



How is Your Demand Planning Metabolism?



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Several months ago I went to my doctor for a checkup, and he told me I'd gained about four pounds over the past two years. Using a chart on the exam room wall, he explained that I was now 12 pounds heavier than the ideal body mass index for someone my height. He then proceeded to tell me about something called "metabolic syndrome."

As the doctor explained it, metabolic syndrome is triggered by excess — excess weight to be precise. He said the extra weight I was carrying around could cause my body to resist insulin, mismanage good and bad cholesterol, increase hypertension, result in a fatty liver, and would harm both my immune system and the connective tissue in my joints — especially in my back.

The message was clear — allowing one bodily component to slip out of control creates opportunity for other systems to fail as well. Without corrective action, dessert was going to be my downfall. His cure: lose weight.

According to my doctor, if I were to lose just a few extra pounds, my body's organs would function more efficiently. The sophisticated feedback and closed-loop systems that make me tick would collectively shift back into balance, and I would probably live a longer, healthier life.

And so it was on the ride home, after committing myself to a plan for losing the extra weight, that I started

thinking about my doctor's advice in terms of what I see transpiring on a daily basis in the supply chains of Spinnaker's business clients. That's when I realized his description of my potential health problems was an apt metaphor for what we at Spinnaker have come to call forecast "bloat."

Too Much Junk in the Forecast Trunk

Because supply chains have become so much more complex over the past 10 years, forecast accuracy has become increasingly vital to the success or failure of supply chain operations.

- Increased competition
- Global sourcing
- Stakeholder pressures
- Never-ending new product introductions
- Government regulations
- More frequent pricing and promotional activities

All these factors heighten the *urgency* to accurately predict demand, but they also make the task of actually *predicting* demand exponentially more difficult. A growing number of our clients have responded to this increased complexity and uncertainty with a typical knee-jerk tendency to over-forecast. If you think of this solution in terms of our healthcare metaphor, it's like choosing to take pills to treat high cholesterol, hypertension, and insulin resistance rather than just losing excess weight.

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Just as a doctor runs tests to look for indicators of health problems, so too should supply chain managers examine their forecasts with a skeptical eye.

Bad Forecasts = Bad Planning

Just as your brain controls your body, forecasts control supply chains. If your brain transmits a flawed signal, your body will experience or exhibit some corresponding system failure. Similarly, if the accuracy of your supply chain forecast is significantly flawed it will trigger a spasmodic response somewhere throughout your supply chain. Just as a bad forecast can cause a ripple effect of bad supply plans downstream, a bloated forecast can cause over-ordering of raw and pack inventories, a misallocation of production resources, increased inventory hold times, and excess/obsolete inventory.

It's possible, of course, to argue the importance of many other factors as being central to supply chain management. For example, inventory management is without a doubt a critical discipline, but when you consider a simple question like: "How do you know how much to build?" you find yourself back on the subject of forecasts.

Are you thinking about using a linear program for strategic supply chain design? The demand input is normally a forecast. The same goes for production scheduling, logistics, deployment, or procurement — all rely upon some internal demand mechanism or signal that brings you back to the same subject: the forecast.

In a well-controlled environment, an overstated forecast won't typically

pose a huge problem, since other supply chain functions like inventory management should catch the excess demand and stop Production and Procurement from making or buying excess inventory. The assumption being, of course, that all such processes are running well enough to catch the problem before it manifests itself in the form of bad planning. But that's a broad leap of faith.

Furthermore, a persistent positively biased forecast is still full of error, and error is part of the equation for most safety stock calculations. So even if the excess is caught, the error alone will have some lasting impact on inventory. And when capacity is tight, a bloated forecast will likely result in bad decisions about the use of the limited capacity — creating opportunity for other systems to fail as well.

Testing for Forecast Bloat

So, how do you know if your forecasts are bloated? Just as a doctor runs tests to look for indicators of health problems, so too should supply chain managers examine their forecasts with a skeptical eye.

While there are no definitive "symptoms" of bloat — only indicators — if you answer "yes" to most of the following questions, it's likely your forecast needs to diet.

- Does your forecast have a persistent positive bias?
- Are forecast misses "rolled" or spread into the latter part of the year?

There are many ways to reduce forecast bloat, but the all-important first step is committing to a reality-based forecast.

- ☑ Do top-down directions on the forecast supersede the hard work involved in creating a bottom-up forecast?
- ☑ Are unrealistic sales or financial plans imbedded in the forecast?
- ☑ Are new product forecasts almost always aspirational or overstated?
- ☑ Do you have a lot of aged or obsolete raw, pack, and finished goods?
- ☑ Do you have more inventory than you need, even though customer service levels are low or declining?

