
Demand-Driven Supply Chains

It's not just the product anymore!

Jim Ayers and Dave Malmberg

Adapted from an article appearing in REPeroire
May, 1998

The Concept

In the future, reps will find their “edge” lies in wrapping fast, targeted delivery systems around their products. Having actual customer purchases, not guesses about future sales, orchestrate supply chain decisions might be their ticket.

As customers for healthcare hardware face increasing cost pressures, they’ll want a whole lot more from manufacturers and distributors. The sales rep should take time to understand the potential of *demand-driven supply chains* because they offer a competitive edge in your market. The term comes from a noble lineage, that is, a long line of labels describing product manufacturing and distribution methods. Examples include *JIT*, *Continuous Flow*, *Continuous Replenishment*, *Pull Systems*, *Efficient Consumer Response* (ECR) for the consumer products industry, and the recent *Efficient Healthcare Consumer Response* (EHCR).

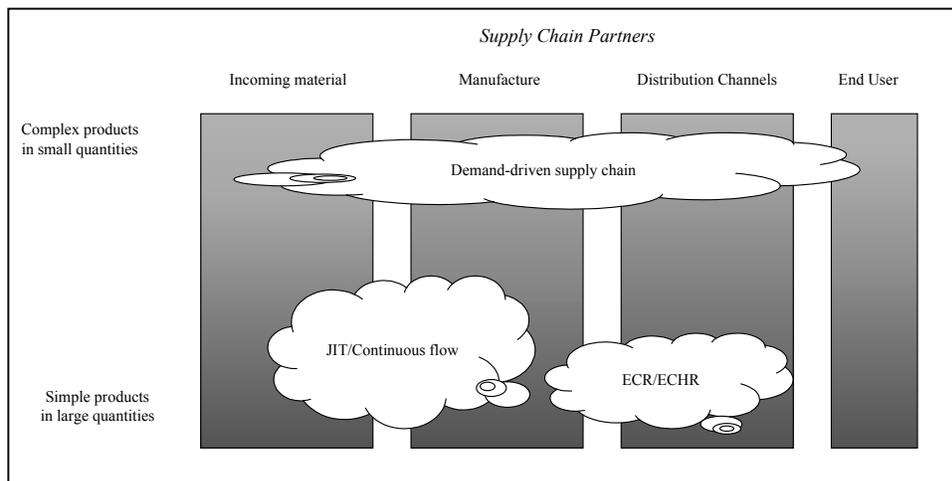
In the future, willingness to join demand-driven supply chains will be as important in selling as the products themselves. Reps will find their “edge” lies in wrapping fast, targeted delivery systems around their products. Their role will shift from a transaction to a relationship focus. They’ll “consult” their customers on ways to reduce total supply costs. In addition, they’ll collaborate with others in the supply chain to lower these costs further.

Already it appears this will not be optional. Enlightened companies are convinced having too many suppliers increases cost and reduces customer service. So many are slashing their supplier base. An example is a multi-national manufacturer who is cutting from 3000 suppliers to 300. The survivors share one characteristic: they are cooperating in redesign of the supply chain.

Manufacturers Spark Recent Interest

Manufacturers – particularly those with complex products – have sparked interest in demand-driven supply chains. Forced toward “mass customization” by their customers, manufacturers must be fast on their feet to provide that service without massive inventories. So they strive to move from reliance on forecasts to reliance on actual sales. It’s a natural evolution from the listed initiatives above.

The diagram suggests that those already involved in substituting actual sales for forecasts in parts of the supply chain will find it easier to extend similar principles to additional partners. They have a base from which to increase the percentage of the chain driven by demand.



The term *demand-driven* supply chain reflects its approach to performance improvement. And that makes the direction and result easier to visualize. *Demand-driven* denotes hooking production and inventory decisions to actual customer sales. Knowledge of actual end user purchases substitutes for wasted dollars for inventory and fixed assets. These investments are necessary when you have to guess, that is, forecast how much you'll sell. Over time, "fat" in the form of unsellable inventory and "just-in-case" safety stocks weighs down the balance sheet.

The Wall Street Journal described the results achieved by IBM's Personal Computer Division in implementing related techniques.¹

	1997	1994
Models assembled at IBM plants	150	3400
Available options	350	750
Types of major components	200	400
Variety of parts in inventory	15,000	56,000
Parts replenished daily by suppliers	62%	5%
Per cent of U.S. PCs assembled by distributors	31%	0%

The table reflects aggressive efforts to restructure the supply chain and, in the process, change the roles of suppliers and distributors. The article credits these efforts with saving the business.

But the transition is complicated. Designing and implementing a demand-driven supply chain is evolutionary rather than revolutionary. The parts for most products flow through multiple companies – each adding cost and lead-time. Making headway in reducing lead-time requires cooperative efforts. The organization must know why the ultimate customer buys the product. The need for knowledge also applies to the value added along the chain.

