

WHAT TQM IS NOT

TQM and the Selfless Nature of Quality

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As opposed to more traditional writings on Total Quality Management (TQM), which tend to offer laundry lists of what TQM is, the focus of this article will be on what it is *not*. Presuming that you are familiar with the basic concepts and history of TQM, exploring TQM from this opposite aspect becomes more than just an academic exercise. In order to fully appreciate the practical value of a theory, you should examine both the hypothetical argument and its complement.

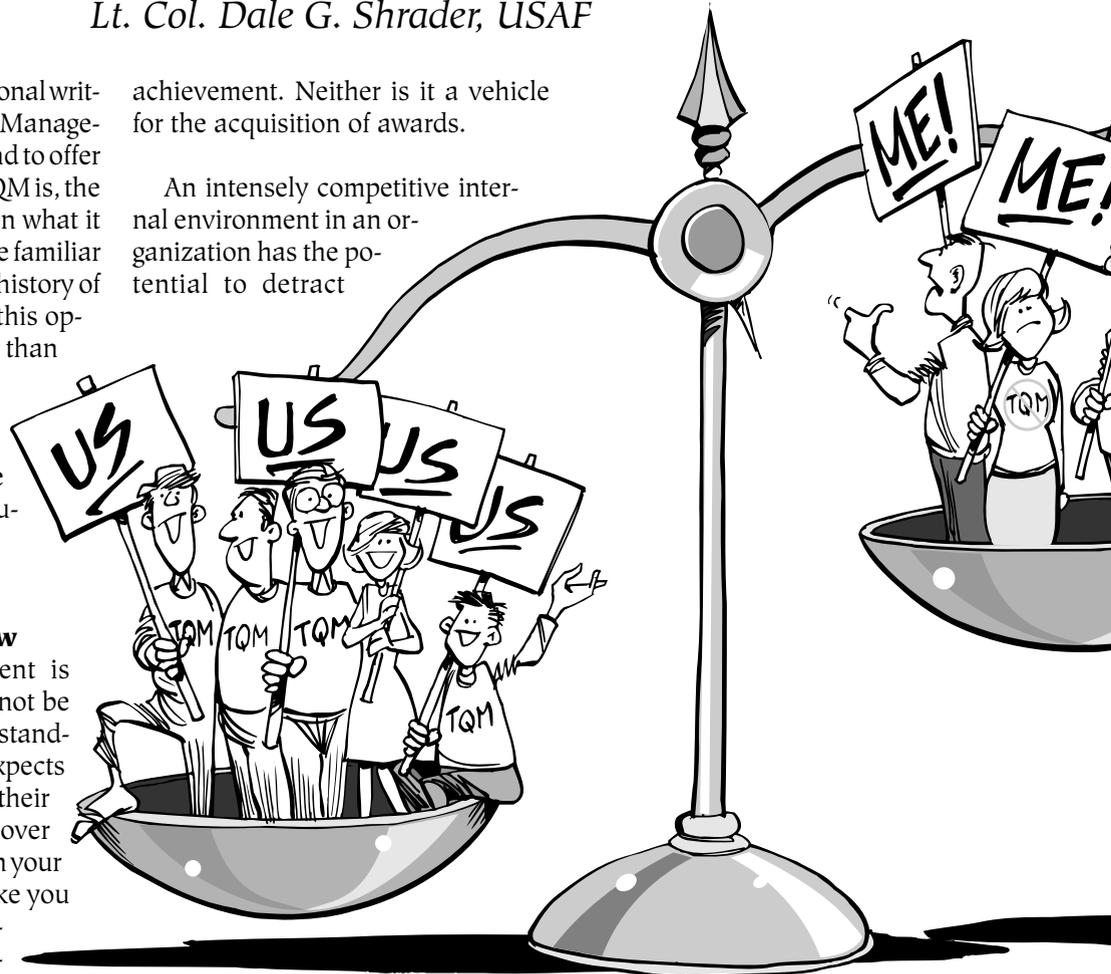
Needs of the Many Must Outweigh the Few

My supposition statement is that...“TQM is not and can not be selfish” — selfish from the standpoint that the individual expects something in return or that their viewpoint or goal wins out over others. Implementing TQM in your organization should not make you famous. If it does, you probably did it wrong. The selfless nature of quality relates to the premise that the needs of the many must outweigh the needs of the few, or the one. Implementing TQM is not a quick fix to what is ailing at the time. Nor is it something you can do one time and put up on a wall as an

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achievement. Neither is it a vehicle for the acquisition of awards.

