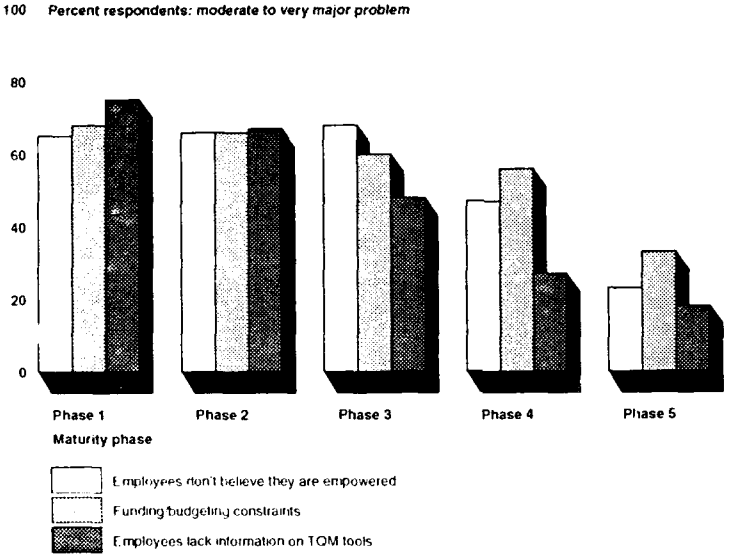
Various barriers impede ongoing TQM efforts



APPENDIX I

GAO Barriers to Ongoing Efforts

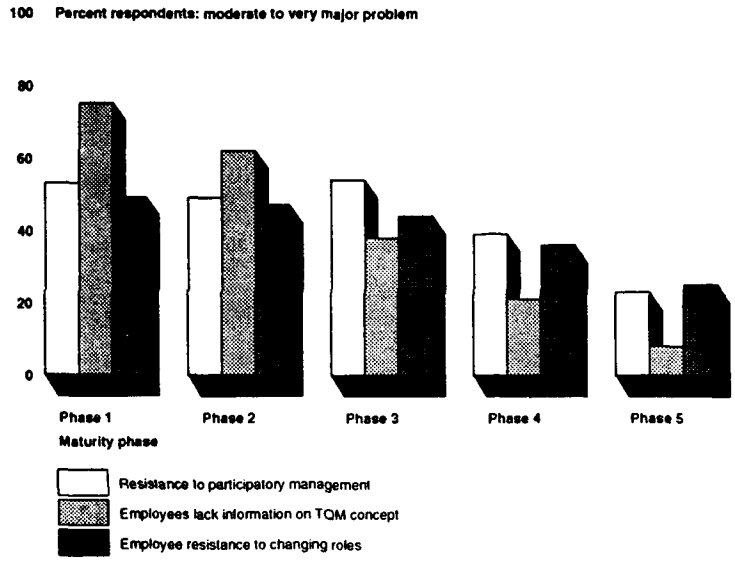
Barriers reduced as maturity increases



APPENDIX I

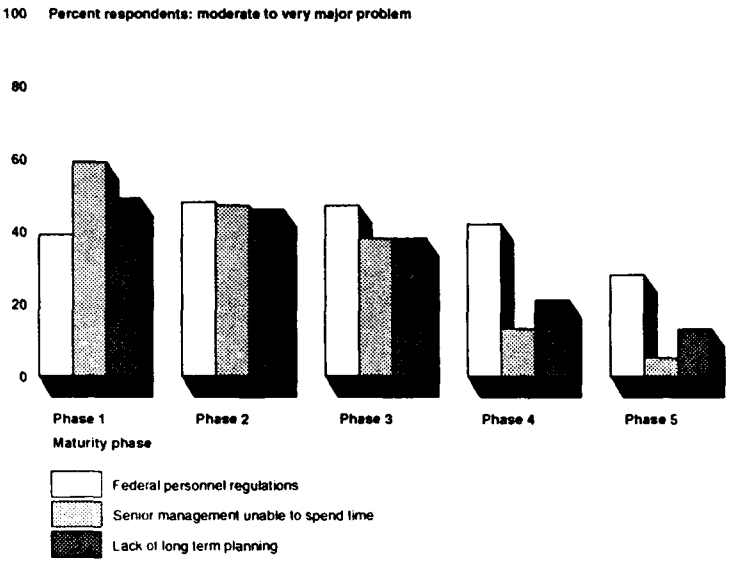
GAO Barriers to Ongoing Efforts

Barriers reduced as maturity increases



GAO Barriers to Ongoing Efforts

Barriers reduced as maturity increases



APPENDIX I

GAO Federal Total Quality Management

Observations

Observations

Clearly, there appears to be a very active interest in TQM throughout the federal government. About two-thirds of the federal installations we surveyed reported that they were involved in some way, and another 15 percent are planning TQM implementation.

Although there is wide interest, TQM efforts are generally new, the average reported age being less than 2 years. This newness is reflected in employee participation levels that are generally low compared to the potential levels reported by mature organizations.

Analysis of the responses to our questionnaire indicates that as the organizations mature in implementing TQM, and as they invest time and effort in the activities needed to carry on TQM initiatives, they find that the barriers become less difficult and they reap greater benefits.

APPENDIX I

GAO Observations

- Active interest in TQM
- Very new to federal installations
- Organizations that have invested time and effort report barriers less difficult
- Organizations that have invested time and effort report greater benefits

APPENDIX II

U.S. General Accounting Office

Survey of Federal Agencies - Status of Total Quality Management (TQM) Initiatives

INTRODUCTION

The U.S. General Accounting Office (GAO), an agency of Congress is surveying Federal installations to collect information on the status and scope of Total Quality Management (TQM) implementation in the Federal government, the barriers to implementation, and the benefits realized through the adoption of TQM practices. The results of this survey will be included in a report requested by Congress.

We recognize that not all installations receiving this questionnaire will be involved in TQM activities. A small number of questions, which can be quickly answered, still must be completed. Please complete these questions by following the appropriate instructions.

Most of the questions in this questionnaire can be easily answered by checking boxes or filling in blanks. Space has been provided at the end of the questionnaire for any additional comments. A glossary of terms relating to TQM used throughout the questionnaire is included on page 2. Please refer to this glossary before starting to fill out the questionnaire.

Your responses will be combined with others and reported in summary form. No information that could specifically identify your installation will be reported. The questionnaire is numbered only to aid us in our follow-up efforts and will not be used to identify you with your responses. We cannot develop meaningful information without your frank and honest answers.

To ensure that information in our report to Congress is complete and accurate, we will validate responses to certain questions at a randomly selected sample of installations.

If you have any questions about anything in this questionnaire, please call Mr. Dom Nieves at (202) 275-5323 or (202) 275-6511.

Please return the completed questionnaire in the enclosed pre-addressed envelope within two weeks of receipt. In the event the envelope is misplaced, the return address is:

U.S. General Accounting Office
General Government Division
Mr. Dom Nieves
441 G Street, N.W. Room 3150
Washington, D.C. 20548

Thank you for your assistance.

Please Note: Answer all of the questions included in the questionnaire for your installation only as designated in the label below. Installation is defined in greater detail in the glossary on page 2. Do not attempt to answer for your entire Department, Service, Agency, or other installations located at your site.

ID#-Rec 1 (1-5)

APPENDIX II

GLOSSARY

Installation - An installation is defined by OPM as a unit with a specifically designated organizational head and/or administrative supervisor who is not subject to on-site supervision by a higher level installation head and who has been delegated some degree of authority in the performance of personnel management functions.

Total Quality Management (TQM) - A management approach to long-term success through organization-wide efforts of continuous improvement. The methods for implementing this approach are found in the teachings of such quality leaders as Philip Crosby, Edwards Deming, Armand Feigenbaum, Kaoru Ishikawa, and J.M. Juran. Even though this approach may have different names, it most often includes the following five concepts:

- -- Customer Driven Quality
- -- Strong Quality Leadership
- -- Continuous Improvement
- -- Actions Based on Facts, Data, and Analysis
- -- Employee participation

For the purposes of this study, quality improvement efforts which have the same basic goals and processes of TQM but have a different name such as Total Quality Excellence, Total Quality Leadership, Quality Management, or Continuous Improvement are encompassed by the term "TQM".

Quality Council - Comprised of top management and/or other staff and provides direction, structure, and oversight to the quality improvement effort. It may also be called an Executive Steering Committee or an Executive Steering Group.

Quality Management Boards - A second-tier structure often used in TQM implementation which is formed to support the Quality Council by focusing on tactical issues or problem solving. Members of Quality Management Boards, or Quality Sub-councils as they are sometimes called, are predominantly, if not exclusively from management.

TQM Team - Any team formed to facilitate the implementation of TQM. These may include functional, cross-functional, task, or process improvement teams and are commonly referred to as Process Action Teams (PATs) or Quality Improvement Teams (QITs).

Benchmarking - Measuring performance against that of best-in-class installations or companies, determining how the best-in-class achieve those performance levels, and using the information as the basis for your own installation's strategies, and implementation.

APPENDIX II

I. BACKGROUND

Please enter the name, title, and phone number of person completing this survey:

Name: _____

Title: _____

Phone number: (_____)_____
Area Code

1. Total number of employees (management, staff, administrative, etc.) at this installation:

Sum = 1,483,557
_____ Federal Civilian Employees (FTE's)

Sum = 785,560
_____ Military Personnel

2. Total number of people at this installation who manage or supervise at least one other individual:

N=387,455 Managers/Supervisors

3. Primary service, product, or function provided by this installation:

_____

_____

_____

APPENDIX II

II. CURRENT STATUS OF TQM AT YOUR INSTALLATION

The purpose of this section is to assess the current status of TQM in general at your installation. We realize that different units may be at different phases or stages of TQM development but we ask you to respond for your installation overall.

4. Please indicate which of the following applies to your installation. (CHECK ONE.)

N=2277

28% ☐ No unit within this installation has ever attempted to implement TQM. ------

Does your installation plan to implement TQM in the future?

N=625

17%	1. ☐	Yes, within the next year	(SKIP TO SECTION V ON PAGE 18.)
37%	2. ☐	Yes, at some point in the future	
14%	3. ☐	No	
32%	4. ☐	Do not know	

68% ☐ Efforts to implement TQM are currently under way or implementation has taken place ----------> (GO TO QUESTION 5 BELOW.)

2% ☐ The installation attempted to implement TQM in some form at an earlier date, but it was discontinued. No current TQM effort is now in place. ------

Does your installation plan to implement TQM in the future?

N=39

15%	1. ☐	Yes, within the next year	(SKIP TO SECTION III ON PAGE 11.)
33%	2. ☐	Yes, at some point in the future	
18%	3. ☐	No	
33%	4. ☐	Do not know	

2% ☐ Other (Please describe): _____ (SKIP TO QUESTION 6 ON PAGE 5.)

5. In what year did your installation officially start implementation of TQM as defined in the glossary?

N=1473

1950 - 1985	*
1986	2 %
1987	4 %
1988	7 %
1989	12 %
1990	21 %
1991	35 %
1992	18 %

* Less than 1 percent.

APPENDIX II

6. Using the following descriptions, in what phase of TQM implementation would you classify the units that comprise your installation? (PLEASE CHECK ONE BOX FOR EACH PHASE LISTED BELOW.)

Phases or Stages of TQM Implementation	No units (1)	Less than half of the units (2)	More than half of the units (3)	Most or all units (4)
Phase I - Deciding whether to implement TQM Management is researching or deciding whether to implement TQM, but no formal decisions or activities have been initiated by top management. A few employees may have attended quality conferences or network meetings but the installation as a whole has yet to be informed or involved in a TQM project. N=640	66 %	22 %	13 %	0 %
Phase II - Just getting started TQM efforts are in the early planning and implementation phase. Management has made a formal decision to start TQM and has communicated this to the organization. The organization's mission and vision have been articulated. A few quality structures such as quality councils, steering committees, or teams have been established and some awareness training has been given. Preliminary quality planning has been done. Pilot programs or newly initiated installation-wide efforts to improve quality are included in this phase. N=1411	14 %	23 %	13 %	50 %
Phase III - Implementation Specific TQM processes designed to improve quality are in place. TQM training for management and employees is beyond the orientation/awareness stage and focuses on TQM tools and techniques, and team-related activities. Measures of quality and productivity have been identified and specific goals have been set. N=1329	23 %	36 %	17 %	25 %
Phase IV - Achieving Results The installation has a sustained TQM effort and has begun to achieve and document significant results. Systemic, cross-functional and/or organizational achievements from the TQM effort have been realized. N=1291	42 %	38 %	10 %	11 %
Phase V - Long Term Institutionalization The installation has incorporated all of the principles and operating practices of TQM throughout much of the organization. The installation has documented substantial improvements in quality and customer satisfaction resulting from these efforts and is making consistent and continuous improvement throughout. An installation in this phase may have been recognized as a Quality Improvement Prototype or is a recipient of the President's Award for Quality. N=1214	76 %	16 %	4 %	4 %

7. Looking at your responses to question 6 above, please place your installation as a whole into one of the phases of TQM implementation. (CHECK ONE.)

N=1592

5 % 1. ☐ Phase I - Deciding whether to implement TQM

46 % 2. ☐ Phase II - Just getting started

31 % 3. ☐ Phase III - Implementation

15 % 4. ☐ Phase IV - Achieving results

3 % 5. ☐ Phase V - Long term institutionalization

APPENDIX II

8. In regard to TQM, please indicate which of the following activities have ever been undertaken to any degree at your installation? (CHECK ONE BOX IN EACH ROW.)

Please note, the responses to this question may be validated at some installations at a later date. If your installation is selected, we will be contacting you shortly.

