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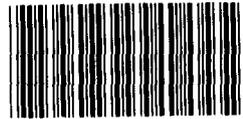
United States
General Accounting Office
Washington, D.C. 20548

General Government Division

B-249779

March 30, 1993

The Honorable Ronald H. Brown
The Secretary of Commerce



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Dear Mr. Secretary:

Total Quality Management (TQM) is a management approach that strives to achieve continuous improvement of quality through organizationwide efforts based on facts and data. TQM also focuses business processes on meeting the needs of customers, both internal and external. Although TQM traditionally has been associated with private sector organizations and their efforts to remain competitive and profitable, in recent years federal organizations have been attempting to implement TQM to cope with budget restrictions and better serve the public.

We recently surveyed federal installations to determine the extent of their use of TQM and learned that 68 percent of the installations surveyed were implementing TQM.¹ An installation, as defined by the Office of Personnel Management, is a unit with a specifically designated head 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. Our survey covered over 2,800 installations, such as Internal Revenue Service Centers, Social Security offices, military depots, the Patent and Trademark Office, and the National Technical Information Service. Thirty-nine installations of the Department of Commerce were included in this survey, and the purpose of this correspondence is to provide you a brief summary of the results as they apply to Commerce as well as to compare Commerce results with the total results of all surveyed federal installations. We believe this information--particularly data on barriers to TQM--can be useful in your planning and as a baseline for judging future efforts.

¹Quality Management: Survey of Federal Organizations
(GAO/GGD-93-9BR, Oct. 1, 1992).

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STATUS OF TOM

As figures 1 and 2 show, a significant number of government installations and Commerce installations reported implementing TOM. Figure 1 shows about 68 percent of the federal installations responding to our survey reported they were starting or already implementing TOM. Figure 2 shows that 74 percent of the 39 Commerce installations responding to our survey reported that they were working on various phases of TOM. Additionally, one of the remaining Commerce installations reported that it planned to implement TOM.

Figure 1: Percentage of Government Installations Implementing TOM

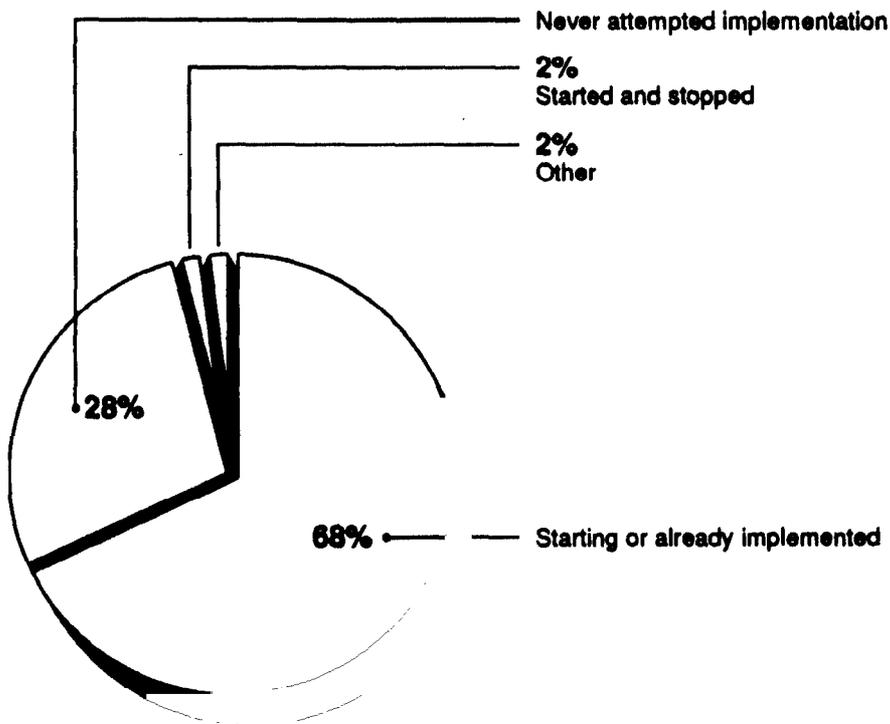
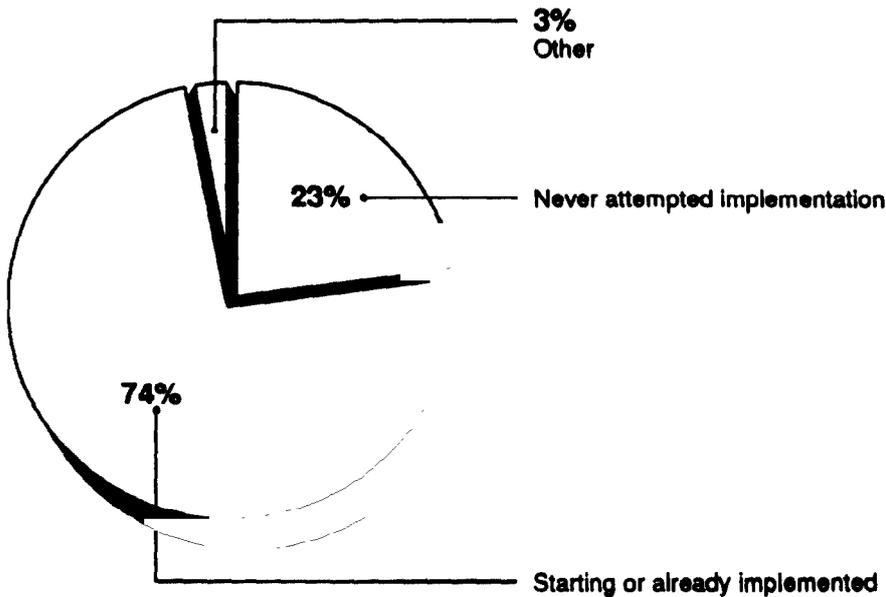
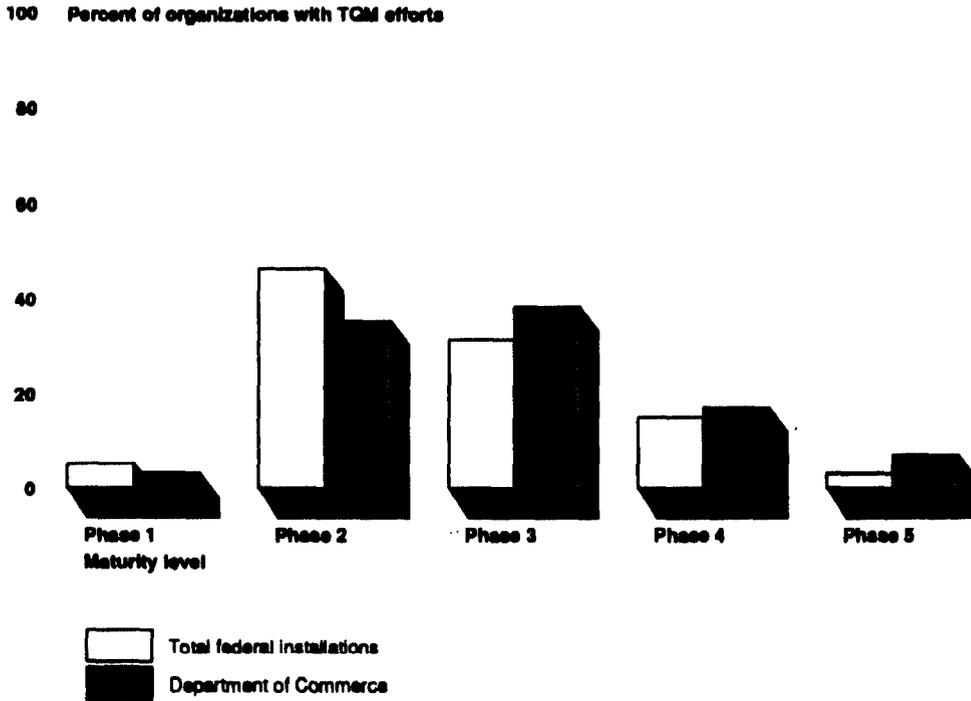


Figure 2: Percentage of Commerce Installations Implementing TQM



To obtain a picture of the status of federal TQM efforts, we asked installations to report their efforts in terms of a five-phase maturity scale. Maturity definitions ranged from Phase 1, preliminary TQM efforts, to Phase 5, institutionalized efforts that are achieving significant benefits (see enc. I for definitions). As figure 3 shows, 51 percent of the total federal installations responding to the survey reported being in Phase 1 or 2, while 38 percent (11 of 29) of the Commerce installations reported still being in these early phases. An additional 38 percent (11 of 29) reported being in Phase 3. The fact that many installations are in the early phases is reflective of the relative newness of Commerce efforts; 93 percent of the installations implementing TQM reported beginning TQM efforts within the past 3 years.

Figure 3: Status of TQM



In our survey of federal installations, we asked respondents about the extent of their involvement in 43 activities commonly undertaken by organizations involved in TQM. Such activities include providing training in TQM tools for employees, establishing quality councils or steering groups, and establishing problem-solving teams. Installations reported that their involvement in these activities increased as maturity increased. In other words, installations identifying themselves as more mature in TQM also more frequently said they were doing the 43 activities commonly associated with TQM.

Comparing Commerce installations' involvement in these activities with reported maturity phases, we found that Commerce generally

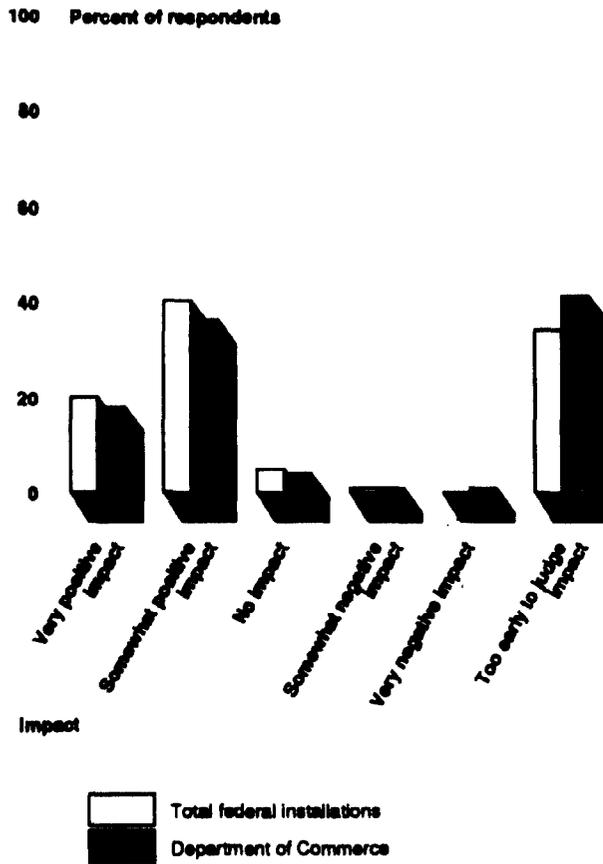
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reflected the same trend as in the total survey--that is, as Commerce installations' maturity increased, they more frequently reported doing TQM activities. For example, 55 percent (6 of 11) of the combined Phase 1 and Phase 2 Commerce installations provided training in TQM tools for employees; whereas 86 percent (6 of 7) of the combined Phase 4 and Phase 5 installations provided such training.

BENEFITS OF TQM

We considered 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. Figure 4 compares the organizational performance index for Commerce and total federal responses and shows that over half (21 of 39) of the responding Commerce installations reported positive benefits, very few saw negatives to TQM, and about 40 percent (14 of 39) felt it was too soon to judge benefits. These results are similar to the total federal survey results.

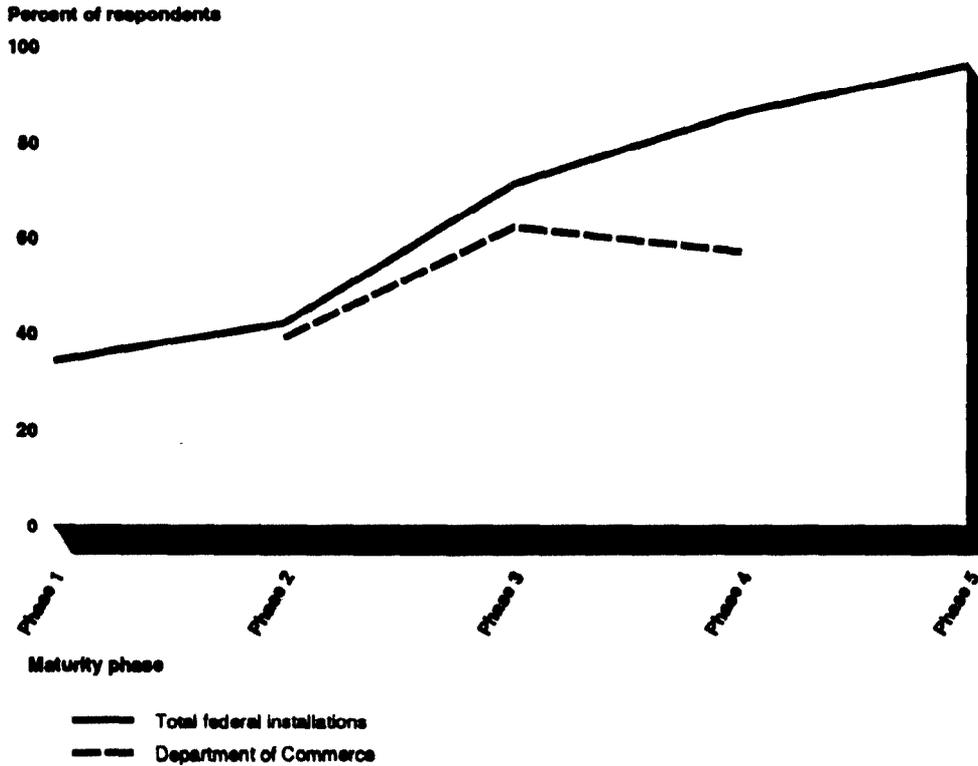
Figure 4: Impact of TOM on Performance



Reported benefits increased as maturity increased. We compared the composite index of responses on external benefits with maturity phases and learned that more mature installations reported greater benefits. Figure 5 shows, by maturity phases, the percentage of total federal respondents and the Commerce respondents reporting somewhat positive to very positive

benefits.² Although about 5 percent more Phase 3 respondents than Phase 4 respondents reported positive benefits, Commerce responses were generally consistent with total federal responses.

Figure 5: Respondents Reporting Increased Organizational Performance

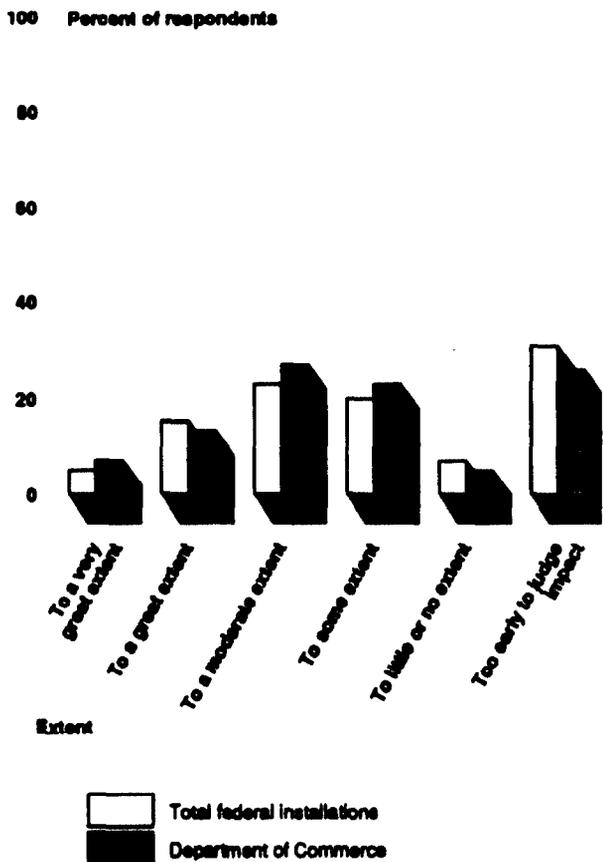


For internal operating conditions, we asked the installations to identify the impact of TQM on each of 13 internal operating

²We did not include Phase 1 or Phase 5 Commerce installations' responses because the number of installations reporting was one in each phase. Both these installations reported TQM had a positive impact on organizational performance.

conditions, such as communications and labor-management relations. To illustrate the benefits, we developed an index in the same manner as for the organizational performance indicators. Figure 6 compares Commerce and total federal responses and shows that Commerce installations generally reported about the same benefits as all of the federal installations.