Sales reps are the premier source of such knowledge. They link different parts of the chain. They are intimate with the wants and needs of downstream supply chain participants. They provide early warning of competitive moves. If multiple parties – either upstream or downstream -- must be educated on the concept, reps will be involved. For these reasons, reps are indispensable for companies wanting to be proactive in supply chain collaboration.

¹ "How IBM Turned Around Its Ailing PC Division," *The Wall Street Journal*, March 12, 1998, p. B1.

Implementation

Most programs for implementing demand-driven supply chains will proceed from analysis to experimentation to pilot testing to full implementation. The following steps are a backbone for planning and executing the effort.

Form a team. The team should include internal supply chain contributing organizations. In most companies, these are sales, production, logistics, engineering, and MIS. Suppliers and customers should also be welcomed. At the least, sales should make the following contributions:

- Customer wants and needs to incorporate in system design
- Competitor intelligence
- Price points – what customers will pay for better service
- Products to include and exclude
- Access to partners in the supply chain for other functions, such as manufacturing
- Forecasts for product sales and market penetration or retention

Set goals. Top management should set the tone with general direction. The team should provide specific objectives as it moves forward. Their goals should be ambitious, such as those in the IBM case. If the effort includes several companies, then all should agree with the goals.

Map the supply chain. Understand the cost, lead-time, and value-adding steps as products move through the supply chain. This includes incoming material, manufacturing, and distribution channels, as well as paperwork, approvals, and engineering time.

Classify you products. Segment products by factors tailored to the business. Examples include end user delivery requirements, profit margins, sales levels, economics of manufacture and distribution, reliance on suppliers, and so on. This will result in about five to ten segmented groups around which you can build strategies.

Develop strategies. Each of the product groups will require a distinct strategy. This strategy will include make/buy mix, stocking, economic lot sizing, and the role of supply chain partners. Implementation can begin with specific segments (a vertical approach) or with multiple groups focused on a step in the chain, like production or incoming distribution (a horizontal approach).

Two Case Studies

The following two case studies describe work at McKesson that took place while one of authors was vice president of purchasing and inventory management. They demonstrate how to put demand-driven supply chain concepts to work for simpler products. Although McKesson is primarily a distributor rather than a manufacturer, both cases followed the Implementation steps outlined above. They also achieved benefits expected from Demand-driven Supply chain projects – i.e., lead-time reductions, simplification of product lines, and better service.

Generic Pharmaceuticals

McKesson needed to simplify the flow of generic pharmaceuticals in its supply chain. Briefly the situation was this:

- Too many suppliers (over 200) and product variations (SKU's)
- Extremely erratic production, shipping and order fulfillment by the manufacturers
- Generics stocked in (and replenished to) 45 separate warehouses
- Poor customer service as measured by fill-rates.

To address the situation, the company built a special distribution hub in Memphis for generic pharmaceuticals and other products that were difficult to source and inventory. The company also reduced the number of generic manufacturers it would stock from approximately 200 to 50. Each of these manufacturers was asked to deliver a monthly order to Memphis, rather than weekly orders to 45 separate warehouses, as in the past. To help the manufacturer, McKesson provided a rolling three-month forecast where the first month was a firm order.

The result of this effort was a “Win-Win-Win!” McKesson cut the number of generic SKU's it carried by 50% (without adverse customer reaction) while reducing investment in these SKU's by 25%. Its manufacturers increased their sales substantially, while smoothing production and simplifying delivery. Customers' service levels improved dramatically as fill-rates for generics rose from the mid-80's to the high-90s.

Wal-Mart

In the second case, Wal-Mart and McKesson collaborated to make the supply channel between them more effective. McKesson had just won a three-year contract to be Wal-Mart's exclusive wholesale provider of pharmaceuticals and health and beauty products. The retailer wanted to get product to store shelves quickly and without going through one or more Wal-Mart warehouses. They also wanted timely information about McKesson's fill-rates with the ability to measure them by store, by manufacturer and by SKU.

McKesson developed – with Wal-Mart's involvement – a new computer based system enabling McKesson to replenish shelves directly using the demand-driven philosophy of “sell one – replenish one.” The system also captured all of the fill-rate data that Wal-Mart needed – allowing both McKesson and Wal-Mart to focus on the service level and inventory level exceptions.

Both partners enjoyed substantial benefits. Wal-Mart reduced their inventory in these SKU's dramatically and improved stock availability to their customers. Wal-Mart named McKesson their “Supplier-Of-The-Year,” and renewed its contract when the prior one expired.

Jim Ayers and Dave Malmberg are Principals with CGR Management Consultants based in Los Angeles. CGR consults in logistics and supply chain reengineering. Jim has consulted to healthcare and other industries for 27 years. He has published on the impact of managed care on healthcare operations. Dave had a long career at McKesson and other distribution companies before joining CGR. CGR is a premier affiliate of the Expert Marketplace. Their website is www.cgrmc.com. Jim can be contacted at (310) 822-6720 while Dave can be reached at (909) 337-6998.