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Think about the last time you went shopping for personal care or home care products. Did you see aisles full of products with various features and price points for you to comfortably choose the best for your need? If so, part of the reason is that one of the leaders in personal care and home care products, