

SAP Case Study



mySAP™ SUPPLY CHAIN MANAGEMENT AT CJ

THE BEST-RUN BUSINESSES RUN SAP



AT A GLANCE: mySAP™ SUPPLY CHAIN MANAGEMENT AT CJ

Strategic Goals:

- Pursue global growth across diverse businesses through selective investment and by streamlining business processes
- Enhance ability to respond to demand shifts in fast-moving consumer goods segments
- Improve delivery performance while reducing inventory
- Reduce costs of offshore procurement of raw materials by minimizing the impact of exchange rate fluctuations and other uncertainties

Approach:

CJ implemented a process innovation program across its diverse businesses following an economic downturn that affected Asian economies. The company first focused on improving its execution capabilities by reengineering its business processes covering order fulfillment, production planning, and procurement. CJ then implemented sales and operations planning processes to better balance supply and demand. Supporting actions included increasing forecast accuracy, analyzing its purchase costs, and shortening its production-planning cycle. This approach was enabled by mySAP™ Supply Chain Management and other SAP solutions.

Results achieved over the period 2000 to 2002:

- Reduced stock-outs by 41.2%; expect to achieve a service level of 97% in order fulfillment by 2003
- Lowered finished-goods inventory by 15.4% and raw-material inventory by 18.5%
- Reduced procurement costs by 5%; expect a total reduction of 10% by 2003
- Increased gross margin by 2% as a result of the complete set of cost reductions
- Improved response time to customer claims by 50% and expect to achieve 24-hour turnaround by 2003

ADDRESSING SUPPLY CHAIN PERFORMANCE ACROSS A DIVERSE CONSUMER GOODS PORTFOLIO

Formerly known as Cheil Jedang, CJ is the largest food company in Korea. The company also engages in a diversified set of business activities including pharmaceuticals, entertainment media, home shopping, and logistics. CJ had fiscal year 2001 revenues of 1.96 trillion Korean won (\$1.70 billion), employs 4,000 people, has 11 manufacturing facilities, and comprises 29 domestic affiliates and a network of overseas investments.

CJ was initially established in 1953 as a sugar refinery. The company has since grown to lead the Korean food market, maintaining its 48% share of domestic sugar sales, developing its brands' images, and emphasizing flour, cooking oil, seasonings, and processed foods. Through the application of innovative biofermentation technology, CJ has become a world leader in the production of food and animal feed additives. CJ is also working to apply its synthesis and fermentation expertise to broaden its range of medicines. In 1993, CJ was spun off from the Samsung Group. The company subsequently pursued additional commercial activities such as entertainment and home shopping, laying a foundation for global growth through diversification, brand development, research investment, and management independence.

Though CJ had built a foundation of diversified businesses through the 1990s, the company was adversely affected by the Asian economic crisis toward the end of the decade. About 25% of CJ's total revenue is spent on imported materials, and the devaluation of the Korean won substantially increased raw-material costs and reduced competitiveness. Moreover, demand was reduced in CJ's core Korean markets, lowering revenue and further slowing the momentum the company had achieved to fund research, advertising, and other growth-generating programs.

While the economic situation in Korea had caused a reduction in profitability, CJ saw the downturn as an opportunity to focus on its core competencies and invest for long-term growth. CJ diverged from the more conservative, cost-focused paths

chosen by its rivals and instead concentrated on improving quality, launching new products, and building brands. The company carefully reviewed its portfolio, pursuing new investments and divesting businesses that did not meet growth or profitability targets. Moreover, CJ recognized that despite the inherent lack of uniformity across its businesses, there were common needs for more efficient processes, better access to information, and improved response to the external environment. In particular, CJ acknowledged that addressing inventory costs and improving customer service would require focusing on its supply chain operations.

CJ determined that it needed to focus on improving order fulfillment, production planning, and procurement processes; increasing forecast accuracy across its businesses; ensuring that resource and production capabilities meet market demand by implementing sales and operations planning processes; and reducing the costs of its raw materials through widespread access to procurement information across organizations. CJ also initiated programs to collaborate with customers to better plan inventory replenishment. The company recognized that a broader e-business initiative would be paced by the stabilization of its internal supply chain processes.