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Leadership				
a. The feasibility of implementing TQM was researched. N=1573	88 %	3 %	5 %	5 %
b. Senior management made the decision to implement TQM at your installation. N=1588	94 %	4 %	1 %	2 %
c. Senior management established a quality council, steering committee or similar body to direct the quality improvement effort. N=1585	82 %	11 %	5 %	2 %
d. Senior management received TQM Awareness Training. N=1591	91 %	5 %	2 %	2 %
e. Senior management participated in a retreat to learn about TQM. N=1577	63 %	8 %	21 %	7 %
f. Middle managers received TQM Awareness Training. N=1587	76 %	18 %	4 %	2 %
g. Commitment of senior management to quality is documented and communicated to employees. N=1583	84 %	13 %	1 %	2 %
h. An executive level Quality Council or Steering Committee has targeted work processes for improvements. N=1587	60 %	29 %	6 %	4 %
i. Your installation utilizes most of the principles of quality management throughout the installation. N=1587	52 %	44 %	2 %	3 %
j. Your installation has adopted significant new policies which are designed to further quality management principles. N=1583	51 %	41 %	4 %	4 %
k. Members of your installation actively share techniques and lessons learned both within and outside the installation. N=1587	66 %	27 %	3 %	4 %

Continued on next page.

APPENDIX II

Question 8 (Continued) In regard to TQM, please indicate which of the following activities have ever been undertaken to any degree at your installation? (CHECK ONE BOX IN EACH ROW.)

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Employee Training and Recognition				
a. At least a few managers or employees attended quality conferences or enrolled in a TQM training course prior to the implementation of TQM. N=1589	92 %	3 %	3 %	3 %
b. One or more representatives from your installation attends quality network meetings outside of the installation. N=1583	76 %	11 %	9 %	4 %
c. Your installation did an assessment of its TQM training needs. N=1579	66 %	21 %	10 %	3 %
d. Non-supervisory employees received TQM Awareness Training. N=1588	65 %	26 %	7 %	2 %
e. A TQM training plan guides your quality training efforts. N=1580	52 %	32 %	12 %	4 %
f. Group processes or TQM tools training is offered to employees throughout the installation as needed. N=1575	57 %	34 %	7 %	3 %
g. TQM teams are formally recognized and rewarded within your installation. N=1577	42 %	46 %	8 %	3 %
h. Your installation's reward and recognition systems encourage management to be involved in quality efforts (e.g., performance standards related to TQM are included in performance management reviews). N=1586	43 %	41 %	9 %	6 %
i. Quality performance goals have been incorporated into employees' performance plans. N=1582	33 %	45 %	13 %	9 %

Continued on next page.

Question 8 (Continued) In regard to TQM, please indicate which of the following activities have ever been undertaken to any degree at your installation? (CHECK ONE BOX IN EACH ROW.)

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Strategic Planning				
a. Your installation developed quality vision, mission, and policy statements. N=1588	77 %	18 %	4 %	1 %
b. A TQM implementation plan was developed. N=1585	64 %	27 %	6 %	3 %
c. Team goals are related to the vision and improvement goals of your installation. N=1576	59 %	33 %	5 %	3 %
d. Your installation actively benchmarks with other organizations to improve the primary processes within the installation. N=1582	30 %	47 %	16 %	7 %
e. A quality strategic plan exists or quality principles are included in your installation's overall strategic plan. N=1585	52 %	36 %	7 %	5 %
f. Your installation uses strategic planning processes which include vision statements to indicate where it should be in the next five years (e.g., Hoshin planning). N=1580	48 %	35 %	11 %	6 %

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Empowerment and Teamwork				
a. The union was involved in the early stages of implementation. *(If no unions, please skip to b.)* N=1258	59 %	17 %	15 %	9 %
b. TQM teams are established by management to work on processes or problems. N=1583	76 %	19 %	4 %	1 %
c. One or more TQM teams have completed a full cycle of a formalized improvement process (e.g., the Seven Step Improvement Process or the Plan-Do-Check-Act (PDCA) cycle). N=1580	47 %	40 %	7 %	5 %
d. Employee satisfaction is assessed on a regular basis. N=1581	48 %	39 %	10 %	4 %
e. Most employees are involved in your installation's quality initiative. N=1582	43 %	50 %	5 %	2 %
f. Product/service innovation is encouraged throughout your installation. N=1586	81 %	15 %	2 %	2 %

Continued on next page.

APPENDIX II

Question 8 (Continued) In regard to TQM, please indicate which of the following activities have ever been undertaken to any degree at your installation? (CHECK ONE BOX IN EACH ROW.)

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Measurement and Analysis				
a. An assessment was done to evaluate your installation's readiness and/or culture for TQM implementation. N=1585	51 %	15 %	25 %	9 %
b. Analysis of systems and processes were done in order to streamline operations or improve quality. N=1587	54 %	36 %	7 %	4 %
c. Internal measures of quality and productivity are developed at your installation. N=1586	57 %	37 %	4 %	2 %
d. External measures of quality and productivity are developed at your installation. N=1581	45 %	41 %	9 %	5 %
e. Continuous improvement in your installation's primary processes and products/services is documented. N=1578	47 %	44 %	5 %	4 %

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Customer Focus				
a. The major internal customers of your installation and their requirements have been identified. N=1587	66 %	29 %	3 %	1 %
b. The major external customers of your installation and their requirements have been identified. N=1586	71 %	25 %	3 %	2 %
c. Methods to measure and monitor external customer satisfaction have been implemented. N=1584	44 %	48 %	6 %	3 %
d. Your installation has mechanisms in place to better anticipate the customer's needs. N=1582	45 %	45 %	6 %	5 %

Continued on next page.

Question 8 (Continued) In regard to TQM, please indicate which of the following activities have ever been undertaken to any degree at your installation? (CHECK ONE BOX IN EACH ROW.)

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Quality Assurance				
a. Your installation works with suppliers to improve quality. N=1575	55 %	23 %	14 %	7 %
b. Your installation uses such methods as Quality Function Deployment and Quality Policy Deployment to enhance its ability to meet customer requirements. N=1563	12 %	31 %	30 %	27 %

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Results				
a. Early quality improvement goals have been met and new goals have been set. N=1571	43 %	47 %	6 %	3 %
b. Your installation has applied for the Quality Improvement Prototype or the President's Award for Quality. N=1572	9 %	27 %	55 %	9 %
c. Your installation has been selected as a finalist or as a recipient of a Quality Improvement Prototype or the President's Award for Quality. N=1552	4 %	25 %	59 %	12 %
d. Improvements in processes and substantial cost savings as a result of your installation's quality initiative have been documented. N=1570	34 %	48 %	11 %	7 %
e. Improvements in work processes are implemented throughout your installation wherever appropriate. N=1579	71 %	24 %	3 %	2 %
f. Outside organizations use one or more of your processes for benchmarking. N=1567	19 %	19 %	23 %	40 %

Installation Activities or Efforts	Undertaken to any degree? Yes (1)	No, but it is planned (2)	No, and it is not planned (3)	Do not know (4)
Other				
a. A TQM expert was contacted for more information. N=1582	83 %	5 %	10 %	2 %
b. TQM experts were brought in to assist with TQM training or implementing the quality process. N=1583	72 %	11 %	15 %	2 %

APPENDIX II

III. BARRIERS AND AIDS TO TQM IMPLEMENTATION

Organizations often encounter barriers while attempting to produce change. The purpose of this section is to gather information about problems that may have acted as barriers to implementing TQM as well as to cover some areas that assisted in the implementation of TQM at your installation.

9. Listed below are some barriers to the implementation of TQM. *How small or large a problem* have the following been during any phase of TQM implementation at your installation? (CHECK ONE BOX IN EACH ROW.)

Leadership Barriers	No problem at all (1)	Small problem (2)	Moderate problem (3)	Major problem (4)	Very major problem (5)	Not Applicable (6)
a. Management above the installation level does not support TQM. N=1623	60 %	16 %	13 %	4 %	2 %	5 %
b. Turnover of management above the installation level. N=1620	58 %	22 %	10 %	4 %	1 %	6 %
c. Insufficient support for TQM among installation managers. N=1620	32 %	29 %	27 %	8 %	2 %	3 %
d. Commitment to change (to TQM) not effectively communicated by senior management at the installation. N=1623	47 %	25 %	15 %	7 %	2 %	3 %
e. Senior management at the installation unable to spend sufficient time on TQM. N=1619	29 %	29 %	25 %	12 %	4 %	2 %
f. Turnover of senior management at the installation. N=1616	57 %	23 %	10 %	5 %	2 %	4 %
g. Other - Please specify: _____ N=328	4 %	4 %	19 %	21 %	26 %	26 %

Employee Training and Recognition Barriers	No problem at all (1)	Small problem (2)	Moderate problem (3)	Major problem (4)	Very major problem (5)	Not Applicable (6)
a. Employees have insufficient information and training on the theory, concepts, and design of TQM. N=1625	19 %	28 %	31 %	13 %	4 %	5 %
b. Employees have insufficient information on how to implement TQM and use TQM tools. N=1625	13 %	27 %	35 %	16 %	4 %	5 %
c. Employees do not believe they are empowered to make changes. N=1624	9 %	24 %	36 %	20 %	7 %	5 %
d. Other - Please specify: _____ N=255	2 %	2 %	20 %	20 %	25 %	32 %

(Continued on next page.)

APPENDIX II

Question 9 (Continued) How small or large a problem have the following been during any phase of TQM implementation at your installation? (CHECK ONE BOX IN EACH ROW.)

