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### **Anchor Foods collaborates via Web**

Anchor Foods, a manufacturer of frozen heat-and-eat appetizers for food-service and retail markets in Appleton, Wis., shifted from forecast-based production to market-driven manufacturing assisted by a multifunctional Demand Management software package from systems integrator On-Point Consulting (Hudson, Ohio).

The package incorporates production planning and production scheduling functions; displays manufacturing, inventory, marketing, sales, accounting and service data by market segment; integrates via touch-screen MMIs with an IBM Plant Floor Solutions package and AS400 mainframe to execute production; traces ingredient and product by lot for quick response to recall if needed; integrates via radio frequency with MMI-equipped fork lifts which supply production lines with raw materials and packaging supplies; integrates via Web with suppliers for JIT deliveries of ingredients and materials; and will eventually integrate via Web with customers as well.

### **Inaccurate forecasts costly**

"For years, we relied heavily on a monthly forecast for order planning that was inaccurate 50 percent of the time," says Pat Lovesee, Anchor's director of logistics and warehousing. "And much of the demand for our products was so erratic that we couldn't predict what the distribution pattern should be."

As a result, the plant would sometimes run out of raw materials and finished products and be unable to fill orders, or would have to expedite delivery of raw materials at premium freight charges that added to product cost. Suppliers were frustrated because they were often pressured to deliver beyond their capabilities. Anchor needed a new manufacturing strategy that could respond to changes in customer demand without incurring extra costs, yet accommodate the company's 15 to 20 percent annual growth rate.

### **Seven-phase analysis**

On-Point Consulting implemented a seven-phase strategic business assessment which analyzed market segments, competition, customers, inventory, production capacity and throughput, information structure, and suppliers. In segmenting markets, the team found that about 80 percent of Anchor's business is in the food service segment, 15 percent in club stores and five percent in six other segments. The team thus concentrated on its two major markets.



**Touch-screen terminals communicate via RF with computer-equipped fork lifts (above) to supply production lines with raw materials and packaging supplies, which are replenished from suppliers with Web access to Anchor's inventories.**

The assessment also revealed that production planning was not coordinated with purchasing. Because they were unaware of planned production, Anchor's suppliers could not anticipate demand. "Because we utilized a forecast-driven manufacturing plan which was wrong half the time, we had to estimate our raw material demand, which required us to pad our inventory," says Craig Elonen, Anchor's analytical systems manager. "In addition, our ERP system was set-up so that if inventory dropped below a certain point, it would force demand on the plant."

### **Collaborative planning**

One of the team's first moves was to discard the forecast system and let orders drive the production schedule. Demand Management software allows the plant to operate as a flow process, manufacturing related "families" of products, rather than a discrete process manufacturing individual items as mandated by the ERP system. It also enables Anchor to collectively plan with suppliers and correct inventory levels. "We now plan for the 80 percent of our production volume which is very predictable," says Lovesee. "The other 20 percent we make to stock, and we have a longer-term forecast to predict what our inventory plan should be for those items."

Elonen describes Demand Management as a SQL server-based client/server package incorporating four modules: Rough-Cut Capacity Planning; Cycle Planning; Rate-Mix Planning; and Supplier-Managed Inventory, "all interconnected so one feeds the other top-down and bottom-up," he adds. Designed as a "bolt-on" package to the JD Edwards ERP system, this structure allows looking at different levels of aggregation to correctly respond to customer demand. "It's basically allowed us to analyze changes in the forecast and orders over time," Elonen continues.

Demand Management incorporates a Web server which allows Anchor to make real-time updates to the production schedule on a daily basis, forecast changes on a weekly basis, and is accessible to suppliers in real time. The system also Web-enables Advance Shipping Notices (ASNs) to Anchor's warehouse and immediate feedback if a shipment does not match the ASN.