Beyond Six Sigma

Now that so many organizations have climbed aboard the Six Sigma bandwagon, it's only natural to wonder what's next. The initiative remains the single best methodology available to close performance gaps, but when companies misappropriate or misdirect Six Sigma applications, they get short-term results with long-term baggage and can rapidly run into the wall of diminishing returns.

Yes, Six Sigma improves performance, but its long-term results seem to beg the question of what should come next. Many who have deployed and implemented Six Sigma say it's brilliant at solving chronic, complex and cross-functional problems, but returns on investments diminish after its initial application in target-rich environments. This article takes a closer look at the problem and its practical solution.

What's behind the Six Sigma slowdown?

In a business environment, change of any type or scale requires more energy up front to dislodge current processes and habits. When a company launches a Six Sigma initiative, the organization initially expends a great amount of energy in getting the initiative off the ground. If properly launched, it begins to show dramatic, quantifiable results in a very short period.

Within two years, however, as the immediate imperatives that prompted initial Six Sigma implementation dwindle, returns from the initiative begin to diminish for several reasons:

- Some high-ROI projects are completed; others with similar payback on investment aren't identified and placed into the pipeline.
- Champions are promoted out of full-time Six Sigma roles into leadership positions that reduce their time commitment to coaching and mentoring Black Belts.
- Experienced Black Belts transition into leadership and functional jobs as big-payoff project opportunities disappear and new people become Black Belts.
- Initial training by consultants is phased out, and the task of training new Black Belts falls on internal master Black Belts who have other responsibilities.
- The honeymoon phase draws to an end, and management is unsure how to reverse the downturn in Six Sigma returns.

Most companies enjoy such great returns on their initial Six Sigma investments that they become disillusioned when the rate of return drops to a lower—albeit significant—level for a sustained period. The prime opportunities have been identified and acted upon, and companies must either allow Six Sigma to run its natural course, with returns diminishing at a steady pace over time, or re-energize and reposition the initiative.

The life cycles of two deployments are illustrated on page 25. The first depicts the aforementioned phenomenon with its relationship between investment and return during a five-year period. A high degree of change force is applied in the beginning and returns mount quickly, but they begin to drop off at a fairly steep rate as the circumstances listed earlier take their toll.

The second graph shows how a Six Sigma investment is renewed and energized at certain points during its life cycle. Each investment drives superior returns by taking advantage of the existing infrastructure and cumulative knowledge base. Diminishing returns from individual efforts signal the company to redirect its business priorities, although it continues to use Six Sigma to achieve them. This restores the initiative and enables it to generate greater returns than it would have otherwise. The diagram depicts concentrated intervention with shaded boxes.

Exploring the boundaries of the popular change initiative

by Pete Robustelli

Thus, the answer to the question, "What's beyond Six Sigma?" isn't a new set of tools but rather a holistic management system that redirects the most powerful improvement methodology ever. To conclude that diminishing returns are caused by Six Sigma's ineffectiveness is to assume erroneously that no other factors critical to business success exist, and this simply isn't true. Diminishing returns don't occur because the tool is bad or worn out. They occur because companies struggle to refocus Six Sigma once the easy harvest has been reaped.

Renewing Six Sigma with a robust management system

When a company commits time and resources to a disciplined methodology such as Six Sigma, it must also develop a methodology to provide context, impetus and direction for change on an ongoing basis. In other words, organizations that get the most out of Six Sigma are those that have implemented a robust management system. With such a system in place, Six Sigma can be focused, refocused and directed in ways that optimize its value as a potent improvement tool.

The most effective way to maintain Six Sigma and the results it delivers is to fold it into an overall management system that identifies important problems as defined by critical business criteria. By doing this, improvements can be further enhanced with a broader set of problem-solving tools and personnel.

