

How Lean Are You? – April 2004

I am often asked, how does a company know how lean they are? My answer is always, not by looking over your shoulder at your competitors or by counting the number of Kaizen events you have run. Instead ask yourselves seven basic questions.

The first uncomfortable question is how much you disappoint your customers? How many quality defects and missed and incomplete deliveries occurred recently? How often did you ship too early to make your numbers and offload your inventories on your customers? Near zero defects and deliveries are not only possible, they are now expected. It is almost impossible to achieve 100% correct and on time when you are still doing lots of rework, holding mountains of finished goods and relying on expedited shipments to get you out of trouble.

The second question is what has happened to your door-to-door throughput time and inventories? Have they been falling steadily since you began your lean initiative? Have they led to falling unit costs? If not then you are not doing lean!

The scale of the opportunity is revealed by comparing the few minutes of value creating time with the days or weeks it takes for products to travel through your plant. After an initial honeymoon when you discover lots of low hanging waste, further progress depends on reconfiguring both your production process and the incoming order and scheduling process that triggers it.

The opportunities for action are revealed by mapping your processes and calculating the standard inventory at each point. Standard inventory comprises the Cycle Stock to meet average demand (batch size and lead time), the Buffer Stock to meet fluctuations in customer orders (demand volatility and forecast errors) and the Safety Stock to cover you against upstream failures (availability and quality losses).

The third question is what are you doing to lean your production and scheduling processes? Do you level orders? In other words do you have a harbour wall to protect your internal operations from ocean storms, whether self-inflicted or created by your customers? Do you pass these levelled orders on regularly and frequently to one pacemaker process? Depending on whether you ship finished goods from your pacemaker or build to order from a pacemaker located further upstream, is everything upstream from the pacemaker pulled from it, including from your key

suppliers? Downstream, does the product flow directly to the customer's point of use without being waylaid in several warehouses? If the answers are no, then you need to map your processes and learn how to reconfigure them using lean principles.

The fourth question is whether you are using lean to improve your office processes and cut overheads as well as direct costs? Firms are just waking up to the potential for redesigning every office process using lean principles.

The fifth question is how are you planning to use the freed up time, equipment and space from your lean activities? The real opportunity from going lean is to be able to do considerably more work with the same resources at almost no additional cost. What will it take to generate this extra work? Or how are you going to handle the need to reduce headcount without bringing your lean efforts to a halt?

The sixth question is whether you have the management systems in place for a lean transformation? Is top management's heart really into leading this? Is someone responsible for reconfiguring each product value stream through your facility? Is there an active policy deployment process based on these value stream plans to prioritise and resource them? Is there a common language across the whole organisation for seeing processes and for root-cause problem solving?

The final question relates to the biggest opportunity of all – the future. What would you have to do to deliver the next generation product with enhanced functionality at 30% lower costs than your current product? This is what Toyota is currently targeting their Chief Engineers! Using your lean experience, how could you redesign the next generation product to remove unnecessary operations? What new technologies and equipment would be required and which new suppliers? Maybe it is time to make this the end goal of your lean transformation.

Yours sincerely

Daniel T Jones
Chairman
Lean Enterprise Academy