Figure 6: Extent of Positive Impact on Internal Operating Conditions

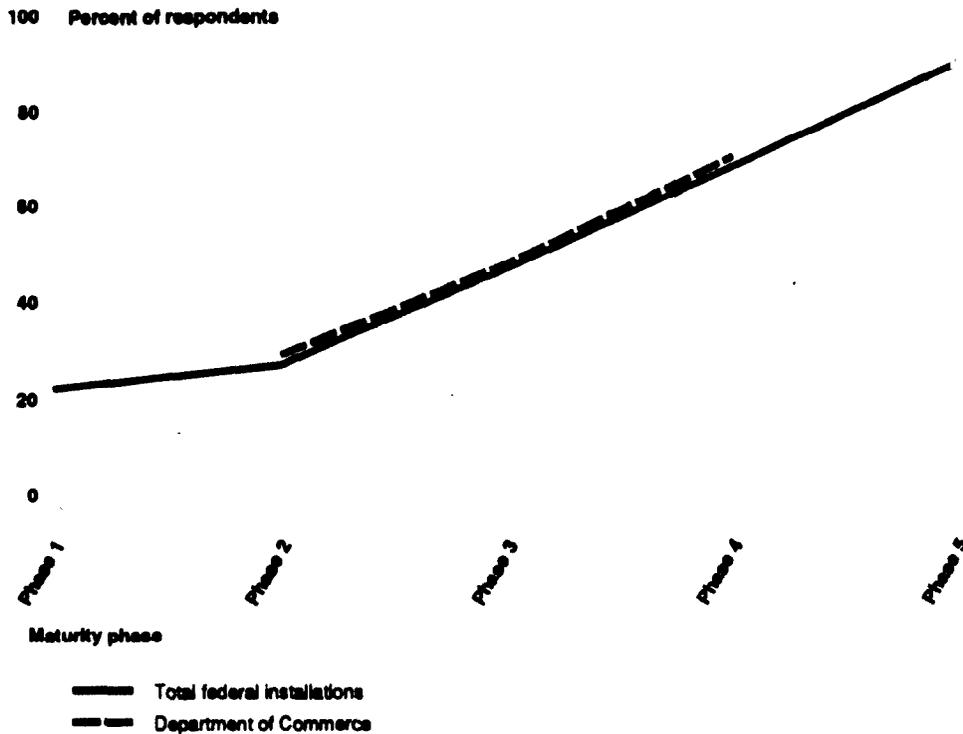


In a manner similar to the overall organizational benefits, we compared the composite index of benefits with maturity phases and

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noted that reported internal conditions improved as maturity increased. Figure 7 shows the percent of respondents reporting a moderate to very great positive impact, by maturity phase, for both Commerce and the total federal respondents.³