An intensely competitive internal environment in an organization has the potential to detract



from the very purpose of TQM. Concerning quality awards such as the Malcolm Baldrige National Quality Award, Belden Menkus, an independent systems consultant explains: “There is a real danger we will be thrown off track; this time by awards programs, which place more emphasis on winning than on the process of achieving real quality.”¹

The purpose of TQM is not to convince the reluctant or the unwilling of the correctness of its existence. For

this concept to work, you must be willing to admit that your organization or process is in need of improvement. Implementing TQM in an organization is not a survival technique. Nor is it a desperate alternative. Taking this analogy to an extreme, an animal caught in a trap will often chew its own leg off in order to survive. I doubt if anyone would consider this a quality move.

Metrics - A Cornerstone of TQM

One of the major cornerstones of

TQM is that of measurement or metrics. Of the three things managers influence (cost, schedule and performance), quality (also known as performance) is the most difficult to measure with a metric. The purpose of measurement is not to produce wall charts and propaganda, but to provide decision makers with objective evidence of compliance with a predetermined specification or standard. This embraces the ideal of real time in-line process control as opposed to completed product inspection.

However, this is much easier said than done. Most im-



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portantly, TQM is not change for the sake of change. It often requires short-term sacrifices for long-term gains. It may require some surrendering of ground now in order to lay the framework for greater advances in the future. While the importance of customers to the longevity of an organization seems fairly obvious, the relevance of the concept of internal customers and the proper application of metrics is often ignored.

Change Can Be Difficult

In whatever form it takes in differ-

ent environments, TQM has a proven track record of success. But, if not approached with a reasonable degree of enthusiasm, the result can manifest itself in a form exactly opposite to its intended purpose. Very few people I came in contact with were able to give solid answers as to how TQM will improve things in their organization. To many, TQM is a threatening concept. It jeopardizes the status quo and introduces one of the most frightening notions known—that of change. If your organization implemented some form of TQM or is thinking about it, be aware that unrest and discontent are probably the rule rather than the exception.

Concerning the aspect of change, Neil Standal, the Vice President and Assistant General Manager of the Boeing Corporation's 777 project remarked, "It is probably harder to change the way we do business than it is to build the airplane."² It is my observation that, after a modest initial wave of enthusiasm in this country, in some cases, short-sighted management did not see earthshaking results within two or three quarters, so interest in the process began to dwindle.

But why has TQM been so successful in some applications and not in others? Dr. William Edwards Deming, recognized as the father of modern TQM, offers this explanation: "There is no determination to do it. We have no idea what to do and how to do it, what the right thing to do is — we have no goal."³ Perhaps one of the reasons TQM does not succeed might be the view that an organization has of itself.

Struggling for Acceptance

By personal observation and research, I formed an opinion that TQM is struggling for acceptance in many organizations and forums in this country. When presented the concept of TQM for the first time, many people (including myself) are somewhat skeptical (if not outright hostile), and tend

to view it as the "buzz word" of the day. Because TQM may be a vast departure from the normal way of doing business, it appears somewhat disruptive, and people often form the opinion that "this too shall pass." I offer two possible explanations why TQM is viewed from this perspective.

First, TQM is a conceptually slow-moving process. For it to become a part of the culture of your organization, it may realistically take a generation to evolve into the normal way of doing business. The Japanese experience with TQM is the most common one used to depict how this process works. One of the reasons for the success of TQM in Japan lies in the very foundation of the Japanese way of life. That society in Japan exhibits a certain selfless attribute — the greater good of the whole eclipses that of the individual — is well documented. As a matter of historical fact, it took around 10 to 15 years before Japan produced effective evidence as to the success of their TQM approach. Americans, by nature and historical documentation, are a rapid, result-oriented culture. We tend to prematurely abandon efforts if we do not see quick benefits.

Second, the very essence of the American way of doing business presents a major obstacle to the successful implementation of a TQM program. We are not a group-oriented society. The following illustration demonstrates this point. As a matter of reference, this example is a generalization and does not reflect the practices of any one particular organization. It merely serves as a model built from ideas gathered during interviews, inspections and investigations of a number of different types of businesses and industries. The vehicle used to illustrate this point is a generic sales and service operation.