Strategic Planning Barriers	No problem at all (1)	Small problem (2)	Moderate problem (3)	Major problem (4)	Very major problem (5)	Not Applicable (6)
a. Lack of a long-term planning approach. N=1618	29 %	27 %	25 %	11 %	4 %	5 %
b. Disconnect between strategic quality plan goals and the installation's other strategic plans. N=1614	30 %	24 %	23 %	10 %	3 %	10 %
c. Funding/Budgeting constraints. N=1619	12 %	23 %	29 %	20 %	13 %	3 %
d. Other - Please specify: _____ N=196	3 %	5 %	12 %	18 %	20 %	42 %

Empowerment and Teamwork Barriers	No problem at all (1)	Small problem (2)	Moderate problem (3)	Major problem (4)	Very major problem (5)	Not Applicable (6)
a. Resistance to moving toward a participatory style of management. N=1620	17 %	32 %	34 %	11 %	3 %	3 %
b. Problems due to federal personnel regulations. N=1617	27 %	23 %	24 %	15 %	7 %	5 %
c. Employees' resistance to changing roles or changing organizational structures. N=1621	14 %	39 %	35 %	8 %	1 %	3 %
d. Employee organizations/unions resistant to TQM. N=1606	44 %	22 %	11 %	5 %	4 %	15 %
e. Other - Please specify: _____ N=158	3 %	2 %	11 %	14 %	18 %	52 %

(Continued on next page.)

APPENDIX II

Question 9 (Continued) How small or large a problem have the following been during any phase of TQM implementation at your installation? (CHECK ONE BOX IN EACH ROW.)

Measurement and Analysis Barriers	No problem at all (1)	Small problem (2)	Moderate problem (3)	Major problem (4)	Very major problem (5)	Not Applicable (6)
a. Resistance to measuring processes. N=1616	24 %	29 %	25 %	9 %	2 %	10 %
b. Resistance to measuring employee attitudes. N=1615	31 %	31 %	22 %	4 %	1 %	11 %
c. Management unfamiliar or uncomfortable with statistics and measurement techniques. N=1618	25 %	29 %	24 %	10 %	3 %	8 %
d. Other - Please specify: _____ N=157	4 %	*	13 %	20 %	12 %	51 %

* Less than 1 percent.

Customer Focus Barriers	No problem at all (1)	Small problem (2)	Moderate problem (3)	Major problem (4)	Very major problem (5)	Not Applicable (6)
a. Resistance to soliciting external customer feedback. N=1615	45 %	27 %	14 %	3 %	1 %	10 %
b. Measures of satisfaction from external customers difficult or impossible to get. N=1611	26 %	31 %	22 %	9 %	3 %	10 %
c. Other - Please specify: _____ N=148	2 %	1 %	18 %	11 %	13 %	55 %

10. At your installation, in order to overcome any of the barriers listed in the previous question did you require or are you currently using assistance provided by federal agencies, such as the Federal Quality Institute (FQI), OPM, OMB, etc.? (CHECK ONE.)

N=1486

27% 1. ☐ Yes

73% 2. ☐ No

APPENDIX II

11. Please indicate how helpful or not the following activities were in preparing your installation for the implementation of TQM. (CHECK ONE BOX IN EACH ROW. IF YOUR INSTALLATION DID NOT TAKE PART IN AN ACTIVITY, CHECK BOX NUMBER 1 FOR THAT ACTIVITY.)

	Did not take part in this activity (1)	Extremely helpful (2)	Very helpful (3)	Moderately helpful (4)	Of little help (5)	Not helpful at all (6)
a. Members of management attended TQM training. N=1610	7 %	43 %	30 %	17 %	3 %	*
b. Your installation talked to consultants about implementing TQM. N=1614	27 %	28 %	24 %	18 %	4 %	*
c. Your installation hired consultants to help with the planning, training, or implementation process. N=1612	51 %	21 %	16 %	10 %	3 %	*
d. Representatives from your installation visited companies, agencies, or other installations who were successful at implementing TQM. N=1615	45 %	18 %	19 %	16 %	3 %	*
e. Management formed a team to investigate and study how to best implement TQM within the installation. N=1614	45 %	22 %	22 %	10 %	1 %	*
f. Management made a formal statement of policy on TQM. N=1604	27 %	27 %	23 %	18 %	5 %	*
g. Anything else? - Please specify: _____ N=154	23 %	44 %	19 %	10 %	0 %	4 %
_____ N=35	26 %	46 %	11 %	6 %	0 %	11 %

* Less than 1 percent.

12. At your installation are there currently any TQM efforts at any stage of development or implementation? (CHECK ONE.)

N=1552

91% 1. ☐ Yes ---> (CONTINUE WITH QUESTION 13.)

9% 2. ☐ No ---> (SKIP TO SECTION V ON PAGE 18.)

APPENDIX II

Teams are typically used to involve the work force in the implementation of TQM. A TQM team may be defined as any team formed to facilitate the implementation of TQM. TQM teams may be functional, cross-functional, or self-managed. Three of the more common types of teams are Process Action Teams (PATs), Process Improvement Teams (PITs), and Quality Improvement Teams (QITs).

