

The True Relationship Between Lean & ERP



STRATEGIC BUSINESS SERVICES



Realize Potential

Can Lean Manage the Entire Enterprise without ERP?

If you present this question to an ERP sales person you can be sure they will tell you that ERP systems are the primary tool needed to support manufacturing. If you ask a Lean consultant the same question they will tell you that ERP systems are not required in order to achieve operational excellence and in fact will claim that ERP systems are part of the problem. So what is the correct answer?

To understand the true relationship between Lean and ERP you have to direct the question to an experienced, non-biased individual that understands the problems that Lean and ERP attempt to solve; someone that has had the opportunity to participate in a strategically formed, well-orchestrated, long-term improvement plan focused on achieving operational excellence. They are the individuals that have been on the front line of today's manufacturing companies. You will find them working in the supply chain group or the manufacturing department; they work in inventory control, finance, quality, shipping, receiving, sales or customer service. These are the people that work to solve problems every day.

Continuous Improvement experts Katie Farrand and Juliet Crandell have seen it all. Throughout their respective careers Katie and Juliet have experienced the type of problems that often cause manufacturing companies the greatest amount of difficulty; unreliable data, variability in process quality, unpredictable suppliers, inaccurate forecasts, unbalanced production schedules and increasingly difficult customer demands. What they have learned from their hands-on experience is that it is impossible to achieve world-class performance without both Lean and ERP. Katie writes "We see so many companies that don't realize their potential and what they could be; it is so satisfying to see companies become re-energized when they see the results from using Lean tools to make process and ERP system changes that drive such significant improvements". In fact, their experience has taught them that ERP can become a more effective enterprise system by utilizing Lean concepts. And here's why.



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ERP is required for all of the up-front forecasting, customer order processing, overall planning functions and accounts receivable. ERP is also instrumental in managing customer orders, purchase orders, accounts payable, costing processes, and many other vital functions.

There are specific challenges and opportunities for some of these functions in order to “synchronize” them with Lean; however, it is clear that ERP is a vital aspect of operating a manufacturing company.

At the same time, Lean attacks three of the underlying ERP planning factors: lead times, replenishment levels and lot sizes. Because Lean eliminates waste, lot sizes and inventory levels are reduced and lead times are minimized as wait, material movement and other non-value adding time (90-95% of typical lead times) is eliminated.

As the time to react to customer demand and market changes improves, the typical ERP approach to ‘forecast’ as a way of producing becomes less important. Using ERP forecasts and inventories to kick-off production orders on the shop can be complemented and sometimes replaced by methods more directly connected to customers by using a Pull System. In a pull environment, physical material moves and shipments trigger downstream operations, because the reaction time is very short.

Like ERP, Lean does not stop on the manufacturing floor. Lean is an enterprise wide program that works to streamline business processes by eliminating “waste” within those processes. Office waste can be found, primarily, in two areas; wasted activities and wasted time. Too often, we look at **HOW** to get things done better or faster instead of examining **WHY** we are doing something and **WHAT** things we really should be doing. In these situations it is common for companies to spend a lot of money on efficiency and automation that leads them to doing the wrong things faster or automating bad processes. Simply stated, applying Lean techniques in the office environment saves time and money by reducing non-value added activities.

So what is the correct answer? Knowledgeable, experienced continuous improvement specialists working with clients who are serious about improving business performance can point to actual results to answer this question. What they have found and what clients are reporting is that by leveraging the best of both ERP and Lean companies have seen the type of improvements shown below.

- Front office productivity gains of 30% - 60%
- Shop floor productivity gains of 25% - 55%
- Lead time reductions of 20% - 60%
- WIP reductions of 40% - 70%
- Inventory reductions of 30% - 60%
- On Time Delivery gains of 20% - 45%
- Floor space reductions of 20% - 45%
- Cost of quality reductions of 20% - 60%

About Synergy’s Continuous Improvement Efforts: The primary drive behind Synergy’s continuous improvement approach is to increase the content of value-added activities by applying the “right” principle and tool to any given business or shop floor process in order to improve its overall performance.

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