

3. Lean Manufacturing and Executive S&OP

You might be thinking, well why can't Lean Manufacturing simplify things enough so that Executive S&OP is not needed?

In some cases, perhaps it can. Lean's task, among others, is to simplify, speed up, and eliminate waste. It does this best in those operations over which it has a high degree of leverage: primarily the plants and suppliers. Toyota is the poster child for Lean Manufacturing, and it is arguably the best manufacturing company in the world.

For many companies, the leverage over customers is often weak to nonexistent, certainly much less than with one's own plants and

suppliers. Demand is variable. It can ebb and flow, and that can give Lean a problem. Why? Because Lean thrives on linearity and stability. Lean dislikes variability and, most of all, variability of demand. It simply doesn't work as well with variable demand.

So the question arises: how does Toyota handle this? Well, at the risk of sounding sacrilegious, we must point out that Toyota's *total* supply chain is not particularly Lean. It certainly is in the Toyota plants and at the suppliers. It's at the distribution and retail end of Toyota's supply chain where Lean goes away.

Toyota produces vehicles in a very Lean, linear fashion and then, when they come off the assembly line, it "pushes" them into a huge finished goods inventory estimated conservatively to range from \$2 to \$3 billion: the dealer inventory in the field.³ This serves as a shock absorber for variations in demand, and thus Toyota manufacturing is insulated from the ups and downs of demand by the end consumers; it can change production rates gradually and thereby minimize disruptions.

Many companies implement Lean Manufacturing but don't have the luxury of such a large finished goods inventory. They follow the Toyota model because it's the most prominent in the Lean literature and because many of the Lean consultants active today learned their Lean while working at Toyota or from those who did. As the initial parts of Lean are implemented in these kinds of companies, they take to heart the Lean principle of continuous improvement. They work hard at making it better. And, at some point, someone raises the question: "Rather than getting surprised so often, wouldn't it be nice if we could see the demand shifts

³ To Toyota's credit, its inventory of vehicles in the field is substantially lower, based on days' supply, than many of their competitors. But the fact remains that it's huge.

sooner, and get our production rates harmonized gradually with the new demand that's coming?"

That's called balancing demand and supply, and that's where Executive S&OP lives.