



AFSC SPACE SYSTEMS DIVISION

Total Quality Management REPORT



"REPORTING ON SSD ACHIEVEMENTS IN TQM"

JANUARY - FEBRUARY 1991

WEAPONS LAB APPLIES TQM

by Patrick J. Serna

(The Weapons Laboratory, Geophysics Laboratory, and Astronautics Lab have been recently combined into the Phillips Laboratory. This report reflects the Weapons Lab TQM status as of December 1990)

Col Leonard J. Otten and his TQM Executive Council have set a long term goal of incorporating TQM into our everyday life here at the Weapons Laboratory at Kirtland AFB, New Mexico.

It is important to note that Col Otten did not intend to abandon the many productive and innovative processes already working throughout the Laboratory. On the contrary, on-going processes will be enriched using TQM principles and philosophies.

HAS 15 PATS

One aspect of incorporating TQM has been the establishment of Process Action Teams (PATs). Fifteen PATs have been formed at the Weapons Lab since May 1990. These teams are working on various process improvements, with the purpose of both improving Laboratory processes and gaining practical experience of working as a team.

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"We are continually faced with great opportunities, brilliantly disguised as insolvable problems."

GEN CROMER COMMITTED TO TOTAL QUALITY

TQM requires top management commitment to work. To show his commitment, Lt Gen Donald Cromer issued the following statement as the Commander's Policy in the Space Systems Division TQM Implementation Plan:

"I am committed to make TQM a way of life at SSD. It has my full support, but it will take a dedicated, long-term effort by all of us.

"Acquisition excellence starts here, at the front door of Space Systems Division! Only you can make it happen: First by the way you do your job, and second by the way you support others in doing theirs.

"We must go beyond 'good enough,' as we strive for continuous improvement in how we do our jobs.

"Let's make SSD a quality place to live and work. Make it an example for our contractors to follow. Make TQM a way of life."

This commitment to TQM can be used as a guide and inspiration for all SSD organizations.

* * *

"The highest reward for a person's toil is not what they get for it, but what they become by it."

TQM REPORT TO KEEP YOU INFORMED

Many organizations within Space Systems Division have been progressing in their implementation of TQM, improving processes, and satisfying their customers. The situation is that other SSD organizations may not be fully aware of those successes or the TQM methods used.

In order to disseminate information about the advances and achievements made in the implementation of TQM at Space Systems Division, we will be publishing a bi-monthly SSD Total Quality Management REPORT. *Welcome to the January-February 1991 issue!*

These reports will not only be distributed to the various SSD offices, but they will also go to our customers, users, suppliers, and support. News of the progress, successes, and efforts to improve by the men and women at SSD will help us unite as a team in working toward excellence.

WHAT'S INSIDE:

Good news on TQM from:

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- Contracting (PK)..... page 3
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- Logistics (AL)..... page 5
- and more.

WEAPONS LAB (cont'd)

One PAT is focusing on studying the Officer Performance Report (OPR) review process. This team has developed deployment flow diagrams for each of the Technical Directorates and is in the process of collecting data. Understanding the OPR review process and identifying major causes of error is in itself a significant accomplishment.

Another team, the Test and Experiments Planning team, is studying how tests and experiments are prioritized and planned within the Advanced Weapons Directorate.

IMPROVEMENT IDEAS

The Weapons Laboratory also established a program to receive suggestions on process improvement, called *Opportunity For Improvement*.

This program allows for anyone at any level to submit an idea of a process improvement for consideration by the Laboratory TQM Executive Council or by a two-letter TQM Executive Council. Twenty-two opportunities were submitted in the 6 months of the program.

TQM ALIVE AND WELL

In conclusion, TQM implementation is alive and well at the Weapons Laboratory.

A customer focused critical mass consisting of the Executive Council members, Process Action Team members, process managers, Laboratory leaders, and various Laboratory members is established. Process Action Teams are studying various processes with an emphasis on data collection/analysis and customer focus.

(Mr Serna, GS-13, is in charge of implementing TQM at the Weapons Laboratory.)

Do you know this guy?



This fellow is in need of some TQM-style process improvement to make his work habits more effective.

