Better Forecasting With Next-Generation Demand Management
People, Process, Analytics and Technology
Demand-driven forecasting

In the grand scheme of things, is it more valuable to know how much product you can offer for sale or how much your customers are likely to buy? What if you had real clarity into how one affects the other?

There is a shift underway in how companies are forecasting for the supply chain - from focusing not simply on how supply drives demand, but how demand drives supply. It has been proven time after time that being able to better predict demand and its effect on the supply chain increases revenues by at least 3 percent to 7 percent. One-third of companies could see revenues increase by 6 percent or more.

However, companies are so used to forecasting supply rather than demand. For the entire business to become more demand-driven, it must get better control over data and the capacity to turn that data into practical, forward-looking insights.

Becoming demand-driven will require changes in sales and operational processes as well as a broader shift in the business model. It calls for radical changes in corporate culture, people skills, horizontal processes, predictive analytics and scalable technology. The entire company needs to become demand-centric and better equipped to influence and anticipate what consumers are going to purchase before they know what they’re going to purchase.

Embracing consumption-based modeling

The sheer number of variables involved - such as product categories, sales regions and business entities - makes demand forecasting and planning on a global scale highly complex. Getting the right amount of products in the right mix to shelves and into the hands of consumers is a job for predictive analytics. In particular, there needs to be more focus on consumption-based modeling using a process called multi-tiered causal analysis (MTCA).

Consumption-based modeling with MTCA combines downstream data with upstream data and applies a series of quantitative methods to:

- Measure the impact of marketing programs and business strategies that influence downstream consumer demand (demand sensing).
- Analyze various scenarios to shape and predict future demand (demand shaping) using point of sale (POS) and/or syndicated scanner data.
- Use consumer demand history and the future-shaped consumer demand forecast as a leading indicator in a supply model to enhance supply volumes (shipments and sales orders).

The end goal is to be proactive instead of reactive, through strong horizontal alignment processes, stronger collaboration with key accounts/customers, and predictive analytics supported by scalable technology.
Once MTCA measures the key performance indicators that influence consumer demand, the demand analyst can:

- Perform what-if simulations to predict and shape future demand under different situations, such as different market conditions.
- Simulate the effect of changes on key variables that can be controlled, such as price, advertising, in-store merchandising and sales promotions.
- Develop short- and long-term forecasts of predicted demand, and recommend the sales and marketing strategies that will produce the highest volume and ROI.

Through this process, leaders can forecast how market influences or changes are likely to affect their supply chain. Decisions are based on data and predictive analytics rather than subjective judgment. And the business continually learns through its increasingly automated customer engagements.

**Game-changing intelligence from the digital retail environment**

Predictive analytics is only as good as the data that goes into it. Traditionally, data has resided in incompatible platforms and organizational silos that could barely speak to each other. Transactional ERP systems, operational CRM platforms, data warehouses, niche marketing and customer management solutions, and various reporting systems churned out gigabytes of data. Trouble was, these mountains of data were not coordinated, didn’t yield the needed insights, or didn’t offer them up in time to be useful.

Two key trends have made it possible to exploit predictive analytics on a large scale like never before:

- **Retail automation systems yield more data than ever.** Loyalty cards and affinity credit cards, online and mobile marketing channels, operational automation, sensors, RFID systems, the internet of things – these developments and more are generating a wealth of potentially useful data.

- **All that data can be turned into supply chain intelligence more readily than ever.** Advances in data management and high-performance processing have made it feasible to quickly distill intelligence from massive volumes of disparate data – all of it, not just a subset. In minutes rather than overnight.

But is the organization ready to take advantage? Making the shift to next-generation demand management will rest on the following conditions:

**A holistic view of the organization.** Traditionally, information technologies didn’t go far enough to facilitate data integration or predictive analytics. Many organizations will need to change how data is collected, how often, and how that data is brought into a holistic perspective.

This is especially true in sales, marketing and operations planning. These functions will need to continually source and share data and learn from the shared knowledge collected from internal systems, business partners and customers in the broader digital ecosystem.

**An integrative and proactive organizational culture.** Successful organizations will have a culture of horizontal collaboration, trust of predictive analytics and the scalable technology to handle big data. These organizations will be poised to work quickly to act on the trends and insights produced by analytics.

**People with domain and data skills.** The shift to next-generation demand management calls for people with the right quantitative skills and domain expertise to advise and drive the process, to make more informed fact-based decisions in support of business strategies. Those involved also need to understand how supply chains are managed differently under the new demand management model – how demand and supply data are integrated to deliver value.

**Effective change management.** Transitioning to the next-generation demand management model while working in a volatile marketplace is a journey. It doesn’t happen overnight. Data and predictive analytics provide the insights and quantify the challenges a company is facing, but it is the business leaders who will make the decisions and drive the change. The most effective leaders will be the ones who see the bigger picture, realize the urgency and know how to reorganize the business and tackle common problems.

To hit the sweet spot – the right quantity of the right products at the right place and time – companies will rely heavily on the combination of transactional data and digital information to anticipate and influence what consumers will purchase.
The journey is worth it

The myriad forces affecting the relationship between demand and supply are set to expand their influence. Smart leaders will take advantage of the flood of digital data to better understand those forces and use that knowledge to make more accurate and predictive supply chain decisions.

Technology is not an obstacle. The analytics and information processing capabilities are readily available. The focus must now be on the skills and organizational changes necessary to transition to next-generation demand management and make it sustainable.

Organizations that have done this well—the ones that more accurately understand demand and its effect on the supply chain—are seeing revenues grow by up to 7 percent. Who wants to leave that opportunity on the table?

Learn More

Find out more about SAS Demand-Driven Planning & Optimization technology and the best practices outlined in Next Generation Demand Management.

For more:

- SAS Insights article
  Practical advice for better business forecasting
- White paper
  What Management Must Know About Forecasting
- Video
  Old Dominion Electric Cooperative: Better Forecasting With SAS

About the Author

Charles Chase is an executive industry consultant for the retail and consumer packaged goods (CPG) industry practice at SAS, delivering demand-driven solutions to improve supply chain efficiencies. Chase has more than 20 years of experience in the CPG industry and is an expert in demand forecasting and planning, market response modeling, econometrics and supply chain management.

A widely published author and speaker, Chase was named a Pro to Know by Supply and Demand Chain Executive magazine, is certified in professional forecasting by the Institute of Business Forecasting, and has received an Institute of Business Forecasting Lifetime Achievement Award.

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