



## Keeping Bio Technology Researchers Supplied with Materials for Their Labs

**F**ounded in 1987, Invitrogen Corporation is a global bio-tech firm whose revenues of \$1.2 billion come from providing products and services to pharmaceutical and biotechnology companies and to academic and government research institutions.

With more than 5,000 employees and conducting business in over 70 countries, Invitrogen offers its customers about 40,000 products to support disease research, drug discovery and commercial bio-production.

It makes for a challenging supply chain.

Jim Carswell, materials manager for Europe at Invitrogen, says that he uses Demand Solutions to forecast his regular selling products but he does not attempt to forecast all slow movers, and the absolute number of SKUs in DS grows each time the company makes an acquisition.

He can use the help from Demand Solutions Forecast Management. Making his already demanding job even more complex is that fact that Invitrogen sells some of the components directly but it also offers to assemble them into kits for researchers, so individual saleable products might include more than one SKU.

“We stock these components separately and bring them together at the time of shipping,” he explains. “A key challenge we have had is that we are managing components, but the sales and force is selling kits. So we have to produce forecasts at both the kit level and the component level. We have found a way of getting

Demand Solutions to do that with help from the EMEA team in the UK. We have developed interfaces to our ERP system so we can drive replenishment at the component level but we can also see the forecast at the kit level.”

With so many SKUs, Invitrogen has to manage by exception. The JD Edwards EnterpriseOne ERP system transmits orders to Demand Solutions and he reviews the resulting forecast with the marketing teams before sending the data back to the ERP system.

### Move from sales data to order data

When the company moved to EnterpriseOne it also switched from sales data to customer orders data for its forecasting, Carswell said this was an important step to improving forecast accuracy because past sales data didn’t uncover cases where more of an item had been requested but the order went unfilled for lack of inventory.

Because demand can be sporadic, the planners are trying to improve their inventory intelligence by obtaining more information from the commercial arm of the company to learn about sales opportunities and probabilities. Invitrogen is also working to plug information about planned product promotions into the forecasts to achieve more comprehensive demand lifecycle views. The team is experimenting with the

## Moving the forecast input from actual sales to customer orders improved forecasts because it covers real demand, not just the demand that could be supplied from inventory.

tool, trying different algorithms, and seeking to identify where products are in the sales lifecycle.

“We pick items we have had service issues with, get feedback from marketing and then adjust our forecasts.”

Carswell says Invitrogen is giving the Demand Solutions FM software a workout with the complexity of its existing inventory. In addition, several recent acquisitions have presented some difficulties for the company forecasters and their software because it is adding SKUs that don't have much history to plug into the system. In two years the number of stocked SKUs has risen from 2,500 to 10,000.

“We are still trying to find ways of managing the increased number of SKUs and we have to improve the forecast accuracy,” says Carswell, who finds the new filtering features useful. “When you are dealing with this number of SKUs you need to look at the forecast on a regular basis to make it more accurate.”

The U.S. sites are achieving better accuracy, he added, probably because the demand planners are spending more hours looking at the data. He plans to hire a new demand planner to spend more time with the application. In EMEA the company has two demand planners who work with the software and 10 regional planners on the marketing side who work with them. Another 15 people in the materials group have access to the forecasts for reviews.

“We are trying to become more sophisticated with the tool.”

Accuracy in forecasting is especially important to Invitrogen because it handles not only a large number of products, but very complex products. Some cultures take two weeks to grow, while a more molecular biotechnology process might require months to develop a protein to the point where a researcher can use it. Most items ship at room temperature, but some require dry ice, while others are fine in wet ice. Packaging ranges from boxes to vials holding items too small for the naked eye to see.

## Improving communications with sales

The sales team has been moderately helpful as they appreciate the need to provide information to forecasters so the company has sufficient inventory to fill their orders, so they can make their numbers.

“We have been successful in making them understand the correlations between opportunity and actually getting that sale, so we have seen some improvement,” says Carswell. He is trying to get demand planners access to the company CRM system that sales people use so the planners can see the opportunities that are underway.

But Carswell knows better than to depend on customers, such as academic labs, to provide advance information on their ordering.

“They aren't very good at managing their own time, so they won't be able to tell us ahead of time what they want, or what research has been funded.”

Carswell said that Demand Solutions is critical to Invitrogen's continuing growth.

“We have brought in more SKUs, more suppliers, and more customers and Demand Solutions has been able to support that and drill down into problems when we identify them.”

On the technical side, Invitrogen has moved to Microsoft Windows Terminal Server and it upgraded the servers that are running Demand Solutions.

For Carswell, being materials manager for Europe is a pretty satisfying position. Inventory management is a primary component of the company's commercial success.

“The fact that we can manage that number of SKUs with the complexity of these products is pretty impressive, and Demand Solutions is an important part of that.” 