



Demand Management Advice

by Bill Tonetti

Document Purpose

This document was originally written for a friend who asked for some high-level pointers on the subject of demand management for his clients. It is hoped that companies that are considering embarking on a demand management and sales and operations planning path will find it useful.

Beginning the Journey

Perhaps the most remarkable thing that I have observed over the years is that many well managed companies of all sizes simply do not plan for demand. If your company doesn't have a formal and periodic demand planning process, then it probably should.

The symptoms of a missing or failing demand management process are high inventories, frequent inventory write-offs, inadequate capacity balancing, excessive use of premium transportation services, missed commitments, and schedules that become obsolete as soon as they're published. Within the organization, the results of poor demand management can be a proliferation of pointing fingers and foot stomping, or simply a feeling of dread in the morning when you wake up to go to work. Nothing is more enjoyable than a finely tuned industrial organization, and nothing is more disconcerting than a failing one.

If you're noticing any of these symptoms, then start at the beginning: Just start working on it. Even your customers and suppliers can tell when things aren't quite right.

Don't listen to people who say "We don't make to stock so we don't need to forecast." They're wrong. Even if you do make to order, you probably procure to stock. Or, maybe you finish or package to order but have to manage semi-finished inventories or plan for line capacities. Even call centers in service industries need to plan for demand. Basically, if you need to make any decisions at all before the demand comes in, whether they're purchasing, deployment, or capacity decisions, then you need to plan for demand. Every company that I've ever seen has needed to do some form of demand management. So the best place to start is to just do it and quit making excuses and pointing fingers!

Leverage Sound Mathematics

Most successful businesses achieved their success by developing some kind of solution and figuring out how to repeatedly deliver it. Since you're employed, your company has at least achieved some degree of repetitive success. With good mathematics, you can take advantage of that repetition and make better forecasts with it. If you're using something simple like moving averages in your forecasting or just asking your sales folks for a number then you're probably leaving a lot of accuracy on the table. Much has been done in the area of optimized time-series forecasting, and most commercial software packages have expert forecast engines that

will improve accuracy 10-50% over less-rigorous methods and they'll do so in an automated fashion.

Studies have shown that exponential smoothing techniques are the most accurate and robust for tactical planning data. In particular, the much-cited Makridakis M3 study that was performed in 2000 was dominated by products and academic teams that relied heavily on smoothing techniques. Box-Jenkins, neural nets and other complex approaches did not fare as well. Having forecasted for hundreds of companies, I have also found this to be the case, particularly with the highly variable data that predominates in tactical, product-level planning. There are level, trending, and seasonality components to exponential smoothing forecasts, and good engines will optimize these parameters each time a forecast is performed. When you get to the point of evaluating options in this area, you will be able to test the alternatives with your own data. Any forecasting solution provider that doesn't let you try the software first either has a solution that's too hard to use or implement, or they're trying to mask product weaknesses during the pre-sales process. Either way, you should consider it to be a warning sign.

Put Someone in Charge

Modern forecasting engines do well, but they do even better with guidance. For example, when a product is replaced by another, even the best engines will continue to forecast the obsolete product for a while unless the forecasting is turned off for that item. Similarly, the new item's history will be brief unless something is done to link the new item to the old one. Once linked, the engine will be able to leverage the extended time-series to better estimate demand and variability. Non-repeatable events will occur as well, and these can have a significant effect on automated forecasts.

To assure the reliability of your forecasts, someone needs to accept responsibility for the process, and that person needs to have the time and commitment to manage it. This need will become increasingly important as your process improves and evolves. For example, a point person will be necessary to assure continued and quality demand signals are obtained from sales, marketing, and even key customers.

Responsibility for demand planning can be hosted in several different departments within your company including sales, procurement, production planning, or a supply chain department that is given specific responsibility for these kinds of processes. No matter where the function resides, the demand management role is an integrating one and it should communicate frequently and fluidly across organizational boundaries.

Don't Be An Island

Sound statistical forecasting will take your company well toward the end goal, but history isn't everything. Make sure your process includes some mechanism for obtaining strategic input from management and tactical signals from customer-facing parts of your company.

Recognizing this need is far easier than accommodating it. First, though you will need an SKU-level forecast to support operations, you shouldn't expect to hold a salesperson's or general manager's attention at that level of detail. Their knowledge and feel for the business is at a higher level and it's probably in financial measures and not the units that you have to produce or buy. These realities produce a whole host of software requirements in our area, but I won't elaborate on them here. (I'll just say that this need to view and modify demand information in multiple, flexible "views" was the genesis of our Pivot Forecasting® innovation).

Realize also that people are involved, so the best methods for obtaining input aren't necessarily systematic ones - especially at first. Before you go all out with collaborative systems, I strongly recommend that you start with monthly demand review meetings with key customer-facing people in your company. Prepare the history, forecast and performance data beforehand, and do so at a level that's meaningful for the people you're meeting with. Expect to learn a lot and don't be disappointed if you're preparations and procedures don't hit the mark the first few times. Demand reviews are extremely valuable. For one thing, they produce informal exchanges of information that will help to improve your demand management function's feel for the business. Secondly, there's nothing like a scheduled mandatory meeting to keep a team's eye on the ball, so to speak. Lastly, you will begin to forge a process that will be the starting point for your software and data requirements when you're ready to tackle the next step.

