

SAP Case Study



mySAP™ SUPPLY CHAIN MANAGEMENT AT BROWN-FORMAN

THE BEST-RUN BUSINESSES RUN SAP



accenture



BROWN-FORMAN

AT A GLANCE: mySAP™ SUPPLY CHAIN MANAGEMENT AT BROWN-FORMAN

Strategic Goals:

- **Improve performance relative to competitors despite industry consolidation and a disadvantage in economies of scale**
- **Sustain delivery service levels and reduce lost sales due to stock-outs while substantially lowering inventories**
- **Strengthen partnerships with distributors, suppliers, and joint ventures**

Approach:

Teaming with Accenture, Brown-Forman's wine and spirits division established a sales and operations planning process covering a 12-month horizon to better balance supply and demand. The division focused on continually improving forecast accuracy for an 18-month horizon and on implementing management-by-exception processes. The division rationalized stock-keeping units to lower costs and reduce inventory. This approach was enabled by mySAP™ Supply Chain Management and other SAP solutions.

Results achieved over the period May 2002 to December 2002 included:

- **Decreased global inventory by 23%, which resulted in a 21% increase in inventory turns**
- **Maintained product availability at more than 99.9% and sustained high service levels while inventory was reduced**
- **Avoided an estimated 80% or more increase in headcount that would otherwise have been required to support planning processes**
- **Prevented the need to expedite shipments using airfreight or to incur other extraordinary costs during a change in cooperative-distribution arrangements**
- **Reduced transportation costs by reducing the number of carriers from 140 to 35**
- **Stabilized plans provided to production units, suppliers, and distributors**

ACHIEVING PERFORMANCE GAINS IN A CONSOLIDATING INDUSTRY DESPITE A DISADVANTAGE IN ECONOMIES OF SCALE

Brown-Forman Corp. is one of the largest American-based companies in the wine and spirits business. The company also manufactures and distributes consumer durables, such as fine china dinnerware, linens, and luggage. With revenues of \$2.2 billion in fiscal 2002, Brown-Forman has 7,400 employees and sales in more than 130 countries.

Brown-Forman was established in 1870. The founder was George Garvin Brown, a pharmaceuticals salesman in Louisville, Kentucky, who had the then-novel idea of selling top-grade whiskey in sealed glass bottles. Today, through Brown-Forman Beverages Worldwide (BFBW), Brown-Forman produces and markets many of the most well-known wines and spirits in the world. They include Jack Daniel's, Southern Comfort, Korbel California champagnes and wines, Bolla Italian wines, and Fetzer California wines.

Although a difficult economic climate prevailed during fiscal 2002, Brown-Forman continued to maintain a solid financial position. The company's cash flow from operations was \$250 million, and the net debt position was less than \$100 million at the end of fiscal 2002. The wine and spirits business accounted for nearly 75% of Brown-Forman's sales, and revenue and operating income from this business increased 3% from 2001 to 2002. BFBW expects stronger growth in the future due to demographic trends in the United States, which is Brown-Forman's largest market. Assuming an economic recovery unfolds, BFBW expects to increase advertising expenses and anticipates contributing significantly to the company's future earnings growth.

Though Brown-Forman's wine and spirits business continued to experience relative success, the company had already recognized in the late 1990s that it would face challenges to ensure an acceptable level of profitable growth over the long term. In particular, substantial consolidation had taken place in the global wine and spirits industry, and although Brown-Forman was a large U.S. supplier, it had become a relatively small player in the global arena. Many of Brown-Forman's competitors had grown through acquisition and achieved significant economies

of scale, thus reducing their unit costs and enhancing their position for procuring advertising, raw materials, and logistics services. Some rivals were shedding businesses unrelated to wine and spirits, further concentrating their resources and heightening their competition with BFBW. Competitors were also generally focusing on inventory management, creative distribution arrangements, delivery performance, and other aspects of their supply chains to overcome declining margins and oversupply in wines – and to reduce costs and improve service across their wine and spirits businesses.

