



FLOW MANUFACTURING IS ESSENTIAL TO COMPETITIVE SUPPLY CHAIN MANAGEMENT

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For manufacturers, supply chain management is continuing to change at a very rapid rate. The significant innovations in supply chain management are quickly moving away from interfacing with customers and suppliers to integrating with customers and suppliers. This continually changing supply chain model is of no minor consequence. The very foundation on which demand and supply business relationships were established are rapidly disappearing in favor of more effective supply chain management methods. Of course, good product, quality and price will always be important, but the added dimensions of rapid response to customer requests and absolute dependability in meeting commitments takes more and more flexibility as the speed of material flows changes. In other words, the old, long-established approaches to information and material flows that result in long lead times are no longer adequate to achieve the high-performance supply chain management that is essential for future business success.

Today, some industries are more affected than others by the increased emphasis on responsiveness and dependability, and there is no doubt that this will inevitably cross all industries. For top management, the rapidly changing business model is challenging, especially when coupled with the immediacy and complexity of increasing profits and market share.

The seemingly endless list of operating problems, such as poor on-time delivery, too much tied-up working capital, slow response and high costs, are often identified as the culprits that scuttle the best strategic intentions. Yet, these are only symptoms of more serious underlying problems in information and material flows, which often result from poorly designed processes—even after implementing the most modern and comprehensive ERP systems.

In practice, the processes that govern the flow of information and material typically are not the corner office focuses on, even though they should be very high priorities up, down and across the organization. Ultimately, the complex challenge of increasing revenue, profits and market share comes down to an inescapable key question: What is the right competitive strategy for us to follow?

One particularly significant area in formulating competitive strategy is a company's ability to implement effective processes that provide superior information and material flows in manufacturing and throughout the entire supply chain.

MINDSETS VS. THE RULES

Companies have made large investments in ERP to improve business performance, but a common complaint about these investments is that promised ROI was never achieved. To a large extent, the expected results were not achieved because the focus was on the wrong issues. Part of the problem has to do with how we think a manufacturing company should be run. This thinking centers on long-accepted, management-endorsed rules and operating logic that people follow on a day-to-day basis, and which can easily defeat the effective implementation of a flow strategy.

Many executives from discrete manufacturing environments often react to the possibility of adopting flow manufacturing in their companies with an it-won't-work-here type of response. Flow manufacturing seems to defy the logic of the discrete, lot-oriented operating rules used in their factories. What they need to do is challenge the rules of traditional production and supply chain processes and operating methods. Understanding and accepting that the old, agreed-upon operating logic is, in fact, outmoded operating logic is a big step. Changing mindsets, at all levels of the organization, is a very difficult task, but mindsets and rules, must be changed for flow to succeed.

The long-accepted, traditional rules allow the flow of information

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and material to be interrupted numerous times in the flow path, and that takes up time—cycle time. Even with computers that can process data at the speed of light, most of a company's information and material flow processes are loaded with the worst kind of time—waiting time. It's not at all unusual to find information and material waiting in queues more than 90 percent of the time. Since responsiveness and dependability are central to effective competitive strategy and responsiveness, cycle time reduction in the flow of information and material throughout the supply chains is of paramount importance. The needed flexibility is impossible without these two-high speed flows.

IS IT WORTH IT?

Developing the most responsive, dependable and flexible supply chain can be the difference between winning or losing. This, by itself, should be enough to at least initiate a thorough investigation of a flow strategy. A number of companies, large and small, from many different industries have very successfully adopted demand-based flow manufacturing as a business strategy with astounding results. Developing a business case for flow manufacturing usually results in projected improvements that are so dazzling that it's beyond incredible. For example:

- Costs down 20 to 50 percent
- On-time performance of 99 percent
- Lead-time decreased by 50 to 90 percent
- Cost of quality reduced by 60 percent
- Overall cycle time decreased 60 percent and more
- Floor space reduced 30 to 70 per-

cent

- Inventory down 50 percent or more
- Material costs down 5 to 10 percent

Certainly, improvements like these would be more than enough for any top management team to adopt flow as one of the most worthwhile of strategic objectives.

Think for a moment about the potential of just a 10 percent-plus increase in throughput. If overhead is fully absorbed at the current rate of output, then usually the only significant additional cost to manufacture is direct material. With cycle times reduced by 60 percent or more and on-time delivery exceeding 99 percent, most sales executives would agree that a market share increase will occur. If the increased output is truly salable, then 30 to 60 percent of every additional sales dollar is increased profit because the only additional cost is direct material. The effect of a salable throughput increase could be as much as a 5 percent profit on sales, or \$500,000 more profit for every \$10 million in sales. As one client company president once told me, "I will be happy with half that."

There are many other justifications worth examining. For example, a substantial amount of overhead activity costs are a direct result of a company's inflexibility in dependably responding to changes in customer needs. The number and extent of schedule misses and changes can create an exponential overhead activity cost as the organization scrambles in an ineffective effort to meet unexpected customer requirements. Without the capability to meet customer-requested schedules, overhead costs are usually much higher than necessary to

compensate for the organization's inability to meet plans and schedules. Most cost-accounting systems have these costs buried in a category labeled "overhead;" the fact is these are often excessive, and they are unnecessary.

A large part of these unnecessary costs are the result of expediting, an overhead activity with a ripple effect that ultimately impacts the income statement and balance sheet. How? Think of the resources consumed, missed shipments, lost sales, higher production costs, quality problems and sales expense, among other things.

ASSESS YOUR POTENTIAL

As executives learn more and more about flow as a cornerstone of competitive strategy, understanding and accepting the improvement potential from flow quickly follows. Consequently, managers will want to determine how well their company could really perform if the old, agreed-upon operating logic were changed to a flow strategy. At that time, management should consider an expert-guided, focused assessment of the as-is condition versus what will be required to achieve a could-be state of flow manufacturing. The objective of this focused assessment should be a quick evaluation of what improvements are needed, when they will be needed, and what their potential impact on overall business performance will be. The end product of this assessment should be a game plan that specifies the improvement actions and measurable performance improvements. Certainly, nothing drives adopting a new and better way of doing business than compelling performance improvement potential.