

Successful Lean Implementations—and Why Some Fail

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Is it lean, one-piece flow or just-in-time? Is it just-in-time inventory, lean manufacturing or just-in-time delivery? It doesn't matter what you call it. What is important is that lean is a business philosophy that focuses on the elimination of waste. In this case, the definition of waste is anything greater than the minimum amount of inputs necessary to add value.

If you embark on implementing lean, is it a program, initiative or a journey? How you position lean when you start will dictate the level of success you achieve. Lean is a journey of continuous improvement. Getting it wrong is part of getting it right, which ultimately is what makes lean principles and concepts work. Lean implementations that employees perceive as a program or an initiative generally suffer slow and agonizing death, because implementing incremental changes on small things wastes resources and provides minimal benefits and gains to justify more resources.

Avoiding Failure

Why do lean implementations fail? Those that do have several easily identifiable characteristics and attributes:

- The enterprise fails to position lean as a journey and fails to embed it as its operating philosophy. No one believes the present end-to-end supply chain operating model must change dramatically.
- The enterprise lacks a clear vision of the lean operating model; therefore, no one knows what it will look like when it succeeds.
- Quantifiable business benefits and economic gains are not identifiable and neither are targets for achievement; therefore, no one knows the order of magnitude the benefits and economic gains lean should achieve.
- Appropriate performance measurements have not been designed or put in place.
- The enterprise fails to commit adequate resources to the implementation.
- Employees haven't received adequate education or training in the principles and concepts being implemented.

For a company to change its business model to a lean model is not a trivial undertaking. Unless threatened, most enterprises that manufacture products are not inclined to make dramatic changes to their operating

model—there's simply not enough motivation. They only change when the pain they encounter in staying the same is greater than the pain that comes along with change.

Ensuring Success

Successful lean implementations result when enterprises commit to the philosophy of lean and recognize lean as a journey and culture to nurture and embrace. Lean will become a way of life embedded in the enterprise's operating philosophy and business practices.

Companies that successfully implement lean have directly or indirectly answered three fundamental questions:

- How does the supply chain's operating model behave with lean—from the customer back through warehousing and distribution, manufacturing and the supplier base? (What does it look like when it's implemented?)
- What are the business benefits and economic gains the enterprise should achieve from a lean operating model? (What do we get when we're finished?)
- What do we need to do to get started? (What do we do Monday morning?)

The process for designing and implementing a lean operating model consists of three primary segments.

Baseline Analysis entails the analysis and evaluation of the present supply chain's operating model. This is a fact-based, data-driven analysis of the supply chain's operating characteristics and performance. The baseline performance is compared to best practices and gold-standard performance of demonstrated lean capabilities. A gap analysis is performed to identify the order of magnitude of opportunities that lean can provide.

Concept Design involves defining the lean operating model from end to end across the supply chain. The concept design applies major lean principles and concepts across the supply chain, from the customer back through distribution, manufacturing and the supplier base. Performance measurements are defined, and the business benefits and economic gains expected from lean are determined and targeted for achievement.

Implementation is the phase at which the company puts the concept design in place. The firm develops a detailed implementation work plan, details design and implementation, puts performance measurements in place and trains and educates employees on the new processes.

The basic lean principles and concepts for implementing lean include:

- End-to-end vision of the lean operating model and new operating characteristics and attributes
- Process redesign of major business and operating processes in manufacturing, distribution, procurement, engineering and product development; production planning, materials; and inventory planning
- "Pull" based demand replenishment across all the players and components in the end-to-end supply chain
- Manufacturing reliability, where the manufacturing processes and related business processes work consistently and reliably every time
- Quality improvement, where all processes provide quality output the first time, every time
- Manufacturing flexibility and the responsiveness of the processes to be able to move from product to product and meet variations in demand with minimum disruption or lost time
- Demand management and communications by which actual customer demand is visible, communicated to all the players across the supply chain and replenishes product to meet demand

- Supplier integration, in which key suppliers are an extension of your own supply chain and work in harmony with you to serve your customers
- Distribution and deployment to integrate with the customer's supply chain to replenish product on a continuous replenishment basis
- Integrated product process development for product design and engineering to achieve the best cost to manufacture
- Key performance measurements that work in harmony with each other, provide performance visibility across the supply chain and are tools to improve performance
- Information support systems that enable the new processes and capabilities, link the players and provide information sharing across the supply chain from end to end

How much of each principle and concept you use is a function of Baseline Analysis and Concept Design. Critical to your lean journey's success is knowing how and when to use improvement tools such as Six Sigma, value-stream mapping, standard work, Kanban systems, Kaizan events and others. Unto themselves, these tools are not lean—they are tools used to achieve lean.

The ultimate goal of Lean implementation is to provide the right product in the right quantity and quality when and where the customer wants it. Lean eliminates waste across the supply chain to synchronize it as closely as possible to the customer's demand.

Enterprises successful with lean have achieved order-of-magnitude business benefits and economic gains readily documented in numerous case studies and publications and at industry conferences. Some examples include 80% lead-time reduction; 50% inventory reduction; 40% reduction in manufacturing and warehouse space requirements; 70% reduction in set-up times; 80% improvement in operating reliability; 50% improvement in quality; 99.5% line-item fill rate; and 6% to 9% increase in revenue. These are not trivial benefits and economic gains that can be achieved overnight. There are no silver bullets on the lean journey. It takes vision, commitment, resources, education and patience. Given the difference between the lean journey and other initiatives and programs an enterprise can choose to undertake, lean provides the most robust and systemic benefits and gains.

If you're not convinced lean will benefit your enterprise, then what is your alternate plan? If you are concerned that it's just not the right time to start the lean journey because of other initiatives and availability of resources, be assured that in today's business environment, there is never a good time to start a new journey. Start slow and ramp up. Don't wait for the enterprise to be threatened before you start the journey.

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