Forecast Often

Many companies have excellent and highly involving annual budgeting processes, but some of them ignore demand management for the eleven months that fall between budgeting cycles.

Business circumstances change over time, and all operations managers know this. So, to keep the ship from sinking they make schedules, buy goods, and generally keep things flowing regardless of whether there's a consensus demand plan.

Let's face it, businesses can keep going without plans. They can't operate without orders, receipts and invoices, but they can sure march along without a forecast. Since businesses can easily make it to the next day without demand plans, this key process can be overlooked. Of course, it costs the company a lot of money in excess inventories, poor service or missed sales opportunities, but these symptoms and their root cause aren't always obvious.

An important reason for having a part of your organization that's responsible for demand management is to maintain the quality, rigor and communications between budgeting cycles. From a forecasting perspective, recent activity is the most important indicator. Exponential smoothing techniques leverage this dynamic, and that's a key reason why they consistently outperform other approaches. Forecasts should be automatically recalculated with each new week or month of demand. This can be a huge undertaking with spreadsheets and that's why many companies don't do it. However, it is very much easier with a good demand management system. A re-optimization of forecasts each period means that your forecasts will be more accurate and up-to-date, and this will help to keep daily operational decisions and corporate strategy pointed in the same direction.

Forge a Link to Operations

A demand plan is only truly good if it impacts the quality of the decisions that your company makes. A really great forecast that doesn't result in better manufacturing, procurement and inventory deployments really isn't that great at all. In fact, one could even argue that it's useless.

One important byproduct of a statistical forecast is the error of the estimate. When combined with lead time and desired service levels, this can be used to determine optimal buffer inventory levels and reorder points. Sensible safety stocks are a natural output from a good demand planning process, and well-oiled inventory policies are one of the keys to lean operations. Consideration for downstream processes like procurement,

manufacturing planning and logistics is a central aspect of demand planning. Many demand management solutions include capabilities for calculating and simulating different stocking policies, planning replenishments, or even producing master production plans.

Monitor Progress

Measurement is an important part of any quality process. Make sure your demand management process includes some mechanisms for measuring performance and identifying root causes and improvement opportunities. Not only will this improve performance, but it will also improve the organization's confidence in the process and that will help maintain the linkage between plans and better execution.

Conclusion

I hope you find some of this advice helpful as you begin to develop your company's demand planning and sales and operations planning process. The most important advice that I can offer is to simply get started. Unlike many operational processes where there can be a start-up event and then things just carry on, planning is evolutionary. After you begin, your planning process will continue to mature and evolve. You will find opportunities to improve your master product and channel data, increase automation, and involve a broader population of individuals in your process. You will also find new and better ways to identify business opportunities and threats and to achieve alignment within your organization. Bearing this in mind, it is important that you incorporate flexibility into your plans and technology choices. Effective sales and operations planning isn't a switch to be turned on as much as it is a path to be embarked upon.

About the Author

Bill Tonetti is the President of Demand Works. Bill's career began in consumer product sales, then advertising. When he was ready for a change, he obtained an MBA from the University of Virginia and took a job working in operations management for a large paper company. While working in the paper industry as a supply chain manager, he implemented his first demand management solution as well as various other solutions including an ERP system and optimizations for production and transportation. He became passionate about supply chain management and he's spent the last two decades working, consulting, and providing demand and supply chain solutions for hundreds of consumer and industrial companies worldwide.

Bill has presented and published a variety of works in the demand management area and he holds a seat on the practitioner advisory board of the International Institute of Forecasters (IIF).

About Demand Works

Originally founded in 1993 as Advanced Planning Systems, Demand Works provides demand and supply planning solutions that deliver large-scale improvements in forecast accuracy, coordination and asset deployment. Demand Works is exclusively focused on the areas of forecasting, demand management and supply planning, and we support hundreds of users throughout the United States, Canada, Latin America, Europe and other parts of the world. Our customers include manufacturers and distributors of many household brands as well as countless industrial and other manufactured goods. The company's principals are respected leaders in the sales and operations planning area, and the solutions reflect their innovative thinking.

Demand Works has taken a holistic approach toward eliminating unnecessary cost and complexity without sacrificing functionality or business results. The engineering is top-notch, leveraging the most exciting forecasting , OLAP database and collaborative technologies. Demand Works invented many leading practices in the industry, most notably a technology called Pivot Forecasting® that makes it possible for businesses to forecast and automatically synchronize plans at any level of product, manufacturing or distribution aggregation in real-time.

Even the sales approach has been engineered to reduce cost and wasted time while eliminating risk and maximizing the customers' ability to rapidly leverage the power of the solutions. By combining innovative solutions engineering and business practices, Demand Works is changing the way people think about best-in-class demand and supply planning software.