

Tipping Point Analysis: A Surefire Way to Get Project Approval

There are never enough funds to take on all of the strategic initiatives a company desires. What can you do to ensure your project gets approval from a Board of Directors who needs to prudently evaluate investments? The Board is looking for the typical metrics like Net Present Value, Internal Rate of Return and payback period. But there is something else you can provide them that will greatly increase the chance of having your project approved—a Tipping Point Analysis.

It is important to keep in mind that what constitutes a major investment is relative to the size of a company and its revenue. What is major for one company might not be so for another. But generally a major project is one that requires a business case and carries the typical investment analysis including Net Present Value (NPV), Internal Rate of Return (IRR), payback period or other metrics that help you evaluate and prioritize what will provide the best return for the money spent.

Tipping Point Analysis Builds Confidence in Decision-making

Tipping Point Analysis is one way you can have greater confidence in the business case for your projects and then evaluate where, if an assumption changes unexpectedly, you may need to make an adjustment in your strategy. With Tipping Point Analysis you focus on the assumptions that have the greatest impact on the business case, evaluate most probable, worst case and best case for each, and identify where the tipping point is in that individual assumption. Then you can answer questions like, how much would the value of this assumption have to change in order for it to change the recommendation or funding for that project?



Examining Tipping Points Across Network, DC or Systems

Tipping Point Analysis can be applied to strategic efforts as well as tactical planning. For example, when looking across a network, it may be used to:

- Identify the right quantity and location for inventory/distribution points
- Balance the number of locations against inventory levels and shipping costs
- Optimize service levels while minimizing transportation costs and time in transit

Within the four walls of your DC, it can be helpful to:

- Consider alternative designs and fulfillment methods
- Evaluate alternate technology types, such as tilt tray versus slat/shoe or cross-belt sortation
- Compare the use of automation versus manual labor

And when comparing systems, tipping point analysis can be applied to decisions about:

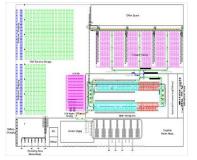
- Build versus buy
- System rationalization
- New applications

When is Tipping Point Analysis Useful?



Network

- Network strategy
- Optimization
- Flow path design
- Inventory
- Transportation



Distribution

- Alternative design analysis
- Manual vs. automated
- Multiple fulfillment methods



System

- Build vs. buy
- System rationalization
- New applications





So, how does one perform a Tipping Point Analysis?

Step 1: Gather Data and Develop Projections

The first step is to gather data including historical information about order profiles, SKU profile, history, customers' demand points, supply points, etc., and then look at projections for the same. When you have the historical baseline, you want to collect forward-looking projections from the various stakeholders in the business. But assumptions based on past performance are not always a good indicator of the future, especially in a volatile economy. This is why, to manage for the potentially unforeseen variances over time, you need more than one set of assumptions and not a singular forecast.

Step 2: Identify Conditions with the Greatest Impact on the Business

The next step is to identify which assumptions have a greatest impact on the business case. For example, in a retail environment, the variables around growth projections might include the number of new stores, where those stores are going to be located and sales growth from new stores. There are often a different set of assumptions around how the business will perform when talking about new store versus comp store sales. Related variables could include fixed and variable facility operating costs, inventory turns, productivity rates and freight and fuel surcharges or even customer service levels, such as visibility requirements, speed of delivery, communication or value-added services.

Step 3: Calculate Probability and Evaluate Options

Finally, evaluate your options based on your stakeholders predictions about the future three, five, and ten years from now. The further you go out in time, the less likely you are to be accurate; therefore, you need to create high and low ranges of probability around each of your variables. Conservative, probable and aggressive values allow you to consider what happens if the needle moves in one direction or another. Balancing your company's tolerance for risk against these "what if" scenarios provides a greater confidence in the choices you make and the projects you fund.

