Why Lean Companies Stay Fat

Lean Manufacturing for High Performance

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A lean lifestyle

Lean manufacturing initiatives, much like diets, are designed to trim fat and make you fitter, faster and more competitive—in short, a high performer. The overall goal is the lasting improvement in company profitability that underpins high performance. And it’s achieved by fighting flab of all sorts, from excess inventory to over-extended equipment setup times. The benefits, moreover, can be dramatic.

Building flexibility into manufacturing processes and facilities and integrating and coordinating your overall supply chain network will both simplify and speed up product flow and facilitate just-in-time delivery. A slimmer supply chain will optimize the alignment of product capabilities with what customers actually want.
Studies indicate that more than half of all US manufacturers have embarked on some kind of lean manufacturing initiative. Far fewer actually achieve lasting profit improvement.

Much like fad dieters, most companies simply don’t stay the course. They fail to recognize that long-term success hinges crucially on a full commitment to a totally new and fitter lifestyle.

Successful lean manufacturers:

**Undertake lean manufacturing as a way of life** – commit to it 100 percent and involve everyone in the company, from top management to the shop floor, in changing the company’s culture along lean lines

**Recognize that long-term success involves far-reaching change** – and embrace it boldly

**Get on the scale and stay on** – measuring the right things with appropriate technologies and sharing the results

**Avoid the big letdown** – by staying the course through fully integrated and consistently communicated change programs

Accenture’s experience with companies that have achieved high performance through lean manufacturing reveals that their approach to the challenge is what differentiates them. Like successful dieters, they don’t allow the “diet of the month”—the rules, tools and schools that claim to guarantee success—to distract them. They focus instead on these four, core capabilities.

**Lean manufacturing is a way of life.**

Like any successful diet, a successful lean manufacturing program is a long-term strategy, not an isolated project. What’s more, it has to be an integrated, operational strategy that encompasses the entire company and its culture.

For most companies, this means challenging current thinking and requires driving lean principles and a lean mindset into the manufacturing environment and beyond. Companies must instill the enterprise with the underlying philosophies of lean—elimination of waste, a “lot size of one” mentality, visual management, and just-in-time delivery. They must also foster a spirit of continuous improvement that leverages these philosophies.

What needs to happen for the plant to be able to build lot sizes of one? How can visual management techniques be used in accounting? Is there waste within the product development cycle that is increasing time-to-market for new products?

**Figure 1. Differences Between Resource Planning and Lean**

<table>
<thead>
<tr>
<th>Resource Planning (MRP/ERP)</th>
<th>Lean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture to forecast</td>
<td>Manufacture based on actual demand</td>
</tr>
<tr>
<td>Large batch (to minimize production changeovers)</td>
<td>Small batches (to minimize inventory and be adaptable to changes in demand)</td>
</tr>
<tr>
<td>Use of WIP inventory stocking</td>
<td>Low WIP based on continuous flow productions</td>
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<tr>
<td>Asset optimization focus</td>
<td>Lead time and delivery focus</td>
</tr>
<tr>
<td>Focus on improving forecast</td>
<td>Capture actual demand</td>
</tr>
<tr>
<td>Quality checks at the end of process</td>
<td>Quality and mistake-proofing built into the process</td>
</tr>
<tr>
<td>Focus on planning</td>
<td>Focus on execution</td>
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The original lean manufacturing initiative was the Toyota Production System, which revolutionized productivity at the Japanese car company. The kaizen philosophy of continuous improvement that underpins Toyota’s system has become a blueprint for others—notably Danaher Corporation, which has turned it into the Danaher Business System (DBS).

The DBS operates on two levels. At the level of daily management, kaizen events employ a diverse range of operational efficiency tools—including Six Sigma and value-mapping techniques—to eliminate such sources of waste as excess inventory, waiting time, overproduction and quality defects. The events run continuously, minutely examining business processes to identify all sources of waste and develop a standardized, repeatable working system that will avoid them in the future.

Hoshin kanri, or policy deployment, the second level, is what really distinguishes the DBS from other systems. This sets aggressive breakthrough targets right across the company. Although limited to one or two a year and typically related to a product line or geographic expansion, these targets are set at a senior management level and cascade down the corporate hierarchy so that every employee understands exactly what to do to achieve the breakthrough.

Coupled with the rigorous DBS training that all employees undergo—a process that lasts two years for executives—the system helps explain why Danaher is such a high-performance business.

**Long-term success means far-reaching change.**

Going on a diet will affect many other aspects of lifestyle—permanently, if the diet is successful and thus becomes your routine approach to eating. Dieters won’t lose weight and keep it off if they don’t take into account other fitness factors, like getting sufficient exercise. And it’s the same with lean manufacturing initiatives, which will almost inevitably have important consequences for many other areas of your business, both operational and strategic.

As a company begins the journey towards becoming a lean enterprise, it is very important to take a holistic view—one that looks both within and beyond the four walls of the plant and considers the implications that the various elements of the overall supply chain network have on each other.

Existing customer and/or supplier agreements may prove prohibitive to lean operations. Planning policies and operational practices between internal manufacturing facilities may be misaligned. Capital investments may be required within facilities to overcome the limitations of aging, inflexible equipment.

Without taking a total, end-to-end view, companies typically are not effective in migrating to a lean enterprise. They usually fall into the trap of incremental improvement, thus missing the opportunity to extract the significant value that can come from a lean enterprise.

The starting point for any successful lean manufacturer is defining multi-year objectives across the enterprise and devising a well thought-out plan to get there. Without a vision of where you want to be in the next three to five years, it is very difficult to make fundamental progress toward the type of capabilities and benefits demonstrated by the likes of Toyota or Danaher.

