Lean Six Sigma Transformation

A strategy for achieving and sustaining excellence

The current recession is prompting companies to rethink how they use their resources to deliver value for their customers. When deployed properly, Lean Six Sigma transformation proves to be a powerful approach to delivering short-term process efficiencies while also building longer lasting capability assets. It is a way to generate and sustain true competitive advantage on and beyond the factory floor.

Management is always challenged to rethink which activities are core and generate competitive advantage, and which are non-core and should be treated as commodities. The economic crisis makes this level of questioning a survival imperative. Optimizing strategic activities, delivering on customer and consumer expectations, and eliminating waste, stand as the best ways to remain successful now and to be stronger when the good times return.

An analysis of winners in past recessions confirms that companies that mobilize their people to eliminate waste—things customers will no longer pay for—are better able to resist the downturn and accumulate monetary and non-monetary assets that allow them to seize opportunities and gain market share during the recovery phase.

In post war Japan, for example, Toyota recovered by reinventing the way they designed and built cars. The success of the Toyota Production System (TPS) gave birth to a lean manufacturing “religion,” adopted by an array of manufacturing and service-oriented companies. During the 1990s, Motorola and General Electric reinvented Total Quality Management and had a hand in redefining what is now Six Sigma. Many companies in the United States and abroad have internal “black belt” teams to drive continuous improvement projects, eliminate variability and deliver what the customer expects.

In our experience, combining Lean and Six Sigma offers an advantage in performance, skills and sustainable results. Lean provides the platform and the spirit and sets the core principles—focus on value from the customer’s viewpoint, eliminate waste and pursue perfection. Six Sigma defines a precise problem solving process and puts hard data and measures at the center of each process step:1 as-is

The five stages of Six Sigma quality assurance are Define, Measure, Analyze, Improve and Control.
performance evaluation, root-cause discovery and evaluation. Six Sigma techniques are useful within the framework of a Lean program.

When properly executed, both Lean and Six Sigma prompt the cultural and skill changes necessary to achieve the next stage of performance.

Misconceptions about Lean and Six Sigma

Lean and Six Sigma became popular in manufacturing in the 1990s and later with service companies. Yet, many companies have not properly or fully embraced the concepts. Some firms adopt the “Lean” vocabulary but not the methodological grounds, skills or effort. Others confuse Lean with blind cost cutting, delivering short-term, bottom-line results but dangerously slashing core assets due to limited attention to value and the customer. A few companies established Six Sigma black belt teams that drifted over time from the original goal and began behaving as standalone organizations, defining their project charters in a closed loop and overanalyzing issues not business critical. These cases damaged the reputations of Lean and Six Sigma concepts.

Repairing Reputations

Lean Six Sigma programs can deliver more than an immediate cost reduction and increased value to customers. They can foster an enterprise transformation by developing virtuous behaviors at all levels of the organization and strengthening the management chain, particularly middle management. In our experience, companies with successful Lean Six Sigma programs follow a few simple rules:

Position the program at the executive level. Lean Six Sigma programs must address the CEO agenda. Often, Lean or Six Sigma projects focus on solving marginal topics and setting less ambitious targets. This is generally due to a misconception that Lean is about “continuous” and therefore “marginal” improvement. On the contrary, Lean Six Sigma programs provide the tools to transform processes and assets to deliver value to clients. Therefore, the CEO should send a clear signal that these projects are vital for the future and cannot fail.

Define scope and tools. Selecting the right Lean Six Sigma project requires breaking down strategic objectives into issues or along business units according to a main criteria: closing a significant performance gap on activities considered core. (For non-core activities, alternative approaches such as outsourcing or straight cost reduction methods can be applied.)

Succeed on a pilot before a full roll-out. The transformative nature of a Lean Six Sigma project will affect many other dimensions—including service level assumptions and objectives, processes, organization and structure, IT tools, measurement systems for performance management—and ultimately workers’ mindsets and behaviors. Such magnitude of change will have little chance of success if deployed all at once to the entire organization. Starting with a pilot will reduce disruption, be easier to manage, and serve as a proof of concept for the whole activity.

