

Getting the goods

Libbey, BIC, other manufacturers confront fast-moving world markets

CONSUMER PACKAGED goods (CPG) manufacture increasingly is driven by the demands of mass customization and globalization of its markets. These tendencies in turn have led to increased spending by CPG manufacturers on enterprise resources planning (ERP) software. A recent study by Boston-based **AMR Research** revealed that consumer goods companies increased their spending on ERP software by more than 45 percent in 1997.

As a group, consumer goods companies comprise the biggest of all industries, with overall annual sales topping \$3 trillion by most estimates. What distinguishes this industry from others is the sheer volume of things produced. For example, nearly everyone has a use for products like toothpaste and mouthwash, and they purchase these products repeatedly.

Selling in such high volumes generates high revenues and creates economies of scale that can lower overall operating costs. But with all the variations in sizes, packaging, and distribution requirements, CPG is no longer a mass market in the strictest sense.

As a result of market globalization, consumer goods manufacturers are seeking the ideal structure for

producing and selling their products around the world. While it's relatively easy to join together multiple facilities in different countries via a network, it's something else to integrate their operations. In the past, integration tended to be restricted to financials. Today, integration is being extended to include product category management, channel management, and demand management on a worldwide basis.

ERP vendor **ROI Systems**, Minneapolis, has approached this challenge from three directions. "First," says Bill Pisarra, a company vice president, "we leveraged our ERP system to accommodate the need for multiple plant/distribution centers. In the case of multiple distribution sites, planning rules for local control of inventory are considered, and then that detailed demand is presented to the manufacturing plan for consideration in production.

"Second, the system helps cost-effectively manage different currencies and exchange rates as global transactions occur," Pisarra continues. "Last, the system can be set up to make communications affordable for those inventory locations that simply cannot justify the cost of a dedicated phone line to support processing. For this environment,

ROI Systems has created support for multiple remote databases that communicate as required and on-demand."

BIC Graphic USA, a leading manufacturer and imprinter of writing products, purchased an ERP solution from **Friedman Corp.**, Deerfield, Ill., largely due to its high-volume order processing module and its integrated, consumer-oriented product configurator.

Configurators capture the customized characteristics of the product at order entry and support manufacturing of the product per the customer's specifications. There are two important requirements for a product configurator in a CPG environment. First, the configurator must be easy to use so it can be operated quickly, while the customer is on the phone, or directly by the customer via the Web. Second, the configurator must provide enough production control via engineering rules to ensure that the requested end product can, in fact, be manufactured and delivered as promised.

Configurators are even more important given the growing prospects for electronic commerce and Web-based product sales. Customers will operate the configurator directly by means of a browser, selecting

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Marty Weil
Contributing Editor



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CONSUMER PACKAGED GOODS

that Libbey purchased before going live with WorldSoftware, was financially integrated with Libbey in three months. The rest of the system was up and running in six months.

The implementation team began work at World Tableware, a company that was acquired while Syracuse China was being integrated. The quick integration of Syracuse China made it possible to bring World Tableware into the fold in only three months.

Recently, Libbey entered into a joint venture with Mexican glass manufacturer Vitro and integrated two new businesses, with total sales of \$35 million, in only two months. With each acquisition, Libbey was able to minimize staff functions, which freed up

the resources necessary to modernize production facilities and continue to grow the firm's already industry-leading distribution team.

Libbey has been able to differentiate itself from its competitors by being able to meet customers' complete table-top needs on an immediate, in-stock basis. The key metric for measuring customer service is fill rate. In the past, Libbey was able to maintain an edge of about 1 percent over its competitors, which typically had fill rates of 94 percent to 95 percent. Increasing that edge was a key component of Libbey's strategy to gain market share. Increasing the fill rate by just one percent directly impacts where that customer will go for their next order. Man-

agement long ago identified inaccurate inventory figures and shipping errors as the two main obstacles to increasing its fill rate. WorldSoftware made it possible for the company to finally overcome those obstacles.

Libbey became one of the first companies to install a new warehousing automation system developed by IBM to interface with WorldSoftware. This system better ensures accurate inventory and shipments by requiring that every addition to inventory and every shipment be scanned in by the staff member making the transaction. The moment that a pallet is wanded in or out of inventory, that information is available to customer service representatives taking orders, as well as managers reviewing production plans.

Inventory audits performed since the new system was installed have shown it to be almost 100-percent accurate. This accuracy has made it possible to eliminate wall-to-wall audits and to perform periodic cycle counts more simply. But the biggest advantage has been the 50-percent savings that has resulted from more accurate inventory tracking and more efficient production plans. Over the same period, Libbey reduced safety stock levels by 50 percent because it has so much confidence in the numbers produced by the new system.

Implementing WorldSoftware has significantly improved Libbey's competitive position. The increase in fill rate has helped the company take market points away from competitors in a low-growth market while enabling it to grow through acquisitions. Meier concludes: "We saw that we had to change our information technology, and we are well on the way to doing that. Our ERP implementation can take some of the credit for getting us where we are today." ■

Software functionality for CPG industry

"To be competitive in the consumer packaged goods [CPG] industry, a company may need special functionality such as warehouse management and advanced transportation," says Denver-based J.D. Edwards' Carol Lippmann, an industry CPG manager. "We find that our customers most often use our warehouse management features. For advanced transportation, our customers regularly use the integrated transportation planning and management capability, full integration with sales order processing, and inventory warehouse management."

According to **Friedman Corp.**, Deerfield, Ill., other key software functions for CPG include:

- Vendor-managed inventories—An increasing number of retailers are requiring their suppliers to maintain shelf inventories at a store or warehouse level. This requires software that can capture point-of-sale demand and inventory positions, transmit the demand to the supplier, interpret this demand, forecast future demand in terms of vendor/customer agreed-upon service levels and inventory turns, and automatically generate a replenishment order to the retailer.
- Logistics planning—CPG customers are demanding that their suppliers meet their special needs in terms of truck scheduling (i.e., route planning, consolidation warehouses, drop-off times, etc.). Hand-in-hand with this are special packaging requirements (e.g., "Don't mix products in the same carton") and special palletization requirements (e.g., single-item pallets, mixed-item pallets, mixed-store pallets).

Software that will meet vendor compliance requirements, including:

- Special labeling (each customer requires a different format);
- Special pricing (e.g., tagging of goods with retail prices);
- Advance shipment notification;
- UCC-128 compliance;
- Special documentation as required by the retailer;
- Cross-referencing between manufacturers' part numbers, customer part numbers, and UPC codes;
 - Electronic data interchange software; and
 - Point-of-sale software that interfaces with enterprise resources planning software.

unique product features, receiving a quoted price, and hopefully, placing an order.

Friedman also supplies an electronic data interchange (EDI) set that incorporates the ability to send configured product data via EDI. BIC Graphic's customers can now enter and transmit custom customer orders via EDI to BIC Graphic. The Friedman ERP System edits these orders for completeness, accuracy, and buildability, and directly feeds the product system with requirements. Handling of customer orders has improved measurably since BIC Graphic installed the Friedman system. Order-entry representatives can process 20 percent more orders per day with greater accuracy, while reducing by 75 percent the time required for job training.

By reengineering its entire business based on WorldSoftware, a fully integrated ERP solution from Denver-based J.D. Edwards, Libbey, a leading sup-

plier of glass tableware in North America, increased its fill rate (the percentage of line items ordered that are immediately delivered from stock) from 95 percent to 98 percent while reducing inventory 16 percent. These improvements have given Libbey a major advantage compared to its competitors, where rates range from 94 percent to 95 percent.

The key reason for the improvements, according to John Zarb, chief information officer at Libbey, is that its managers can obtain accurate inventory numbers and make companywide production plans with WorldSoftware. The company also has integrated newly acquired production plants into the ERP system within six months to quickly take advantage of synergies and reduced costs.

