Six Sigma – Lessons from the Trenches

Six Sigma or 6σ . . . If you haven't heard of it, you've probably been living under a rock! If you have heard of it and are not deploying Six Sigma as a strategic initiative, you're either in denial or suffering from sticker shock from the implementation costs. Six Sigma is rapidly becoming the new metaphor shift in today's industrial society, and the new World standard for customer satisfaction and profitability improvement. There are many documented success stories out there about Six Sigma at GE, Motorola, Honeywell, Bombardier, 3M, American Express, Sears Roebuck, Ford, Toshiba and hundreds of other organizations. Most large organizations have been deploying Six Sigma for years by now, and have posted megabucks in their annual reports to show for it. Make no mistake about it – Six Sigma is here to stay because its success is in the numbers. Many of these larger organizations have now dropped the gauntlet and are requiring their supply base to implement Six Sigma as a condition of future business.

Six Sigma: Just a Piece of the Improvement Puzzle

Although Six Sigma offers an impressive arsenal of statistical software and tools, it is not the silver bullet or cure-all and end-all. In fact, no single improvement methodology or set of tools by itself (e.g., Kaizen, Lean, Six Sigma, ERP, enabling IT, etc.) will make an organization World Class. Six Sigma or any other improvement initiative by itself is neither all inclusive nor exhaustive. In fact, it is quite possible to have a 6σ process that adds no value to the customer. The scope of improvement issues in the total value stream is complex, requiring a broad solution set. Kaizen, Lean, Six Sigma, ERP, and enabling IT ask different questions about the process and provide different approaches on change. Just like your toolchest at home, application of the right improvement tools to the right opportunities is the key. Keep in mind that there are other drawers of improvement tools (e.g., Kaizen, Lean, Reengineering, ERP, Enabling IT applications such as SCM, CRM, PLM, etc.) which may or may not serve you better than Six Sigma in certain situations. The largest opportunities are derived from understanding and integrating all of these tools into a unified powerhouse improvement initiative. Put these tools together and apply them correctly, and your organization will achieve breakthroughs in operational and financial performance. Use them incorrectly and you will end up with window dressing improvements and another *flavor of the month* program.

Is Every Six Sigma Deployment Successful?

Absolutely not! Only the successful ones make the trade journals, and even a few of these stretch the truth. Why then, do other organizations fail miserably? The Six Sigma methodology and tools work, but the strategy and human drama of deployment can kill you. Lack of a well-defined strategy, leadership and commitment, communication and awareness, or just plain succumbing to the pressures of short term results are a few common reasons totally unrelated to the Six Sigma methodology and tools. Strategic improvement is a core competency that many organizations believe they possess but it actually takes years to transform culture and internalize Six Sigma. Somehow everyone hopes that a few waves of Black Belt and Green Belt training and enough project activity will transform everything automatically. Six Sigma is not about launching a level of activity in every department and collecting the right ratios of Belts, it's about permanent cultural transformation and financial results.

Others have turned their turned towards public and web-based Six Sigma offerings in an attempt to address their needs. They send off a few individuals who may learn the methodology and tools, and then return to an organization missing the strategy, deployment, and implementation infrastructure. Unfortunately, a few lonely Black Belts and Green Belts scattered around the organization doesn't create breakthrough performance and cultural transformation.

Ten Most Valuable Six Sigma Lessons Learned

Lesson #1: Six Sigma is about results, not belts and statistical tools. Six Sigma is not a business strategy, it is a powerful enabler of executing on business strategy. Too many organizations focus on education and calculating the number of Black Belts and Green Belts they need based on their revenue and headcount. These textbook standard

ratios serve to benefit the large consulting firms who provide Six Sigma education more than they do their clients. Six Sigma is not about belts, or how many Black Belts and Green Belts an organization needs. It's all about business improvement and whatever it takes to make it happen. Six Sigma methodology and statistical tools are the means, not the ends.

