Developing Lean Supply Chains

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A study by a research team from Accenture, INSEAD and Stanford University showed a statistical correlation between companies with a successful supply chain strategy and significant financial success. What really is a lean supply chain and how do you develop one? Lean supply chains have been approached from many angles. Sometimes, from a logistics and transportation or the "planes, trains and automobiles perspective": how do you keep goods and services flowing in a smooth, uninterrupted and cost-effective fashion from suppliers to customer firms to end customers? Another is the buckets of inventory perspective: how do you keep minimal, but sufficient inventory in the supply chain pipeline in order to provide good service levels without disruptions? A third approach is lean procurement: how can procurement scale and improve its processes to minimize transactions, reduce total cost, and work with the best possible suppliers who meet its requirements? Another approach is adopting lean within both customer and supplier firms: how can each business work to eliminate waste while adding value to its customers?

What is a Lean Supply Chain?

All of these approaches are valid. But given that most firms have limited resources and bandwidth, what basic steps can firms take to develop a lean supply chain? A lean supply chain needs to be developed, as it will not evolve into leanness by itself or by doing just one thing well. A lean supply chain is a dynamic ecosystem comprised of processes, products and firms working together smoothly to deliver products and services and adding value to the entire network as they meet customer requirements in a cost-effective manner. Developing a lean supply chain helps firms to leverage their own lean process far beyond what they can do alone. However, lean is too often viewed as the domain of the manufacturing floor. While executives have become aware that lean principles and practices can be applied beyond the factory to the rest of the firm's processes as well as extended to the supply chain, all but best-in-class firms have achieved success in lean supply chain development. It requires a proactive approach, a balancing act and importantly, communications within and among customer and supplier firms. Rather than attacking the symptoms, firms must look at the causes and drivers of waste and non-value added activities and processes,. Too much focus in one area can sub-optimize another part of the

supply chain. For example, working to reduce inventory alone without identifying its root causes can increase inventory somewhere else in the supply chain ecosystem including in your own firm.

Uncovering the Hidden Cost Drivers

The wastes that are part of lean thinking are well-documented, i.e., anything that doesn't add value to the customer or that a customer would not be willing to pay for. The classic seven wastes in lean include: unnecessary transport, inventory, wasted motion, waiting, overproduction, overprocessing and producing defective products/services. How does waste pertain to the supply chain?

Much of supply chain waste and cost are attributable to business practices and processes at both customers and their suppliers. For example, a customer firm's frequent schedule changes may unintentionally cause a sequence of events that increase waste in the supply chain. Frequent schedule and order changes, particularly less than lead time changes, may compel a supplier to carry excess inventory, cause shortages and increase lead times as the supplier scrambles to cope. The effects can become magnified and create a self-induced volatility. Schedule and order changes can increase overall cycle times at both customer and supplier, with the customer ordering earlier because of increased purchased-part lead times, while continually making changes mid-cycle and keeping just-in-case inventory of its own. The situation can snowball into shortages, expediting and increasingly longer lead times. Supplier quality problems can create other cost drivers ranging from rework, shortages, and expediting both at customers and suppliers, as well as warranty returns, customer complaints, increased volume at call centers and loss of market share.

It's All about the Relationship

Some of the hidden cost drivers in the supply chain are relatively easy to uncover, measure and address by adopting classic lean approaches. However, many supply chain problems begin and end with the customer-supplier relationship. The extent to which critical issues, wastes and cost drivers can be identified and mutually addressed depends heavily on the strength of the customer-supplier relationship. Developing good business relationships with key and critical suppliers can help in areas that are often weak, for example by:

- Developing common and simple communications
- Developing a common understanding of one another's needs
- Sharing business strategies in order to develop in the same direction
- Understand and overcome differences in quality systems and IT systems
- Mutual involvement in innovation and product design

To identify hidden cost drivers and waste, you will need to apply lean thinking and lean principles and practices to your own firm and to work with key suppliers to adopt lean as well. Each firm needs to look at not only what it can do to add value to customers and eliminate wastes and cost drivers within its own organizations as well as its internal processes and practices that create waste and cost at its customers and suppliers. Often customers are unaware of the extent that their business processes and practices, while seemingly cost-effective within their own four walls, create and multiply waste and cost at the supplier and will come back to bite them in the form of higher costs, service failures, quality problems and customer complaints.

Getting Started

Viewing the supply chain from a systems perspective in addition to focusing on internal issues of one firm is needed. Begin by collaboratively creating a high-level extended enterprise value stream map, including your firm and key suppliers.

Often the "white spaces" or interactions and relationships between firms are the least visible and least addressed yet have great potential for harboring hidden cost drivers. Also be certain take baseline performance measurements so that you can demonstrate ROI as progress is made.

The following graphic illustrates some simple steps to get started: