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Rev date: 10-23-2003

Format: MS Word

Topic/title: Six Sigma and TQM: The Good, the Bad, and Those Still Stuck in the Middle

[CT] Chapter 47

[CT] Six Sigma and TQM: The Good, the Bad, and Those Still Stuck in the Middle

[CT] Key terms

Magic wand management
Management by mysticism
Rain-dance methods
Six Sigma
Total Quality Management (TQM)

[OH] **PURPOSE:** To evaluate the Total Quality Management movement and its successor, The Six Sigma “Revolution”

[OH] **INTRODUCTION**

Total Quality Management (TQM) was the “buzzword” echoing throughout the corporate world in the 1980s and early 1990s. National, state and local trade associations picked up the rhetoric and added to the fervor. The TQM movement gained prominence throughout corporate America during this period. However, it was often misunderstood and treated more as a “social” improvement process than as a scientifically based method for improving the processes within a business. Fortunately, TQM survived the distortions forced on it and evolved into the Six Sigma movement. Six Sigma has taken Total Quality Management to new levels of sophistication and effectiveness.

George Eckes states it best in his book, *The Six Sigma Revolution*. “Six Sigma is a quantitative approach that fuels improved effectiveness and efficiency in an organization. This approach was first created in the 1980s by Motorola. Then, in the 1990s, companies like AlliedSignal and General Electric contributed to making Six Sigma the most popular quality improvement methodology in history.” (TSSR. p. xi)

[A] **TQM evaluated**

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In the late 1980s, the construction and maintenance services industry joined the TQM parade in no small way. The American Society for Quality Control (ASQC) addressed quality issues concerning the construction industry in its regional operations centers and conferences. The Association for Quality and Participation (AQP) formed a Construction Industry Division.

The Construction Industry Institute (CII) stated in August of 1989, “Companies which do not implement Total Quality Management in their firms will not be competitive in the national and international markets within the next 5-10 years!”¹⁰ Ernst & Young's March/April 1992 issue of *Contractor Briefing* echoed CII when it stated, “To remain competitive, contractors must use (the) total quality management technique.”¹⁰

Did the results justify the hundreds and thousands of dollars (and hours) expended on TQM? Was it just another fad that stressed-out and overworked contractors latched onto in desperation, as they attempted to control the chaos surrounding them? Or was the TQM movement the panacea some claimed it was?

The answer to these questions was neither a resounding “yes” nor a “no.” Rather, the answer was probably best analogous to the advent of the personal computer (PC), and its arrival on the construction and maintenance services industry scene in the mid-1980s. After seven or eight years of horror stories and rave reviews alike, the dust began to settle. Some companies had made significant progress using PCs. Others improved neither their management methods nor their bottom line, after spending thousands of dollars and hundreds of labor hours on personal computers.

The results obtained from TQM were not unlike those achieved with personal computers. Fortunately, there was hard data to help us ferret out the good from the bad.

There were basically two types of TQM programs. The first targeted incremental *results-driven* improvements, by focusing on specific goals and the management processes involved to obtain them. The second was *activity-centered* and focused on employees doing the right types of activities. These activities would, in turn, improve performance as a natural by-product of the activity.

These two methods came under much scrutiny. Robert H. Schaffer and Harvey A. Thomson concluded in the January/February 1992 issue of the *Harvard Business Review* that, “Most corporate change programs mistake means for ends, process for outcome. The solution: focus on results, not on activities.”

They further stated that, “The performance efforts of many companies have as much impact on operational and financial results as a ceremonial rain dance has on the weather. While (results-

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driven) companies constantly improve measurable performance, managers in (activity-centered ones) continue to dance round and round the campfire – exuding faith and dissipating energy.

******* Main point:** “The performance efforts of many companies have as much impact on operational and financial results as a ceremonial rain dance has on the weather.” *********

“The ‘rain dance’ is the ardent pursuit of activities that sound good, look good, and allow managers to feel good – but which in fact contribute little or nothing to bottom line performance.”

******* Main point:** “...The ‘rain dance’ is the ardent pursuit of activities that sound good, look good, and allow managers to feel good – but which in fact contribute little or nothing to bottom line performance.” *********

They go on to cite a 1991 survey which covered over 300 electronics firms. Findings indicated that 73 percent of the companies had TQM programs, but 63 percent had improved quality defects by less than 10 percent. These were dismal results for efforts expended.¹¹

Tracy E. Benson of *Industry Week* (IW) magazine stated in its October 5, 1992 issue that, “The large number of quality activities in U.S. firms ‘that aren't making a difference’ is alarming...Remember ‘The Emperor's New Clothes,’ the fairy tale about the Emperor whose robes were made of fabric so opulent that it could not be seen by those who were unfit for their jobs or impossibly stupid? The Emperor paraded daily before the townspeople until one day a young boy could contain himself no longer. ‘The Emperor has no clothes,’ he cried. So it is with quality.”¹²

