Honeywell

Honeywell Safety Products Protects Customer Service with Better Forecasting

Profile

Honeywell Safety Products (HSP), part of Honeywell's Automation and Control Solutions (ACS) division, is a leading provider of Personal Protective Equipment serving the fire service, electrical safety and general industrial worker segments. Offering a wide range of safety products—from helmets to respirators to first aid kits—HSP has grown in part via acquisition, a process which creates some forecasting challenges.

Backed by Honeywell's strong commitment to Sales, Inventory & Operations Planning (SIOP) which is viewed as a strategic advantage to the corporation, John Romano, Director, SIOP & Materials Planning, leads the team responsible for HSP's SIOP process in North America. John explains how important it is to accurately assess demand. "We've always said that it starts with demand—what is the market telling us that it needs? We then translate that need via our forecasts to our ERP systems so that the supply chain responds to that demand."

Challenges

With only five demand managers responsible for forecasting products that generate more than $800 million in annual sales, John's team has its work cut out for it. Having grown both via acquisition and organically, HSP faces some significant forecasting challenges including (but not limited to):

- lumpy, inconsistent demand;
- SKU proliferation; and
- the use of three different systems for creating forecasts.

It was evident that the forecasting process for HSP's "legacy" products needed to be overhauled. The process for this business segment—wherein 32,000 data series are forecasted on a monthly basis for US and Canada—relied on the forecasting module of an existing ERP system with several limitations. Forecasts could only be created using shipment history, not actual orders. Furthermore, the software included a limited number of forecasting models (four or five) and usually chose a very simple forecasting model as the "best fit" for these products.

Not only was it very difficult to extract data from the forecasting module, but it was also hard to analyze it, making the process cumbersome. Forecasts for relevant items were extracted into Excel spreadsheets and then passed on to HSP's product managers for review and adjustment. The system often generated inaccurate forecasts and errors were perpetuated for those products which had experienced availability issues.

"We looked at the process and said 'the manual Excel spreadsheet method that we are using has got to change.' It was very frustrating," explains Joe Menna, Demand Manager. Hampered by the limitations of the forecasting system, the organization lacked a repeatable process for forecasting—a critical component of a successful SIOP process—and it was clear that something had to be done.

⇨

The team began their search for forecasting software that would facilitate a more systematic forecasting and planning process. Following a recommendation from the ACS SIOP group, they evaluated Forecast Pro TRAC which was successfully supporting other SIOP processes within the division, as well as other forecasting software being used at a different Honeywell site. They chose Forecast Pro because it had the rich functionality to meet HSP's needs at a significantly lower cost.

Solution

In early 2010, the team set up a trial phase during which forecasts for HSP's legacy products were created in Forecast Pro TRAC in parallel with the existing software. As a first step, they worked with their IT organization to set up input files with 36 months of order history. The trial phase gave them the opportunity to verify that they were working with the appropriate data, which was critical considering the shift away from shipment data to orders.

During this two-month period, the team reviewed the forecasts generated by Forecast Pro TRAC. They first looked at forecasts at the product-line level, reviewing both total units and average selling prices. While doing this "sanity check," if issues arose, they would then drill down to a lower level within the hierarchy and make adjustments as necessary, which at times occurred at the bottom rung of their 6-level hierarchy.

They also looked at how the forecasts would change over a 12-month horizon using Forecast Pro TRAC as compared to their current system; the forecasts from Forecast Pro were $13 million higher. This resonated with HSP's senior management who perceived that there was a tendency towards under-forecasting resulting in service level issues.

"I recall leadership saying upon seeing these results that they were pleased that the organization was getting more analytical with its ability to forecast market needs," notes John Romano.

Results

After going live with Forecast Pro TRAC, the team experimented with tracking accuracy at different levels in the hierarchy and settled on tracking it at the item/class level. This was chosen as the standard because it is low enough in the hierarchy to be able to see variability but high enough to be meaningful to the sales and marketing teams. The results from the first three quarters showed that HSP's overall forecast accuracy—measured using weighted MAPE—was improving:

<div align="center">

Q1: 24.4%
Q2: 13.6%
Q3: 12.9%

</div>

In addition, a year-over-year forecast accuracy comparison for the US operation revealed a 13% improvement. "The analysis showed that since implementing Forecast Pro TRAC, without question, there has been a definite improvement in forecast accuracy across almost every product line," explains Lisa Gardner, Demand Manager.

Implemented in HSP's Canadian operation almost a year after its US counterpart, Forecast Pro TRAC has contributed to improving customer delivery as measured by On-Time to Request (OTTR). In addition to using the software, HSP took other steps in Canada to improve OTTR, including material planning and cycle-time reduction initiatives. The results of these combined efforts are impressive—OTTR improved by 20% in less than a year and inventory turns have improved by 16%.

Beyond improving forecast accuracy, Forecast Pro TRAC plays a key role in HSP's demand planning process.

"Forecast Pro has allowed us to have deeper discussions with better information," explains John Romano. "By coupling the quantitative framework provided by Forecast Pro TRAC with the qualitative input from sales and marketing, we are able to create true consensus. The end result is not only buy-in from different parts of the organization, but a crisper view of the market and its needs."