Decision to Implement Supply Chain Planning Processes

When Brown-Forman began to explore options to reach its profitability goals, the company teamed with Accenture on a supply chain value assessment, which examined not only all supply chain operations, but also the go-to-market area. This early analysis set in motion a wide range of change projects – 11 in all – that Brown-Forman would undertake during subsequent years. One important result of this project was the blueprint for new supply chain planning processes supported by a new organization. Specifically, the company focused on ensuring that inventory and production capabilities meet market demand by implementing a sales and operations planning (S&OP) process; modifying finished-goods deployment to reduce overall inventory without compromising customer service; rationalizing stock-keeping units (SKUs); increasing production flexibility; and simplifying transportation processes.

In the fall of 2000, as Brown-Forman and Accenture completed process design for the new supply chain planning function and organization, the team also structured a process for selecting a new class of supply chain planning software necessary to address future requirements. An important factor was that Brown-Forman had operated SAP® R/3® to support its execution processes since May 1999. “From the start, we recognized that Brown-Forman had a valuable asset in its SAP R/3 implementation, and we wanted to leverage it as much as possible,” says Jim Panos, an associate partner at Accenture who worked

extensively in the design work with Brown-Forman. When the team members began to evaluate key supply chain planning packages, they looked at the then-new version of SAP® Advanced Planning & Optimization (SAP® APO), a key component of mySAP™ Supply Chain Management (mySAP™ SCM). “While it had not been in the marketplace as long as some of its competitors, SAP APO had the right planning functionality to deliver benefits and had strong integration with SAP R/3,” says Panos. “More importantly, Brown-Forman had a positive, established relationship with SAP based upon the SAP R/3 implementation.”

After a careful analysis of alternatives, Brown-Forman selected mySAP SCM and SAP® Business Information Warehouse (SAP® BW) to enable its reengineered planning and execution processes. “mySAP SCM will help establish discipline and process thinking at Brown-Forman. Our supply chain planning initiative is leading the way for the organization on this front,” says Jim Hutchinson, senior vice president and director of supply chain integration. “In particular, mySAP SCM information will support our S&OP process. By implementing S&OP and related processes, we want to improve overall supply chain performance and reduce our finished-goods inventory investment around the world – ultimately by more than 35%. We also have a customer service advantage over key competitors that we want to preserve. These competitors are growing larger through consolidation and are launching their own supply chain initiatives. We have to maintain a service-level gap to offset their scale. In mySAP SCM, we believe we have a strong base to do the things that we want to do – now and in the future.”

IN DETAIL

Challenges and Objectives

Consolidation in the worldwide wine and spirits industry gained momentum in the late 1990s. Factors motivating this consolidation included the need to establish global positions in premium brands, the fastest-growing segment in spirits; the

importance of a strong market position to achieving favorable advertising and distribution arrangements; and the value of scale when dealing with regulatory and environmental issues in various countries. The wine business had become highly competitive, providing further motivation for consolidation. Many labels were at the same price point, substitution of brands had become more prevalent among consumers, and wine margins were declining. The drive to consolidate was further stimulated by the need to focus significant resources in emerging markets (for example, in Africa, East Asia, and the global duty-free market) and in regions where time to market, accommodating local tastes, and concentrating on key labels are critical.

A prime example of the benefits of consolidation is Diageo, a company formed at the end of 1997 through the merger of GrandMet and Guinness. Diageo became the world's largest supplier with £8.7 billion (\$13.9 billion) in sales and 13% growth in operating profits in wine and spirits in 2002. Moreover, by 2002 Diageo had nearly completed the sale of its food businesses to further develop its strategic focus on premium drinks.

Another example of the market strength gained by companies during this era is Pernod Ricard of France. With the acquisition of part of Seagram's spirits division in 2001, Pernod Ricard doubled its size in this segment and became one of the world's leading players in the wine and spirits business. Today the company is also refocusing all of its resources on wine and spirits and withdrawing from its diversified activities. And in 2002, the global company Allied Domecq had a net turnover increase in wines and spirits of 18% and 22%, respectively, an increase driven by newly acquired entities; volume declined 3% before accounting for acquisitions.

