

CHAPTER 4

Demand Forecasting

Forecasting is one of those topics that is both incredibly critical and incredibly complex. Get it wrong and you could shut the doors within a few lead time cycles. More than any other topic in this book, I strongly advise you to get yourself educated, get skilled talent around you that is even more educated, and perhaps bite the bullet and bring in one of those well-dressed consultants. Invest in your forecasting and you should realize the benefits long term.

The aim here and now is to provide some quick hits that I find most inherently interesting. Yours truly has owned demand planning processes and outputs in large corporate Aerospace, CPG and Healthcare environments as well as smaller private equity shops. I know what I'm talking about with this stuff. Or perhaps at the very least I know how to screw things up in any situation. You be the judge!

ERP: Apologies in advance, but I have strong thoughts on this topic. A big boy ERP software package with a full suite of contemporary forecasting mechanics built in sure *seems* like a good thing. More smart attention went into the development of these packages than was spent on the Apollo space program. They are absolutely freaking incredible. In many cases from a pure demand planning perspective they are also not worth the trouble of implementation. The thing is unless you are one of the blue bloods (and not always then....) your existing human infrastructure and demand planning processes likely are not wired to effectively use these advanced mechanics. After implementation and after the army of consultants spin off, what you typically see is one of two things:

- a. The parameters for the advanced mechanics get screwed, resulting in suspect outputs. Alpha/beta factors, forecast consumption policies, and “selecting” which advanced forecast model to use are just a few of the nuances that get easily well and truly screwed up. Over time people tend to blame “the system” for the resulting crappy forecasts. The result is “the team” distrusts the system, management distrusts the team because they know better results should be in hand, and the business suffers.
- b. Alternatively, a really bare bones iteration of the system is being used. Think of an Italian sports car stuck in second gear. Now, this is honestly not as egregious as the scenario above because there is some internal honesty about training/process deficiencies. At the very least this means you have overshot on the package selected and have wasted copious amounts of time and money to get to where you are now.



good forecasters don't come cheap....

SPREADSHEETS: Hands down, the two biggest godsend in global supply chain are email and Microsoft Excel. I find it fascinating the degree to which our industry has exploded in parallel with the introduction and mass use of these tools. Relative to Excel (and to be on point, relative explicitly to forecasting in Excel), there is no shame in having it be the backbone of your forecasting processes. Forecasts need to be intuitive to get the most out of them---using Excel to build the models almost guarantees your outputs will be well understood, and hell, maybe even more accurate. Besides plain forecasting here are some other considerations to keep in mind:

First, the inputs/outputs of your Excel planning model can be integrated into even a rudimentary Financial, MRP or ERP system. It will likely take you some trial and error to nail this automation, but it is well worth doing. As powerful as Excel is not being able to integrate the data cleanly with your system is a major hindrance and should be avoided at all costs.

Also, note that a whole ecosystem of software vendors exists that hock add-ons to Excel that can really juice up the core functionality of the program. I **strongly** recommend you first maximize the capabilities of native Excel before looking to these options. That being said, something like an off the shelf statistical forecasting add-on can be had for safely under a thousand bucks and can do wonders given some certain demand profiles.

He/she with the largest spreadsheet does **not** win. Because Excel is so flexible it can be misused. Columns can easily extend to ZZ and beyond, the number of tabs seem limitless, pivot tables get increasingly meatier, and there is nothing preventing you from doing vlookups and sumif's until the cows come home. Keep playing with these tools and before you know it you have a 20MB+ spreadsheet on your hands that is cumbersome to manipulate, save and share. Streamline your modeling and do not fall victim to Excel scope creep.

GOOD FORECASTING IS MORE THAN JUST SYSTEMS: Nature abhors a vacuum, and so does forecasting. There is a real world out there gang. Complete with dynamic economic trends, competitive pressures, and activities from your customers. None of this can be gleamed if your planner is buried in a system combing through copious amounts of demand history. Speak with your customers, understand your industry trends, and leverage your Sales and Marketing teams for insight. When you gain maturity, institutionalize these talks/understandings into a fundamental and repetitive part of your demand planning process. Besides being smart sounding acronyms, CPFR and S&OP are two outstanding initiatives that really do yield verifiable positive results. None of this is easy, sorry. All of it is important to do.

FORECASTS ARE JUST THE BEGINNING: Whether your forecast is fully integrated into a specialized software package or you are bootstrapping it in Excel, your forecasts should be a complimentary piece of the pie and not a stand-alone engine. One wise action to do with your forecast is to share it with your supply base. Now this assumes you have the ability to scratch out an MRP output and derive a clean list of projected buys. If you are at this point the “buy forecast” is incredibly valuable to your supply partners. You’ll have to ensure you communicate in blood that it is non-binding---but once you get over these hurdles many good things can come from sharing your buy forecasts (reduced lead time, assurances of production allocation, reduced costs, and general goodwill).

For another relevant example try using your forecasts to carve out future inventory projections. This again requires use of an MRP-type functionality as well as careful scrubbing of your master data---all this should yield a pretty decent view of *what* assets you will have *when* and *where*. This makes YOU happy (inventory mgmt. and capacity planning), Sales happy (customer-facing communications on availability) and Finance happy (supports cash flow). Happiness all around—everyone wins!

KEY TAKEAWAYS:

1. Invest in the people, processes and systems which drive your forecast. It will pay dividends.
2. Forecasting capabilities inherent within ERP systems offer incredible functionality, but are not a magic bullet.
3. There is nothing wrong with using Excel as the backbone of your forecasting engine. Take whatever opportunities you can to integrate Excel into your system, and take steps to ensure your Excel workbook does not inflate to unwieldy proportions.
4. Do not forecast in a vacuum. Collaborate with internal and external partners.
5. Carve out smart ways to use your forecast output – your demand forecast can drive views of supplier purchases and internal inventory projections.

Good stuff, right? Go to www.pragmaticscm.com to get yourself the whole book