



EPICENTRAL

A Newsletter from Epicenter Development Group
highlighting ideas that improve organizations

Welcome to Epicenter Development Group's newsletter, EPICentral. The purpose of this newsletter is to highlight fundamental ideas that have helped organizations develop and maintain great manufacturing and service operations. We hope that you find our EPICentral newsletter helpful, and we would welcome your comments on its content.

Lean Six Sigma - What is it??

Most of you have heard of Lean, and many have heard of Six Sigma. These philosophies may even be part of your company's management plan. But what exactly does it mean? We will define both Lean and Six Sigma and talk about how they can work together to improve your company's product, service and bottom line.

Defining Lean

What is Lean? - Lean is a manufacturing philosophy that was derived from Toyota Production System (TPS); Toyota's program improved the value to their customers and their bottom line by reducing waste.

Types of Waste - Toyota identified three types of waste: muda (non-value added work), muri (overburdening the system), and mura (uneven production levels). These are further broken down into the seven wastes:

1. Transportation - moving things that are not needed for production
2. Inventory - everything: finished goods, raw materials, work in process
3. Motion - any movement made (people, equipment, materials) more than necessary for production
4. Waiting - people waiting for machines or materials, materials waiting for people or machines, etc.
5. Overproduction - producing more than you can use or sell
6. Over Processing - poorly designed processes that use more steps than may be required
7. Defects - the cost of inspection, scrap and rework

TPS has been very successful as Toyota is known for their value and quality. But Lean is more than a set of rules or tools; it is a mindset, a company culture. By simply trying to give their customers more value, Toyota has developed a world-class company that has become the benchmark of manufacturing centers throughout the world. Lean has also been successfully applied outside of manufacturing, most notably in healthcare.

Defining Six Sigma

What is Six Sigma? - Six Sigma is a management strategy developed by Motorola for quality improvement with a goal of limiting defects to 3.4 per million parts. In non-manufacturing industries, this has been translated into 3.4 million defects per opportunity. The reduction in defects translates to a drop in production costs by reducing rework and lowering inspection costs.

Six Sigma's inventor, Motorola, built it on earlier methodologies such as Total Quality Management, quality control, and Zero Defects. These were based on the work of Industrial Engineering pioneers including Shewhart, Deming, Juran Crosby, Ishikawa, and Taguchi. The similarities between Six Sigma and its predecessors are:

- Reduction in variation in production processes
- Processes can be measured and, therefore, analyzed, controlled, and improved, and
- A change in corporate culture is the most important part of sustained quality improvement.

Six Sigma also has several features that set it apart from the previous quality related management strategies. Those are:

- A clear focus on financial returns from Six Sigma projects,
- An emphasis on leadership who are supportive and passionate about process improvement,
- Creating a system to identify and train champions, master black belts, black belts, green belts, etc. to implement and lead improvement projects, and
- Commitment to data-based decision making.



How They Fit Together

While the two methodologies may initially seem different, they have the same goal; make the customer happy and reduce costs doing it. Lean is a great place to start. For example, holding Kaizen events will allow you to identify where changes need to be made and implementing 5-S will clean up workstations and highlight best practices. Once your processes are stable and best practices are in place, it's time to bring in Six Sigma and reduce defects. These steps topped off with a robust continuous improvement program will guide your company to satisfied customers and a better bottom line.

Considerations

- The most important step in any improvement project is to develop work standards if you don't have them already.
- No Lean or Six Sigma project will be truly successful unless the company culture makes it a priority from the top down.
- Continuous improvement is not an option! Many improvement projects that fail do so because once the initial project has been completed, no plans are made for upkeep of the changes

Next Steps

If you would like more information on this topic or other similar types of tools, please contact Bill Proctor with your request at wproctor@epicentergroup.com or 216-702-0952. You can also find previous issues of EPICentral at [Newsletters](#).

Mr. Proctor also speaks on a variety of problem-solving and system design topics that can help companies significantly increase the success and profitability of their businesses. If you are interested in having Bill speak at one of your upcoming meetings/events or would like more information on any of the speaking topics, please visit [Speaker Services](#) or you can email sales@epicentergroup.com.

Epicenter Development Group is a unique consulting firm that seamlessly integrates the disciplines of Systems Engineering and Organizational Analysis & Development to create practical design solutions to your toughest challenges. It is on the cutting edge of problem-solving solutions and the creator of a unique process called GreenRoom Engineering. This process adds greater value and cost savings for clients as compared to traditional engineering methods.

William Proctor, Epicenter's founder and president, has provided services around the country to more than 100 companies consisting of a variety of organizations; and Epicenter continues to grow as a resource for firms of all sizes.

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