13. Please provide the following information about the current use of teams at your installation.

a. How many TQM teams of any type are currently operating at your installation? (ENTER NUMBER. IF NONE, ENTER ZERO "0". IF NECESSARY, AN APPROXIMATION WILL SUFFICE.)

N=19,360 Teams (NOTE: IF ZERO "0" ENTERED, GO TO QUESTION 11.)

b. How many of your installation's employees (including management) are currently serving on at least one TQM team of any type? (ENTER NUMBER. IF NECESSARY, AN APPROXIMATION WILL SUFFICE.)

N=143,473 Employees

c. How many of the current participants on all teams are managers or supervisors? (ENTER NUMBER. IF NECESSARY, AN APPROXIMATION WILL SUFFICE.)

N=35,393 Participants

d. Please indicate the types of teams that are active within your organization.

	Team active? *(Check one for each row.)*	
	Yes (1)	No (2)
a. Cross-functional (inter-unit) teams that work to improve processes which cross unit lines within the installation. N=1225	89 %	11 %
b. Functional teams that work to improve processes within a specific function or unit within the installation. N=1218	83 %	17 %
c. Teams established on an ad hoc basis to address a problem or accomplish a specific task. N=1212	86 %	14 %
d. Self-managed teams, the most advanced type of TQM team, manage and improve their specific processes. N=1202	29 %	71 %
e. Quality circles which have been integrated into the TQM effort. N=1191	16 %	85 %

e. How many of all the individuals at your installation are currently involved in TQM activities, such as, TQM facilitation, Quality Councils, TQM teams, or teaching? (ENTER NUMBER. IF NONE, ENTER ZERO "0". IF NECESSARY, AN ESTIMATION WILL SUFFICE.)

N=57,836 Managers and Supervisors

N=147,810 Non-Supervisory Employees

APPENDIX II

IV. Benefits

14. Thinking about those units at your installation where TQM has been implemented, would you say it has had a positive impact, no impact, or a negative impact on the following organizational performance indicators? (CHECK ONE BOX IN EACH ROW.)

Organizational Performance Indicators	Very positive (1)	Somewhat positive (2)	No impact (3)	Somewhat negative (4)	Very negative (5)	Too early to judge (6)
a. Productivity/Efficiency N=1360	19 %	44 %	3 %	1 %	*	33 %
b. Reduction in the cost of doing business N=1358	11 %	34 %	13 %	2 %	*	40 %
c. Quality of products/services N=1360	22 %	43 %	3 %	*	*	32 %
d. Overall service to the customer N=1356	26 %	39 %	3 %	*	*	32 %
e. Customer satisfaction N=1357	22 %	38 %	4 %	*	*	36 %
f. Timeliness N=1355	18 %	42 %	6 %	1 %	*	33 %
g. Other - Specify: _____ N=124	43 %	17 %	2 %	0 %	0 %	38 %
_____ N=32	44 %	16 %	3 %	6 %	3 %	28 %

*** Less than 1 percent.**

APPENDIX II

15. Thinking about those units at your installation where TQM has been implemented, to what extent, if at all, have the total quality management activities implemented in these units had a positive impact on the following internal conditions? (CHECK ONE BOX IN EACH ROW.)

Internal Conditions	To a very great extent (1)	To a great extent (2)	To a moderate extent (3)	To some extent (4)	To little or no extent (5)	Too early to judge (6)
a. Improved timeliness of internal processes. N=1357	5 %	14 %	25 %	18 %	4 %	34 %
b. Increase in efficiency/productivity. N=1355	4 %	14 %	25 %	20 %	3 %	34 %
c. Improved implementation of technology. N=1348	3 %	9 %	19 %	17 %	11 %	42 %
d. Change to a more participatory management style. N=1355	6 %	16 %	23 %	25 %	6 %	24 %
e. Improved labor-management relations. N=1315	4 %	10 %	17 %	19 %	15 %	34 %
f. Movement of decision-making authority to a lower organizational level. N=1355	3 %	10 %	22 %	25 %	12 %	28 %
g. Improvements in group process and problem-solving skills. N=1357	8 %	21 %	27 %	20 %	2 %	22 %
h. An increase or improvement in communication throughout the installation. N=1355	7 %	20 %	25 %	22 %	4 %	22 %
i. Improvements in management decision making due to availability of more information. N=1356	4 %	15 %	23 %	21 %	7 %	30 %
j. Improvements in employee morale. N=1355	5 %	13 %	21 %	24 %	9 %	29 %
k. An improved ability of the installation to adapt to change. N=1352	4 %	12 %	23 %	19 %	8 %	35 %
l. Enhanced attention to customers' requirements. N=1355	9 %	22 %	25 %	17 %	3 %	23 %
m. Ability to achieve quality improvements in performance during a period of resource reduction. N=1351	4 %	13 %	18 %	18 %	8 %	40 %
n. Other - Please specify: _____ N=56	7 %	9 %	5 %	5 %	5 %	68 %
_____ N=19	5 %	5 %	5 %	5 %	11 %	68 %

APPENDIX II

V. Role of Central Management Agencies in the implementation of TQM

16. Are you aware of the existence of the Federal Quality Institute (FQI)? (CHECK ONE.)

N=2245

71 % 1. ☐ Yes ---> (CONTINUE WITH QUESTION 17.)