After a careful analysis of alternatives, CJ selected mySAP™ Supply Chain Management (mySAP™ SCM) coupled with SAP® R/3®, SAP® Business Information Warehouse (SAP® BW), and other SAP solutions to enable the reengineering of its associated execution and planning processes. “The SAP solutions provided a framework for implementing business processes for our diversified consumer goods portfolio that meet the standards of global best practices,” says Yong Bum Kim, senior manager of CJ’s Digital Nervous System team, which is focused on improving CJ’s responsiveness across all businesses. “After a false start with another vendor’s software solution, we realized that our vision for e-business solutions could only be accomplished with a solid systems platform within CJ. In order to achieve value-adding electronic connections with our customers and suppliers, we needed to

achieve world-class business processes within our own operations. The SAP solution has allowed us to avoid costly software customization to achieve this, because the standard SAP solutions incorporate best practices applicable to our range of processes.”

IN DETAIL

Challenges and Objectives

CJ had established a well-regarded position in Korea. The *Korea Economic Daily* and the *Institute of Industrial Policy Studies* ranked CJ 7th in brand power and 11th in brand asset value. CJ was also acclaimed as one of Korea’s top 10 companies by *Far Eastern Economist Review* and by *FinanceAsia*. As the Asian economic crisis unfolded in the late 1990s, CJ focused on sustaining and enhancing its market positions; and since the company had a diverse portfolio, it recognized that it had a broad array of challenges. CJ focused on key objectives for process improvements in three business areas:

■ Sugar, wheat, and oil

Production of sugar, wheat flour, and cooking oil serves domestic demand, and these three businesses are the traditional cash generators of CJ. However, the markets are growing slowly. For example, sugar accounts for 30% of CJ’s corporate profit, but revenue is expected to grow only 3% per year. These businesses had tended not to take a rigorous approach to managing raw-material and finished-goods inventory because of the stable and certain markets for these products. Moreover, prices for key raw materials such as raw sugar and wheat grain had varied significantly due to fluctuations in supply conditions and exchange rates. The tendency was to build inventories of raw material to protect against price increases and to run production at full capacity to consume these raw materials. Key objectives for the sugar, wheat, and oil (SWO) businesses were to reduce inventory and raw-material costs, better balance supply with demand, and reduce production costs – and thus increase profitability.

■ **Bio Pharma**

This global business comprises amino-acid-based products and antibiotics, and 70% of the revenue is from exports. Price competition is significant among the numerous offshore rivals. Profitability has been low, but the business is growing significantly, has opportunity for greater margins, and is important to the future of CJ. With a forecasting horizon of three months and make-to-stock production that takes into account per-product demand, business process development had been more rigorous in Bio Pharma than in SWO. Nonetheless, inventory management was acknowledged to be a key issue. In working to better manage its finished-goods inventory, Bio Pharma focused on ensuring product availability for customer satisfaction and growth, improving profit margins, and containing costs. Raw-material inventory was a focus for the same reason as in SWO – to minimize the impact on the business of price fluctuations due to changing exchange rates and supply conditions. Key objectives for the Bio Pharma business were to reduce inventory and raw-material costs, improve product availability, and enhance customer service.

■ **Category Management Group**

The company's Category Management Group (CMG) businesses encompass processed foods, frozen foods, and household products. A key to growth of these businesses has been brand development and management of new-product introductions. Accordingly, each CMG business has a brand manager who focuses on ensuring that R&D, advertising, and related expenditures create and sustain products that are superior in taste, quality, safety, and convenience. Another key to growth was ensuring high levels of service to the distribution channels. Also, as with other businesses, containing the costs of inventory and procured materials was essential for profitability. Key objectives for the CMG businesses were to enhance brand images through improvements to customer service and product availability, to plan for high growth for some existing and new products, and to reduce operating costs in line with requirements in other businesses.

CJ Global Logistics Services (CJ GLS) provided transportation and storage services to the CJ businesses. In the late 1990s, CJ GLS had to deal separately with individual businesses and with the sales, production, and marketing groups from these businesses. Lack of coordinated planning and information access inhibited cost efficiencies in vehicle scheduling, warehouse management, and other services that CJ GLS provided.

Thus, CJ's overarching objective was to consider the diversity of needs across its businesses and – wherever appropriate – put in place consistent business processes to address these requirements. By pursuing this course, CJ would reduce its internal logistics services expenses, inventory-carrying costs, and raw-material procurement outlay; and it would improve service in specific ways to meet the growth and profit opportunities of each business in its portfolio.

Implementation

Following the Asian economic crisis in the late 1990s, CJ recognized that inefficiencies and customer service problems were largely a result of its multiplicity of ad hoc business processes. The processes in place had evolved in response to many individual and independent requirements within distinct businesses at CJ. The processes were relatively inefficient because they were predicated on a lack of visibility into operations, tended to generate inaccurate information, and did not formally consider CJ's interaction with the external world.