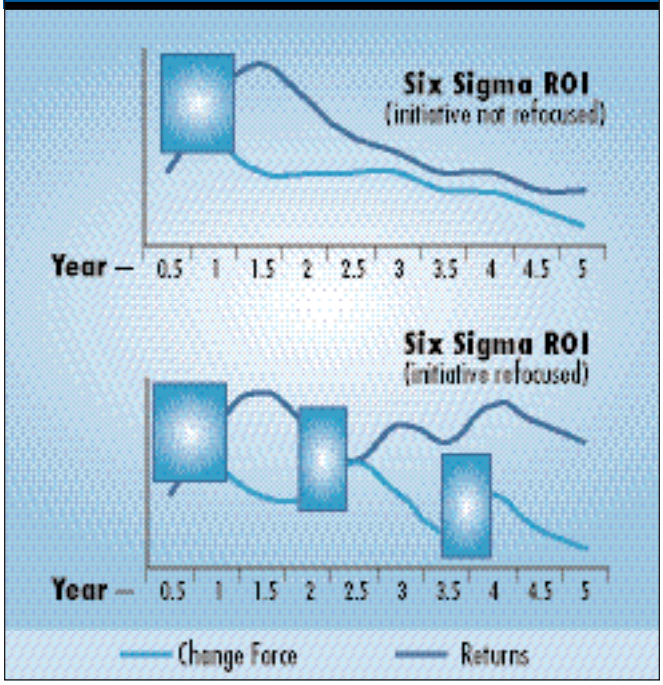
Such a disciplined management system has several key components:

- It's built upon business process management and leadership.
- It's constrained by desired business results.
- It focuses on creating value related to specific customer needs.

The system must be supported by the organization's people (i.e., human capital). These employees, in turn, need the enterprise to support their change efforts. (See the figure on page 26.) Ultimately, Six Sigma becomes one part of the overall system, which also leverages other tools and methods as needed.

An interdisciplinary business system supported by a Six Sigma program integrates other problem-solving methods and answers the question, "What's next?" Rather than throwing

Deployment Life Cycles



away what's good about Six Sigma, the system welds it to other critical business success variables. A robust management system optimizes Six Sigma's function within the larger goal of ongoing, disciplined, data-rich, results-driven and measurable change.

Six Sigma hasn't reached the end of its usefulness. It simply must be understood, directed and led within an overarching system for change. Just as a DMAIC project optimizes the individual parts of a process, product or service, an effective management system optimizes all aspects of the management function in a unified manner. It delineates a clear purpose and quantifiable output, either in a competitive position vis-à-vis the customer, as monetary and/or time savings, or all three.

Most companies don't have the benefit of an up-and-running management system that optimizes all of its people, processes, products, services, transactions, tools and technologies. This keeps them from implementing Six Sigma effectively and deriving a consistent benefit from it. Instead, the DMAIC process is turned loose on every possible process. Expensive Black Belts are deployed to fix lower-order problems. Six Sigma becomes the only "legitimate" mechanism of change, rendering all other tools inferior.

In such cases, the initiative is no more than a big hammer—the default choice for every nail in need of driving. No big-picture management schematic connects a diverse set of human, technological and process-related factors. Therefore, when the Six Sigma initiative falters, it's blamed because it alone stands as "the way we do business."

Instead of rushing to implement Six Sigma, a wise company begins with more fundamental management-system building blocks, such as process mapping, value analysis and basic improvement activities. Only then does it develop a more sophisticated process management system that helps it identify and improve chronic, hidden performance problems. Further, an introspective analysis and diagnosis of performance gaps, relative to customer requirements and the company's inherent capabilities, dictates its choice of methods and tools.

In this sense, Six Sigma isn't for every company every time. It's simply a problem-solving method we use under certain circumstances and in the face of certain challenges. It's not a tool to put into everyone's hands for carte blanche application. As with any complex endeavor, the systemic strategies and tactics determine how, when and in what combination the tools are employed.

Lacking a robust management system, companies too often pull out the big jackhammer to do everything—and consequently suffer collateral damage when Six Sigma proves to be too much force for the occasion.

Leading with customer-focused vision, values and strategies

If Six Sigma needs a goal—and it does—that goal is the customer. Sometimes your customers might not need or require six sigma quality; four sigma could provide them the quality they desire at a price they're willing to pay. Anything else to them would be overkill and a reason to take their business elsewhere.

