Business Forecasting:
Supply Chain Requirements

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Forecasting Your Requirements

Inevitably, you'll find yourself in the position of providing a requirements forecast. There are lots of tools around to do that and probably the most flexible, and perhaps the most useful, is the spreadsheet. It allows simple "what-if" calculations and is designed to make data entry as simple as possible. Software packages that can assist in the process help by tracking what your consumption has been over time and may make entering past data even easier. Regardless of the approach you use, we've always found it useful to keep in mind what the basic components of nearly *any* requirements forecast are. We developed this approach (depicted in Figure 1) when we had responsibility for managing demand and capacity projections for a computing environment that included dozens of mainframes and hundreds of minicomputers.

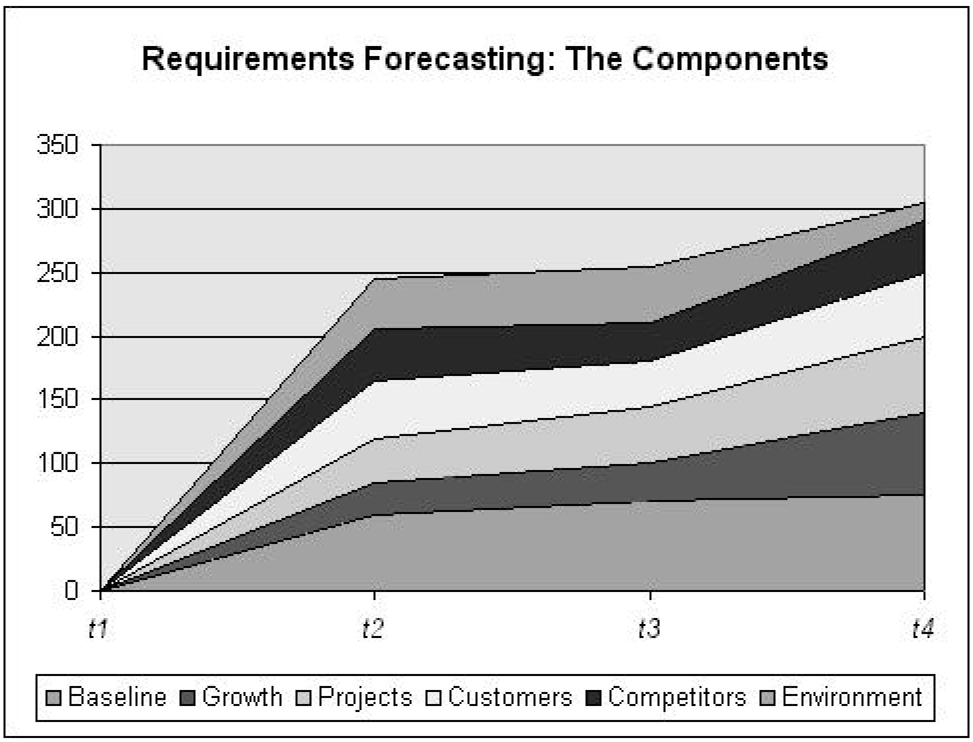

Figure 1

As the figure shows, a requirements forecast has six components, which have an "additive" impact. Note, however (and it's a big however), that, although this chart shows each of the contributing components *adding* to the demand for clarity, in reality some of the components frequently *reduce* your requirements. Let's take each component in turn.

- **Baseline Requirements**

  This component simply represents what you are using right now. If absolutely *nothing* in your business environment changed, your requirements would continue at the current level, forever. Not likely, but that's why it's just the baseline.

- **Baseline Growth**

  In most cases, you aren't using the same amount of a product or service you've used in the past. This component allows you to show what that trend is likely to be in the future, without taking into account any of the other factors. The trick here is to isolate causes and not wander too far into the other components. It may be that the market is moving to other products than the one you are manufacturing, and you'll need fewer raw materials as a result. Or it could be that you have been reducing waste in your manufacturing process and you require less stock to produce the same output.

- **Your Plans**

  This component represents active projects and initiatives your company has underway. You may be planning to manufacture a new product or expand into another market or open another office. This allows you to reflect what your company - and no one else - is doing that will affect the forecast.

- **Customers**

  What is your sales organization telling you? What does your own research say about the market for your goods and services? This component factors in your best estimation of effects of your customers' actions. Is the market saturated? Are there other alternatives? Are your customers flush with cash on hand? The better you can estimate the impact of the answers to these questions, the better your requirements forecasting will be, to state the obvious.

- **Competitors**

  While we may like to dream what it would be like to be in a situation in which we have no effective competition, it's not going to happen for most of us. So, we have to deal with the impact of other companies on our business. Here are some of the questions that you continually try to get answered: Are your competitors underpricing their products? Is your product competitive with theirs? Does their cost structure allow them to reduce prices below a level you can tolerate? Are they seeking to merge with another competitor to improve their marketing position? Does their quality control allow a better yield, reducing their cost per unit? And what is the cumulative effect on what your requirements will be?

- **Environmental Factors**

  Of course, there are many other factors that can affect your requirements and we attempt to aggregate their impact here. Will the economy soar or collapse, turning your carefully calculated forecast into a pile of rubble? Will regulatory activity improve or hinder your sales? If there is an increase in international terrorism, does that affect your sales one way or the other?

A few months ago, we sat in on a discussion among telecommunications executives. One of the most evident points of frustration that came out of the group was their collective inability to trust sales (and by extension, procurement requirements) forecasts. Almost to a person, they considered long-term projections to be in the two- to three-year range. They had little faith in any of the forecasting tools or processes available to them.

The term for an algorithm that incorporates incredibly precise data and calculations only to produce an answer that has a substantial margin of error is "superfluous accuracy". Choose your tools and allocate your resources for forecasting requirements with this in mind. And consider what the impact is if you underestimate or overestimate. Living with uncertainty and reacting to changing circumstances may be the most effective skill you can bring to forecasting.