Start from the “eyes of the customer.” Lean and Six Sigma define value and “critical-to-quality” attributes as the starting points for eliminating waste and stabilizing output. These are generally the service levels expected from an activity. This initial step requires the Lean Six Sigma team to interact with the “client” (generally the internal marketing department) to understand what the customer expects from an activity, and jointly define key

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A Winning Strategy for TelCo

This telecom operator, we’ll call TelCo, embarked on an aggressive convergence strategy, providing its 30 million customers with a quadruple play—phone (fixed and mobile), Internet and TV. Selling and providing services for the new offerings, however, caused some headaches. The business was swamped with customer inquiries, from questions about how to use the products and billing to technical support. To improve productivity and protect margins, TelCo needed to realign its processes and skills, and do it quickly.

The company launched Lean Six Sigma programs across all customer-facing activities, from sales and customer care to network installation and maintenance. The programs were run by the Head of Transformation, who reported directly to the CEO. A core team of Lean Six Sigma experts designed and ran transformation streams across an organization of 40,000 employees.

TelCo ran three-month pilots for each activity with a target to improve productivity by a factor of 20 to 30 percent. Each pilot had 40 to 50 trained managers who acted as change agents and disseminated their know-how to their colleagues. The program was fully deployed within 18 months, reducing operating expenses by a magnitude of $140 million for each activity.
performance indicators (KPI) that will measure the value.

Quantify from a fact-based assessment. Once the pilot is selected, and the service level policy and measurement tools are in place, the reconfiguration process can begin. Most people recognize that activities can improve marginally. Managers and employees have been doing their jobs and numerous improvement initiatives have likely been deployed already. Therefore, a successful transformation hinges on the Lean Six Sigma team’s ability to demonstrate that a quantum leap in performance can be achieved. This can be accomplished with a fact-based assessment, usually based on measures, observations, and quantified proof of delays, non-value added reworks, and variability among teams and processes. Tools such as value-stream mapping, activity-based costing and benchmarking (external or internal) are useful to convince people that a significant gap exists, and that it can be closed.

For transactional activities, simple tools such as a team performance distribution analysis can help managers understand their team’s average performance, evaluate improvement ability and whether the solution will come from process work, management decision or HR activities (see figure 1).

Train by doing. Armed with a fact-based diagnosis of how much should be gained and where efforts should focus, the project can now be broken down into work-streams focused on specific areas and improvement levers. Each work-stream is executed by a “Kaizen” team, with operational managers providing insights while being coached by a Lean Six Sigma facilitator.

The problem solving process of Six Sigma and associated tools such as Fishbone and Ishikawa, 5 Whys, and correlation analysis, will help ensure the root-cause investigation is creative and robust. Levers to address the root causes of waste or variability fall into the six categories shown in figure 2. A systematic approach will ensure a long lasting result.

Evaluate and capitalize on the execution. Once Kaizen teams have determined corrective actions, the actions must be immediately tested on the pilot. The Kaizen members who came up with the change ideas should be in charge of the implementation in their areas of responsibility. Two categories of KPIs are defined and tracked: Implementation KPIs, measuring the execution of the new idea (process change, new tools), and Performance KPIs, measuring the effect of the change. Visualizing both categories of KPIs to the entire firm is crucial to creating momentum.

Conduct the viral transformation. The pilot phase ends with two distinct deliverables: actions with proven results and a team of managers, or “champions,” who have gone through the pilot, are fully aware of the roadblocks to change, and can train other managers (see figure 3 on the following page). Successful companies use their internal communications resources to advertise the success of their programs and promote their champions.

Where to Apply Lean Six Sigma
The Lean Enterprise Institute reports that more than 60 percent of companies in the industrial goods sector have formally adopted lean methods and tools, compared to just 30 percent of services companies. But the latter figure is growing rapidly. In fact, the most
publicized recent Lean success stories are from the U.S. healthcare industry and government agencies around the world that are deploying Lean principles. Even areas such as R&D and product and software development, which tend to resist the industrialization of their activities, are implement-