A Hypothetical Model

Let's say our hypothetical organization has a manufacturing section that generates a product at a cost of

\$500 per unit, with an expectation of .5 service calls per year. They, in turn, sell this product to the marketing section at a slight markup (say \$600). To cover the cost of administration, advertising and expected profit, marketing releases the product to the retail section for about \$800. The customer will probably see the product on the shelf for about \$1500.

In addition, a service contract will be sold to show a profit based on the .5 service calls per year. If, in the process of development, the manufacturing organization discovers that the cost is actually \$600 to make the product, they will show a reduced profit margin within the division if they release the product to marketing for the original price. Because of factors such as lead time and other considerations, elevating the price to marketing is generally not acceptable.

Manufacturing can meet their \$500 target price if they spent money internally to engineer the cost of the product down or accept a lower reliability rate (say .6 service calls per year). This will eat into the expected profit margin of the service operation since they based their service contract on the .5 figure. However, this is not an immediate concern of the manufacturing operation since, on paper, they met their quarterly revenue goal and profit margin. The real dichotomy of this predicament is the fact that manufacturing's profit report (the metric by which they are measured), will look better if they release the product to marketing with the higher service rate.

Clearly, manufacturing does not view service, marketing or retail as internal customers. In this case, the short-term success of the sub-operation has taken priority over the larger association. The division looks good, but the organization as a whole suffers. The impact of this situation becomes more significant when you consider the following additional in-

formation. Our hypothetical organization makes about two-thirds of its revenue from the sale of its products. Of this revenue, only about 10 percent is profit.

The remaining one-third of revenue comes from the servicing of its products. Of this portion of generated revenue, about 90 percent is profit. Ironically, little or no incentive exists to produce a more reliable product since doing so will reduce the overall profit margin. However, there are those organizations who reached the realization that customer satisfaction is not defined in terms of how fast the repair man deploys every time the product breaks down. What the customer wants is reliability — not repairability. These are the types of obstacles the TQM concept has to overcome if we expect it to achieve maximum potential.

A Look at What Quality Is

Despite a wide range in variation of response to a certain dosage of TQM, the bottom line remains that changes are necessary to make truly "quality" organizations. Further, they must be put into place with both strategic and tactical objectives in mind. Since to this point, we spent a good deal of effort examining what quality is not, perhaps a look at the other side of the issue is in order.

One view expressed by Russel G. Redenbaugh, a partner in Cooke & Bieler Inc., states that, "There is no single measure of quality. It is an assessment. It is an opinion, a verdict."⁴ Given this definition of quality, then the next questions to answer are — who is qualified to make this assessment, form this opinion or pass this verdict? The answer to all three questions is the customer! Quality is in the eye of the customer. You may produce the best widget on the face of the planet, but if the customer has no need for widgets, you go broke. The point here is that knowing your customers' needs and desires gives you

the target at which you aim your quality effort.

One of the more successful and popular ways of determining customer needs is the Quality Force Deployment or QFD. The concept of QFD involves literally deploying a well-defined team of experts from your organization to the customer. The team will use tools such as interviews, questionnaires and observation to definitize customer expectations. Basically, QFD is —

- a systematic and measures-related method of determining how to satisfy customers;
- a way of establishing the baseline for specifications and standards by which you develop metrics for the evaluation of success;
- a quantitative way of calculating your customers needs; and
- a technique used to identify customer desires and insure incorporation into new designs.

Once you determine these needs, you have a starting point to develop the most efficient and effective ways of meeting them. One of the more difficult tasks involved in the TQM process is making a tangible entity out of this nebulous concept called quality. While there is plenty of help out there (none of it free or cheap), I present the following information as one of many options that can be used as a possible starting place.

ISO 9000

In the process of doing research for this article, I had the opportunity to interview a team of quality experts from Underwriters Laboratories and the British Standards Institute. This team consisted of specialists in particular fields of endeavor (petroleum engineering, software, manufacturing, supply line management, etc.). They (and other teams like them) were hired by companies all over the world to perform assessments of the processes used to produce goods or services.

The sponsor of this quality inspection effort is the International Standards Organization or ISO. Based in Belgium, the ISO is a consortium of 120 member nations who, over the last 5 to 10 years, established generic, tailorable guidelines for business and industry to use in documenting process control to ensure consistent, quality products. These standards are described in detail in a document known as the ISO 9000.

The document establishes 20 basic elements of what a quality system should address, and then expands these elements to fit unique applications in individual organizations. They examine these processes from a quality standpoint — not so much the finished product, but rather the sequence of events set in motion to achieve the final goal. The vehicle used to examine quality systems is very simple, which allows it the flexibility to be used in a wide range of applications. This examination of process control centers focuses on three basic questions. Is it documented? Is it followed? Is it current?

The thrust toward meeting quality standards took on such importance that the European Common Market countries announced a requirement for organizations to be certified and registered to the ISO 9000 standard in the near future, or face the possibility of not being allowed to market one another's products in the European Common Market. Collectively, the five-person team I interviewed accomplished quality assessments for around 5000 companies and business interests worldwide.

Model of a TQM Success

In an ad hoc discussion, I asked the team to build a model of what they perceived a quality organization in today's environment might look like. The following is a summary of their comments: Those organizations making inroads into the quality market are, in general, less than 20 years old. They are not burdened by years of

tradition and are amenable to new approaches. They pay a great deal of attention to what is termed "implied customer desire" or expectations of the client.

Organizations who have problems with the "quality" concept concentrate on meeting customer requirements rather than customer satisfaction. In other words, they practice specification compliance versus operational suitability (sound familiar?). They understand that quality is defined in terms of the customer, not internally by the organization. They also realize that each customer has their own culture, and they are ready and willing to react to different cultures.

For those organizations who pursued TQM (including those who achieved varying degrees of success), the going was rough. The admission that the way you always did something may have been counterproductive is difficult, particularly if a style or methodology was in place for generations. Despite the evidence, there remains a significant faction whose school of thought is that TQM is doomed to failure. If this mind set is allowed to remain in your organization, it becomes a self-fulfilling prophecy. While there remain some exceptions, the old school view of management and quality is still posing a significant challenge. A somewhat disappointing observation is that groups or individuals who downplay the impact of TQM know something is wrong, and they may even have an idea of how to fix it. However, their inbred paradigms are so strong and tender so many roadblocks, that the necessary becomes the impossible.

Goals of the Organization Demand Precedence

The TQM process focuses on keeping what is value-added for the system and discarding the rest. For this to work, the overall goals of the organization demand precedence over sub-groups or individuals. This

requires sacrifice and a selfless approach to objective accomplishment — selfless in the sense that personal goals take a lower priority than those of the organization. Carried to a somewhat ridiculous extreme, truly selfless individuals would remove themselves from organizations if they determined an inability to add value to the system. More than ever, customer expectations of a product or service are very high. Organizations today are dealing with a more complicated society and an infinitely more complex set of variables. You will pay the price for quality — but, at least for today, the customer is willing.

Endnotes

1. Menkus, Belden, "Forget The Trophies and Concentrate on Quality," *Viewpoint*, Oct 1990, p. 60.
2. O'Lone, Richard G., "777 Revolutionizes Boeing Aircraft Development Process," *Aviation Week and Space Technology*, 3 June 1991, p. 34.
3. Walton, Mary, *The Deming Management Method*, Mead/Dodd, 1986.
4. Redenbaugh, Russell G., "Beware The God Of Quality," *Business Month*, June 1990, p. 90.

Bibliography

1. Benson, Tracy, "The Gestalt of Total Quality Management," *Industry Week*, 1 July 1991, p. 30.
2. Butler, Kathleen, "QFD on the Advanced Launch System Interconnects," Rocketdyne Division, Rockwell International.
3. Dillion, Patricia M., "Get A Grip On Quality," *Food Engineering*, July 1990, p. 55.
4. Lobbstaal, Col. Wayne, USAF, & Vasquez, Maj. Bud, USAF, "Measure to Improve," *Total Quality*, May-Jun 1990, pp. 39-44.
5. Reda, Capt. Helmut, USAF, "How to Streamline an Organization and Combat Bureaucracy," *Program Manager*, May-June 1991, pp. 4-8.
6. de Tocoqueville, Alexis, *Democracy in America*, Harper & Row, 1966.