In a May 3, 1993 *Industry Week* article, Benson wrote, “Employee-based programs that are designed to boost morale but are not tied directly to performance can actually frustrate and alienate workers instead.” She goes on to quote the authors of *Quality on Trial* (West Publishing CO., 1992), Roger J. Howe, Dee Gaeddert and Maynard A. Howe. They state, “When the primary focus...is measuring participation in activities (e.g., number of hours of training, number of team meetings, number of suggestions, and the like) rather than on the impact of those activities on business results, the corporation's time and money are wasted.”¹³

*******How it works –start *******

I visited a contractor on the East Coast shortly after he had returned from a seminar conducted by a major industry association. The association was making TQM the major theme for the year and it was also the topic of the seminar. I was interested to find how the subject matter was taught. As it turned out, the contractor was given only theory at the seminar and little practical advice as to how to implement it. Future seminars and on-site visits to participating companies would certainly help him implement the desired improvements. He was determined to implement TQM throughout his company and make it work.

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Nine months later, I revisited this contractor and his company. In frustration, he had given up on TQM and he was disillusioned with the whole subject. Thanks to the sincere, yet misguided efforts of the association, this contractor threw out the TQM baby with the proverbial bath water.

*******How it works –end *******

[A] VERDICT ON TQM

Change and quality improvement programs offered great hope to the contractor facing seemingly overwhelming problems and who was desperate for solutions. TQM had the potential to not only offer many real solutions while improving the bottom line, but also had the ability to revolutionize a company and the management structure within it.

However, buyer beware! TQM is not a “magic wand.” Like the dollars and labor hours spent on personal computers during the 1980s and 1990s, many contractors improved management performance and profits. Unfortunately, many other contractors wasted a lot of money and a lot of labor hours on PCs because precise expectations weren’t established and compared to measurable, targeted results.

Contractors who made similar mistakes with TQM and who failed to target specific incremental results-driven improvements were very disappointed with the return on their investment, and disheartened with the very concept of TQM. This was unfortunate, because many others obtained the results and saw the benefits of the tried and proven methods of TQM, when used properly.

[A] TQM REEVALUATED

Philip B. Crosby, in his classic book, *Quality is Free*, tackled two key myths regarding TQM and quality improvement. He stated, “The first erroneous assumption is that quality means goodness, or luxury, or shininess, or weight. The word ‘quality’ is used to signify the relative worth of things in such phrases as ‘good quality,’ ‘bad quality,’ and that brave new statement ‘quality of life’...It is a situation in which individuals talk dreamily about something without ever bothering to define it...That is precisely the reason we must define quality as ‘conformance to standards’ if we are to manage it.”¹⁴

Crosby goes on to state, “In fact, quality is precisely measurable by the oldest and most respected of measurements – cold hard cash.”¹⁵

******* Main point:** “In fact, quality is precisely measurable by the oldest and most respected of measurements – cold hard cash.” *********

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Tom Peters builds on Crosby's basic premises when he challenges us to, "Measure what's important."¹⁶ And to remember that in today's marketplace, "What gets measured gets done has never been so powerful a truth."¹⁷

***** **Main point:** "What gets measured gets done has never been so powerful a truth." *****

TQM is simply the threefold process of: 1) establishing a performance standard; 2) collecting actual performance data; and 3) comparing the two to obtain a variance (or deviation) between them. As pointed out in the Introduction, this is a similar methodology as the one used by science. For the green industry, the first step is a budgeting or estimating process (which this book addresses) combined with quality standards for performance. The second and third are data collection and job-costing issues which are really information management ones.

The typical contractor has problems with the very concept of TQM for the following reasons. First, he or she simply doesn't understand the methodology (or the very concept) of TQM as described above. The process remains too ethereal and non-quantifiable. The "rubber never meets the road," so to speak.

Second, most contractors don't understand that you "de-mystify" TQM by means of the budgeting and estimating process, and therefore make it an integral part of a business. Third, the typical contractor either doesn't have key staff trained to collect the right types of data and compare them to the original performance standards (budgets and estimates), or lacks a business management software system to do so in a cost-effective manner, or both.

Annual company/division budgets and individual job estimates provide the majority of the "standards" or targets required to run a landscape and irrigation company. It's the monthly Profit & Loss statement (for your company and/or division) and individual job-cost reports which provide the means of comparing "estimated" or budgeted standards to actual performance. It's this very process of identifying standards, collecting data, and comparing the two that comprises the "guts" of any TQM system.

However, if you don't establish quantifiable measurable standards in the bidding and budgeting process, you can neither direct nor control your jobs, nor your company. You can't effectively job cost a job bid by means of material-times-two, or one whose price is calculated by the Market-driven Unit Pricing method. You have nothing to which to compare actual performance data.

This is why a good estimating system provides you with not only an accurate *Price* but also a *Plan* by which to run your job (and your company), plus a *Process* by which to self-adjust the whole system.

Crosby hits the nail on the head when he states, "In business, ...requirements must be clearly stated so that they cannot be misunderstood. Measurements are then taken continually to determine

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conformance to those requirements. The nonconformance detected is the absence of quality. Quality problems become nonconformance problems and quality becomes definable.”¹⁸ All through his book, whenever you see the word ‘quality,’ it means ‘conformance to requirements’ or standards.

