



Always Enough, Never Too Much

Kirin Brewery Company Accurately Forecasts – and Meets – Demand

■ Industry

Manufacturing

■ Business Issue

Kirin needed a highly accurate supply/demand forecast system.

■ Solution

SAS® Supply Chain Intelligence helps the Kirin Brewery Company move its inventory faster and perform better demand forecasting.

“We examined and compared the results and found that SAS presented the most accurate forecasting.”

Katsutoshi Ishii
Planning Section, Logistics Division

Ensuring appropriate inventory is one of the key business goals for any manufacturer, making effective supply chain management (SCM) a priority. Failure to control inventory can have a huge influence on the whole business, including lost sales opportunities caused by short stock and unnecessary costs incurred by excess inventory.

The Kirin Brewery Company markets approximately 700 product items, including domestic and imported beer, whiskey, liqueur, shochu and wine. It was determined to carry out a radical renewal of the supply/demand planning system to effectively manage its inventory. The Spirits and Wine SCM System project, which began in April 2003, was based on SAS® Supply Chain Intelligence, and brought about dramatic improvements in demand forecast accuracy and the automation of complicated procurement processes. By adjusting inventory levels, the system contributed to cost savings and improved operational efficiency.

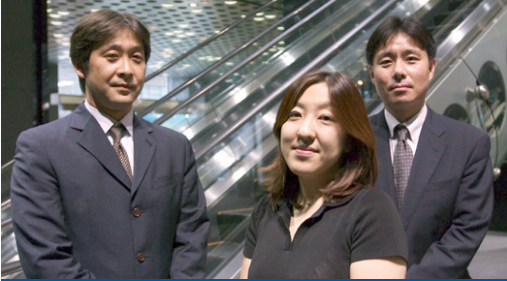
Building a New SCM System to Improve Efficiency

The trend of alcoholic beverage consumption in Japan is currently undergoing a shift to drinks that are lower in alcohol and lighter tasting. As a result, Kirin's spirits and wine business wants to further enhance its competitive advantage and improve customer satisfaction by offering a wide variety of popular products such as Chivas Regal, Two Dogs and Franzia (a California wine).

“We are not just a beer brewery, but a comprehensive beverage company offering a wide variety of products. We strive to retain consumers' continuous support. To do this, our logistics division, in collaboration with SAS, has developed a new supply chain management system where all current and future distribution can be optimized by demand forecasting. Currently, ordering, shipping and any changes in inventory for spirits and wine can be consolidated and controlled, based on the methods we have developed for beer and happoshu (low-malt beer). By fully utilizing the system, we are determined to meet customer demand and improve business productivity,” says Keigo Kubota, Manager of the Spirits and Wine Logistics Section, Logistics Division of Kirin Brewery Company.

Demand Forecasting for Managing Lead Times

“The spirits and wine business is largely dependent on imported products. We trade with 34 suppliers in 14 countries. The business requires an extremely long lead time from placing an order to import clearance procedures. Some products can be obtained only by making a reservation more than one year in advance. The lead time also depends on the area, season and order lot, as well as the tonnage capacity of trucks, which is restricted by law in some nations. These complex factors and conditions are stored in the master database. All decision-making processes, including the timing and volume of placing orders, are automated. In the past, these processes were dependent



*Pictured from left to right: **Katsutoshi Ishii**, Logistics Division, Planning Section; **Yuko Hamamoto**, Logistics Division, Spirits and Wine Logistics Section; and **Keigo Kubota**, Logistics Division, Manager of Spirits and Wine Logistics Section*

on individual staff knowledge and experience and carried out with spreadsheets. We succeeded in dramatically improving efficiency for such processes,” says Katsutoshi Ishii, Planning Section, Logistics Division.

The Spirits and Wine SCM System has two major strengths. One is that the procurement operation, including order planning and future stock simulation, is now an automated system. Another strength is that the demand forecast and shipment plan are logically calculated using an appropriate analytical method.

Choosing the Most Relevant of Seven Forecasting Models

The seven-model system specially developed for the spirits and wine business plays the most important role in forecasting demand and preparing the shipping plan. The models are specially designed by arranging dozens of analytical methods, which may be based on past data, seasonality or the most recent performance. Simulations are run using models with different variables and patterns chosen for product characteristics, and then users choose the value of the most accurate forecast among the seven. The new system also solved issues contained

in conventional package tools, such as an inability to accumulate forecast data. Now, transitions of forecast/actual data are grasped and compared on the spot, and sales performance and actual figures are promptly compared on a monthly basis. Furthermore, an alarm function notifies the user of deviations from the forecast in the actual figures, allowing Kirin to take prompt, appropriate measures against the change.

“Demand forecasting is the key to achieving the objectives of proper inventory. We chose SAS for this solution because of its forecasting accuracy. We asked potential vendors to model actual historical data. We examined and compared the results and found that SAS presented the most accurate forecasting. In addition, SAS offered the best performance in comprehensive cost evaluations in the initial and operational stages, the most experience in system implementation in Japan, and the highest customer support capability and processing speed,” explains Ishii.

Aiming to Improve Forecast Management

The introduction of the new system brought positive results that were immediately noticeable. “I spent most of

my time on forecasting the appropriate order volume,” says Yuko Hamamoto, Spirits and Wine Logistics Section, Logistics Division. “Now that all such processes are automated, I am able to focus on verification of forecasted values. I want to make the most of the system by further comprehending the nature and characteristics of the models.” Department personnel are now able to control the forecast model themselves and repeat practical simulations. By doing this, they will be able to identify the data’s value and improve their ability to control the forecasts. The Spirits and Wine SCM System also supports improvement of user intelligence in forecast management. “We would like to become more accustomed to the system and will endeavor to improve our understanding of and proficiency in the system,” concludes Kubota. “We are committed to improving the level of forecast management by feeding the issues we’ve identified back into the secondary development process.”



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