29 % 2. ☐ No ---> (SKIP TO QUESTION 21 ON PAGE 20.)

17. Are you familiar with FQI's mission? (CHECK ONE.)

N=1579

22 % 1. ☐ Very familiar

65 % 2. ☐ Somewhat familiar

13 % 3. ☐ Not familiar at all

18. The following is a list of the services provided by the Federal Quality Institute. For each of the services listed, please indicate whether you are aware they provide the service. (CHECK ONE BOX FOR EACH SERVICE.)

Services Provided by FQI		Yes, I am aware they provide this service (1)	No, I was not aware they provide this service (2)
Technical Assistance			
a. Executive level awareness seminars	N=1569	82 %	18 %
b. Readiness assessments	N=1564	49 %	51 %
c. Start-up services	N=1565	60 %	40 %
d. Model projects	N=1562	50 %	50 %
e. List of vendors from the Federal Supply Schedule	N=1558	62 %	38 %
Research and Publications			
a. Handbook series	N=1563	63 %	38 %
b. Quality improvement prototypes (e.g., case studies)	N=1564	59 %	41 %
c. Federal Quality News	N=1567	64 %	36 %
Information Center			
a. Electronic bulletin board	N=1565	36 %	64 %
b. Federal TQM Documents data base	N=1562	37 %	63 %
c. Assistance starting own information center	N=1563	30 %	70 %
d. Self-service information centers	N=1561	27 %	73 %

APPENDIX II

19. If you used any of these services provided by FQI, how satisfied or dissatisfied were you with the service? (CHECK ONE BOX IN EACH ROW. IF YOU DID NOT USE A PARTICULAR SERVICE, PLEASE CHECK BOX 1 "DID NOT USE SERVICE.)

Services Provided by FQI	Did not use this service (1)	Very satisfied (2)	Generally satisfied (3)	Neither satisfied nor dissatisfied (4)	Generally dissatisfied (5)	Very dissatisfied (6)
Technical Assistance						
a. Executive level awareness seminars N=1508	83 %	8 %	8 %	1 %	*	*
b. Readiness assessments N=1502	96 %	2 %	2 %	*	0 %	0 %
c. Start-up services N=1504	93 %	3 %	3 %	1 %	*	0 %
d. Model projects N=1499	96 %	2 %	2 %	1 %	*	0 %
e. List of vendors from the Federal Supply Schedule N=1505	76 %	8 %	10 %	5 %	1 %	*
Research and Publications						
a. Handbook series N=1504	75 %	11 %	11 %	2 %	*	*
b. Quality improvement prototypes (e.g., case studies) N=1505	81 %	8 %	9 %	2 %	*	*
c. Federal Quality News N=1506	74 %	10 %	12 %	4 %	*	*
Information Center						
a. Electronic bulletin board N=1500	94 %	2 %	2 %	2 %	1 %	*
b. Federal TQM Documents data base N=1504	94 %	2 %	2 %	2 %	*	0 %
c. Assistance starting own information center N=1501	96 %	1 %	2 %	1 %	*	0 %
d. Self-service information centers N=1495	96 %	2 %	1 %	1 %	*	0 %

*** Less than 1 percent.**

20. From which of the following federal agencies have you sought or obtained assistance in helping to implement TQM at your installation? (CHECK ONE BOX IN EACH ROW.)

N=1449	a. OPM (Other than FQI)	23 %	1. ☐ Yes	71 %	2. ☐ No	5 %	3. ☐ Do not know
N=1401	b. GSA	8 %	1. ☐ Yes	86 %	2. ☐ No	6 %	3. ☐ Do not know
N=1391	c. OMB	4 %	1. ☐ Yes	90 %	2. ☐ No	7 %	3. ☐ Do not know

d. Any other agency? - Please specify:

_____ _____

APPENDIX II

VI. Why Organizations Do Not Implement TQM

NOTE: The following question (#21) should only be answered if your installation never attempted to implement TQM. All other respondents should go to question 22.

21. If you have never attempted to implement TQM, please list up to five of the major barriers that you believe prevented the implementation of TQM at your installation. *(You may wish to refer to the list of barriers in question 9 on pages 1 12, and 13).*

1. _____

2. _____

3. _____

4. _____

5. _____

22. If you have any comments about any issue related to TQM, please use the space below. If necessary, you may use additional sheets.

Thank you for your assistance.
Please return your completed questionnaire in the enclosed pre-addressed envelope.

GGD-SIE 5/92

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