CJ initiated a detailed evaluation of its operations to determine how best to improve efficiency, satisfy customer needs, and establish a set of processes for its diverse businesses. Following this evaluation, CJ started to implement a comprehensive e-business program in mid-2000 to address its cost containment and customer service objectives. The company recognized that its greatest opportunities for improvement lay in improving its interaction with customers and suppliers. However, after the initial implementation, the company realized that the external collaboration processes that it had started to implement under the e-business umbrella needed to be based on accurate data from its operations and sound internal processes.

Accordingly, CJ decided to focus on improving its execution capabilities by reengineering its business processes covering order fulfillment, production planning, and procurement. The company also decided to implement sales and operations planning processes to balance supply and demand. CJ discontinued use of the non-SAP e-business software platform it had originally selected, evaluated various vendors, and selected SAP software as its enterprise system foundation because of the well-developed business process orientation of SAP solutions.

CJ began implementing SAP R/3 in September 2000 to establish an execution process foundation and subsequently selected and began implementing the SAP® Advanced Planner & Optimizer (SAP® APO) capabilities of mySAP SCM to support the sales and operations planning processes across businesses. CJ engaged SAP Korea to take a leading role in managing the implementation, and the company initially focused on SWO, Bio Pharma, and CMG businesses during 2001 and 2002. The supply chain execution and planning processes put in place are shown in Figure 1, and the implementation program strategy is shown in Figure 2.

Today, a total of six demand planners and two supply chain coordinators in the SWO and Bio Pharma businesses use the SAP APO capability of mySAP SCM. In CMG, 70 marketers use the system for demand-planning activities related to brand management, and three supply chain coordinators use the system for supporting sales and operations planning. The Production Planning and Detailed Scheduling (PP/DS) capabilities of SAP APO are initially being used by a total of 7 planners at 3 of the 11 plants in CJ. In 2003, SAP APO PP/DS will be implemented in the other manufacturing facilities.

In addition to SAP R/3 and mySAP SCM, CJ implemented SAP BW to monitor relevant transaction data, information about supply and demand, actual financial results compared with the plan, and key performance indicators. CJ also implemented the Customer Interaction Center capabilities of mySAP™ Customer Relationship Management (mySAP™ CRM) software. This mySAP CRM implementation enhanced CJ's ability to receive, respond to, and analyze product and service claims submitted by its customers.

Through this implementation, CJ achieved results that supported strategically significant and measurable improvements in inventory, customer service, and procurement. For example:

- **Forecast accuracy**

Forecast accuracy improved from 70% to 80% for horizons of one month, and the company expects to achieve 98% accuracy by 2003.

- **Sales reporting**

Prior to implementation, information on sales progress had been available in daily reports covering the approximately 100 SKUs in the SWO, Bio Pharma, and CMG businesses. Since implementation, sales information has been available in real time, so adjustments to the plan can be made more readily.

- **Procurement**

Seventy percent of purchase orders were released automatically from the mySAP SCM demand-planning system during 2002 (the first full year of operation), and the company expects to achieve a 90% rate by 2003.

- **Production planning**

The production-planning cycle, which had encompassed 6 days of data collection, 3 days of what-if analyses, and 5 days of planning and associated negotiation, was reduced from 14 to 2 days. The faster cycle time also enabled CJ to adhere better to production schedules.

- **Standard costing**

CJ moved from an actual costing system to a standard costing system so the company could better monitor and respond to variances in labor, utility costs, and – most importantly – raw materials. Accuracy of standard costs was 98% during 2002 and is expected to improve to 99% by 2003.

- **Financial closing cycle**

As a result of more precise operational data and shorter planning cycle times, CJ reduced its financial-closing cycle time from seven to four days.

CJ started to implement customer collaboration programs with the expectation that more comprehensive collaborative processes would be put in place in 2003. For example, CJ started a collaborative replenishment program with Carrefour, a retailer that distributes CJ's CMG products in Korea.

In this implementation, Carrefour sends inventory information to CJ, and CJ replenishes inventory based on a process that considers this stock information, safety stock levels, preestablished reorder points, and existing supply plans. CJ also plans for Carrefour's longer-term replenishment requirements by making use of the sales and operations planning process and considering an 18-month planning horizon. This collaborative replenishment program is a precursor to full collaborative planning, forecasting, and replenishment (CPFR) programs that CJ plans to put in place with Carrefour and other retailers. CJ is also considering vendor-managed inventory (VMI) implementations with some retailers, including local discount stores.

In addition to its plans for CPFR and VMI, CJ is planning the following implementations:

- **Procurement**

CJ expects to implement SAP® Enterprise Buyer, a component of mySAP™ Supply Relationship Management (mySAP™ SRM). This implementation will enable standardized procurement processes and allow further visibility across businesses into raw-material purchase expenses. This implementation will therefore permit CJ to further reduce the costs and increase the effectiveness of its procurement activity.

