

FOCUSED MANAGEMENT: A BUSINESS-ORIENTED APPROACH TO TOTAL QUALITY MANAGEMENT

By Boaz Ronen and Shimeon Pass

One of the most talked about subjects today in the world of management is total quality management (TQM). There are several reasons for the unprecedented acceptance of this management approach.

In recent years, managers have been extensively exposed to the achievements of Japanese and Western firms that have implemented TQM.

Managers are only too well aware of the increasing competitive pressures in the world market. It is clear today that these pressures are due largely to the increased competitive advantage of those firms that have successfully implemented TQM.

The Department of Defense (DoD), the institutions of the European Community and large and small firms throughout the world insist that their suppliers implement TQM. Regulations like the DoD's DoD-5000 and the European Community's ISO 9000 expedite the process.

Dangers of failure to implement TQM

Though the present openness to the notion of TQM seems to be potentially advantageous to the Western economy, incorrect implementation can be very harmful. Organizations that fail to properly implement TQM run the risk of failing to keep up with competitors who successfully manage the quality of their processes, goods and services. As they become less competitive, they gradually disappear from the world market.

The quality revolution

One hears much today about the so-called quality revolution, though quality has been the subject of scientific debate for close to a century now. The revolution is in the approach of treating quality not as a mere technicality, but rather as a focal management issue. The principles of TQM are:

- Quality is achieved through correct processes, the emphasis being on continuous improvement of processes and the responsibility for improvement resting mainly on management;

- Most quality problems arise from incorrect processes, and very few can be attributed to poor workmanship;

- The right way to achieve quality is to control the process by collecting data and analyzing them by means of statistical tools and charts at every stage. The wrong way is to check the quality only at the end of the process;

- Workers should be encouraged to be involved in and responsible for the quality of their work;

- The process will be improved by teamwork in locating, analyzing and solving problems;

- Management needs to be involved and lead the way in achieving quality. The functions of the manager are to train and guide workers in the correct performance of their jobs;

- The norm is awareness of and respect for the achievements;

- The customer is the focus; and

- The organization works only with quality suppliers.

Emphasis is on improving work processes and procedures anywhere, including marketing and sales processes, production processes, development and engineering processes, financial management processes, personnel or accounting.

"Doing it right the first time" is of utmost importance if the organization is to reduce uncertainty and improve its performance. Despite the obvious and clear messages outlined above, about half of the organizations that start TQM find themselves disappointed, dissatisfied with the results or admitting a total failure in the process.

The trend is to blame the commitment and involvement of managers. In too many cases, it is the implementation philosophy that is to be blamed.

Every manager has own definition

Since it is a multi-faceted managerial notion, TQM is usually inadequately defined. Everyone can get a different idea of its essence, and the individual's background and depth of involvement and understanding will affect his perception of the subject.

Some managers come from a quality control background. They are convinced that the aim of TQM is to improve the quality and reliability of the organization's processes, goods or services using statistical tools.

Those with a background in organizational behavior or psychology believe TQM means a change in organizational culture that finds expression in cooperation, team meetings, improving worker satisfaction and improving organizational communications.

Managers whose professional training was in the area of statistics are convinced that TQM will be achieved by measuring the organization from top to bottom and analyzing the data with the help statistical tools.

Managers with a background in marketing believe that TQM will be realized by merely putting the customer in the focus of the organization's attention.

At first glance, there seems to be nothing wrong with these different viewpoints on the meaning of TQM. However, managers who have set their organizations on the path of setting the customer as the focus of organizational attention may at first produce high customer satisfaction, but in the long-term, the initial euphoria will fade as the organization continues with its old work habits. It should also be remembered that satisfying customer requirements is not the reason for the organization's existence. A business organization has business goals. Satisfying customer requirements is only a principal means of ensuring survival and profitability.

Some try to make do with the behavioral aspects of TQM, improving communications and setting up teams to ensure worker satisfaction. Here too, initial achievements may be impressive, as in the case of the famous Hawthorne experiments. The workers will be more highly motivated because the quality circles and improvement teams provide them a forum for voicing their problems. But workers will not be inclined to continue team meetings and quality circles that are not designed to lead to better busi-

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ness results in the long- and short-terms. Teams and quality circles with no business content usually disintegrate within nine to 12 months.