SSD CORPORATE COUNCIL SETS TONE

SSD has a Corporate Council that acts as the governing body for implementation of TQM. The Council meets on a regular basis and is chaired by SSD Commander Lt Gen Donald Cromer.

In their most recent meeting, the Corporate Council members discussed the requirements of AFSC Commander, Gen Ronald Yates, on providing measurable objectives.

The progress of "Lead Teams" established to examine ways to improve the quality of life at SSD was also discussed. Topics for these teams include improving training, facilities, time management, and generation of ideas.

Several Process Managers attended this meeting and will start to participate on a continuing basis. Their participation is important to get some worker-level perspective on SSD TQM decisions.

KAIZEN

A JAPANESE PHILOSOPHY

Although TQM is an American enterprise, started by the Department of Defense, the model for excellence and quality comes from the Japanese. In that respect, it is interesting to examine the reasons for their success.

An American, Dr W. Edwards Deming, was instrumental in helping the Japanese start their quality revolution. But also, the fact that Japanese culture emphasizes quality and continuous improvement in everything they do helped them in enthusiastically embracing Deming's ideas.

EXPLAINED IN BOOK

This cultural way of thinking is the subject of the book "*KAIZEN - The Key to Japan's Competitive Success*" by Masaaki Imai. In this book, Imai says that the Kaizan strategy is the single most important concept in Japanese management. It is the key to Japanese competitive success.

Kaizan means ongoing improvement, involving everyone - top management, managers, and workers. The concept of Kaizan is used extensively in every aspect of Japanese business and life.

The Kaizan concept determines the difference between the Japanese and Western approaches to management. The Japanese have a process-oriented way of thinking, while the West uses innovation- and results-oriented thinking.

Our cultural change to TQM and continuous improvement is similar to the Japanese's Kaizan.

This book is interesting reading on management philosophy and techniques. It is available in the SSD TQM library.

MJ SUPERCHARGED IN TQM

by Lt Col Richard S. Cheney

MJ's TQM effort is in high gear. The "word" has spread throughout the organization and people are getting involved. The Defense Support Program (DSP) director Col John Kidd is leading the charge and making the commitment to see TQM take hold in DSP at the earliest possible date.

TQM is an integral staff function, with its own office - MJT. The director of TQM participates at all DSP staff and TQM Council meetings, and he chairs the DSP Steering Committee meetings. Additionally, MJT is responsible for all issues relating to TQM - contractual, training and staff.

USED CONSULTANT

MJ realized that if they wanted to quickly implement TQM they would need outside help. Two false starts had confirmed the need for an outside consultant. The decision was made to use Harrington, Hurd & Reiker (HH&R) - the same consultants used by the ALS SPO.

As a result of HH&R's recommendations, the DSP TQM Council developed a 5-year Vision statement, had two offsites, and completed a detailed 3-year Improvement Plan.

TRAINING IMPORTANT

TQM training is an integral part of MJT's work. Awareness training has been completed, and people are regularly scheduled to attend TQM short courses offered by various commercial vendors.

The office also maintains a lending library of approximately 30 publications, and we are bringing more videos into our collection.

MODELED STRUCTURE

DSP's TQM structure was modeled after PK's. The senior staff comprise the DSP TQM Council and is chaired by Col Kidd. They allocate all resources to implement TQM within DSP and meet monthly for one to two hours.

The Steering Committee is composed of volunteers from throughout the SPO and is chaired by Lt Col Cheney. These are the front line troops that move the TQM process forward. They implement the TQM Suggestion program by acting as distributed collection points for ideas, work with the suggesters through resolution and report to the Council on their research. The Steering Committee meets two hours per week.

TQM ACTIVITIES

Our current activities includes a Training PAT, lead by Maj Paul Leuthauser. The team's mission is to define the DSP training process and develop an implementation plan.

We also have an Admin Support Task Team, consisting of secretaries and lead by SSgt Kevin Panet. Their tasking is to develop a plan to assure the front office would always have secretarial support when the executive secretary was out.