- **Global available-to-promise**

The initial SAP implementation makes use of SAP available-to-promise capabilities. The global available-to-promise (global ATP) capability of mySAP SCM will be implemented

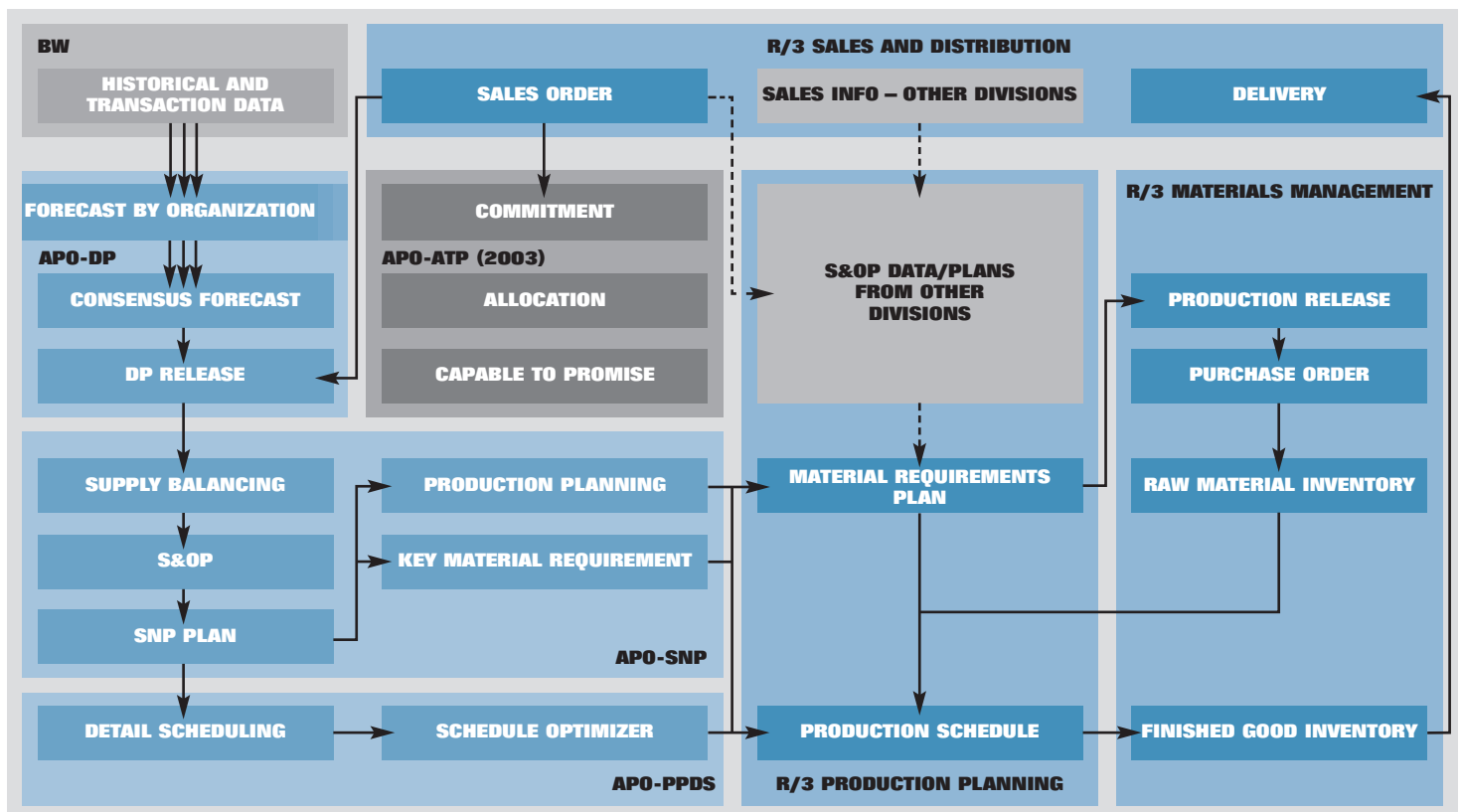


Figure 1: Supply Chain Planning and Execution Processes

to provide rule-based decision-making capabilities, taking into account inventory, constraints, and planned production information to accurately inform customers about the availability of standard and specialty products. The global ATP implementation will further enhance customer service through measurably increased order fulfillment service levels.