IMPORTANCE OF SUPPLY CHAIN CONSIDERATIONS

As consolidation had substantially run its course, opportunities for major acquisitions by Brown-Forman had significantly diminished. Nonetheless, the company foresaw achieving profit growth by focusing on developing its existing global brands, introducing new products, pursuing tactical acquisitions, and

developing agency brands – that is, selected brands in which BFBW would have exclusive marketing and distribution rights in contracted markets through joint ventures or similar agreements. However, as was confirmed by the supply chain value assessment, Brown-Forman recognized that these actions alone would not be sufficient to achieve the 9% to 12% growth in earnings required to satisfy investors and sustain the business in the long term. In particular, the company recognized that lowering inventory, enhancing service to its distributors, reducing stock-outs, improving production efficiency, lowering procurement costs, and addressing other issues associated with supply chain planning and operations would have a favorable effect on profitability. For new-product introductions, the company also realized that reducing the cycle time to create new packaging, as well as avoiding incremental staffing and transportation costs, could be addressed through supply chain improvements. Brown-Forman recognized that attending to these areas quickly was imperative, given its relative scale disadvantage after recent industry consolidations – and given the fact that the company's competitors were pursuing supply chain improvements as well.

BFBW's extended supply chain network has many elements, including stave mills (for shaping wood for barrels), cooperages (for producing barrels), distilleries, wineries, bottling facilities, finished-goods warehouses, distributors, retailers, and consumers. The physical supply chain profile for aged spirits is presented in Figure 1. Different supply chain configurations are used for non-aged spirits and wines. Additional complexities are introduced by international distribution, specific distribution arrangements for agency brands, and distribution to 19 "control states" in the United States, where the state liquor control authority acts as the wholesaler or retailer for alcoholic beverages.

PROCESS IMPROVEMENT OPPORTUNITIES

Brown-Forman's work with Accenture on the supply chain value assessment highlighted where its lack of formal processes and limited visibility created excess costs throughout its manufacturing and logistics operations. The company had no established forecasting process and thus could not efficiently plan

production, establish storage requirements, and assign sales resources. Production decisions were often made by plant schedulers without input about expected market demand. Moreover, excess inventory buildups at distributors, sales spikes caused by promotions and discounts, lack of consideration of seasonality effects, and unanticipated supply issues compounded the problems. Excess inventory was carried at warehouses and production facilities by distributors – and in other areas of the extended supply chain – to compensate for the lack of visibility. There was no capability to review slow-moving inventory. Some of the inventory had existed in storage for as long as 10 years, and costly discounting programs were often used to ensure the sale of slow-moving products.

The problem of excess inventory was exacerbated by a lack of discipline in creating new products or packaging; the company had no specific process or profitability requirement for establishing SKUs. In addition to creating inventory issues, the lack of visibility of demand caused requirements for expedited orders and higher shipping costs – and reduced the accuracy of plans provided to BFBW distilleries and suppliers, causing inefficiencies in their production. Another area lacking formal processes was transportation. Customers had traditionally assumed responsibility for shipping, and BFBW consequently lacked control over shipment schedules because it worked with about 140 transportation service firms.

Although there were opportunities to directly improve performance throughout the extended supply chain, BFBW found that the downstream portions of the supply chain had the most critical issues. Moreover, first addressing areas closest to consumer demand would yield improvements in the upstream supply chain. Through the supply chain value assessment and significant follow-on strategic efforts, the BFBW and Accenture team determined that areas of focus should include demand forecasting for finished products, finished-goods inventory planning at BFBW and external warehouses, planning key packaging-supply purchases (glass bottles, for example), and produc-

tion scheduling at BFBW's bottling facilities (see Figure 1). While managing distributor inventory levels is not the direct responsibility of BFBW, understanding distributors' anticipated requirements is important to provide a downstream view of future product demand.

Implementation

In 1999, the strategic work that followed the supply chain value assessment yielded a detailed evaluation of the BFBW supply chain that pinpointed how best to reduce costs and satisfy customer needs in light of industry consolidations and the emerging business environment. A critical outcome of this evaluation was the creation of a dedicated supply chain planning group. The company reassigned 10 people from operating roles to several teams covering supply chain and related processes, including forecasting, master planning, production scheduling, and warehousing. In fact, BFBW recognized that it did not have formal business processes in place; ad hoc processes had evolved over several years in response to many individual and independent requirements.

The implementation subsequently unfolded as follows:

January 2000 through April 2000: The teams issued recommendations covering improvements to supply chain performance and the establishment of standardized, formal business processes. Virtually all the recommendations were accepted by the BFBW executive committee.

They included:

- **Sales and operations planning:** BFBW established a formal S&OP process covering a 12-month planning horizon to better balance supply and demand, improve the product mix to achieve higher gross profits, react more quickly to deviations from expectations, improve time to market for new products, and improve capacity utilization.
- **Forecasting:** The division focused on continually improving forecast accuracy for an 18-month horizon, incorporating an approach tailored to the availability of data from distributors

relating to their inventory and “sales out” (shipments from distributors to retailers, which are referred to in the wine and spirits business as depletions).

- **Inventory rationalization:** BFBW decided to reduce the amount of inventory maintained at bailment warehouses (the only distribution centers allowed in control states) and at private distributors. Through the SAP R/3 implementation completed in 1999, the company had achieved greater accuracy in inventory records. For example, Fetzner wine inventory accuracy had improved from 97% to 99.9%. Accuracy improvements would in turn support implementation of inventory management programs.

BFBW completed a thorough assessment of its inventory and removed obsolete stock from its warehouses. The division assigned accountability for inventory levels at the business level; established processes to improve the visibility of distributor inventory so that replenishment decisions could be made more readily; and worked to reduce the variability of inventory levels. The division also changed inventory planning processes to establish target days of supply for each product. Through these actions, the company would reduce global inventory levels, avoid increasing inventory at external locations, and reduce lost sales resulting from stock-outs.

- **SKU rationalization:** The division rationalized SKUs and established discipline in the process for creating new SKUs, including ensuring that any new SKU established would have minimum gross profit requirements in its first year of production. There were initially 4,000 product SKUs and 60,000 combinations of SKUs with sourcing locations. The company reduced the number of SKUs in the wine business and made significant reductions in other businesses.
- **Transportation consolidation:** BFBW established a transportation management program and assumed responsibility for transportation carriers, relieving customers of this responsibility. This enabled control over truck arrivals, smoothed

the demand for and improved the reliability of shipping, and lowered complexity by reducing from 140 to 35 the number of carriers involved.

- **Management by Exception:** BFBW decided to develop a management-by-exception approach, in which actions would be taken when specific measures fell outside predefined limits (for example, when inventory was too low and would lead to an out-of-stock problem; when inventory was too high and might create excessive carrying costs; when order lead times were too long and could create delivery delays; and so forth).

June 2000: The division commenced implementation of new planning and execution processes based on the existing SAP R/3 implementation.

July 2000 through November 2000: BFBW, with Accenture’s guidance, identified software requirements for planning processes and considered capabilities of alternative software suppliers against the requirements.

December 2000: BFBW finalized selection of mySAP SCM.

February 2001 to May 2002: BFBW commenced implementation of mySAP SCM, which was supported by staff from three groups:

- Brown-Forman provided an understanding of the business requirements and deployment of information technology. About 15 company staff members (including 8 full-time people) were involved in the project to varying degrees.
- Accenture provided deep SAP implementation skills, including project management, as well as significant functional and consumer products industry knowledge and insights.
- SAP provided software technology and information about the future stream of capabilities.

mySAP SCM was implemented in two main phases and was ultimately used by about 50 staff members throughout BFBW:

- **Demand and supply planning:** This implementation was initiated in the Fetzer wine group's sales and marketing company and in an associated production facility. Following this, the implementation proceeded for agency brands and three spirits businesses. BFBW implemented S&OP in each of these businesses. The planning implementations are enabled by the SAP APO demand planning and supply network planning capabilities of mySAP SCM. "We have predefined days-of-inventory plans for each distributor and determine shipments from this information," says Randy Isdahl, supply planning manager. "We release forecast information to the supply planners. They use mySAP SCM to work with the forecasts and the target days of supply to establish warehouse delivery schedules that maintain the appropriate inventory levels." Demand planning and supply network planning are executed weekly to provide data to support the S&OP process. The planning runs require from 30 minutes to 3 hours, depending on the complexity of the supply chain network.