Naturally Occurring Bloat

Just as having a *little* body fat is not harmful, industry research has shown that it's normal for forecasts to have a naturally occurring positive bias. In-depth analysis of forecasting behaviors has determined that forecasters of all stripes tend to react rapidly and positively to good news yet much slower to bad news. The psychology associated with this tendency is akin to denial, thus the resulting behavior of forecasters naturally leads to inherent positive bias in their forecasts. When trying to remove bloat from a forecast, this bias is an obstacle to be overcome.

Another cause of bias is an organizational “little engine that could” approach to demand generation. The forecast becomes an exercise in “**I think I can... I think I can...**” mentality, with *can do* attitudes and organizational momentum leading to an aspirational forecast.

Sales and Marketing typically provide the most “I think I can...” forecasts; and these tend to be positively biased, with inherent — often unchallenged — growth assumptions. Momentum and aspirations aside, these forecasts should be challenged to determine if there are underlying facts to support the volumes in the forecast.

The Cure for Bloat: A Forecast Diet

There are many ways to reduce forecast bloat, but the all-important first step is committing to a reality-based forecast.

“Getting real” with your forecast describes the constant, ongoing challenge of determining whether your forecast can be supported by hard facts, the best statistics, solid judgmental input, and believable market assumptions. Getting real **does not** include:

- Using the budget as your demand plan
- “Peanut butter spreading” a top-down volume assumption
- Using best-guess or seat-of-the-pants estimates to determine the future

When it comes to forecast review, we often recommend that our clients adopt an attitude embodied by the Missouri state slogan: show-me. That is, all significant forecast changes should have a corresponding explanation or assumption that serves as a sound underpinning.

If forecasts differ from historical trending, ask “Why?” And if you don’t like the answer, ask “Why?” again. In fact, adopting the “Five-Why” process from the continuous-improvement discipline is a great way to understand forecast deviations.

Once you resolve to “get real” about forecasting, the process of reducing forecast bloat is no different than the process of dieting to lose weight. You need to set a goal, establish a support group, or maybe even engage a professional to assist you — a forecast “nutritionist,” if you will, or “personal trainer.”

To get started with your own reduction plan, consider these seven specific areas associated with demand planning, each of which deserves particular attention:

Error reporting is essential to understanding the presence and source of errors. Improving forecast bloat can be as simple as error-reporting with multiple “cuts” across the product and sales hierarchy to help determine where the error is greatest. These instances of high error then need an active challenge to determine causality.

Analyze. Forecast error can be naturally occurring, or it can be created by erroneous judgmental input. Only careful analysis will indicate the root cause of a problem. Measure the stat forecast as well as variations of judgmental forecasts. Reporting bias — with special emphasis on forecasts that are positively skewed — is essential to removing bloat.

Teamwork is essential to understanding error. A collaborative demand consensus process will enable more accurate forecasts and provide a forum for active challenges of erroneous forecasts.

Latest estimates should be compared to the prior version of the forecast to help enable a net-change process for reviewing forecast changes. Large deviations “rolled” into the latter part of the year tend to be one of the most significant sources of forecast bloat.

Exception processing is essential to accurate forecasting. Reviewing every item every month within the forecast cycle is overkill that amounts to busywork. But detailed analysis of exceptions and causality tends to yield immediate, long-term improvement in the forecast process.

Statistical tools should be managed to peak performance. Runaway statistics or overactive models can create incredibly counterintuitive forecasts. We often find the parameter settings and configuration of these tools to be one of the biggest hurdles to overcome. People often falsely conclude that statistical forecasts are just not that good. In fact, simply reviewing statistics and making a few tweaks on a monthly basis can significantly reduce bloat.

Straight talk is critical to removing forecast bloat. It’s the process of questioning a forecast based on facts and knowledge. For example, if the trend for Product Line A has been +5% over the past year, then why suddenly forecast +15%? Straight talk requires an approach to consensus forecasting based on maturity and continuous improvement.

**The Solution is Clear:
E-A-T L-E-S-S**



Just as dieting can help you lose weight, reducing forecast bloat is a challenge you *can* manage on your own, but the reality is often more challenging than it sounds.

by incorporating analysis, discipline, and process improvements into their demand planning processes.

The benefits are a healthier supply chain and a healthier bottom line.

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That's why Spinnaker has developed a Demand Excellence Model™ to help organizations adopt and embrace a forecast diet.



Our Demand Excellence Model™ is a proprietary approach designed to help supply chain leaders methodically reduce forecast error

To learn more, contact the supply chain specialists at SPINNAKER. Call **877-476-0576** or visit **www.spinnakermgmt.com**

Spinnaker's Demand Excellence Model