Figure 7: Respondents Reporting Positive Impact on Internal Operating Conditions



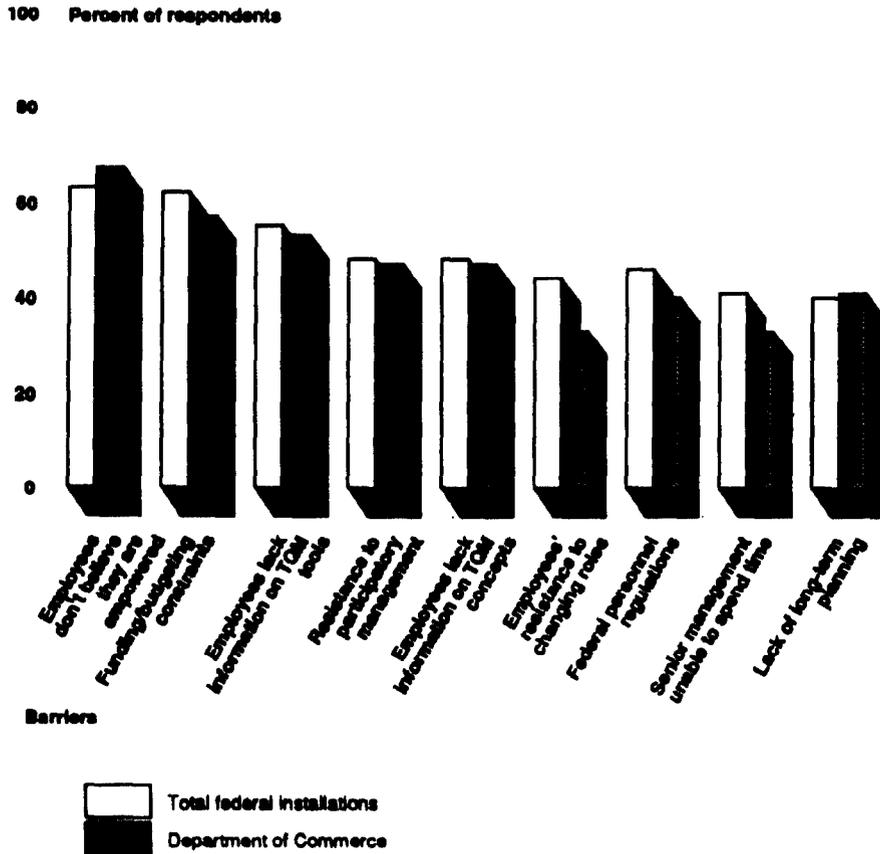
³We did not include Phase 1 or Phase 5 Commerce installations' responses because the number of installations reporting was one in each phase. Both these installations reported TQM had a positive impact on internal operating conditions.

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BARRIERS TO TQM

We asked all the federal installations we sent our recent survey to about the significance of 21 potential barriers to implementing TQM that had been identified through our research. Nine barriers were said to be moderate to very major problems by 39 percent or more of the total federal respondents. Commerce respondents generally concurred with the categories of barriers identified by the total federal survey and the extent of impact of these barriers. An exception appears to be that Commerce installations find employee resistance to changing roles somewhat less of a barrier than most federal installations, as is shown in figure 8.

Figure 8: Respondents Reporting Barriers Are Moderate to Very Major Problems to Implementing TQM



It should be noted that many of these barriers are related to employee issues, such as (1) employees do not 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.

Total federal respondents reported that the barriers became less significant as TQM efforts matured. This was also generally the case with Commerce respondents. For example, 82 percent (9 of

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11) of the combined Phase 1 and 2 Commerce installations reported employees' lack of information on TQM tools as a moderate to very major problem; whereas only 14 percent (1 of 7) of the combined Phase 4 and 5 Commerce installations saw this as a moderate to very major problem. Also, 55 percent (6 of 11) of the combined Phase 1 and 2 Commerce installations reported that employees' lack of information on TQM concepts was a moderate to very major problem, but only 29 percent (2 of 7) of the combined Phase 4 and 5 Commerce installations reported this as a moderate to very major problem.

SUMMARY

Our survey of federal TQM efforts indicated that as installations invested more time and effort in TQM activities, they matured in the implementation of TQM, found that the barriers became less difficult, and reaped greater benefits. Although some differences were reported between Department of Commerce TQM experiences and those of all federal respondents, overall Commerce respondents' message generally appeared to be similar.

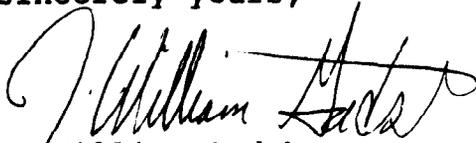
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We have enclosed a copy of our report Quality Management: Survey of Federal Organizations (GAO/GGD-93-9BR, Oct. 1, 1992) to provide information on the background; results; and objective, scope, and methodology of the total survey.

We hope you will find this information useful in guiding your quality management initiatives and in improving service to your customers under today's budget constraints. We will make copies of this correspondence available to others upon request.

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The major contributors to this correspondence are listed in enclosure II. If you have any questions, please call me on (202) 512-8387.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. William Gadsby". The signature is written in dark ink and is positioned above the typed name.

J. William Gadsby
Director, Government Business
Operations Issues

PHASES OF TQM IMPLEMENTATIONPHASE 1 - 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.

PHASE 2 - 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 installationwide efforts to improve quality are included in this phase.

PHASE 3 - 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.

PHASE 4 - 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.

PHASE 5 - 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 Award winner or may be a recipient of the President's Award for Quality.

ENCLOSURE II

ENCLOSURE II

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