The alert-monitoring capabilities of mySAP SCM are used to highlight significant differences from forecast, short inventory positions, and so forth. "We're driving toward managing plans by exception, rather than looking at everything as we had been doing," Isdahl says.

- **Production planning and detailed scheduling:** This implementation was initiated in the Fetzer production facility and subsequently in spirits production facilities to improve plant utilization, postpone capacity additions, capture the logic employed by individual schedulers in the plants, reduce variability in production levels, and lower raw-material costs. This implementation is enabled by the production planning and detailed scheduling (PP/DS) capabilities of SAP APO as well as by integration with other SAP solutions. PP/DS is

executed weekly to support production planning. The planning runs require from 20 minutes to 40 minutes, depending on the complexity of the manufacturing operations.

The PP/DS capabilities will be a key to lowering raw-material costs. "We have two worldwide suppliers for glass," Hutchinson says. "If we can give these vendors a stable production plan, they can manage their facilities better. We are working on a pilot program with one of these glass suppliers to share our material forecast. Eventually we will transmit this information electronically, directly into this supplier's production planning program."

PP/DS will also help capture individuals' knowledge of plant scheduling. "The master scheduler in our Lynchburg plant has been there for 20 years and has all the decision rules in his head," Hutchinson says. "This is a very complex plant to schedule – half the volume is make-to-stock, half is make-to-order, volume is growing 5% to 6% a year, and there are a couple of bottleneck lines. We are capturing his decision-making logic and expert knowledge into PP/DS and anticipate, over time, capturing and retaining even more knowledge and history about demand planning from all our people."

The combined BFBW, Accenture, and SAP team quickly implemented the SAP solution. Only six months elapsed before SAP APO was live in the wine business. The balance of the company was live on SAP APO by February 2002.

The implementation of enhanced forecasting, the S&OP process, inventory management, and other programs yielded benefits throughout Brown-Forman's global business.

The following are two specific cases:

- **U.K. distribution arrangements:** Jack Daniel's whiskey is a \$100 million per year business in the U.K. Brown-Forman had a distribution agreement with Diageo for this business and recently replaced it with a cost-sharing arrangement with Bacardi, in which BFBW shares Bacardi's sales and

distribution infrastructure. As a result of the S&OP process and the visibility afforded by SAP planning and execution systems, BFBW was able to handle the transition with one full-time staff member. Following the change, the division was also able to reduce inventory by 40%, saving a dollar value in the high six figures in inventory-carrying costs. Moreover, had the planning processes not been in place, BFBW believes that it would have had to take extraordinary measures to maintain this important business, since any significant retailer dissatisfaction would have resulted in loss of market position and difficulties reentering the business. These measures would have included temporarily deploying a substantial number of additional people to handle the changeover – and also airfreighting finished goods from the United States to prevent product shortages.

- **New-product introduction:** BFBW introduced a new cream-based spirits product called Amarula, whose sales volume is 27,000 cases per year. The order-to-delivery lead time for this product is three to four months – a significant portion of the overall shelf life. BFBW had no comparable product experience on which to base planning for introduction of this new product, and the business was initially twice as successful as expected. Making use of the S&OP process, achieving high levels of forecast accuracy, and taking advantage of the visibility afforded by mySAP SCM have been critical to managing this business, given the long order lead time and short shelf life.

Through the implementation of formal planning and execution processes enabled by mySAP SCM, Brown-Forman is reducing inventory and cost of goods sold while improving customer service. In the near future, BFBW plans to enhance its use of data for decision making by using the supply chain performance management capabilities within the solution to present and more easily access company data as defined in the Supply Chain Operations Reference model (such as days of inventory, production flexibility, and order fulfillment lead times). The company also plans to use mySAP SCM to establish collaborative processes and vendor-managed inventory programs, which will improve visibility and enable further cost savings shared between Brown-Forman and its customers and suppliers. In sum, mySAP SCM is helping to establish discipline, process thinking, and data-based decision making in supply chain operations – and will ultimately be beneficial throughout the company's operations. Even though the global wine and spirits business has undergone substantial consolidation, Brown-Forman – despite its relatively small scale – is well-positioned to continue to grow profitably.

