Successful Supervisor Part 48

Tips to Employ Six Sigma

by Bob Whipple, MBA, CPLP

The “Six Sigma” movement grew out of the Total Quality Revolution of the 1990s. It is a mindset to minimize variation in manufacturing or business processes. The objective is to achieve processes that are nearly perfect, with a statistical approach that achieves less than 3.4 defects per million opportunities.

Having worked in the era of the Total Quality Revolution myself and studied personally with some of the great names such as W. Edwards Deming, Joseph Juran, Brian Joiner, and others, I built a strong foundation of knowledge that supports a six-sigma mindset. Trying to employ this “profound knowledge” (a Deming phrase) in a real manufacturing environment allowed me to see some precautions or areas where significant care is needed to obtain the full benefits.

This article is written to help supervisors trying to implement a six sigma philosophy in a manufacturing operation. To be successful, one must begin by learning a new way of communicating information about the process.

Learn the jargon, but do not be a slave to it

The whole area of lean six sigma is rife with a special language that practitioners use to communicate with each other but which often confuses people who are less informed. The processes are really pretty simple and logical, so try to educate people to avoid hiding behind a lexicon of acronyms or mathematical calculations that can confuse mere mortals. Focus more energy on putting the ball in the hoop than figuring out how many standard deviations the hoop is from the foul line.

1. Understand the Six Sigma issue

The meaning of six sigma is that the process you are running is so close to perfection that it will produce less than 3.4 defects per million opportunities. I am not going to go into the derivation of why that last statement is true (although I do know why). If you are interested, go look it up. My struggle is that trying to measure either the numerator or the denominator of the equation is nearly impossible.

Just trying to define what a defect is can suck the life out of a technically oriented person. There are numerous different interpretations and lots of papers written trying to identify what a defect is.

If trying to pin down a “defect” is difficult, understanding how to measure what an “opportunity” is can keep you occupied forever. You not only have to contend with the opportunities you can see and count, but you also need to conceptualize the missed opportunities that did not happen. Trying to understand the true level of opportunities is like trying to find the edge of the earth. Since the real number of opportunities is infinite, an equation that puts this number in the denominator might drive mathematics graduate students to the local beer garden.

A much better way to think about six sigma is to focus on something other than defects per opportunity. Rather, picture a process so perfect that we just don’t have to think about it ever producing a defect. We do not need to inspect the part because the process is so robust we never find any problems. As Joe Juran used to say, “You cannot inspect quality into a product.”

2. Support the “Black Belt” program

The “Black Belt” program is a series of educational milestones that designate the knowledge and experience level of an individual. A brown belt is better equipped than a yellow or green belt, and a black belt shows mastery level. The benefit of a black belt program is not that we have visible signs of the education level of a person. What the program produces is a support system for educating people to become proficient with the tools. The stepwise program ensures that you continually invest in educating your people, which is a great way to improve engagement and reduce turnover.

3. Know what you are getting into

Get educated yourself on the philosophy and tools of Total Quality Management. I saw problems crop up when the supervisor was trying to direct traffic but did not understand the tools personally. Continuous improvement toward process perfection is not a program for amateurs. You can create chaos and confusion if you seek to implement a program that has a lot of bells and whistles but is not grounded in “profound knowledge.”

4. Get real top level support

Make sure top management is truly engaged in the program. If they understand the incredible payback for a six sigma program, they should be easy to convince. Unfortunately I have seen several instances where top managers give lip service to the program but starve the training or the resources. When that happens, the whole effort becomes a kind of sham where people go through the motions but do not make the gains.

Honor the experts and become a mentor

Most of the gurus of the Total Quality Revolution died in the 1990s. Their work revolutionized the world for the last half of the last century, but the gains can be easily diluted and lost. Implementing a successful six-sigma program takes strong leadership on the part of the supervisor. There is a significant challenge here for all supervisors.

I once heard Deming express his personal concern that there are not enough leaders coming along to carry on his work. Here is a brief story of that event from my third book, “Leading With Trust is Like Sailing Downwind.”

By 1990, Deming was 89 years old and in failing health. You had to admire this old man with his trademark silver crew cut for keeping up a rigorous teaching schedule, even though he could no longer walk and could barely talk. A nurse would roll his wheelchair up to the platform, and he would bend over a microphone and speak in a gravelly voice, just above a whisper.

The most poignant part came when he reflected on the gains made by manufacturing over his lifetime and attempted to project them into the future. Deming’s outlook for the last decade of the 20th century was grim. Unfortunately, it was grim for Deming since he died in 1993, but in 1990 the great man had a profound message to the audience of about 400 managers and engineers crammed into the huge ballroom.

At one point, he sat up straight; his voice rose up, becoming strong and clear as he asked, “Where are the leaders going to come from?” He paused and repeated himself, “Where are the leaders going to come from?” Then he said it again and again, gaining in volume and strength with each statement. I remember vividly his fist in the air almost yelling now, “Where are the leaders going to come from?”

People in the room became uncomfortable and started looking at each other. Was the old man insane? Did he need medical attention? What was this all about? His question was crystal clear, but what did it mean? I felt like yelling back, “from over here,” but I held my tongue. Finally, the old man stopped and kind of slumped down again. He muttered some additional points that nobody seemed to hear.

Why was this great man so interested in having the audience think about his question? He obviously knew he was dying soon and was desperately trying to send out a message with all the passion and urgency his feeble body allowed. With all the technology he taught the world for over 50 years, why was he dwelling on this point?

There was a good reason: he was right. Without enlightened leadership, his technology would atrophy and eventually amount to very little. Obviously he was doing everything in his power to get the audience to realize this.

The technological advances brought about by the Quality Revolution were no less dramatic than those of the Industrial Revolution 70 years earlier. For the first time, workers and managers really focused on their processes to identify which ones were in control and which were not. People started paying attention to data in ways that were robust. Instead of chasing after a trend based on two points of data, control charts helped to identify situations that required explanation versus those that were basically in control. Deming called this "profound knowledge," and it transformed manufacturing worldwide for several decades.

As a leader, embracing leadership knowledge and passing it on to the next generation is not an onerous task, but an uplifting way of doing business. When Deming asks, "Where are the leaders going to come from?" we all need to shout out, "right here!" Unfortunately, none of us in his class in 1990 got that message, and many leaders still don't today. Embrace the profound knowledge and pass it on to the next generation with urgency.

The supervisor has a key role to play in any six sigma effort. In some organizations, the effort is spearheaded by staff people from a "quality" group. I think it is fine to use staff people to help with some of the administration, but the passion to drive for process perfection needs to be owned by the line organization actually running the process. Supervisors need to assume the leadership role in support of the six sigma thrust.

This is a part in a series of articles on "Successful Supervision." The entire series can be viewed on www.leadergrow.com/articles/supervision *or on this blog.*

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