HOW RELEVANT ARE SIX SIGMA AND LEAN TODAY?

Continuous Improvement Strategy

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Case Study

During the presidential elections of 2012 the Republican Party was going through the procedure of identifying the challenger to President Obama. However, one very interesting fact that probably did not get as much coverage in the popular press as it deserved was the pledge that most of the Republican contenders took to reduce wastes in how the Government operates and reduce the national debt by applying the principles of Lean Six Sigma.

This movement was started by Mike George, a Texas-born business consultant who founded Strong America Now and believes in Lean Six Sigma as the best methodology that can help the US Government systematically identify and eliminate wasteful spending and thereby bring Government spending under control without having to cut any programs or raising taxes. Strong America Now estimated that up to $500 billion in savings could be achieved annually by identifying and reducing 25 percent of wasteful Government spending. In a report that appeared in TheGazette.com, George said "[T]the effort likely would mean a reduction in force because so much Government spending is personnel costs associated with people doing tasks that likely are not needed to conduct an efficient, streamlined operation that focuses on the best way to achieve desired outcomes."

As of January 2012, five of the seven republican contenders remaining in the running have already signed a pledge to utilize Lean Six Sigma methodology if they were elected to the White House. This is in addition to two pledged Republican candidates who pulled out of the race in late 2011.

It is important to mention here that the US Government already has a very successful Six Sigma program running within the Department of Defense which is managed by the Lean Six Sigma Program Office. In a report published on September 2008, the program office highlights a few successful projects that were completed including one that earned the Shingo Prize for Excellence in Manufacturing (Silver Medallion). This project called "Heavy Expanded Mobility Tactical Truck (HEMTT)" resulted in reduction of cycle time by 75 percent, reduction in rework by 51 percent and exceeded delivery requirements of assets. Another project that was a recipient of the Malcolm Baldridge National Quality Award resulted in cost benefit/avoidance of several millions of dollars over six years!

The very fact that most of the presidential contenders of the largest economy in the world are proposing Lean Six Sigma as a methodology to solve the biggest problem facing the American economy in decades combined with the fact that Lean Six Sigma is already widely applied in different governmental departments shows the power of the methodology. There can probably be no stronger statement on the future of Lean Six Sigma as an extremely proven continuous improvement tool!

Lean and Six Sigma Today

Is Six Sigma and Lean still relevant today and will it be in the future? Or is continuous improvement just a fad and does not really help companies improve their operations and processes? In order to get some additional insight that might help us answer the first question, we wanted to find out whether continuous improvement is still considered important for businesses and what kind of skill sets companies are looking for to drive continuous improvement projects. For this study we decided to look at two countries–USA and India.

There are a couple of reasons behind selecting these two countries. First, we are pretty familiar with the corporate culture and work ethics having lived and worked in both the countries. Second, we were trying to find a combination of two countries–one country that has moved far along the path of deploying Six Sigma and Lean in most areas and at the same time has been experiencing low GDP growth versus another country where the concepts are still being tentatively tried out and are embraced by a relatively small minority plus has been one of the fastest growing economies in the last few years. In May 2011 a single search using the keywords “Six Sigma” in the over $100,000 job site Ladders.com yielded 800 results; the keyword “Lean” turned up 600 jobs. Things have not changed much since then.

Recently there have been some questions around how effective Six Sigma and Lean approaches are as continuous improvement methodology. The most common and high profile examples that critics of Lean Six Sigma bring up are of 3M and Home Depot. In both companies Lean Six Sigma was launched with tremendous visibility but ultimately had to be rolled back as the methodology was apparently not right for the company. While researching for this topic we looked at a few lists of companies excelling in different areas, instead of just focusing on revenue growth, to see if we could find enough evidence of the top companies using Lean, Six Sigma, or Lean Six Sigma as a continuous improvement methodology. First we looked at Gartner’s list of Top Supply Chain Companies for 2011. Apple is an exception, as we found no information in the public domain of a Lean Six Sigma program existing within Apple. However, many operations managers and supplier quality leads within Apple have Lean Six Sigma backgrounds and the authors believe the basic concepts of a Lean Six Sigma methodology are being applied at Apple to some degree within the supply chain / quality functions.

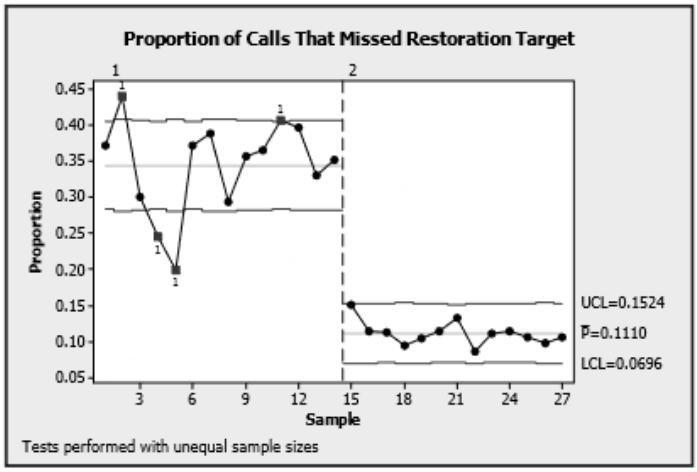
In our opinion, one of the reason we still see a lot of skeptics is because of the belief that Lean Six Sigma is just a cost cutting tool; however, that cannot be further from the truth. Lean Six Sigma when properly applied, increases customer and employee satisfaction and have “soft cost” benefits that business leaders don’t always see or want to see. If cost cutting becomes the end goal for business and the only reason why Six Sigma or Lean is deployed, then chances are these methodologies are going to become irrelevant. Unfortunately too many business leaders’ exposure to quality evolution has been limited to experiencing Six Sigma and Lean being used as tools to cut costs. This belief points to the fact that a significant gap in knowledge exists at the senior leadership level about Six Sigma.

