Improving Forecasting and Replenishment Planning Analytics Capabilities for a Major United States Retail Company

Summary
A regional retailer with more than 150 combination grocery and general merchandise stores in the United States needed to improve its seasonal forecasts so it could define profitable inventory policies to optimize ordering processes. Thereby, the retail could achieve a key strategic goal of being able to serve customers better by ensuring the right amount of products, at the right place and right time. The company turned to Accenture to create the improved tools and establish the processes and analytics services it required to successfully measure its performance and accurately forecast future business demand to enhance productivity and reduce costs.

Business Challenge
This leading United States retailer was expanding with new products and store locations while managing a line of highly seasonal products with varying demand patterns. The company needed to address the following issues to increase its ability to measure performance for its existing and new products lines:

- Limited knowledge about advanced forecasting models
- Challenges hiring, training, and retaining advanced skills needed to perform the statistical analysis for demand planning
- Recognition that forecast excellence creates better in-stocks, lower inventory and competitive advantage

The ability to measure performance to guide future business planning is critical to success in today’s retail environments. Retailers operate at a significant disadvantage without real-time access to inventory data, the tools to analyze that information and the ability to define standard measures.

How Accenture Helped
This retail company chose to work with Accenture to develop its demand planning and replenishment planning analytics capabilities, by deploying the tools and technology required with the help of Accenture’s outsourced Forecast Analytics Services team.

The retailer selected Accenture based on its proven ability to deliver significant business value. In addition, Accenture’s previous work in this area with other clients clearly demonstrated it could serve as a trusted partner and provide deep analytical and
industry expertise as well as insight and innovation into the retail business, resulting in tangible business outcomes.

Specifically, Accenture is enabling the client to make key decisions related to:

- Employing the correct forecasting algorithm
- Using appropriate values for algorithm parameters
- Determining frequency of reviewing the forecast
- Enabling large forecast setup review for huge volumes of data

Accenture also is helping the client’s business teams review and determine correct order policy on a periodic basis—developing and providing process-specific aids such as seasonal calendars.

Since August 2008, Accenture has been working with the client to set the course for high performance by improving several processes. Over the course of the engagement, improvement in these processes has resulted in forecast accuracy improvements of 8 to 10 percent each year, helping reduce inventory costs, improving in-stocks and achieving higher customer satisfaction. These processes include:

- Initial hierarchy and clustering of products
- Forecast ability of products
- Risk and complexity reduction
- Hierarchy modeling
- Algorithm selection and configuration
- Key performance indicators and accuracy measures modeling
- Algorithm fine tuning
- Cluster and hierarchy fine tuning
- Automatic reporting and fine tuning of activities
- Expansion of service to other areas

Leveraging Accenture’s Center of Excellence in Barcelona, Spain, and the Accenture India Delivery Center, the Accenture team has implemented innovative analytics solutions for the client. This collaborative on-site/offshore team mix has resulted in the deployment of unique tools such as:

- Automated Forecast Accuracy Reporting—to enable calculation of pre- and post-tuning difference in forecast accuracy
- The Forecast Tuning Toolkit (FIT)—to automate the process of selecting algorithm parameter values for each product store combination
- Forecast Accuracy Simulation Tool (FAST)—to simulate forecast accuracy scenarios, thereby allowing selection of accurate forecasting parameters
- Fine Tuning Simulation Tool (FTST)—to determine initial parameters for products at the time of solution go-live
- Replenishment Analytics Tool (RAT)—to help keep shelves stocked with the right merchandise while avoiding overstocks, out-of-stocks and short shipments

The Accenture India Delivery Center provided the needed experienced technical personnel and supply chain professionals. The team also worked with alliance partner, JDA Software, to implement integrated solutions for Demand Management, Replenishment and Order Optimization—by deploying JDA Manuistics supply chain management software along with JDA Demand and JDA Advanced Warehouse Replenishment software.

Specifically, Accenture has helped the client develop and implement the following innovative solutions for better managing forecasting and replenishment.

1. An automated, scalable solution to manage forecast tuning at store level—a capability that enables forecast management of millions of products without having to deploy any actual human effort
2. A simulation tool to help determine the most effective order policy, such as safety stock, distribution method, order frequency and order multiples

Accenture also has helped by developing and implementing new solutions to engage and interact with business users that seamlessly integrate with existing applications.

High Performance Delivered

The retail company now possesses cost-efficient access to Accenture’s global delivery network to leverage its high levels of experienced personnel, global assets and scalable solution delivery programs that focus on operational excellence. The retailer also has access to the latest technology and improving tools and processes on an ongoing basis for this client.

The client benefits from improved forecast processes and capability across all areas of its business—offering enhanced ability to manage seasonal sales promotion. By using Accenture’s Forecast Analytics Services, the retailer gains more accurate forecasting and the ability to anticipate and manage promotional sales spikes and improve product flow at its distribution centers.

This retailer now can measure its performance with advanced statistical modeling; demand classification and segmentation; multilevel forecasting; new product forecasting; and promotional and event data management.

As of 2011, the client has achieved approximately $11 million in cost savings due to its improved forecast planning’s effect on inventory management and lost sales. Forecast accuracy has improved by 6 to 8 percent at the corporate level.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 249,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$25.5 billion for the fiscal year ended Aug. 31, 2011. Its home page is www.accenture.com.