

December 10, 1992
ILR 92-J

Speaker H Craig Moody
House of Representatives
State Capitol Bldg
Salt Lake City UT 84114

Subject: Total Quality Management

Dear Speaker Moody:

As you requested, we have examined state government's use of Total Quality Management (TQM). You specifically asked us to evaluate whether TQM is a useful program for state government, to identify the costs associated with TQM, and to determine if TQM has been discussed with the Legislature. Since agencies have only been using TQM a short time and some costs such as employee time is not always tracked, we cannot provide complete answers to your questions. However, we have discussed TQM with several agencies that have begun using it, and have identified some of the costs.

While several agencies have begun using TQM concepts, none have fully implemented it. As a result, it is too early to know whether TQM can be useful for state government. Agencies we talked with believe that TQM will greatly benefit the state. However, you should be aware that TQM is not a quick fix, and even when fully implemented it may be difficult to measure TQM's impact in some areas, and it may take several years before TQM can be reliably evaluated. In addition, the purpose of TQM is not solely to identify cost savings, but also to enhance customer satisfaction and expand employee involvement in process improvement.

Agencies are using different approaches to implement TQM. Two agencies, the Department of Human Services (DHS) and the Department of Environmental Quality (DEQ) have used outside consultants to assist with the implementation of TQM. During the past year DHS spent about \$213,500 on consultants, and DEQ has spent about \$180,000. In addition, about \$42,000 has been spent in DHS on staff salaries. Other than this figure, amounts reported represent only direct expenditures paid to consultants, and do not include employee time spent in training or other TQM activities which is not always tracked. Other agencies including the Department of Health (DOH) and the Division of Facilities Construction Management (DFCM) have used consultants on a limited basis and have relied primarily on in-house training and implementation. Officials in DOH estimate that less than \$5,000 has been spent on TQM in the past year. Officials in DFCM report about \$2,000 has been spent. Funding for TQM in the agencies we talked with has come from several sources: some agencies have used training funds, others have relied on funds from other sources. For example, DEQ has used funds from federal grants, the general fund, and fees.

The Legislative Fiscal Analyst and at least one agency have discussed TQM with Legislative Committees. The Fiscal Analyst has produced several reports dealing with productivity and efficiency in state government which have included TQM and similar concepts. The most recent of these reports was discussed with the Legislative Interim Appropriations Committee in

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September 1992. At the same meeting DHS officials discussed the use of TQM in their agency. In addition, training sessions, conferences, and meetings on TQM have been available to state agencies. A more detailed discussion of the information reported to us is found below.

TQM Concepts Are Not New

Total Quality Management was pioneered in the 1950's in Japan by W. Edwards Deming and other quality advocates. Deming taught that quality should be based on the wants and needs of the customer, and that most organizational problems are process, not employee caused. He also advocated worker participation in decision making. These concepts were adopted by many businesses in the United States in the early 1980's. While originally designed for the manufacturing industry, TQM has been adapted to service organizations, and is now widely used in both the private and public sector. Unlike the traditional approach to problem solving where decisions are usually made by managers, TQM addresses problems by using teams comprised of both managers and employees. As a result, for TQM to work managers must be willing to adapt to a more participative management approach which allows employees to be part of the decision-making process.

The program typically involves setting up a quality council, which is usually made up of several layers of management and staff. The council identifies problem areas in the organization. Quality improvement or action teams comprised of both management and staff are established to identify solutions to specific problems. Teams include a team leader, a facilitator to provide training and guidance, and several team members. Teams may be on-going or dissolved when a problem is solved. In addition, employees are usually given awareness training in TQM concepts and philosophy to better prepare them to work within a TQM environment.

Several Agencies Are Using TQM

Several agencies have begun using TQM concepts. Some of these include the Department of Human Services (DHS), the Department of Environmental Quality (DEQ), the Department of Health (DOH), the Department of Human Resource Management (DHRM), and the Division of Facilities Construction Management (DFCM). Currently, only DHS and DEQ are implementing TQM on a department-wide basis. Other agencies have started pilot programs and plan to implement incrementally. Below is a brief description of what was reported to us by those agencies with whom we talked.

Human Services

Officials in DHS have told us they are currently in the process of implementing TQM, and have relied on outside consultants and surveys to assist them with this effort. A consulting firm, Tennessee Associates Inc. (TAI), was hired to assist with training and implementation, and they have provided training to about 122 directors and managers in DHS. As a part of this training employees were divided into 30 quality improvement teams, which, as discussed above, report to the department-level quality council. The purpose of these teams was to identify areas where improvements could be made in productivity and quality of service. Agency officials report that several of these teams were successful at identifying and streamlining processes. For example, a team in the Data Processing Bureau found that many of the reports they generate and distribute were not used by agencies. As a result, reports were often thrown away or filed without being used. To remedy this the Data Processing team decided to make reports available electronically. Agencies now will be able to print those reports they need. Data Processing estimates this change will eliminate the need for three positions, which then can be transferred to other areas.

Human Services officials also told us that about 500 employees in DHS have been trained in TQM concepts. They estimate that all 4,500 employees will have received awareness training by the end of April 1993. For the most part training will be provided by the 122 directors and managers originally trained by TAI. DHS reports that costs will be absorbed from existing training budgets, and previously scheduled training and meeting time will be used for training to avoid disrupting work schedules.