MJT recently sponsored a DSP/supplier TQM Focal Point meeting. The purpose of this one-day meeting was discuss the various contractor TQM efforts in support of DSP, open lines of communication, and to discuss the upcoming Supplier/SPO Partnership Conference planned for March 1991.

(Lt Col Cheney is the TQM Director for MJ.)

LOOK TO YOUR PROCESS MANAGER ON TQM ISSUES

Although TQM requires top management commitment, there still has to be someone to work the implementation of TQM in the "trenches." In order to do that, every Two-Letter office has at least one person trained in TQM to aid in its implementation. These people are the TQM Process Managers.

The Process Managers received training in TQM methods from the Technology Exchange Center, the SSD TQM consultants. Many have also attended the Deming Seminar and taken other training in TQM.

These people have been leading training efforts and have helped to form Process Action Teams (PATs) within their organizations. They are their organizations' experts in TQM.

If you have any questions about TQM or would like to become involved in process improvement, see your TQM Process Manager.

PK AUTOMATES IDEA PROGRAM

The successful TQM *Search for Opportunitites* program, initiated by DCS Contracting (PK), has been automated on their LAN, according to Capt Bray Becker.

Previously, PK personnel submitted their TQM ideas on suggestion-type forms. Now they are able to enter ideas and monitor the progress of that idea through their E-Mail system.

Following PK's lead, CN is also automating their *Ideas for Improvements* program. Other organizations are considering following suit on this excellent way to get worker input on ways to improve processes.

SSD TQM OFFICE KEEPS BUSY

Mr Bill Briggs, SSD Assistant for TQM (SDD), is in charge of facilitating the implementation of TQM throughout Space Systems Division. He has a staff of Mr Michael Friedhoff, Ms Heidi Singleton, and Capt Tom Geoghan.

Besides supporting TQM implementation for every two-letter office, they identify SSD training needs and manage the TQM consultants, TEC (see article below).

"With such a small staff, we're really kept busy," explained Mr Briggs. "But we're getting the job done."

SDD also has a library of TQM books available for loan, as well as a collection of TQM videos. They have a VCR and TV available for showing the videos. For information concerning using these TQM materials, call Mr Friedhoff at x33040.

CONSULTANTS GUIDE SSD TQM

Technology Exchange Center (TEC) is a consulting firm that has been hired to assist in the implementation of TQM at Space Systems Division. Leading the TEC team are Ms Barbara Van Dine, Ms Jeannie Fennel, Mr Bill Dutting, and Ms Darlene Maddock.

They are responsible for training Process Managers, advising on TQM, and facilitating meetings and off-sites.

BOOK REPORT

Juran on Planning for Quality, by J. M. Juran, The Free Press, 1988, is a definitive guide to the structured approach of planning for quality on a company-wide basis.

WHAT'S REALLY NEW ABOUT TQM?

by Lt Col John Williams

It's true that everyone wants to improve quality, and everyone agrees we better do that, and do it soon. But, what's the big deal about TQM? Is it just more of the "same ole stuff" merely re-packaged in a different way?

Many of the phrases used in TQM such as teamwork, statistical control, setting goals, and effective communication sound like methods that have been around for a long time. So, exactly what is new about TQM that is so different and wonderful?

The answer is that TQM offers a new approach to improving quality by improving the process.

All work is part of a process that creates a product or service for a customer. Improve the process of creating a product or service and quality improves. That's the essence of TQM.

This sounds too simple to be revolutionary, doesn't it?

OLD WAY TO IMPROVE

For decades, virtually all approaches to improving quality fell into one of two general categories: (1) motivating workers, or (2) increasing inspections.

Bitter experience has shown that such approaches do not help in the long run. "Motivating" the workers to work harder, better, smarter, and so on, merely results in more of the same low quality products or services.

Increasing inspections, tightening specs, or whatever, just results in more re-work. Such approaches to improving quality are not viable in today's world.

DEMING'S APPROACH

Deming proposed a new approach to improving quality: "...any substantial improvement must come from action on the system." (1) In other words, improvements in quality result only from improving the process. TQM's new approach to improving quality can be summarized in only two words: process improvement.

