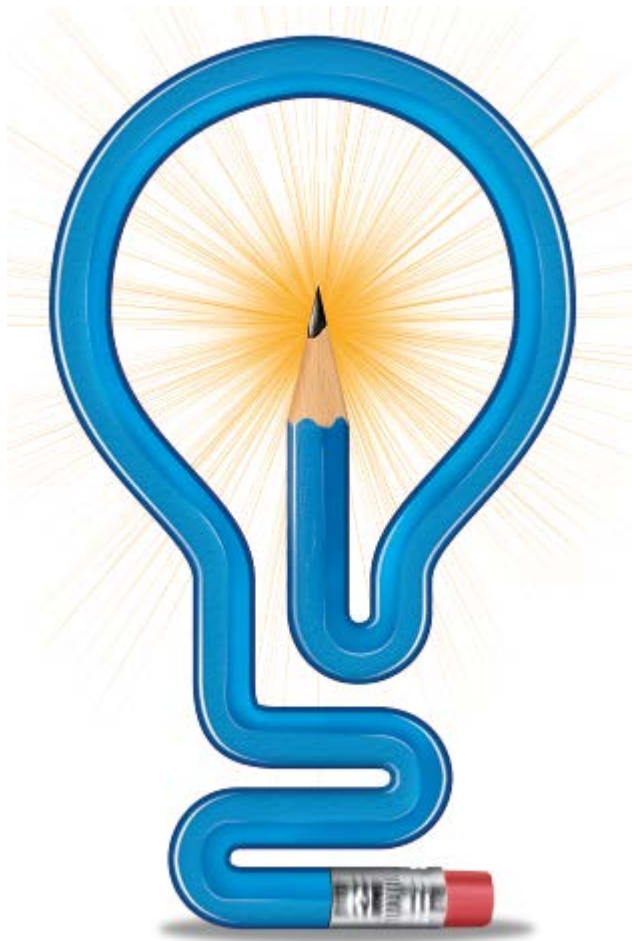




White paper
**Lean in Supply Chain
Management**

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Lean in Supply Chain Management

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Need for JIT Manufacturing

The modern mass producing industries are not much older than a century, as its genesis came from the invention of motor car by Henry Ford in 1906. There are two concepts that made complex gadget manufacturing possible; one is the interchangeability and the second is sub-contracting of parts manufacturing. It is prudent to get the parts manufactured from vendors rather than investing on facilities to manufacture them all in-house. The business process value involved in getting those parts & raw materials made from vendors is called "In-bound Logistics".

In the traditional manufacturing systems, the inventory and quality issues of the incoming parts were not of a serious concern as factories held a huge inventory and the re-work of incoming supplies was assumed to be a part of the value chain. In modern era however, the Lean manufacturing system wishes to get supplies Just-in-Time (JIT) as the inventory carrying cost is considered as avoidable waste (muda in Japanese language). Increasingly, JIT demands First Time Right (FTR) parts which do not require any re-work at the point of receipt. Often, JIT wishes to have Green Channel vendors (Self Certified) whose parts do not require any inspection or re-work.

Why is JIT in Supply Chain Management

In the manufacturing value chain (Raw material to Finished Goods) major focus is on reduction of Machine downtime; change over time, Work in process, in process quality issues. Over and above to have continuous flow in the value chain, its important to have focus on the parts supplied by vendor are ready to use once it arrives at factory premises without any further inspection involved. Arrival of these has to be based on the Just in Time (JIT) principle with ready to use so that unnecessary inventories can be avoided at the incoming stage. Automobile industries are matured in this process so that parts supplied to them can be directly fed to the manufacturing line. This significantly reduces the cost of inspection and inventory carrying cost. Most of the manufacturing industries are getting the parts manufactured from vendors. Keeping up their quality and delivery commitment depends largely on the vendors capability to supply defect free & on time supply.

The entire supply chain management policies, processes and management for a traditional manufacturing system need to be challenged while reorienting supply chain management for the Lean manufacturing system. This includes enhancing manufacturing process capability, rationalising the vendor base, their location, vendor quality systems, etc.

Converting the vendors into 'Green Channel (Self Certified)' vendors is not an easy task, as many of the small and medium scale industries have limited inputs for process engineering and cannot afford to hire high profile people. Due to this scenario, often the Original Equipment Manufacturers (OEM) have hardly spend time and effort in developing the systems and competencies of their vendors leading to poor quality of supplies which has to be often re-worked in their factory. The companies in Japan, particularly automobile manufacturers, have systematically developed their vendors through a vendor integration program.

Rational of SCM^{LEAN}®

SCM^{Lean} is a holistic approach of studying the current inbound logistics of the company through extended value stream mapping and identifying waste variation and over processing and systematically eliminating by restructuring the inbound logistics systems.