[A] SIX SIGMA

Six Sigma is the successor to the Total Quality Management movement and has evolved directly from it. Both have foundations based on the scientific method. Six Sigma constantly attempts to integrate managerial effectiveness with operational efficiency, as it focuses on the customer, the process and the employee. “Effectiveness is meeting and exceeding the needs and requirements of the customer. Efficiency is the time, cost, or value of the activities that lead to customer satisfaction.” (TSSR p. 28)

Peter Drucker said it best when he stated in his book, *The Effective Executive*, that managers make sure things get done right and leaders make sure the right things get done. Six Sigma integrates the strategic issues dealing with managerial efficiency with the tactical issues concerning operational efficiency.

Eckes goes on to describe Six Sigma, “At the most basic, Six Sigma is a way of measuring the variation in a process. It can enable you to determine how close you are to being world class in terms of performance.” (TSSR p. 37) “Another definition of Six Sigma is cultural—having everyone in the organization develop and refine the never-ending pursuit of perfection.” (TSSR p. 39)

Some in the green industry would appear to prefer that small business (businesses under 100 employees and \$10 Million in annual sales) be an intuitive maze of mysterious processes. TQM and Six Sigma both fly in the face of this model. Measurement of key data is at the heart of science and management improvement processes. “If you have no data, you are just another person with an opinion.”

There’s also this quote attributed to Lord Kelvin...:

“I often say that when you can measure what you are speaking about and express it in numbers, you know something about it, but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind.” (TSSR p. 70-71)

W. Edwards Deming, like Tom Peters, wholeheartedly approves this paradigm when he emphatically states, “What gets measured, gets done.” (TSSR p. 70)

Six Sigma and TQM are based upon measurable, quantifiable facts. Decisions are based on facts, not some seat-of-your-pants subjective feeling. Too often, business decisions in the green industry are made on whims and “by gosh” and “by golly” methods. This may be fine for the

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entrepreneur just starting out. However, if the business is going to grow, a sounder approach is necessary.

I must warn you that Six Sigma does get technical. If you're easily bored with charts, graphs, statistics and data, Six Sigma can overload you very quickly. However, some understanding of Six Sigma is essential in order to appreciate its value.

Eckes explains that, "The symbol for the standard deviation is the lowercase Greek letter, *sigma*. As simply put as possible, the technical concept of Six Sigma is to measure current performance and to determine how many sigmas exist that can be measured from the current average until customer dissatisfaction occurs. When customer dissatisfaction occurs a defect results. A defect is any event that does not meet the requirements of a customer. Six Sigma is a process that produces no more than 3.4 defects per million opportunities." (TSSR p. 94-95)

The long and short of it is that Six Sigma is a very sophisticated management improvement process you're going to be hearing much about in the near future. Frankly, it's far too sophisticated for most small businesses as it currently exists. However, as information management technology for the small business improves, you'll see Six Sigma methods applied at that level.

[A] **SUMMARY**

Total quality management and Six Sigma methods can significantly improve your operation. However, in order to use these processes effectively, you have to analyze and measure things against predetermined standards (budgets, goals, bids, etc.). This book, in essence, shows you how to establish the standards on which to build an effective TQM program.

Don't be tricked into thinking that only budgeting and bidding fall under the TQM realm. Chapter 40 covers the Bid Board and the MAD report, which help you monitor the nebulous process of bringing business into the company. They help you "grab the handle," so to speak, by measuring the process of selling jobs, and comparing targeted standards to actual performance.

Just about anything can be measured and brought under the TQM umbrella. It's simply not necessary to measure everything, but only what's important. Analysis can lead to paralysis if not properly monitored, and when information is simply collected and never used. One of the key roles of the owner/manager is to collect and focus on the right data at the right time and to understand the process in doing so.

As I mentioned earlier in this chapter, Peter Drucker said it best when he stated that managers make sure things get done right while leaders make sure the right things get done.

******* Main point:** "Managers make sure things get done right. Leaders make sure the right things get done." *********

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TQM can improve the whole company and the systems/processes in it, if it's understood and used properly. Otherwise, **“magic wand” management** and **management by “mysticism”** prevail, as owners and/or managers employ **“rain-dance” methods** in their attempts to control and direct their companies, and make them more profitable.

[AP] ACTION POINT

Read Peter Drucker's classic book, *The Effective Executive*. It's a quick read and well worth the time spent.

******CARTOON: CORPORATE VITAL SIGNS/THE TQM PROCESS******

This article was adapted from James Huston's new book and audio book, *How to Price Landscape & Irrigation Projects*, released in July 2003 and his previous book, *Estimating for Landscape & Irrigation Contractors*. The author is president of J.R. Huston Enterprises, Inc., which specializes in construction and services management consulting to the Green Industry. Mr. Huston is a member of the American Society of Professional Estimators and he is one of only two Certified Professional Landscape Estimators in the world. For further information on the products and services offered by J.R. Huston Enterprises, call 1-800-451-5588, e-mail JRHEI at jrhei@jrhuston.biz or visit the J.R. Huston Enterprise web site at <http://www.jrhuston.biz>.