■ **Enhanced logistics capabilities**

CJ will extend the standard processes enabled by SAP solutions to CJ's global logistics group, CJ GLS. A warehouse management solution for the manufacturing plant's storage area will be replaced with SAP warehouse management capabilities; the transportation-planning and vehicle-scheduling capability of mySAP SCM will be implemented to achieve more favorable routings; and global ATP capabilities will be implemented to improve customer service. The collection of new processes

will enable consolidation of warehouses, reductions in storage and transportation costs, and development of new services such as door-to-door delivery.

■ **Enterprise portal**

CJ expects to implement mySAP™ Enterprise Portal technology to facilitate management and personalization of information across the company's diverse businesses. This implementation will heighten the level of standardization of business processes throughout CJ, enabling further performance improvements.

Through its current and expected implementations, CJ is establishing a consistent set of processes across its diverse businesses, reducing costs, and improving customer service. CJ expects to continue on this path of improving profitable growth as it enhances its business portfolio.

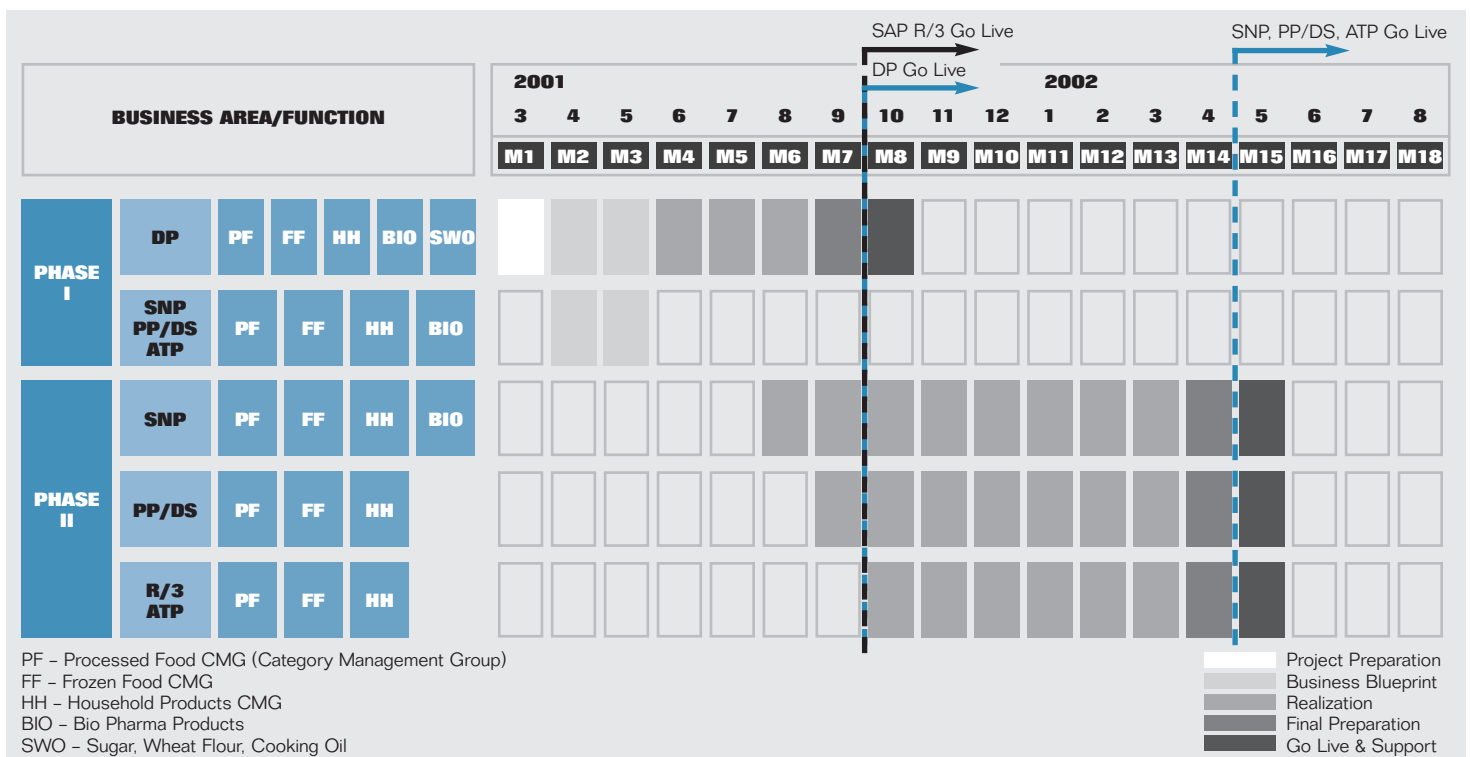


Figure 2: Implementation Strategy

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