

Upping Your Game: Real Analytics for Your Supply Chain

Too Many Talking Analytics for Analytics' Sake?

The term “analytics” sometimes seems washed clean of real meaning; lots of buzz but what’s actually being done being less clear. Everyone agrees that good analysis of good data can help improve business performance, but with so many possibilities in such a broad discipline, how do we keep from getting bogged down by platitudes? We need a sensible place to start.

Find Those Places Where A Little Analytics Goes A Long Way

Supply chain management processes are core to your ability to create value for your customers and profit for your business. If your company is like most, these are run by folks with deep experience in their functions who somehow “know how to make it work”. When you look under the covers, you often find a mix of old information, traditions and “house rules”, and sometimes outright misconceptions about the “right” ways to operate.

Noting the rules-of-thumb around you is a good way to survey candidate areas for analytics. Are you doing things because they are proven to work, or because rigorous analysis seemed out of reach? Or, as often happens, people just weren’t aware of useful methods available.

Below we summarize some key areas where analytics can be effective across the supply chain using the Supply-chain operations reference (SCOR) model from the Supply Chain Council as a reference point.



Plan

Supply chain planning is often much less analysis-driven than it deserves to be. For example:

- **Supply Chain Operating Model Segmentation:** Different products need to be planned and managed differently, but planners are usually too overwhelmed to sort it out methodically. Supply chain segmentation – considering factors like sales volume, demand variability, customer concentration, lead time requirements, and profitability – combined with supply chain parameter analysis provides a very useful and feasible way of classifying products and finding their planning “sweet spots”.
- **Forecasting and Demand-Shaping Analysis:** Forecasting often is both done and measured without the benefit of key analytics that are both very useful and very accessible. Analytics can provide insights into the various drivers of demand behavior such as pricing, seasonality, promotions, and product

lifecycle using well-understood math and common data. The effect of various contributors to the consensus forecast—customers, field reps, executives—can be evaluated to find out who’s adding noise instead of value.

- **Inventory Policies:** Inventory targets and lot-sizing rules are frequently days-of-supply rules across all products. Analysis nearly always shows that inventory should be redeployed compared to such rules of thumb, improving your bang for the working capital buck in a big way—all with very commonly available data and straightforward analytics.

Source

Although purchased materials are often the single largest component of COGS, the impact goes way beyond landed unit cost. Modeling & analytics lead to better decisions around:

- **Make vs. Buy:** With increasingly flexible internal and external supply chain models available, companies can dynamically revisit make/buy decisions considering direct, indirect, and opportunity costs as well as capacity and capability considerations
- **True Cost of Volume Price Breaks:** Discounts for larger purchases are common but often result in inventory holding costs and costly product obsolescence which can be analytically evaluated to drive the right decisions.
- **Lead Time vs. Cost Trade-offs:** A cheaper but slower supplier can trigger hidden costs and put revenue at risk. Expediting freight or paying for shorter lead time can lower overall cost when the full picture is evaluated.
- **Risk Management:** The ideal degree of supplier concentration or dispersion can be modeled and evaluated but often decisions are seat of the pants until problems arise.

Make

Anyone whose business converts materials into saleable products knows how complex this can be. Good analytics can drive improvements in efficiency, quality and asset utilization:

- **Capacity Analysis and Optimization:** Capacity planning is often based on historical experience and loose assumptions, when rigorous modeling and analysis may reveal significant hidden upside and identify which resources are truly bottlenecks.
- **Overall Equipment Effectiveness (“OEE”):** OEE is an established data-driven methodology that lets you understand the factors reducing throughput and measure improvements and check your performance against normalized benchmarks.
- **Statistical Process Control (“SPC”):** SPC is the original analytics and foundation of Six Sigma and Total Quality Management (“TQM”), but many still let their lines underperform in reliability, quality, and productivity by failing to adopt SPC.

Deliver

Processes that touch the customer are critical areas for using analytical insights to understand and improve performance:

- **Service vs. Cost Tradeoff Analysis:** Even when you treat high service levels as non-negotiable, it’s important to know where that puts you on the tradeoff curve with inventory and productivity.
- **Logistics Optimization:** Transportation spend is typically a key category that responds positively to analysis of sourcing, mode, frequency, and costs vs. inventory.

- **Performance KPIs:** Knowing more than your high-level fill rates helps you isolate, diagnose, and correct root cause issues, letting you provide higher service at higher profit.

Return

For both economic and corporate citizenship reasons, many companies have begun to focus on managing the end-to-end product lifecycle and supply chain. Cost-effective management of reverse and remanufacturing supply chains require answers to analytical questions including:

- **Product Return Rate Forecasting:** Understanding the volume and timing of product that will come back and the supply chain model required to support this product flow prevents it from becoming a burden and allows a company to leverage the returned product as an asset for an alternative revenue stream, replacements or spare parts.
- **Spare Parts Planning:** Managing inventory required to fix or refurbish returned product is critical to managing the growing refurbishment and repair market.
- **Pricing Optimization and Demand/Supply Curve Analytics:** Companies that sell both new and refurbished products need to understand how the price paid for returns will influence the incoming supply and also how sales of refurbished product will influence new product sales to manage cannibalization.

The Adoption Journey

Your business is your guide to prioritize analytical needs. What are the one or two top-of-mind business issues pestering you right now? Unproductive inventory? Demand keeps surprising you? Is plant productivity bogging down? Long lead times? Some products are painfully costly? From these you can, with expert help if needed, readily identify the hypotheses, methods, and data required to apply useful analytic assessments.

Some data may be readily available from your primary business system, but often you'll have to pull data from multiple sources. Data consolidation in spreadsheets may suffice for initial exploration, but when it's time to make repeatable processes you'll want something more industrial strength.

Spinnaker helps clients execute one-time studies as well as build repeatable internal processes to embed analytics into your business. We bring proven approaches and proprietary tools and algorithms to many problems but also help you dependably adopt these solutions to drive continuous business value. For more information, reach out using the info provided below.

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About Spinnaker:

Spinnaker is a supply chain services company that helps clients grow, manage risk, reduce costs, and improve customer service by developing world-class supply chain capabilities. Our services help clients develop the right supply chain strategy for their business challenges and implement the process and technology solutions to improve Demand/Supply Planning, Procurement and Sourcing, Logistics and Warehousing, and Reverse Logistics business performance. Spinnaker offers a unique service delivery model that combines the strength of deeply experienced management and technology consultants with a seasoned team of business process outsourcing (BPO) and 3rd-party logistics (3PL) professionals. Founded in 2002, Spinnaker has offices in Boston, Columbus, Denver, Houston, Memphis, Pittsburgh, London, and Singapore.

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