Costs of implementing TQM are difficult to identify because costs are not broken out within budgets, and employee time spent on TQM projects is not always tracked. From information provided by DHS officials, about \$255,500 has been spent for consultants, training, surveys, and two staff. Staff costs we could identify totalled about \$42,000. This figure includes a part-time Quality Coordinator and about half-time of an additional staff person. The consultant used, TAI, was paid \$150,000. DHS officials feel that this money was well spent. They point out that when all 4,500 employees are trained, the cost will have been about \$33 per employee. In addition, the University of Utah was paid \$17,000 to conduct an initial survey to determine how receptive employees were to TQM concepts, and to establish a baseline to measure the future impact of TQM. Also, about \$30,000 was spent sending managers to national conferences on TQM, and about \$16,500 will be spent on training team facilitators. However, other than the \$42,000 in staff costs discussed above, the remaining costs of \$213,500 represents only direct documentable costs paid to outside consultants and does not include additional staff time or other costs which

we cannot document.

Environmental Quality

Like DHS, DEQ has used a consultant, Organizational Dynamics, Inc. (ODI), to assist with the training and implementation of TQM. Officials at DEQ have told us that ODI will be paid about \$180,000. They believe the training and assistance provided by ODI has been worth the cost. Agency officials report the initial contract for \$150,000 with ODI covered a diagnostic evaluation of the agency which included discussions with customers and employees. Also provided were training for 16 employees as quality awareness facilitators, training for an additional 16 employees as quality action team facilitators, workshops for senior managers, and materials and supplies for all employees. However, these costs do not include staff time. The agency also reports an additional \$30,000 will be spent for ODI to assist a quality team looking at the permitting process, and to make an independent evaluation of this process. This evaluation fulfills an agreement that DEQ made with the Legislature to have an independent study done of the permitting process.

Currently, a quality council, and four action teams have been formed, according to agency officials. In addition to the action team reviewing the permitting process, teams are also looking at communication, time reporting, and employee recognition. The agency reports all employees have completed awareness training which has been taught by managers who initially received training from ODI. Officials we talked with are enthusiastic about TQM, and believe it will benefit DEQ. They also report that employee and customer response has been positive.

Health

Unlike DHS and DEQ, training and implementation of TQM in DOH is being done in-house and on an incremental basis. The focal point for TQM in DOH is the Bureau of Organizational Development and Evaluation (OD&E). According to agency officials in March 1992, OD&E presented executive staff with three options for implementing TQM. These included implementation by a consultant, implementation internally, or a hybrid of the two. Because of cost, the executive director chose the second option. DOH officials estimate that less than \$5,000 has been spent in the past year on training and materials. Currently, several teams have been formed and are functioning. The agency reports one team which has developed a department policy on conservation and recycling has completed their work. Also, the OD&E staff are available as a resource, providing training, materials, and also function as team facilitators.

DOH officials also reported to us that they have taken advantage of several training opportunities provided by private firms, government agencies, and consultants at a minimal cost. For a modest cost Xerox Corporation provided a two-day training session which was sponsored by DOH, but available to all state agencies. Employees have also attended training provided by the Internal Revenue Service and the Forest Service. Some training and materials have also been provided by other consultants on a limited basis. Officials also report the cost of training and materials has been absorbed within existing budgets.

Other Agencies Are Also Using TQM

Several other agencies are using or are planning to use TQM concepts. In DHRM, action teams have been formed in the Classification/Compensation and Employment Bureaus. Officials report recent changes in the processing of classification actions based upon the recommendation of a TQM team in the Classification/Compensation Bureau, resulting in staff-time savings the equivalent of 43 days annually, a savings which has been reallocated to other areas. In addition, DHRM's Human Resource Development Bureau (HRDB) manager told us that TQM concepts have been incorporated into the state Certified Public Management (CPM) Program. The HRDB also acts as a TQM resource for state agencies providing training and orientation sessions, instructional materials, and assisting with pilot programs.

We have been told the focus of TQM in DFCM has been an employee in the Maintenance Section. At the urging of this employee, the Maintenance Section was organized into Continuous Quality Improvement (CQI) teams about a year ago. We have been told by agency staff that TQM has worked well and improved the quality of service. Currently, TQM is in the process of being implemented throughout the division. A quality council has been set up, and plans are being made for training employees. Staff report about \$2,000 has been spent on training and implementation.

Several Opportunities To Learn About TQM Have Been Available

Several opportunities have been available for state agencies and the Legislature to obtain more information about TQM and other productivity and efficiency concepts. As discussed above, the Legislative Fiscal Analyst has prepared several reports on productivity and efficiency in state government. The most recent of these was presented to the Interim Appropriations Committee in September 1992. This report along with previous reports prepared in November 1990, and April 1991, discussed several programs (including TQM) that could enhance productivity and efficiency. While these reports provide general information about TQM, they do not specifically discuss which agencies have used TQM, or the associated costs. In addition, at the September Interim Appropriations Committee meeting DHS officials discussed TQM with the committee. However, agency officials told us that because of limited time, their presentation was brief. Other than this meeting, it is our understanding that agencies have not discussed TQM with the Legislature.

As discussed above, other opportunities have been available to learn more about TQM. The topic of discussion at the Governor's Conference on Excellence in Government the past two years has been TQM. In 1991, David Carr, one of TQM's leading advocates nationally addressed the conference. This year's conference included a discussion on the progress of TQM in state government. Training sessions presented by private businesses such as Xerox, and federal agencies such as the Internal Revenue Service, Veterans Administration, and Forest Service have also been available. Several consulting firms have also expressed an interest in working with the state. In addition, a TQM interest group which is sponsored by DHRM meets monthly. Agency and legislative personnel interested in TQM can attend and learn more about TQM. This group has engaged in a variety of activities including discussions by agencies about their experiences using TQM concepts and presentations by consulting firms.

We hope this letter provides you with the information needed. If you have any questions or need additional information, please let us know.

Sincerely,

Wayne L Welsh
Auditor General

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