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CONTINUOUS PROCESS IMPROVEMENT IN SUPPLY CHAIN

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In the constantly changing business world of today where companies frequently have to face new regulations, confront new competition, and meet constant customers changing demands, it becomes vital for any organization to have supply chain processes that are not only aligned to the company's strategy, but also that are efficient, flexible enough to act quickly in response to changes, and offer full visibility

Continuous process improvement is a group of activities initiated to help us analyze our processes and identify the weak elements so we can improve on these weak areas thus optimizing the end-to-end supply chain process. It is an ongoing practice and should always be followed up with the analysis of tangible areas of improvement. When implemented successfully, the results can be measured in the enhancement of product quality, customer satisfaction, customer loyalty, increased productivity, development of the skills of employees, efficiency and increased profit resulting in higher and faster return on investment.

Continuous process improvement always involves a systematic approach which follows a specific methodology. Which approach and methodology is used depends largely on the company needs and their supply chain team expertise and knowledge.

There are different approaches that can be considered. I will briefly discuss the three which I consider to be the most powerful and effective, **Six Sigma**, **Lean**, and **Goldratt's Theory of Constraints**.

As per Edwards Deming, **"If you can't describe what you are doing as a process, you don't know what you're doing."** As a manager, once you understand your process, then your job is to find ways to make that process even better. Once you have a full grasp of your entire process, applying Six Sigma or Lean or Theory of Constraints techniques will undoubtedly help you drive improvements in your own supply chain. Let's start with Six Sigma.

Six Sigma is a math-based approach that uses facts and data to reduce the variations in a process. It is a set of management techniques intended to improve business processes by reducing the probability that an error or defect occurs. The goal of Six Sigma is to make every process repeatable, to ensure it works the same way each time, that is, the results are the same each time. When a process is repeatable, it is considered a stable process. A process fully under control. When you use Six Sigma to improve a process, you follow a five-step approach called **DMAIC** (**D**efine, **M**easure, **A**nalyze, **I**mprove, and **C**ontrol).

Lean is a management philosophy first developed by Toyota. When you hear about the Toyota Production System you are hearing about Lean philosophy. Simply put, lean means creating more value for customers with fewer resources. A lean organization focuses its key processes to increase value for the customer. **Its goal is to provide perfect value to the customer through a process that has zero waste**. Lean aims to ensure that everything flows smoothly in a supply chain. There are three things that interfere with flow: Mura, Muri, and Muda. **Mura** is variation that leads to interruptions in flow, which makes a supply chain less efficient. In other words, it creates waste. **Muri** means overburden. When you use equipment too hard, it's more likely to break down, so muri causes waste too. And **Muda** is waste itself, the stuff that costs money and adds no value, like waiting and overproduction, or unnecessary transportation.

Lean states there are eight types of waste:

1. Over production
2. Transportation

3. Motion
4. Inventory
5. Repairs / rejects
6. Waiting
7. Over processing
8. Employee potential

The benefit of a process improvement can usually be measured as a reduction in one or more of these eight wastes. So, the goal of Lean is to create smooth, balanced flow in a supply chain by eliminating Mura, Muri, and Muda.

The final process improvement philosophy is **Goldratt's Theory of Constraints**. The Theory of Constraints is a methodology for identifying the most important limiting factor, the constraint, that stands in the way of achieving a goal and then improve that constraint until it is no longer the limiting factor.

In manufacturing, the constraint is often referred to as a bottleneck. In Goldratt's book **The Goa**l, he describes a factory that is very inefficient and explains how they improve by always focusing on the slowest step in their process, **their constraint**. They achieve the goal of making the factory run smoothly by always improving the constraint, because that's the one step that's slowing all other processes.

The Theory of Constraints provides a powerful set of tools for helping to achieve its goal, including:

- **The Five Focusing Steps** (a methodology for identifying and eliminating constraints)
- **The Thinking Processes** (tools for analyzing and resolving problems)
- **Throughput Accounting** (a method for measuring performance and guiding management decisions)

Always keep in mind that the way you make process improvements is through a series of projects designed to attack every single weakness. In any manufacturing or distribution process, your objective is to have a smooth, steady, efficient flow.

Whatever methodology you decide to apply, Six Sigma, Lean, or Theory of Constraints, if your team is well trained in the methodology to be used and the principles are properly applied, processes will improve and you will reduce or eliminate errors in your supply chain operations and deliver better results for your business and for your customers.

SCM Consulting Services can provide the expertise, guidance, and solutions to perform diagnostics activities and implement adequate processes to help your organization produce major profits and savings.

Find out how we can help you by contacting us today!

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