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Smooth Ride

Forecasting solution improves product deployment and reduces transportation costs

CHALLENGE: Improve inventory allocation and distribution effectiveness

PRODUCT SOLUTION: Smart Software's SmartForecasts Enterprise

COMPANY: Prevost Parts, a division of Prevost Car

FACILITIES: Quebec City, Canada

OPERATION: Manufacturer and distributor of parts for buses and motor coaches

The challenge

Prevost Parts, a division of Prevost Car, is a parts distributor for both motor coaches and transit buses. The company serves the North American aftermarket, distributing original coach and urban bus parts for Prevost Car and Nova Bus, as well as replacement parts for other models. To serve its market, the company maintains two distribution centers, one in Canada and one in the United States; five service centers; and more than 25,000 active parts.

Prevost Parts was facing three distinct challenges. Of all its active parts, 70 percent have intermittent demand. Thus, the company needed to more accurately respond to demand and attain accurate forecasting inputs to its production planning processes. In addition, 25 percent of orders either were not being shipped from the distribution point closest to the customer or were backlogged. This caused increased transportation costs, delivery delays, and unacceptable customer service levels. Finally, because its SAP Min/Max system did not compensate for seasonality or trends, the company had too much stock in the off season and too little when need was greatest.

The solution

To respond to these issues, Prevost Parts leadership started a comprehensive program to improve its parts

distribution system. They first conducted a formal evaluation of six demand planning and forecasting systems to find a solution that would overcome the limitations of the Min/Max system and enable Prevost Parts to use the full potential of SAP's distribution resources planning (DRP) module.

Leadership wanted a tool that could accurately forecast demand for all of its products and deliver accurate safety stock estimates at the lowest level in the network. They also required a system that could provide the flexibility of cumulative lead time measurements, isolate and identify extreme values, recognize seasonal patterns, and provide top-down and bottom-up product group forecasts.

Of the six applications considered, Prevost Parts selected SmartForecasts Enterprise from Smart Software, Inc. SmartForecasts scored highest in the evaluation of more than eight functional criteria, plus it is able to generate accurate sales forecasts and safety stock requirements for products with irregular demand.

“With most of our parts having intermittent demand, the ability to solve that problem was very important to us,” says Dave Gilbert, logistics manager at Prevost Parts. “SmartForecasts’ unique solution in that area was a major advantage.”

The results

SmartForecasts is installed at Prevost Parts corporate headquarters, where the software is directly linked to an Oracle database used by Prevost Parts’ SAP system to store data and forecasting results. Since implementation, backorders of the company's most frequently demanded parts have decreased 65 percent, lost sales are down 59 percent, and fill rates increased from 93 percent to 96 percent in just three months.

Interestingly, the implementation of these changes required Prevost Parts to creatively adjust the way it operates. The company's strategy for improving its distribution activities required a major shift in the way it forecasted demand. Rather than simply forecasting overall demand, Prevost Parts needed to forecast demand for each product item at each of its distribution and service centers. This gives a more accurate picture of local demand and enables the company to better align its inventory. Local forecasts then can be rolled up into a companywide forecast for planning purposes.

At the beginning of every month, Prevost Parts transfers the past month's consumption data directly from SAP tables in the Oracle database into a demand history table maintained by SmartForecasts in the same Oracle database. Using SmartForecasts, the company automatically produces a forecast of demand and safety stock requirements for all products at each of its distribution and service centers using 36 months of history. These forecasts are validated by a demand planner and branch parts managers using audit reports and graphical adjustment facilities in SmartForecasts and then are passed to the SAP tables for direct use by the SAP DRP program.

Based on these significant results, along the way, Prevost Parts leadership found that monthly shipments weren't meeting its replenishment needs. Thus, demand is now broken down into weekly buckets, resulting in a Just-in-Time ordering process that has lowered stock levels. Gilbert says, “We need to have the right parts in the right place to support our customers. SmartForecasts helps us to not only improve our inventory allocation, but also significantly reduce transportation and inventory costs.” ■

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