Business Problem

For a minute let us keep Six Sigma, Lean, BPM or any other continuous improvement methodology aside and focus on a real life business problem faced by a company that needed to be resolved and the approach taken to address it. A leading global IT services company was missing customer Service Level Agreements (SLAs) related to restoration of critical outages that were impacting the customers.

This was causing significant customer dissatisfaction, led to missed Service Level Agreement penalties, and was a leading cause behind customers leaving the company. In order to address this problem, a team of cross functional subject matter experts was formed, led by a dedicated resource to identify the root causes behind the missed SLAs. The first thing the team did was to get everyone together in a room for a two day session to set the scope, charter, and map the end to end process from when a customer experiences an outage to when the outage gets restored. Once the mapping was done, the team could easily identify redundant process steps that were either unnecessary or not optimized.

The team also figured out two major issues right upfront–there was no uniform definition around what constituted the correct SLA (start point and end point for measuring the SLA), as well as a lack of a measurement system to track the SLA. The next step for the team was to baseline the existing process metrics and use the data to carry out further analysis to identify the root causes behind the missed SLAs. After the root causes were validated using a combination of graphs, statistical analysis, and team sessions the team went ahead and identified and implemented solutions. Once the solutions started showing the improvements, the team then updated all processes, policies, procedure documents, and established a metric that is reviewed by senior management at least monthly. This led to a decrease in SLA violations by 70 percent. The chart below shows data for the two stages of the project: Stage 1 was before the project was launched, and Stage 2 is after the completion of the project. The Y axis measures the proportion of customer outages that missed the restoration target and the X axis denotes the months the data was pulled.



Is this an approach that the company would probably like to take in future again to solve business problems? The answer hopefully for most readers would be an emphatic yes! And if the answer is yes, Six Sigma, Lean, BPM or any other such structured improvement methodology for driving process improvement will always remain relevant, in future they might be called by a different name though! Now let's go back to the example of the IT services company that was missing SLAs related to timely restoration of critical customer impacting outages. What the team actually applied to address the issue was a combination of Lean and Six Sigma tools and methodology.

The team started by finalizing the charter (define phase tool from Six Sigma), did a Value Stream Mapping to identify wastes (Lean tool), established metrics and measurement system (measure phase tool from Six Sigma), analyzed data to identify root causes and implemented solution (analyze and improve phase tools from Six Sigma as well as Lean tools to identify opportunities). Once the solutions were implemented and working, the team ensured that the metric and measurement was added to a top level corporate dashboard and updated the documents and processes (control phase of Six Sigma). So, as we can see from this example, any process improvement can and will continue in the future to use elements of the established process improvement framework that have been tried and proven, and these approaches will always remain relevant.

Why Do Companies Need Process Improvement Strategies?

With the current challenging economic conditions we have also seen most global organizations have to improve their productivity and get the same work done with fewer resources, compared to before 2008. In addition companies are automating or off-shoring many of their processes. In these situations it becomes even more imperative for companies to have a strong process improvement methodology in place that can help leadership make the right decisions by highlighting wastes and non-value added activities, reducing process variation, and standardizing processes that can be relatively easily automated or off-shored.

Our belief is that the progress we have seen in the continuous improvement world is here to stay and the basic concepts of Lean and Six Sigma, as well as other methodologies that have been discussed, will be very much in demand. Our recommendation to business leaders struggling to meet customer demand would be to go down the path of deploying a structured continuous improvement program to help identify what the customer's need and be able to align their internal business processes around that need.

Most of the process improvement models including ITIL (used extensively in the IT service industry), SCOR and CMMI actually support using Six Sigma and Lean as process improvement tools. The approach and tools behind Six Sigma and Lean will remain relevant in the future. However, it is important to note that generally the skill set requirement around Lean, Six Sigma, or BPM has changed and are now complementary to other business competencies such as business management, project management, change management and so forth.

The reason behind this is that Six Sigma deployment has evolved from the early stages when it was a new concept and the ones who were trained early became specialists who were sought for their knowledge. Since then pure Six Sigma or Lean knowledge has become more of a commodity and additional skills are expected from a continuous improvement practitioner in addition to a Lean or Six Sigma certification to successfully meet and deliver on business expectations.