Unfortunately, many companies delegate the enterprise responsibility and ask each major department to come up with its own, individual “multi-year plan.” This greatly complicates the task of defining what the lean enterprise should be. Cross-
enterprise synergies can be lost, and competing priorities between supply chain components can complicate operations.

Making the plants more flexible and responsive through lean manufacturing is a fundamental priority, but it is also critically important, especially for global companies, to apply lean thinking to the broader, global supply chain. When there is a significant flow of products between large numbers of plants and distribution centers, the implication is that the migration to lean is more complex, and not just in terms of cost.

It can be hard to stick to a diet when friends and family are working against you. And it’s the same for companies striving to be lean. Every plant and subsidiary has to commit to the inevitability of change and prepare to approach it pro-actively.

Studies demonstrate that the benefits of lean manufacturing make it well worth the effort. Indeed, most companies that have initiated lean manufacturing programs will see a positive cash flow within 120 days of the program’s start. And over a longer timeframe the benefits in terms of more specific measures, including inventory and order-to-delivery cycle time, can be striking.

One metal products manufacturer, for example, cut its order-to-delivery cycle time from six weeks to just four days in four months. This company also reduced its inventories by 40 percent and boosted gross margin by 12 percent in the same period.

Another company, a large electronics manufacturer, led the implementation of a focused factory environment for its magnetic ballast operations as part of an overall, “fulfill demand” capabilities initiative. Two focused factories within the facility were linked with a kanban signaling system to indicate when items needed replenishing. As a result, the company realized an 80 percent reduction in cycle times and a 50 percent reduction in work in process (WIP). It also achieved an almost 70 percent reduction in quality defects because defects became much more visible in the focused factory environment.

Get on the scale and stay on.
That’s the dieter’s mantra. And companies have to learn to measure the right things—and keep measuring them—if they hope to be successful lean manufacturers. Sharing the results with everyone involved in the program’s success will help maintain morale and ensure accountability.

Take manufacturing asset utilization. Though one of the most common measures in your industry, it may not, in fact, be the most appropriate one in this context. It tends to go along with a “we sell what we make” mentality—rather than the “we’ll make what we sell” attitude that characterizes customer focus and thus high performance.

Figure 2. What Should I Expect? Or How Should I Pay for It?

<table>
<thead>
<tr>
<th>Metric</th>
<th>Minimum Expectations</th>
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<tbody>
<tr>
<td>Order-to-delivery cycle time reduction</td>
<td>33%+</td>
</tr>
<tr>
<td>Inventory reduction</td>
<td>25%+</td>
</tr>
<tr>
<td>Material cost reduction</td>
<td>3%+</td>
</tr>
<tr>
<td>Throughput increased</td>
<td>5%+</td>
</tr>
<tr>
<td>On-time to promise</td>
<td>90%+</td>
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Companies can expect to see measurable benefits from improvements in performance during the first six, 12 and 24 months of lean manufacturing implementation.

One lighting products company got the emphasis right. It switched from a view of efficiency that hinged on keeping all its plants running at full capacity, regardless of how much was sold, to the sort of balanced scorecard approach that aligns measures with goals and adopts them right across the organization.

The company’s new scorecard included such metrics as performance to schedule (stopping production once the schedule was made), days of supply on hand (which were to be driven as low as possible), changeover time (more product changeovers = more products made), and lot size (small is better). It also aligned these measures in support of three common goals—lowest landed cost, customer service and flexibility. The upshot: the company reduced its inventories by 40 percent and steadily improved its line item fill rates.

Any set of measures must reflect an overall view of your lean objectives. The metrics must mirror and provide support for an environment that will inevitably need to strike balances between varying objectives. Classically, and probably most simply, companies must be able to manage trade-offs between cost, service and inventory and measures must be in place to manage these factors.

Avoid the big letdown.
Every dieter is familiar with the depressing experience of stepping on the scale and finding that they’ve gained pounds rather than shed them. It’s enough to make you give up—and many do. Similarly, many companies that undertake lean manufacturing programs are thrown off course by the unexpected—slumps and spikes in demand, for instance.

That’s what happened to a global manufacturer for whom the costs of long-term change ultimately proved prohibitive. The company’s European operations had implemented a pull-based replenishment system for finished goods. Inventory targets based on demand, variability and desired service levels were established. And a re-order point drove production requirements.

Inventories remained under control for a couple of years and service levels improved—until demand suddenly spiked, and instead of sticking to the principles of the system and either adjusting service levels or controlling order acceptance the company abandoned it.

Contrast this with the experience of another company, an exhaust system manufacturer, which implemented a new operating model for its inventory management and production scheduling processes. The company developed a process and system that supported the successful reduction of its finished goods inventories—by 45 percent—while maintaining service fill at 95 percent. Cross-functional replenishment teams brought together people from manufacturing, planning, purchasing and scheduling to support the two business units and a kanban-based pull scheduling process decreased WIP by 70 percent.

Successful lean manufacturers, indeed, manage to stay the course—usually because they’ve ensured that all aspects of the business, old and new, are integrated in the lean program.

Witness Danaher’s approach to post-merger integration. Even before its 2002 acquisition of Gilbarco was complete, the company was introducing Gilbarco executives to the DBS. Within 60 days of the deal’s close, the continuous improvement events that form the system’s core were well underway right across the acquisition.
A total commitment

A lean lifestyle has to be a total commitment. Successful practitioners use it to change the entire culture of their companies. They recognize that to stay lean in the long-term, they will have to institute strategic and operational changes that go beyond mere manufacturing. They know, too, that success involves accurately and consistently measuring the right things and aligning these metrics with common corporate goals.

Only then can they avoid the pitfalls and stay the course, ensuring that lean manufacturing realizes its promise as a foundation of sustained, long-term profitability and high performance.
About Accenture

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