Typical Levers for TPA Consideration

Network

Distribution

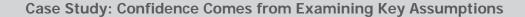
- Growth
- Customer channels
- Product categories
- Inventory turns
- DC By-Pass
- Pack-by-store
- Productivity rates
- Labor rates
- Freight rates
- Real estate costs
- Fuel costs

- Growth (new stores, comp stores, eCom)
- Product categories
- Inventory turns
- DC By-Pass
- Pack-by-store
- Productivity rates
- Labor rates

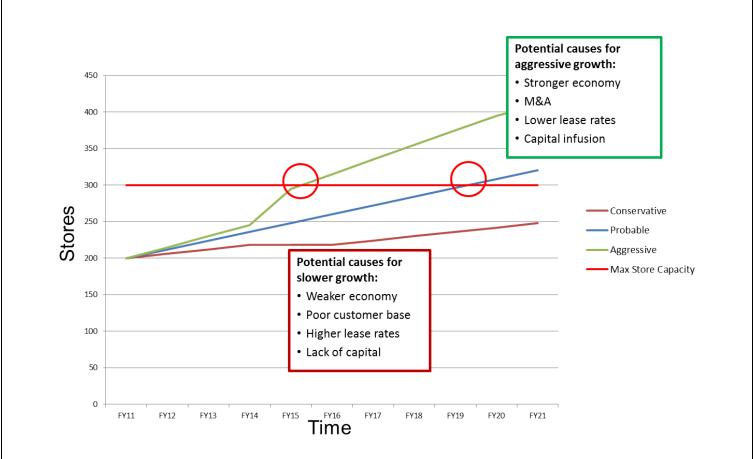
System

- License costs
- # concurrent users
- Interfaces
- Maintenance
- Modifications





A specialty retailer was building their capital investment and systems implementation plans based on a growth rate of 12 new stores per year. But with a possible acquisition on the horizon, they wanted to know at what point their DC's capacity would no longer support that growth and dictate a change in strategy. Fortna helped them examine their growth assumptions based on the strength of the economy, customer demand, commercial store lease rates (a barrier to entry with potential to impact store growth rate), as well as capital availability as a result of acquisition and planned systems implementation. A tipping point analysis revealed that if growth followed their planned (probable) trajectory, they would not break capacity in their DC for several years. But if one or more key assumptions were to change, such as a stronger than expected economy or if the merger were to take place, they would need to start looking at a different investment scenario. Confidence comes from examining those levers with the greatest impact for your business and knowing your own sensitivities to change. Before you take a proposal to your Board, be certain you can answer these types of questions and know how it will change your investment decisions.



Acknowledging up front that your project is based on assumptions that have the potential to change, allows you to adjust your course to changing conditions as you go. It helps you to know when things start to trend toward one end or the other of your pre-defined parameters, which is a signal to review or renew your analysis and adjust for the change.

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Though Tipping Point Analysis is often thought of as a quantitative tool, it is just as critical to understand the qualitative components of the business case. For example, your Board may want to consider how your project compares to industry best practice, how easily the solution can scale due to unexpected growth, or how flexible it is to absorb consumer behavior or economic change. Coupling the quantitative AND qualitative arguments is what makes the difference between telling a story and telling THE story that gains project approval.

A Flexible Set of Assumptions for Your "What If" Questions

One of the biggest mistakes that business leaders make is going to the Board with a static set of assumptions and single recommendation. You need to be prepared to answer "What if" questions and provide a recommendation across a range of possible outcomes. Tipping Point Analysis allows you to evaluate the variables that affect decision-making most, develop a flexible set of assumptions based on best case/worst case scenarios and explore how the potential solutions and recommendations change as you consider individual assumptions. This is a surefire way to fully develop a business case that your Board can support and get funding for your project.

About Fortna

For over 60 years, Fortna has partnered with the world's top brands—companies like ASICS, O'Reilly Auto Parts and MSC—helping them improve their distribution operations and transform their businesses. Companies with complex distribution operations trust Fortna to help them meet customer promises and competitive challenges profitably. We are a professional services firm built on a promise—we develop a solid business case for change and hold ourselves accountable to those results. Our expertise spans supply chain strategy, distribution center operations, material handling, supply chain systems, organizational excellence and warehouse control software.

How Can We Help?

Fortna helps companies develop the business case for investment, including tipping point analyses that build confidence. To learn more, ask to speak with one of our consultants.

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