Lesson # 2: Strategic Improvement is a Core Competency. It all looks so easy and logical, but the ability to define, organize, and lead a major initiative like Six Sigma is a skill that most organizations do not have internally by osmosis, and they underestimate the difficulty of launching and deploying a strategic improvement initiative of this magnitude. It takes a huge, long-term commitment to define and organize a strategic improvement initiative and then integrate strategy, leadership, execution, the right methodologies, and permanent culture change. Those organizations who have achieved impressive results from their improvement programs do so because they understand this fact. Although most improvement methodologies such as Six Sigma offer steps and tools that are necessary to achieve success, they are neither sufficient nor exhaustive. Further, improvement methodologies are ineffective without the right improvement strategy and infrastructure bundled around them. Six Sigma methodologies, tools, and enabling technologies are only the *means*, not the *ends*.

Lesson #3 – Leadership, strategy, infrastructure, and deployment are most critical. Six Sigma leadership represents 80% of the success factor, while the statistical tools and belts themselves represent the other 20%. Leadership is the turbo-charged engine that drives a successful Six Sigma deployment. Although many of the Six Sigma statistical tools are based on chance, a successful Six Sigma deployment is a matter of *choice*. Many organizations skip the most important element of improvement – The Six Sigma Strategy and Deployment Plan. Organizations tend to skim over this process and dive into the methodologies and tools. People select and implement tools and techniques in an effort to get quick results. The anxiety of jumping in leaves the rest of the organization in initial confusion and doubt. In the absence of a well-defined Six Sigma Strategy and Deployment Plan, activities are "perception-driven" vs. "fact-driven," and not focused on strategic gaps and root causes of poor performance.

Lesson #4 – A "One Size Fits All" Six Sigma Deployment is doomed to failure. These days there are too many Six Sigma consultants running around touting the large scale deployment model of a GE, Honeywell, or 3M. This model works well in large organizations but it is totally irrelevant further down the supply chain. A $100 million organization can not afford the same financial and resource commitment of a $20 billion organization, nor does it need to in order to achieve success. Six Sigma deployments must be driven on strategic needs and the ability for an organization to absorb, benefit, and actually transform itself to a higher level of performance – Not on how many belts they think they need. Six Sigma has created sort of a *Mad Belt Disease* in the marketplace where too many individuals are focused on the means of getting their belts, and not the ends.

Lesson #5 – DMAIC is the roadmap to individual Six Sigma project success. DMAIC (Define-Measure-Analyze-Improve-Control) is a standardized, disciplined approach to problem solving, no matter what type of problem you are facing: Kaizen, Lean, or Six Sigma. DMAIC provides a common problem solving language for the organization, and weaves together the specific statistical tools and deliverables used at each stage of the process. DMAIC prevents the confusion caused by feeding people six different versions of the same thing because it is presented as a common structured problem-solving methodology. Using this uniform approach to business improvement is effective across all improvement methodologies and presents Six Sigma as another drawer of tools in the DMAIC tool chest.

Lesson # 6 – Transactional Six Sigma presents high impact opportunities. For many organizations, actual manufacturing represents 15%-20% of their total cost structure. The remaining 80% is due to transactional process activity such as sales and marketing, finance, engineering and R&D, customer service, procurement, and distribution. Transactional Six Sigma is strategically important because as much as 70% to 95% of product cost is generated outside of your organization, up to 75%-95% of lead time is consumed outside of your organization, about 95%+ of the key activities of design, supply chain planning, and manufacturing are outside of your organization. Many of these practices have become institutionalized and accepted as the norm in many organizations. As long as these processes and practices remain in *hidden factory* mode, they can not be improved and the hidden costs of doing business grow. This myriad of improvement opportunities is surfacing because executives recognize that

transactional processes represent the major component of their businesses from both a cost and activity/resource consumption perspective. Hence, Six Sigma deployments must have a high transactional content in their scope.

Lesson # 7 – Project Selection is a critical element of Six Sigma success. A prerequisite to project prioritization and selection is the Six Sigma strategy and how this is linked to the tactical plan. This annual operating plan must then be supported by a critical few set of improvement priorities. These priorities create the need for underlying projects. These "critical few" projects are "must do" to meet the annual operating plan and thus the strategic plan. It is important to separate the critical few from the trivial many projects than can act as a distraction and dissolve the effectiveness of limited resources. Another critical element of this process is alignment - The culmination of people, processes, and enabling technology in synchronization with the business strategy. Without alignment, there's a natural tendency to drift into conflicting objectives throughout the organization, rather than staying focused on mission-critical improvements. Alignment provides a crystal clear link between the business strategy and the day-to-day improvement activities throughout the organization. It's better to complete a dozen incredibly successful Six Sigma projects than it is to complete dozens of Six Sigma projects with disillutionary savings.

