

"There are two types of forecasts – the lucky ones and the wrong ones."

Gary's Wife

FORECASTING REVENUE

One of the key pieces to developing a business plan is attempting to develop a revenue envelope for the future. The easy and standard joke about revenue forecasts is the typical, forever moving ahead of time "hockey stick" forecast. Such a forecast is neither believable nor helpful in developing a new business nor in running an existing business. We will discuss revenue forecasting for both cases of businesses: those where there are currently no existing sales, and established companies, where cross functional coordination can lead to improvements in future revenues and profitability.

FORECASTING IN THE PRIVATE WORLD

In fairness, it is often hard to understand if a revenue forecast is right, but it is often very easy to show that a forecast is wrong. In the case where it is obviously wrong, the fundability of the project is quickly extinguished. This article will focus on helping you avoid obvious mistakes when looking at new businesses.

It is always hard to get a young company funded, and one of the first things potential investors consider is the soundness of the projected revenue stream.

The forecasted revenue stream is a critical piece of building a business plan for a new business, or for a new product without a historical revenue stream. In general, most young companies have at least some notion of the size of their target market, but very few of them think about the problem in a way that allows them to develop an understanding of how and when revenue will begin, and how quickly revenue will scale.

One of the key things that we look for in a business proposal is a clear idea of how revenue works. At some level this is really simple: who are the customers, what are they buying, and what are their purchasing habits. Most of the companies we see don't spend enough time understanding these basic items, and visibly struggle when questioned on the logic behind their revenue projections.

To make this article more fun, we'll take each and every opportunity to teach you straightforward questions to ask the Marketing guy that is making the pitch for the new company or product. We do this in the spirit of paying homage to the tireless efforts of the



men and women in operations trying to understand what is actually needed and when they might need to build it...

PRODUCT AND MARKET

Customers paying money for a product or service define a market. For a start-up, this is almost certainly a product attempting to offer a new value proposition to the market, occasionally creating a completely new market. So start with really simple questions for our exuberant Marketing guy.

1. What, exactly, is this new product?
2. What value does it provide – and who benefits from this value?
3. Is the person/company that derives the main value from the product, the customer to whom you sell the product? If not, how is the value of the product actually captured?
4. What is the structure of the market into which the product will be sold?

These questions should be straightforward to answer, and the answers should be pretty convincing. If Mr. Marketing wilts on these kinds of questions, it is probably best to promise to “do lunch” sometime soon and move boldly ahead with your day.

Let’s show this with a couple of examples. In Figure 1, the supply chain of the telecommunications world is shown. In general, materials vendors sell to components houses, which in turn sell to companies that make systems, with their products ultimately being sold to companies that provide services to people. Let’s assume that a fiber vendor has developed a product that gives substantial value to the service provider when incorporated into a component. From the perspective of a service provider, they will pay substantially more for a system that has this component, which means the system provider will pay extra for a component that uses this special fiber, which means the component vendor will give a bit of extra money for the fiber. Stated differently, each level of this supply chain captures some of the value of this product, greatly diminishing the value captured by the company that developed the product. **Focus on developing value for your customer – not on providing value several layers up in the food chain.**

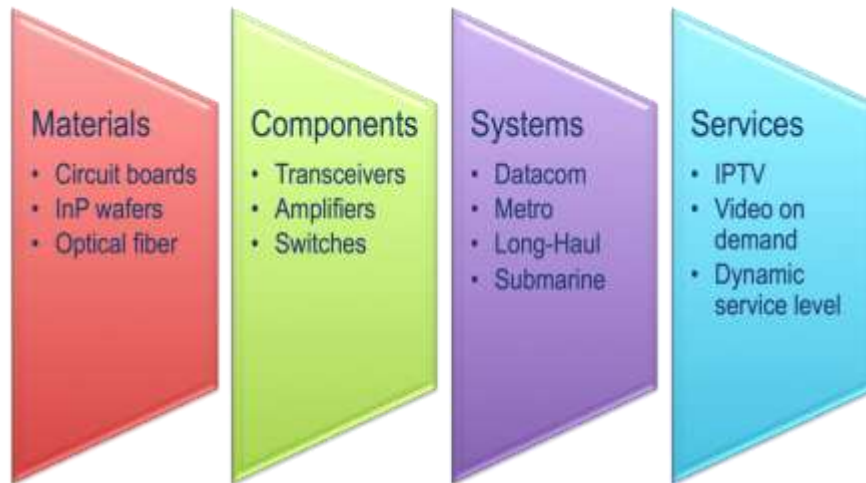


Figure 1. The telecommunications vertical market.

In a different example, we look at a beverage company that has developed a new pick-me-up drink cleverly called “Rouge Cow”. With its powerful effects and potent marketing budget, youthful consumers will easily pay several times more for this product than for a simple soft drink. “Rouge Cow” is sold directly to supermarkets, like “Fortunate”. “Fortunate”, like many supermarkets, has very narrow margins, and due to intense competition with other supermarkets, has limited power to negotiate pricing for “Rouge Cow”. The net result is that the beverage company keeps the value it developed for two reasons: it is closer to the customer that values the product, and it sells into a distribution channel with so much competition that the distribution of the product is very low cost.



Figure 2. The Rouge Cow vertical market, selling through the supermarket “Fortunate” to the end consumer.

Key point: The further away the product is from the end user, the less value the company that develops the product will capture of the total product value.

TIMING IS EVERYTHING

After passing the first set of questions, our dauntless Marketing guy is ready for another set of questions. This time, the focus will be on understanding exactly when a product begins to generate revenue.

Most products in the development pipeline go through several stages. To make the discussion tractable, we assume that the primary product “breakthroughs” have been achieved. If major breakthroughs are required, it becomes pretty difficult to schedule revenue generation with any accuracy at all.

To get revenue from the product, the development program must be complete, internal qualifications passed, external qualifications, and/or approvals must have been completed. At that point, the product/service can actually begin its commercial life.

So here are the questions for Ms. Marketing...

1. How long is the development program? In this type of endeavor, are development programs ever late, and if so, on average by how much and why?
2. Is the product internally qualified to minimize risk of failing customer qualification or regulatory approval? Specifically how is qualification determined, by whom, and how long does the process take?
3. Describe the external qualification process? Describe any regulatory approvals required? What are the political aspects to the process – how will that risk be handled? How long does this take? Does each customer require a custom qualification? How many customers are there?
4. How does the distribution channel work? Direct or indirect? Timeline? When is it engaged, and what are the distribution risks?
5. Draw a timeline that shows the development process, the internal qualification process, and the external customer qualification process. Spend time with the Marketing person understanding the level of comprehension they have of the entire sequencing of events, risks, and contingency plans.
6. Once the product is qualified, how does the customer purchase the product? Is it tied to product rollouts of the customer? Will the customer backwards-integrate this product, i.e. use the product not only for new products, but also use it in existing applications? Does it replace an existing product, such as a new cell phone?

This isn't intended to be an exhaustive list; rather it is intended to encourage lots, and lots, of questions about the realities of getting a brand new product up and running.

Let's look at a few examples to show how very different the process can actually be for different industries. Here we'll talk in very general terms of the market, with the intent of having the reader recognize how different the revenue profiles and risks are for products serving different industries.

An example of a large corporate customer

A large, well-funded OEM customer has many attributes that play into how revenue ramps. First, they have significant internal resources across many functions, including engineering, manufacturing, supply chain, quality (reliability), etc. Selling into a sophisticated OEM customer requires a good understanding of the requirements and qualification processes for each of the functions that have the power to determine an approved vendor. Read this to mean any of the functional areas of the OEM may have veto power over the product introduction. In selling to an OEM customer the first step of a revenue forecast is understanding how to become qualified to sell to an OEM.

Typically, younger companies focus on satisfying an R&D group within the OEM, as this is where most of the new product action happens. That viewpoint significantly misses what happens within an OEM prior to an actual production order being placed:

- That a supply chain manager considering a new supplier may require a credit report, audited financial records, bank information, a listing of suppliers, the names of the officers of the companies, a listing of funding sources and company identification numbers,
- That a quality engineer will want to see all certifications for the company in areas, such as RoHS, ISO 9001, ISO 14001, to understand the full reliability model of the product, to understand in substantial and documented detail how corrective actions are implemented, to personally certify that the product is "qualified" to the standards acceptable for the OEM,
- That a plant manager may need to negotiate terms with the company on how long it takes for an order to be acknowledged, what inventory the company is willing to hold, shipment lead times and more.

Again, this isn't a full listing of the work to get a supplier qualified, rather it is meant to help get the discussion going about the process being long and potentially rather costly for a start-up.

As hard as it is to get the business of a large corporate OEM, there are several great upsides. First, in a typical industry, there really aren't that many huge customers making the new sales force affordable and allowing the opportunity of truly understanding the customer.



Once a product is designed into an OEM system, the revenue streams can become impressive. Finally, the small number of customers means that a small company can reasonably focus upon only a few customers to produce meaningful revenue. By extension, this implies that a small market share, comprised of a large percent of the revenue of a couple of large customers, can be relatively stable.

Another example analogous to OEM's is the drug development industry that has a very lengthy, and risky, path to revenue. By contrast, selling a piece of software to the owner of a smart cell phone is an incredibly faster route to revenue. **The main point to be made here is that understanding what steps have to be completed before finished products actually starts generating revenue is a crucial part of developing good revenue forecasts.**

FORECASTING EXISTING REVENUE STREAMS

Our discussion now turns to the topic of forecasting existing revenue streams. Let's list some of the objectives of forecasting. The most obvious output from a forecasting process is a financial projection that can be shared with investors or a board of directors. However, that is the tip of the iceberg in terms of what a good forecasting process can do for a company. A good, disciplined forecasting process serves tremendous utility in linking different functional areas and activities within a company.

Before we begin discussing this, let's start with what we want a good forecasting process to deliver. The objective of a good forecasting process is to develop a common viewpoint on revenue production within a company so that the corporation can simultaneously meet conflicting goals of maximizing the production of revenue and making customers happy while simultaneously keeping inventories and costs low.

THE ROAD TO REVENUE

Prior to revenue, a customer learned of a product (Marketing), was engaged in the sale process to the point that features and price were determined and an order was taken (Sales). The order was accepted, parts were identified and ordered, if needed, and a delivery date was given to the customer (Operations, Customer Service). The product was built and shipped (Operations), and the customer was invoiced (Customer Service). Obviously, if you consider the financial underpinning of all of these activities, forecasting the revenue from products exiting the R&D cycle to the generation of the customer's invoice for product shipped, almost all functions of the company are involved with the production of revenue. This is very much a good news/bad news situation. The bad news is that, Holy Cow! a lot of people are involved with making revenue happen – and that is an organizational challenge. The good news is that the implementation of a good revenue forecasting process can provide the structure for great execution and coordination among different functional areas. In addition, when properly constructed, revenue forecasting mirrors the implementation of an MRP system – providing a regular forum for critical company communications.



Start with the customer

The primary interfaces to the customer are the folks in Sales and Customer Service. The forecast has to start with a demand view. This view focuses on how much product could be sold if constraints were removed. This can be fed into a good salesware program, such as Salesforce. These voices should represent the perspective of the customer and work to inform the rest of the company about issues impeding the production of revenue. This raises issues so that they are visible, and management can take concrete steps to resolve them.

Business judgment

It is unusual for a pure sales demand forecast to be used to load a factory. You want to have Sales be aggressive, to point to all the possibilities that they see. However, the actual cost to get at all of the revenue is generally very high. This cost comes from the fact that the inventory and overall factory capacity required to meet all possible customer expectations quickly becomes non-economic.

Quite often a business function that has overall profit and loss responsibility, often a product line manager or business unit head, creates a forecast that takes into account both the opportunities that the Sales team has identified and the economic realities of the factory situation. This forecast is suitable for loading into MRP systems and for the creation of reasonably detailed financial forecasts.

Operations

The Operations group faces all the challenges of actually making and shipping this product to the customers. It is important to understand that the Operations group is always looking at several "build" plans. The easiest are the ones where Ops has received an order, has the parts, and has scheduled the build. Next easiest are orders where Ops has the order, parts will need to be ordered and received, and the build is scheduled for somewhere out in the future. Here life gets interesting – Ops also typically has in their build plan product that the business/sales guys are committing to get the order for, but there is no actual order on the books.

Balancing Metrics

It is critical to understand that the overall health of a company improves when all functional areas are simultaneously performing well. The revenue forecast process is a great way to get these disparate groups working together through problems. This is, *almost by definition*, a place of conflict, but also a real opportunity for the types of breakthroughs in operational efficiency that can substantially aid your bottom line.

If we simply drove all groups, Sales, Business Units, and Operations, to maximize revenue, it would quickly lead to way too much manufacturing capacity and piles of finished goods and boatloads of inventory. So let's create an example with a little bit of conflict – let's give a single additional metric to each group. To Sales: Bookings; the Business Units: Gross Profit; and Operations: Inventory (to minimize). The Sales group will agitate to be able to book orders for all products (even those with poor margin performance) and will request that Operations hold tons of inventories so that they can accept last minute orders. The Business Units will seek to simply maximize Gross Profit – pushing Sales to focus more on



highly profitable products and trying to get Operations to channel inventory spend toward the products with good margin. Operations will try to ship those products that are the cleanest to produce, thus minimizing inventory requirement.

The point of this discussion is to note that these requests are simultaneously both legitimate *and* conflicting. Getting groups to participate in a broader forecasting exercise, and using that venue to get them to work these problems so that bookings and gross profit both go up, or so that gross profit goes up as inventory levels go down – that is the real opportunity and challenge.

Key Point: Use the forecasting process to increase the visibility of key processes, like bookings or order acknowledgement.

Key Point: Use metrics that create healthy tension between groups and constantly support and acknowledge when these groups work together to improve disparate metrics. An example is improving the capability of Sales to achieve bookings while decreasing the inventory levels of the company.

CONCLUSION

Regardless of whether revenue is being forecast for a brand new business opportunity or for existing products, creating good processes surrounding the development of the forecast can serve to better understand the market dynamics and to improve operational efficiencies. The main point is that by ensuring that all basic assumptions are fully visible, tested and validated and by understanding inter-functional company dynamics, the overall business improves.

Cheers,

The InSite Team

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