

Creating the Lean Supply Chain



Lean is an approach to improving businesses that focuses on the elimination of activities that add 'no value' to customers, normally in a commercial setting indicated by whether or not the customer would be prepared to pay for the activity. The traditional approach is to understand the end to end process within an organisation, what is called the Value Stream, and through this to identify the activities that can be eliminated, reduced in size or impact or combined to gain efficiencies. Extending the value stream out from a single organisation to encompass the whole supply chain gives us the concept of a 'Lean Supply Chain'

that spans the 'Big 5' elements that define a true end to end supply chain, namely; Design, Procurement, Manufacturing, Transportation and Warehousing.

Lean in the 'Big 5'

Whilst Lean has been applied across supply chains for many years, it is most closely associated with its application in manufacturing and indeed many people are so used to hearing the term 'Lean Manufacturing' that they forget that without the extension into the supply chain products would at best simply sit at the end of production lines and at worst not be possible as no raw materials would be available to start the manufacturing process. The Lean Supply Chain is therefore about applying Lean throughout the 'Big 4' as described below;

Lean in Design

Lean in the design area is about collaborative design teams that will often involve specialists from other organisations who provide technical input not available to a single organisational design team. It will also encompass designing products that can be easily sourced and that minimises part count. For some industries it will also include design activities that lead to easy recycling or minimum energy usage. Lean in Design leads to reduced product costs, shorter product development times, easier supply and recycling and lower energy and production costs. The design phase 'fixes in' up to 90% of the overall cost of a product and therefore has a major impact on the long-term financial performance of the whole Supply Chain.

Lean in Procurement

It is during the procurement phase that a Lean Supply Chain comes alive. Lean Procurement is concerned with strategically important activities like rationalising the supplier base so that you have time to form meaningful relationships with suppliers, as well as changes designed to reduce the time and cost involved in

placing orders and introducing flexibility in supply so that manufacturing processes are neither starved nor flooded with stock. Procurement is a two way processes involving both suppliers and customers, and making it easier for communication to occur both ways and the selective introduction of technology to improve both ordering and the introduction of changes reduces costs and increases the flexibility of the whole supply chain.

Lean in Procurement leads to reduced purchasing costs, greater flexibility and fewer stock 'emergencies', meaning that the rest of the supply chain is 'enabled' to go Lean.

Lean in Manufacturing

As mentioned, Lean in Manufacturing is extremely common. What is less common is that consideration that Lean Manufacturing does not just apply to 'factories' but also needs to be applied in areas such as production engineering and planning. Lean applied in Manufacturing has a major impact on the overall lead-time of the whole supply chain as well as impacting product costs and quality positively.

Lean in Warehousing

The Lean concepts applicable to the warehouse cover reducing stock levels, increasing pick rates and accuracy and reducing 'damage', whether this is to staff or to products. The effective introduction of Lean in the Warehouse will encompass such concepts as reducing movement distances and handling activities, eliminating delays in unloading and loading and focusing on delivering parts OTIF (On Time, In Full).

Lean Warehouses tend to have higher pick-rates, lower returns and more motivated staff.

Lean in Transportation

Counter-intuitively, efforts to improve customer service can have a major impact on the quality of shipping decisions. Failure to combine orders, multiple shipping channels and a tendency toward expensive 'last minute' delivery options are symptoms of poor communication between manufacturing and transportation and inefficiency in the transportation process.

The last of the 'Big 5', Lean in Transportation, is about introducing concepts such as combined multi-stop loads, cross-docking, right sizing equipment (and packaging solutions) and developing relationships with core carriers to reduce costs and improve delivery performance.

Challenges in the Lean Supply Chain

The first and most obvious problem that people face when attempting to make improvements across an entire supply chain is a lack of robust professional

relationships with suppliers and customers and chaotic and undefined processes that drive the wrong behaviours in every one of the 'Big 5' areas. This is often compounded by a history of adversarial management styles that have created a 'supply chain culture' that resists change, doesn't allow for open discussions and prevents innovation.

Overcoming these challenges is not easy. This is so important that it needs to be said again. Overcoming these challenges is not easy. There is no such concept as a quick fix or a magic wand, instead we propose that there are seven elements to a Lean Supply Chain that build up over time to deliver improved performance, reduced costs and greater flexibility for all organisations involved.

Seven Lean Supply Chain Elements

Remain focused on the voice of the ultimate customer and what they would say was 'value adding' and eliminate everything else

Understand the true end to end supply chain using Value Stream Mapping

Create a supply chain that flows with activities being triggered only when required

Design processes to be able to respond to volatility

Introduce a culture of continuous improvement that is based on measures that drive the right behaviours, openness and collaboration

Find the suppliers who you can work with, and change as many of the rest as you can

Build the capability of your team and those of your supply partners to enable them to understand how to get the benefits of a Lean Supply Chain

How the Institute of Operations Management can help

The Institute of Operations Management, in partnership with both Amnis and Unipart, provide a wide range of training and support options to help you develop a Lean Supply Chain. Examples of the workshops we run that will help you benefit from the Seven Elements of a Lean Supply Chain include;

Accelerated Lean Skills Programme	This three day programme takes participants from beginner to 'Green Belt' in Lean. Participants are required to produce a short post-training project to gain accreditation.	Next Date?
Developing a Culture of	This one day	Next Date?

Continuous Improvement	introductory programme is designed to introduce participants to the things that need to be done to affect the climate of an organisation and entire supply chain to develop better relationships and a culture that supports a Lean Supply Chain.	
Unipart Workshop?		
Unipart Workshop?		
Value Stream Mapping	Available as a one day overview or two day intensive practitioner programme this introduces participants to the practical aspects of mapping pathways, processes and entire supply chains.	