Focused management

TQM is the combination of all the viewpoints mentioned above. The proper integration should be based on a business approach and with the extensive use of other management approaches. This is the approach of focused management, which selects for each organization the most suitable combination from among the management approaches described below, all under the conceptual umbrella of TQM. The various management approaches do not contradict each other. Instead, a substantial synergistic effect is realized.

The aim of TQM is to improve organizational performance. Implementing the approach correctly enables the organization to maximize production and eventually increase profits. Organizations will achieve this through higher throughput and larger market share. In the case of a non-profit organization, (the military, universities, etc.) TQM will help a company accomplish objectives and achieving higher output.

TQM is not a religion. It should be viewed as a way of life, a philosophy and a selection of tools to achieve the organization's objectives. If quality is perceived as a goal, and the quality improvement a target, one may be caught at the "12 PPB (parts per billion) syndrome:" the competition's percent defective is 50 PPM (parts per million) and the company manufactures parts at the rate of 300 PPM. In the quality improvement efforts, the company puts a target of 40 PPM to get the competitive edge. Until now the quality and the business approaches had gone hand-in-hand. Enthusiastic from the achievements and following the process of ongoing improvement, the company determines the goal of 12 PPM, and the 12 PPB goal arrives. If not necessary to the company's critical success factors, managerial energy should go somewhere else.

Throughput is defined as the effective output of the organization versus its goal. Managers should realize that the main purpose of TQM is to increase throughput, and reducing operating expenses comes second, if not third. The same works in other leading managerial approaches such as just in time (JIT), and the theory of constraints (TOC).

Limited and partial implementation of TQM will lead to limited performance improvement. True, customers are interested in a high quality product or service; they are, however, also interested in timely delivery, good performance, innovative goods and services and competitive prices. In other

words, management must view the organization as an integrated organization. Increased profitability may best be achieved by improving development, engineering and decision-making processes, rather than production processes. Unfortunately, classic TQM focuses mainly on production processes.

Focused management calls for focusing management attention on the important issues of the organization. These critical issues should be identified by adopting a global view of the organization, and should be tackled by simple and effective managerial tools. On these lines, implementing TQM successfully means combining classical TQM with other management approaches, including (TOC), the JIT philosophy, global performance measurement and control (GPM); and the complete kit (CK) concept.

Theory of constraints

TOC is a management philosophy and a set of techniques that enable the manager to focus on a small number of constraints — those factors that impede organizational performance. Better exploitation of the constraints (the internal bottlenecks, for example) will substantially improve organizational performance. Proper management of the system's bottlenecks will ensure maximum throughput of the existing system and a shortening of response time. These factors affect profitability and customer satisfaction.

TOC includes a seven-step methodology that is a generalized formulation of a normative management process. It requires the following:

- Set up the system's goal;
- Determine measures of performance;
- Identify the system's constraint(s);
- Decide how to exploit the system's constraint(s);
- Subordinate everything else to the above decision;
- Elevate the system constraint(s); and
- If, in the previous steps, the constraint has been violated, go back to step three, but do not let inertia become the system's constraint.

Included in it are techniques for locating the firm's main problems and methods to solve them. The TOC approach also stresses the importance of the implementation process as a principal factor in success.

Combining TQM with the TOC approach

Implementation of TQM simultaneously throughout the organization is an unrealistic objective. The resources and the time needed to make all the necessary changes are simply not available. However, using the tools of TOC will enable the manager to determine the locations where starting to implement

TQM will significantly improve operations in the shortest time.

The ultimate objective of TQM is the ongoing improvement of operations, while controlling all the organization's operations, whether or not they are bottlenecks. TOC can be helpful in setting an order of priorities for controlling all the different processes.

JIT — meeting supply schedules

JIT philosophy advocates doing only what is necessary and on time. It enables improvement of the organization's operations by reducing inventory, reducing production and transfer lot sizes reducing the amount of work in process, and preventing waste. All this improves the organization's ability to supply its goods or services to its customers on time. The better performance improves customer satisfaction, profitability and the quality of the organization's processes and goods or services.

Global performance measures

The behavior of workers and managers is influenced by the performance measures by which they are assessed, as is the behavior of entire divisions, departments, areas, plants and projects. Experience accumulated on the subject of implementing changes shows that only too often the factor that hampers the process of change is the use of measures that do not suit the new approaches we are trying to implement. For example, rewards based only on quantities will lead workers and managers to prefer producing quantity rather than quality. Measuring a high-tech industry project strictly by budgetary profit-loss criteria is likely to encourage the application of wrong considerations in make-or-buy decisions and in deciding whether to employ sub-contractors.

Similarly, inappropriate use of traditional costing approaches will hamper the firm's efforts to increase market share or capitalize on opportunities that may arise.

The correct choice of measuring techniques, parameters, costing and control, which is the clear responsibility of management, is the difference between improving organizational performance and not doing so. Performance measurements should be global and effective in a way that an increase in them will bring the system closer to its goal. The proposed measurements should be carefully defined for each organization and should measure whether or not the organization has achieved the following targets:

- Higher throughput;
- Lower operating expenses;
- Product/service quality improvement;
- Less work-in-process;
- Better response time; and
- Better due date performance.

Measurement and control of perfor-

mance enable the implementation of TQM in by choosing the right measures of performance. An important process is the managerial process, and the GPM gives the right focus on the right parameters. Correct principles of measurement improve the decision-making quality of managers and focus attention on throughput.

Simplifying the organization's processes and managerial information systems aids comprehension of the TQM approach.

The complete kit concept

One of the fundamentals of good operations management practices rarely discussed in the literature is the CK concept, which suggests that work should not start until all the items required for completion of the job are available. These items are components, tools, drawings and information. A CK for a manufacturing task is the set of all components, drawings, documents and information needed to complete a given assembly, subassembly or process. The completeness of the kit should be confirmed prior to the release of the job to the shop floor. Starting a job with an incomplete kit means more labor time to finish the job, longer lead time, more work-in-process, reduction of throughput, poor quality and impairment of due date performance.

Also, in paperwork environments the rule should be to start working only if the kit is complete. For example, in the insurance industry the life insurance department will not start working unless the kit includes all the documents and information needed (i.e., medical results and signed forms, complete forms on beneficiaries bank account number, etc.). This means that no insurance policy is going to be issued unless all documents are ready. In this example, a "gater" is assigned, and he or she is the only person authorized to release jobs to the office floor. Clearly you cannot finish the work if you are missing a document or form. The main point is not to start until all documents are on hand.

Focused management

FM is the integration of the five managerial philosophies (TQM, TOC, JIT, GPM and CK) under the conceptual umbrella of TQM. Experience shows that using only one managerial approach yields only partial success for the organization.

The FM approach integrates the five methodologies and other techniques to improve the system. Though these concepts are simple and even obvious, management often has substantial difficulties in applying them. Thus, the FM philosophy mainly focuses on the implementation process and tailors a specific plan for each organization. The differences between manufacturing and service organizations, as well as the differ-

BELIEFS FOR MANAGEMENT: #8

Success is a marathon, not a sprint.

Pay attention to your enemies, for they are the first to discover your mistakes.

If you can't think too well, don't think too much.

Always wait to buy the gift.

Life is a competition.

You are never the same after you lose that first step.

There are two kinds of statistics — the kind you look up and the kind you make up.

There are two kinds of people — wishful thinkers who throw coins in the fountain and realists who fish them out.

A good compromise leaves nobody mad.

Secrecy keeps mistakes secret.

Never forget that the purpose of competition is to divide participants into winners and losers.

Don't try if you can't be a winner.

Many a false step is made by standing still.

What was good enough yesterday might be good enough today, but will not be good enough tomorrow.

Don't try to build a snowman during the summer.

Even a good fish requires a garnish.

Success breeds conservatism.

If deadlines are not set, nothing happens.

The time will come when there are no more tomorrows.

Don't sweat the small stuff.

Everybody wants to go to Heaven, but nobody wants to die.

Reality never lives up to fantasy.

The best offense does not offend.

The laws don't change when the sheriff leaves town.

Sometimes it is better not to know.

It takes courage to sail in uncharted waters.

There are different kinds of smarts.

Use damaged goods as a last resort.

For further reading

#1 Industrial Management, March/April 1991

#2 Industrial Management, May/June 1991

#3 Industrial Management, September/October 1992

#4 Industrial Management, January/February 1993

#5 Industrial Management, May/June 1993

#6 Industrial Management, September/October 1993

#7 Industrial Management, January/February 1994

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ences among the various service organizations, call for different implementation models of the concepts for each industry.

Long-terms and short-terms in TQM

The central concept of the TQM approach is achieving long-term improvement. However, short-term results are important to the organization's survival and to facilitating the process of implementation itself, not to speak of engendering credibility among the managers and workers concerning the ability of the organization to improve.

The field implementation should start with the application of JIT, TOC and the complete kit concepts. These techniques and their profound tools enable the organization to reduce its response time considerably and to increase its throughput substantially, using the existing resources only. The techniques employed in these approaches are easy to implement and produce identifiable results within months. This usually causes the organization to become "lean and mean," gaining better response time, more throughput and improved due date performance. At this stage, improved quality is usually achieved through the reduction of work in process and the awareness of managers and workers. Only after this stage (three to six months) is it appropriate to address classic TQM. At this time, teams start to work on proper performance measurements and the improvement of critical processes. Teams are built to work on planning marketing, sales, logistics and production critical processes. All levels of the organization participate in these teams, not only the floor people. The number of teams is constrained by the number of available empowered team leaders. Experience shows organizations tend to establish too many teams, ignoring the real constraint — the number of team leaders.

Analyzing the histories of firms that have successfully implemented TQM in western Europe, the U.S. and Japan reveals an interesting phenomenon. Under TQM, all the successful firms implemented at least JIT techniques or the theory of constraints approach, and within a short time achieved excellent results in the form of shorter response.

The throughput world and cost world

The goal of TQM is to increase the organization's profits by achieving higher throughput. To paraphrase Deming, the goal is to increase the organization's profits and to create jobs by increasing market share through shorter response time, adapting the product to the customer's needs and high quality. The cost of non-conformance quality in the Western world has been estimated at 20 percent to 40 percent of the product's sales cost. Thus, addressing the problem of

the "junk factory" could lead to price reduction and an increase in returns. This way of thinking is called "the throughput world."

Opposed to "the throughput world" is a way of thinking that aims to bring about a reduction in the number of workers employed by the organization. This is "the cost world," and it conflicts sharply with the goals of TQM. Organizations that have no agreement with their employees regarding job security will not enjoy their cooperation while making changes and may even be unable to implement improvements. Moreover, the "big money" is not gained by the reduction of costs, but by increase of the throughput, which can be unlimited.

This approach calls for a definite change in the methodology of quality costs into quality throughput. The new methodology should monitor and control the gain in throughput, rather than the reduction in operating expenses.

Implementation of focused management

The implementation of TQM on the shop floor is fairly straightforward and simple. Improved performance and effectiveness are achieved when implementing the approach in other sectors.

In many organizations the problem does not lie in production, but rather with other functions. Sometimes it is marketing, sometimes development and engineering, and sometimes sales. The TOC approach enables management to identify where to implement TQM and with what priority.

Implementing TQM along the lines of focused management leads to improvement of the management systems in all areas. It is a culture of ongoing improvement of all management processes by systematic learning of the system's processes, and by the managers acquiring knowledge and understanding of the activities in other managerial areas of the organization. The outcome is better communication among the different organizational entities and better decision making by managers, all of which is to the good of the organization as a whole. This revolution in perception is an ongoing enrichment of managerial technology. The implementation process has three stages:

- Operations improvement by using JIT, TOC and CK techniques;
- The implementation of TQM; and
- Strategic implications.

At the first stage the focus is on cutting lead time, increasing throughput, and reducing excess inventories. This stage is done by using the JIT, TOC and CK techniques. All top managers go through an eight-day seminar to master these techniques. On top of this, current measures of performance, as well as cost accounting practices, are carefully examined. In most cases, significant

change is taking place in costing and pricing procedures as well as in changing the department's measures of performance. At this stage, the changes are made by a relatively small group of managers that have to be active while all the other employees cooperate passively.

The next stage is to introduce TQM to the whole company and use the classic methods of control charts, Pareto analysis and fishbone diagrams. At this stage, all the company's employees go through three to five days of education and training. Teamwork starts and results begin to appear.

The third stage is management reconsideration of strategic issues, while taking into consideration the improvements made.

The FM methodology was successfully implemented in more than 40 organizations, from manufacturing plants throughout assembly processes, service organizations and military units. Results after the first year show significant improvement in throughput by 10 percent to 40 percent, reduction of lead time by almost half and reduction of non-conformance quality costs by more than 50 percent. This was done at the first stage by implementing JIT, TOC, the CK concept and changing the measures of performance. At the second stage, quality was improved. Some of the organizations have changed their strategy, having a competitive edge with excellent lead time and better quality.

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