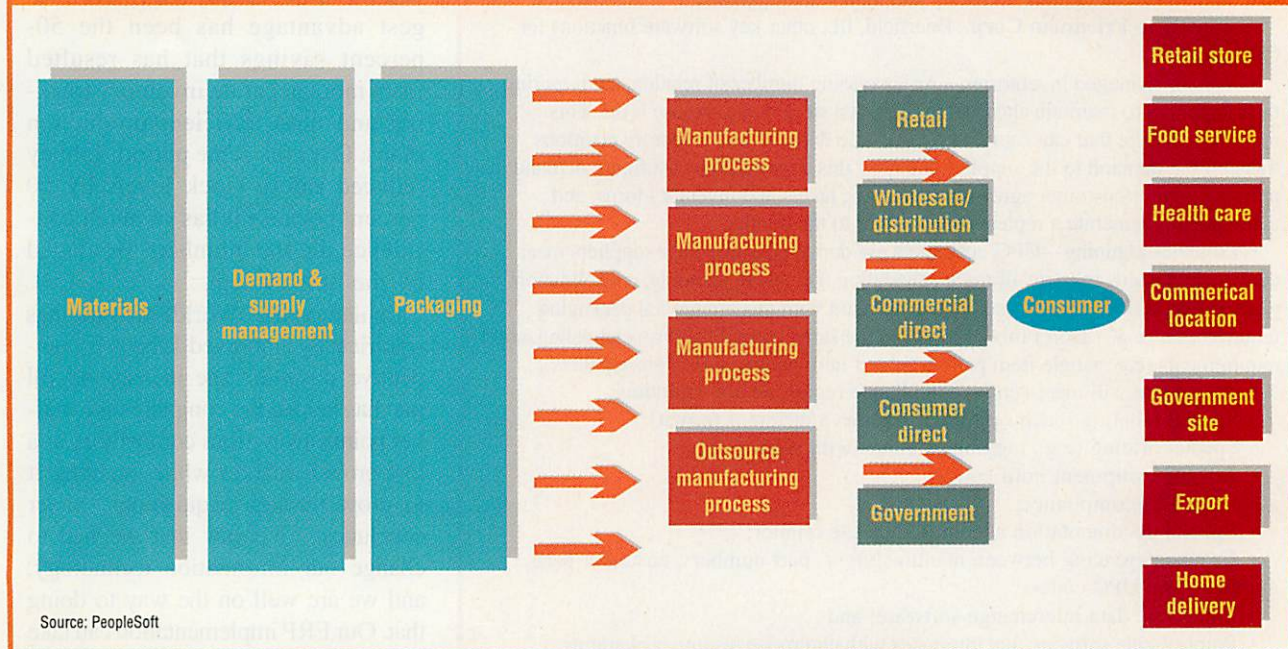
Information once stored in multiple, disjointed systems is available companywide with the new system. This comprehensive approach has automated much of the company's previous production planning process. Planners

enter orders. The system calculates the raw materials required to fill them, and generates purchase orders for the materials, subject to purchasing department review.

The resulting production schedule considers orders and resources companywide, providing a dramatic improvement in efficiency over Libbey's previous plant-based approach. While a significant amount of manual intervention is still involved in producing the final schedule, the system eliminates drudgery. Planners spend their time on higher-level tasks, such as evaluating alternatives. The result is a far superior schedule that requires considerably less time.

Given its many recent acquisitions, if Libbey hadn't implemented a new system, it would have been forced to duplicate customer service, production planning, purchasing, and other staff functions at each acquired company. Instead, Syracuse China, a firm

Demand and supply chain



The complexities of consumer packaged goods manufacture include the need to meet demand from multiple markets and manage multiple distribution channels. This market complexity impacts management of materials and packaging, as well as demand and supply management.