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Forecasting – As Important as Ever

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Speed, customization, and customer service have become the driving concepts in manufacturing and pose new challenges for inventory planners. Some industry analysts and members of the trade press have questioned the relevance of demand forecasting in an age of much-shortened lead times and make-to-order production requirements.

They are mistaken. Because in today's new, lean manufacturing environments, where e-commerce business models and competitiveness are built on speed of delivery and meeting ever-increasing customer service levels, the role of forecasting has become even more critical than in traditional environments. Whether inventories are vendor-managed or held by the manufacturer, forecasting is still relevant. But instead of forecasting at the finished goods level, forecasters in mass customization environments may need to plan further down in their company's bill of materials (BOM).

Every part or component that goes into a finished product, whether standard or specialized, becomes critical to meeting customer demand. Successful execution of a mass customization model depends on having the right time. Failure to immediately satisfy a customer's needs invariably means lost business.

While the standard components of a product may be relatively easy to forecast, specialty components are not. These items may only be needed on an occasional or intermittent basis, with weeks or months elapsing between orders. Specialized parts typically have high added value and higher margins, but also higher costs. In some industries, specialized parts may also have long lead times, and sourcing may be particularly difficult. For these types of items, planners are faced with two often competing objectives: stocking enough to satisfy high service-level requirements and, at the same time, minimizing inventory levels to restrain costs.

Demand forecasting systems can help an enterprise deal with the requirements of mass customization. A collaborative forecasting and planning network is fundamental for success, as well as connectivity with other systems throughout the enterprise. Statistical forecasting is still essential—these systems enable planners, even those who know little or nothing about statistics, to quickly generate meaningful forecasts. And, most important, any system should produce accurate forecasts of intermittently demanded components that correspond to the inventory service levels your business requires to be competitive.

In this new manufacturing age, the need for forecasting really hasn't changed, but the technological requirements for successful execution of new business models certainly have.

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Note: The above article appeared as a sidebar to the feature article "A Lot Size of One? Get Serious" by Jean-Daniel Cusin in the November/December 2001 issue of *APICS—The Performance Advantage* magazine.

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