Lesson # 8 – Performance measurement is the only true gage of Six Sigma success. Performance measurement is the needle-and-thread that ties together strategy and execution and turns the Six Sigma strategy into results.   It enables organizations to achieve alignment and integration throughout the organization. More importantly, it allows people to measure the right things so everyone can tell if things are getting better. Performance measurement includes many levels, and it must be designed to link and align the organization and drive the right behaviors. It must create that hard-wired spiral between the organization's strategy and its daily Six Sigma improvement activities. Everything begins and ends with performance measurement.

Lesson # 9 – Integration of Six Sigma with other improvement initiatives equals a powerhouse improvement initiative. The entire spectrum of enterprise activity and business processes includes the full array of problems and opportunities. Any methodology like Six Sigma, Lean, Kaizen and new IT applications by itself is sub-optimizing and will not make an organization World Class. Each improvement methodology by itself can provide some gains, but there is a danger of going overboard. It's like the *hammer looking for a nail* analogy. If you're a big believer in just Kaizen, than you will subconsciously believe that everything can be solved with a blitz. If you're a narrow-minded Lean deciple, then you will try to fix everything with 5S, kanbans, and cells. We can hang up signage and shadow boards, purchase color coded totes, and label everything in the place. Like your toolbox at home, you are very limited with just a hammer, a wrench, and a few screwdrivers. Pretty soon every problem starts to look like a nail or a screw. If you attempt to solve a problem with the wrong tools, you will probably get the wrong answer. We have observed the misuse of improvement methodologies over and over. Sticking to a single point improvement and discounting the other methodologies is very limiting on the realm of improvement potential.

We need to stop the debates about Kaizen, Lean, Six Sigma, ERP, SCM, CRM, PLM, and other IT enablers and recognize that they all have their place in total enterprise improvement. The methodologies and tools are not magic mantras, they are simply *tools of the trade* that work well when integrated and deployed correctly and to the right opportunities. We need to provide new injections of skills so that people understand how to solve problems, recognizing that all of the improvement methodologies fit together. We need to focus on integrating processes, people, and information across the total value stream. We need to stay with a common, organizational approach for analyzing and solving business problems and the DMAIC methodology provides a uniform problem-solving structure.

Lesson # 10 – Six Sigma is powerful stuff – Especially for small and mid-sized organizations. Six Sigma is not the silver bullet, nor is it the panacea for all of management's challenges. But make no mistake about it ― Six Sigma is here to stay because its demonstrated success is proven in the numbers. Six Sigma is a highly "customer-centric" improvement process that focuses on tangible results ― One project at a time. Many organizations are well into Six Sigma and are migrating the methodology upstream to new product development and suppliers. Many smaller and mid-sized companies who are suppliers to these larger organizations recognize this trend and are

proactively implementing Six Sigma before it becomes a mandate for future business. These organizations are the early beneficiaries from Six Sigma.

If you are implementing Six Sigma, there is a good chance that you will see millions of dollars added to your company's bottom line this year. Congratulations to you, your employees, and your stakeholders! If you are not currently implementing Six Sigma or have not heard about it yet, chances are that you will ― Especially if you do business with any Fortune 1000 company. If you wait until one of these organizations mandates Six Sigma as a condition for doing business with them in the future, you have given away a lot of ground to your competition. Six Sigma represents a strategic change of choice, and the *choice* and the *outcome* is directly in your control.

_____

Terence T. Burton is President of The Center for Excellence in Operations, Inc. (CEO) of Bedford, NH, a management consulting firm specializing in Lean and Six Sigma. Terry is currently the APICS LeanSIG Chair and a certified Black Belt. This article is based on information from a new book, **Six Sigma for Small and Mid-Sized Organizations** *which is due out in the Fall. For additional information contact Terry at* burton@ceobreakthrough.com *or visit the website.*