

TECHNOLOGIES THAT ENABLE DEMAND-DRIVEN MANUFACTURING

Manufacturers can leverage technologies from ERP to sales and operations planning to smooth the transition to a demand-driven supply network

November 30th, 2012 • Tech Target • Lauren Gibbons Paul

With increasing global competition and shrinking profit margins, everyone knows it has become imperative for manufacturers to increase productivity while reducing costs. Toward that end, many manufacturers are transitioning – or have already made the move – to a demand-driven manufacturing model, as opposed to simply making whatever the forecast dictates and hoping the market follows along.

The concept of demand-driven manufacturing (DDM), alternatively known as demand-driven supply network (DDSN) and demand-driven value network (DDVN), is simple. Under DDM, a manufacturer monitors “demand signals” from its customers and suppliers to determine what to make, when to make it, along with which components to use and how to make it fit a timeline to ensure the supply chain meets

the demand that drives the whole network.

Moving to a demand-driven value network

A variety of technologies exist that can help a manufacturer make the switch to demand-driven manufacturing, according to Mickey North Rizza, a former manufacturing analyst for Gartner and AMR Research, now VP of services for BravoSolution.com of Chicago. “There are tools for sourcing, new product introduction, demand signal repositories, inventory planning, demand management, warehouse management, logistics,” she said. In short, these point solutions cover anything and everything that gives visibility into your operations, supply network and market. Most manufacturers have found that their ERP system can’t cover all these areas, said Rizza. “Traditionally, ERP has not been

able to do everything.” But as the system of record for everything from customer orders to shipment and inventory information, many manufacturers can go far just by making use of the data that resides in ERP. The problem is, most companies don’t take full advantage of ERP, she said.

“Most companies don’t even use 25% or 30% of the capabilities in their ERP,” said Rizza. In order to become a demand-driven value network, they will need to do more than the basics. For example, basic transactional data needs to feed into the planning tool, which may or may not be part of the ERP suite. Generally, this will require some integration.

BEGA-US Lighting builds a demand-driven supply network

For BEGA-US, subsidiary of BEGA-Steuerberatungsgesellschaft mbH, implementing an ERP suite



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from Vormittag Associates Inc. enabled the small manufacturer to cut its lead time to customers significantly, helping it come closer to meeting customer expectations. By its nature, the commercial lighting market has been demand driven from inception – it would not make sense for manufacturers to make hefty, expensive fixtures without an order specifying all of the many options available. Short of some modular components that BEGA-US builds to stock, 85% of its products are built on demand.

“We do build 15% to stock,” said Mark Reed, vice president of manufacturing for BEGA-US Lighting in Carpinteria, Calif. “We do that to reduce lead times. We are a high mix, low-volume company. It doesn’t make sense for us to build large assembly lines to build things to stock when we don’t know what the customer will order.”

But there was still plenty of room for BEGA-US to improve its lead times, which started out in the 10- to 14-week range. After automating its Excel-spreadsheet and paper-based manual processes via the new ERP system a few years ago, BEGA-US was able to achieve average lead times of just four to six weeks. Considering these products are high end with loads of variables and features, that is not excessive when compared to industry benchmarks. More importantly, the customers are happy with the shorter lead times.

For BEGA-US, becoming a more demand-driven supply network is about meeting customer demand for quicker order fulfillment. The end-to-end process now operates much more efficiently and quickly because of its visibility into information that was not previously available. For instance, it used to

take an incredible two weeks to get an order into the system for processing. Now, the orders come via fax from the sales reps and are put into the system on the same day most of the time.

“Most of our materials are imported from Germany or Taiwan. They come by ocean or by air. Now we can receive shipments in a timely fashion and get them right to the line as they are received,” said Reed.

Like BEGA-US, Rizza said, each manufacturer must analyze and determine what it will take for its enterprise to become demand driven. “You have to understand what it means for your organization to become demand driven,” she said. “It’s about tradeoffs and understanding your roadmap to success.”

