


Striking Gold



*Anchor Food
Products
refines inventory
management
and saves millions*

by Ken Cottrill

The alchemy of Internet-based supply-chain collaboration can turn inefficiency into gold. It helped Anchor Food Products sustain a 20 percent growth rate without raising its inventory levels while saving millions of dollars through reduced materials delays. At the same time, Anchor is achieving customer service levels in excess of 99 percent.

The Wisconsin-based manufacturer of frozen "heat-and-eat" appetizers has two production centers. The facility in Appleton, Wis., makes the company's core cheese-based products and a plant in Pecos, Texas, manufactures vegetable-based products. Anchor serves the food service and retail markets. These are divided into a number of segments such as bulk-buy clubs like Sam's Club.

Special Report: Supply-Chain Innovation

"Food-service is consistent and easy to predict as far as volumes are concerned," said Mark Reimer, Anchor's co-pack manager. But it's a different story in the retail sector. "You can have 100 cases a month and all of a sudden it balloons up to 5,000 cases for whatever reason," he said.

That reason could be a promotional campaign. There are also ongoing, demand-related volume fluctuations to contend with. "Big club stores are fickle — if your product is not moving, you are out," Reimer said, whereas the manufacturer may have to find new capacity quickly if a product line takes off.

A different comparison can be drawn when each market is analyzed in terms of the number of stock items generated at Anchor. Food service "is a highly complex business" said Bob Burrows, president of Hudson, Ohio-based On-Point Consulting Group. The business has around 1,500 SKUs to manage and that is "two orders of magnitude higher" than in the retail market, he pointed out. On-Point developed the customized Supplier Managed Inven-

tory System that underpins Anchor's new approach to supply-chain management.

In order to better manage its inventory in this uncertain environment, Anchor had to reduce total inventory replenishment times from back-end supply to front-end delivery to the customer. "We had to dramatically reduce that time so we could produce on demand instead of to a forecast," Burrows explained.

That required a more refined approach to inventory management. "We stratified the inventory into fast, consistent movers and slow, inconsistent movers," said Reimer. Instead of chopping and changing production schedules to allow for the erratic movement of unpredictable items, "we stabilized our schedule by holding larger amounts of inventory on the slow, inconsistent movers," he said. As a result the company can attune scheduling to the more predictable items, giving its production processes a relatively stable backbone.

For most companies the problem is that the majority of inventory items are not statistically predictable. "That is why

ERP systems break down under the burden of changes," said Burrows. There are two rules of forecasting, he said: the shorter the horizon and the higher the levels of aggregation, the better off you are. "And you have to have at least 150 independent orders for an item in the replenishment period before the statistics can be properly applied — you learn that in graduate school," he said.

For the Anchor project, On-Point aggregated inventory items into families and built up fairly stable stock levels for the unpredictable ones. The small percentage of predictable items account for most of the overall demand, enabling the company to "forecast over a seven-day period instead of two months," said Burrows.

Having reorganized Anchor's production cycle plan it was then necessary to bring suppliers into the loop. Thirty to 50 companies supply most of the raw materials that Anchor uses. "We had to communicate the plans to the suppliers and have them respond and be able to replenish in two to three days maximum," Burrows

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explained. This is where Internet-based supply-chain collaboration comes in.

Burrows said the idea is to provide one-to-one information to suppliers on Anchor's inventory needs, available whenever the supplier wants to log on and based on reliable, short-term production plans. For example Anchor specifies the amount of cheese it needs over the next four days and suppliers gear their production schedules accordingly. "What they see on the Internet is the actual cheese inventory in our plan as it is being consumed in real time, and what will be consumed that day," Burrows said. Suppliers can micro-manage their production even further by accessing the information online when they are ready to load a truck and deliver materials to Anchor.

Why use the Internet to exchange this information? "There are three reasons and not one of them has to do with speed," said Burrows. The first is the timeliness of the information that can be conveyed online. Secondly, accurate information is a must. "Time-advantaged manufacturing

needs very accurate information," said Burrows. The third reason is accountability; it is difficult to hide errors on a web-based information system.

A closer look at the way in which the system operates reveals why these characteristics are critically important. For example, a series of checks and balances is built into the system to minimize error rates. "We found that on the inbound bills of lading, 30 percent of them have an error that would have caused a disruption in the material flow," said Burrows. "Now we don't have any errors." Data entry errors can cause major delays. "Ninety percent of the time if you make an error in quantity it will be an order-of-magnitude error," he said. Shorn of such errors, the new inventory management system is much more efficient.

Also making it more efficient is the suppliers' use of the Internet to send detailed shipment information to Anchor ahead of the truck arrivals. The supplier's planning data when it ships becomes its bill of lading and that document is sent

electronically in the form of an advanced shipping notice to the manufacturer. Anchor uses this information to plan its warehousing operations within very tight windows. "Before the truck hits the dock, we already know what items are shipping, the quantities and the lot numbers associated with the shipment," said Reimer. When the truck arrives the system compares what it is carrying with the advanced shipping notice, providing another set of checks and balances.

In combination the various efficiencies have made a significant contribution to Anchor's bottom line. Burrows said that a primary reason for the low utilization of manufacturing capacity is that materials are not available when needed. "Our materials delays went from 40 hours a week to almost never heard of," he said. A production hour at Anchor can cost around \$6,500, so losing 40 of them is costly. The company also has squeezed more manufacturing capacity out of its existing plant. One line used to produce about 2,500 to 3,500 pounds an hour;



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Dr. Blake Hawley
Hill's Pet Nutrition

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now "we are pushing 5,000 pounds an hour," he said, mainly through efficiencies such as drastically reducing the number of disruptions to production schedules.

Suppliers also have gained, Burrows said. A supplier of cheese makes yellow and white cheeses, and switching from one to the other is a major operation since it requires extensive cleaning to eliminate

contamination. Under the old system the manufacturer may have had to make the switch several times a week, losing a production shift every time. Since demand-cycle management planning has become much more predictable, the supplier can plan ahead more effectively and cut down the number of product changeovers. "A huge cost saving," said Burrows.

So far Anchor has not tried to extend the system to its end customers, but Reimer said this is probably down the road. As regards Anchor's future growth, "I anticipate the same growth levels as over the last five years," Reimer said. Anchor has grown 1,000 percent over the past 10 years, "and the system is geared to accommodate that," he said. ●

Lessons in Collaboration

For vendor-managed inventory to succeed, all collaborators in the chain must benefit

Many companies were seasoned supply-chain collaborators long before the Internet arrived. A lesson learned from this experience is that even though the gains possible through collaboration are compelling, the business models of trading partners

may have nuances that need special attention if the new relationships are to

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work. Web-based collaborators can learn much from such experience.

St. Louis-based D&K Healthcare Re-

sources Inc. has established close collaborative relationships with customers and suppliers through a number of vendor-managed inventory programs. "Although I do believe that VMI can provide significant benefits to the supply chain as a whole, there are several key factors that

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