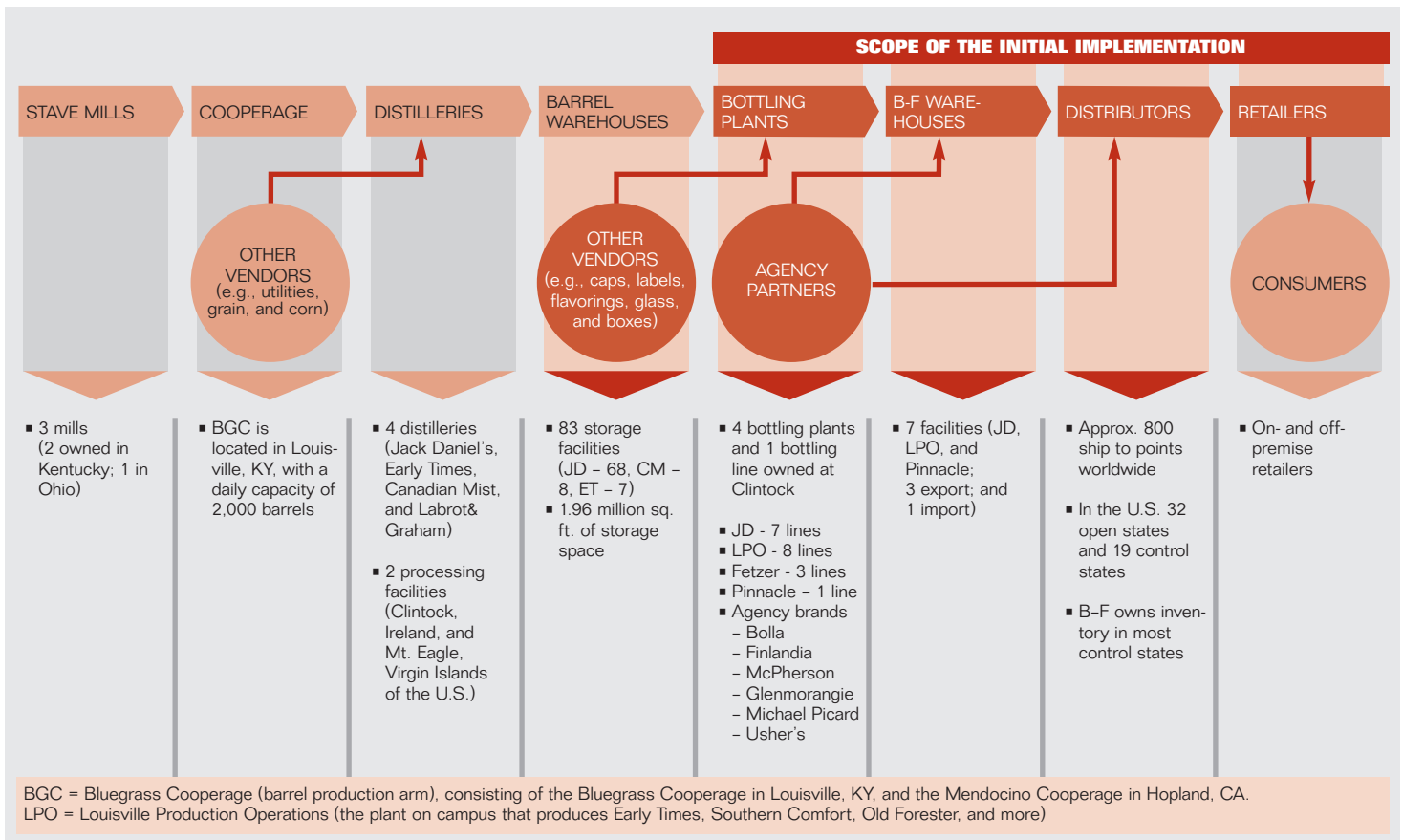


Figure 1: Brown-Forman Supply Chain for Aged Spirits

THE BEST-RUN BUSINESSES RUN SAP



SAP AG

Neurottstraße 16

69190 Walldorf

Germany

T +49/18 05/34 34 24 *

F +49/18 05/34 34 20 *

* Subject to charge

www.sap.com