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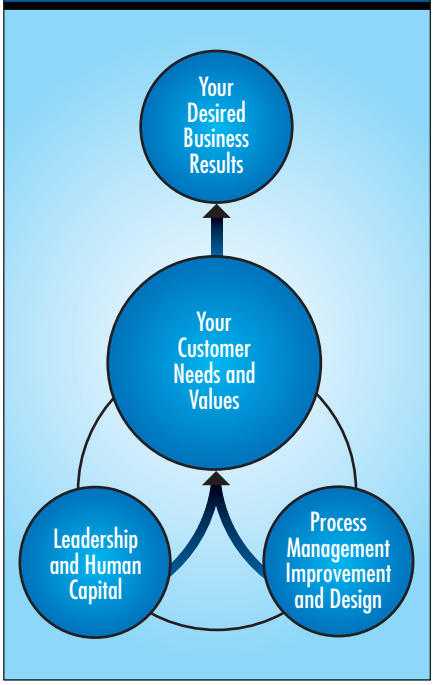
Although meeting the customer's needs is the goal, the organization defines the goal posts. That's because customers and businesses must interact in a way that produces value for each. Therefore, an effective management system has a mechanism for evaluating both customer and business requirements, including how the different requirements assist or constrain each other. This understanding leads directly to business strategies and objectives that avoid the risk of system suboptimization.

With a well-defined vision, mission and set of values, along with an optimized set of strategies and objectives, a company not only knows where it's going but how it's going to get there. And it certainly knows how to use, or not use, the Six Sigma tool.

Interdisciplinary Support



The immediate result of an effective management system is a set of measurable performance targets that cascades down through the organizational hierarchy and derives from defining and galvanizing the business in light of customer requirements.

At this point, the organization is in a position to decide which methods and tools it might need in order to realize its objectives: maybe Six Sigma, maybe lean enterprise, maybe quality function deployment—or maybe a combination of the three. The systematic approach to defining priorities might not require Six Sigma—not because the initiative is passé, but because it's suited only for certain jobs.

Six Sigma facelift: a case study

Here's an example based on a true customer case study: A large service provider implemented Six Sigma to carry out improvement projects. It gathered a group of executives and brainstormed a list of priority activities. The first few projects produced average savings of $200,000 each. A second round of projects was instituted; several produced major results, but most of them realized savings that were less than originally anticipated.

The company found it harder and harder to justify additional Six Sigma projects. People began to question its worth and value as well as its significant

personnel and time requirements. The company decided to step back and regroup.

It validated the corporate mission, vision and strategies. It analyzed market and customer information to determine strategic gaps. It established clear, quantifiable goals for closing these gaps. It launched a communications campaign to educate personnel on the mission, vision and goals. It began educating employees on the importance of understanding customer needs, both internally and externally. And it began a series of customer "discovery" interactions in relation to its products, services and processes to better understand what drove customer loyalty and buying habits.

After this, the company established various process management systems within the organization. An all-encompassing management system was deployed at the highest level; at the lowest level, control systems were set up to monitor everyday priority work processes.

Black Belt activities focused on the larger gaps identified by the management system and more complex problems that had cross-functional or cross-business-unit effects. Performance gaps were discovered throughout the organization, and they were closed using basic problem-solving and focused Six Sigma project activities.

The results were outstanding. Annualized direct bottom-line savings of more than $50 million were recorded in rapid order. Six Sigma worked because the company understood the importance of first establishing a management system, then gathering data and customer understanding, then identifying the proper grouping of tools and methods needed to fulfill its goals.

Six Sigma can't exist in a vacuum. Companies must take holistic, strategic approaches to fulfill their overall missions, and their executives must conduct themselves in a way that befits their calling as business leaders—not quality leaders or even Six Sigma leaders.

This means implementing a management system to plan and execute actions and designing that system to change with changing times. If a major problem-solving tool is needed, perhaps Six Sigma should be implemented, but maybe not. It all depends on what's best for the business, and what's best depends on its leaders and the system by which they live.

It's likely that people are writing off Six Sigma before its time. Maybe it's not dead at all, or even dying. Maybe it just needs to be put in its place.

About the author

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