Lean Six Sigma Exploring Future Potential and Challenges

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Abstract: Understanding future potential and challenges of lean six sigma will allow industries and organization for better improvements. This paper examines evolution, key differences, list of potential challenges and key opportunities influencing successful lean six sigma implementations. The combination of six sigma and lean six sigma is most widely accepted methodology and this raises a question: Where does LSS go from here? This paper therefore explores the next steps of LSS and its impact on industries and organization.

Keywords: Lean, Six Sigma, Implementations, Future potential

1. Introduction

LSS is an advanced business strategy and methodology that increases process performances, enhances customer satisfaction and develops leadership skills through DMAIC approach. LSS has acquired wider acceptance as an improvement strategy in a range of industries and sectors. LSS has become one of the most popular approaches among industries all over the world, covering manufacturing, military, government, health care, IT, education and service.

2. Evolution of the Lean Six Sigma Methodology

LSS has evolved during a journey that can be traced back well over a century. Post WWII, Six Sigma and total quality management (TQM) program originated from methodologies and techniques advocated by Americans, Dr. Deming and Dr. Juran and initially adopted by Japanese after World War II. In 1980’s, Just-in-time (JIT) was originated and developed in Japan by Toyota. In mid-late 1980’s, Motorola started a program modeled after Deming price and TQM methodologies and called it Six sigma. In 1990’s, other companies followed, including General Electric, IBM, Texas Instruments, Allied Signals, Kodak and US GAO. In mid 90’s, Six Sigma became popular. Lean manufacturing was introduced in 1990’s whose management philosophy is derived from Toyota Production System (TPS). In 2000’s, American companies increasing embraced lean tools and techniques as lean focused on process thorough and efficiencies.

3. Key Difference Between Lean and Six Sigma

<table>
<thead>
<tr>
<th>Basis For Comparison</th>
<th>Lean</th>
<th>Six Sigma</th>
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<tbody>
<tr>
<td>Meaning</td>
<td>A methodical way of elimination of waste, in the production system is known as Lean.</td>
<td>Six Sigma is a process of maintaining the desired quality in the products and processes by taking necessary steps.</td>
</tr>
<tr>
<td>Propounded in</td>
<td>1990’s</td>
<td>1980’s</td>
</tr>
<tr>
<td>Theme</td>
<td>Waste removal</td>
<td>Removal of variability</td>
</tr>
</tbody>
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4. List of Potential Challenges in Organization

<table>
<thead>
<tr>
<th>Challenges Consistent With Private Sector</th>
<th>Challenges Unique To The Private Sector</th>
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<tbody>
<tr>
<td>• Inconsistent leadership motivation</td>
<td>• Unique human resource practices</td>
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<tr>
<td>• Management competency in process improvement</td>
<td>• The election cycle and term limits</td>
</tr>
<tr>
<td>• Culture that considers time devoted to improvement less valuable than time devoted to “real work”</td>
<td>• Attitude of employees regarding stability and job security</td>
</tr>
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<td>• Union rules and relations</td>
<td>• Legislative control</td>
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<tr>
<td>• Technical skill of employees</td>
<td>• Competing special</td>
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<td></td>
<td>• Interest Revenue not directly linked to value provided</td>
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Several additional challenges particularly unique to the public sector include distinctive human resource practices; the election cycle and term limits; stability and job security concerns; legislative controls; and competing special

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555
interests. Additionally, revenue is typically not directly linked to value, since most of the funding of services derives from tax revenue paid by citizens, who traditionally have low expectations, making them relatively apathetic and therefore not likely to routinely complain or offer suggestions for improvement.

5. Key Opportunities

LSS is considered as one of the key initiatives to improve management processes. The future of Lean Six Sigma is bright and includes the following trends:

Continued Use of Lean Techniques in Conjunction with Six Sigma

Simply stated, there are an endless amount of processes, situations, and process improvement project opportunities facing business leaders. Every situation is different and there is no “one size fits all” approach that will work every time.

A Six Sigma practitioner, such as a Green Belt or Black Belt, needs to use the tools and techniques which are appropriate for that particular situation. Thus, focusing on just Lean concepts or sticking with traditional Six Sigma techniques is a mistake. The Six Sigma project leader should utilize both sets of tools; use the right tool for the job at hand.

Smaller Projects and Daily Usage of Lean Six Sigma Techniques

The cornerstone of improving processes is a solid three to six-month project following the DMAIC (Define, Measure, Analyze, Improve, and Control) roadmap; this will not change.

However, including smaller “rapid improvement events” into the mix of projects will help Lean Six Sigma and process thinking to become part of daily operations. Not every process improvement effort needs to be a huge project. Making process improvement efforts simple and accessible to everyone will help transform company thinking.

6. Conclusion

LSS has been developed and utilized in various sectors across globe due to its process performances, customer satisfaction and DMAIC approach. Due it’s improvement strategy, it has it’s unique place in most of industries in future. We believe continuous improvement will continue to evolve and become more important in all sectors. We can be certain however about the improving technologies will continue to play an increasing part of the LSS evolution.

References