Mr. NC Narayanan (NC), the Founder & CMD of SSA Group of Companies, with his four decades of experience in automobile and auto-ancillary industry has come up with several thought leaderships in the area of Lean manufacturing system such as RMAOR® framework for Lean factory design. SCM^{Lean}® is one of those thought leaderships of NC that fills the gap in developing green channel vendors for mass-producing industries. This approach will challenge all the Supply Chain Management systems, re-engineer them to improve their value chain to suit Lean manufacturing system.

Business Relevance of SCM^{LEAN}®

Every business irrespective of their size & product are facing the following challenges

- Low on time delivery & in full performance (OTDIF)
- High cost of poor Quality (COPQ)
- High Customer Return
- Underutilization of Resources
- Excessive Incoming Inspection Resources
- Quality assured by Inspection & hence low Reliable
- Cost Of Inventory at Incoming is very high

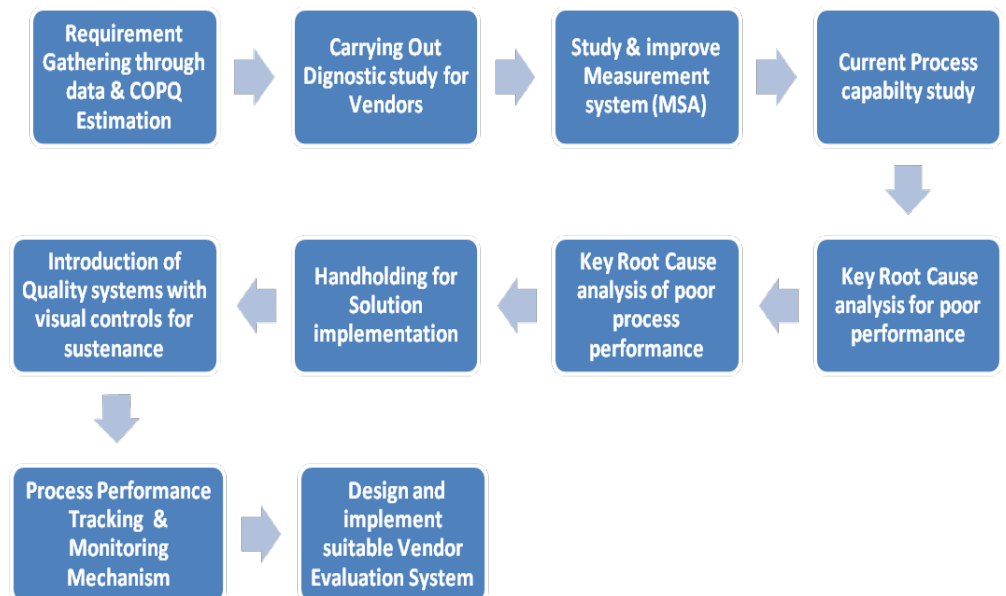
The Objectives of SCM^{LEAN}®

The important objective of SCM Lean is the Reduction of Cost Of Poor Quality (COPQ) through

- Reduction in rejects and segregation of incoming supplies
- Reduction in inspection time of incoming supplies.
- Zero defect supplies from vendors
- Reduction in inventory of incoming materials
- Reduction in the Storage space

SCM^{LEAN}® Approach

The following illustrates the SSA's SCM^{Lean}® approach:



Note: These are the generic steps of the approach. This may vary from vendor to vendor based on complexity & product manufacturing systems.

Benefits To The Vendor

- Increase in the throughput
- Less rejection and rework
- Reduction in Cost of Working capital
- Higher Market Share
- Low manufacturing cost
- Faster payment cycle
- Low Working capital
- More competent operators
- Better utilization of resources

Benefits To The Company

- Reduction in cost of Supply Chain Management
- JIT supplies to suit Lean manufacturing system
- Reduction on COPQ
- Throughput improvement



About SSA

SSA is a leading management consultancy firm headquartered in Mumbai, India with local presence in Middle East and Africa and a rich clientele base spread across Asia, Middle East and Africa. SSA provides tailor-made solutions for the various problems faced by an organization with special focus on improving profitability and reducing costs.

Founded in 1999 with a missionary zeal to make 'Made in India Synonymous to Quality', In well over a decade of its existence, SSA has worked successfully with valued clients such as Pfizer, DHL, Maruti Suzuki, Reliance Industries, Vodafone, ABN AMRO, Bharat Petroleum, Novartis, Cadbury, and National Stock Exchange of India, to name a few, and has effected cumulative savings of over US \$200 million.

In the area of corporate training, SSA is the first and only institution in India to have been accredited to IACET, USA (International Association for Continuing Education and Training). SSA offers a host of training and certification programs on topics ranging from Lean, Lean Six Sigma to Performance Scorecard.

To know more about SSA, visit us on www.ssa-solutions.com

Our Clientele