Of course, the new-and-improved process itself can be further improved, and this cycle of improving must be repeated again and again. As Deming put it, "*Improve constantly and forever every process for planning, production, and service.*" (2)

Thus to fully summarize, TQM's new approach to improving quality really takes three words: continuous process improvement.

(article to be concluded in next issue)

REFERENCES

1. W. Edwards Deming, "Out of the Crisis" (Cambridge MA, MIT, Center for Advanced Engineering Study, 1986), pg. 2.
2. Ibid, pg. 23.

(Lt Col Williams is Deputy Program Director for the Directed Energy Weapons Program Office - CNL.)

CIVILIAN LOCALITY PAY IS "TQM"

Apparently, the recent locality pay increase obtained by SSD civilians is considered "TQM" - at least, according to Mr Mehdi Kavary of CNWB. Mr Kavary said, "This locality bonus really is TQM to me: Total Quality Money!"

GETTING QUALITY FROM SUPPLIERS

TQM concerns satisfying your customer with high quality products and services. In order to do that, you must first get quality goods from your suppliers.

If you are in a program office involved in the acquisition of space systems, you must get quality products from your contractors, as well as quality work from Aerospace, other support agencies, and those working for you. How do you make sure you get this quality?

The purchasing of quality service and products is a major concern in any business. The way many companies do this is by rewarding and encouraging quality from their suppliers.

One example of encouraging quality is used by the Japanese. They guarantee their suppliers continued business by going sole-source to quality producers.

Award fees are used by the Air Force to encourage excellence from contractors. Awards are also used as incentives at the individual worker level.

The "atta-boy" or letter of appreciation is probably one of the most effective ways to encourage continued quality. This is true at every level, whether to corporations, organizations, or individuals. Unfortunately, some managers find it very difficult to give out praise. This is strange, because it is a very cost effective way to encourage results (i.e. it's free).

It is in your best interest that all your suppliers excel. Help them, reward them, and encourage them. You will get better products and will then do a better job of satisfying your own customers.

DCS ACQUISITION LOGISTICS ENERGIZING ITS TQM

by John Armstrong

DCS Acquisition Logistics (AL) has been working to re-energize and broaden its quality program. We are seeking to strengthen management commitment and increase employee involvement. Deputy Chief of Staff for Acquisition Logistics Col Joseph O'Neill has led this effort with a management offsite and follow-up meetings to examine AL's vision and goals.

As a result of those meetings, we have established that AL is committed to effective partnerships with our customers and suppliers to assure the design, development, and fielding of affordable and supportable space systems which are operationally effective.

We are looking at our key processes, identifying critical pulse points, and tackling the problem of measuring progress towards delivering value to program managers, Air Logistics Centers, and Space Command.

HAS TQM MEETINGS

To maintain our progress in implementing TQM, every sixth AL staff meeting is dedicated solely to quality planning and tracking. The AL TQM Steering Group will now meet in alternate six week intervals

to charter Process Actions Teams (PATs), review PAT progress, and assign actions based on PAT recommendations. Thus, one or the other quality group will be meeting every three weeks.

In meeting external customers' needs we must look at our employees' needs as internal customers. We must provide our employees with the knowledge, skills, and understanding to do the job.

AL has two existing PATs: On-the-Job Training PAT, led by Sandy Jones of ALG, and Newcomers' Orientation PAT, led by Betsy Knutson of ALN. Both teams have been gathering data through interviews with supervisors and employees. They are now beginning process analysis and improvement.

We also have started a People's Idea program and have initiated a volunteer Quality Improvement Committee. All of these efforts will help us move from merely initiating an acquisition logistics quality approach to integrating the quality approach in the way we do our day-to-day business.

(Mr Armstrong, GS-13, is the TQM Focal Point for Acquisition Logistics.)

SSD Total Quality Management REPORT

Lt Gen Donald L. Cromer, Commander

Brig Gen Jean E. Klick, Vice Commander

Mr William Briggs, Assistant for TQM

Mr Ron Kurtus, SSD TQM Report Editor

If you have any questions, comments, or contributions to the SSD Total Quality Management REPORT, contact:

Ron Kurtus, SSD/CNW, (213) 363-8746.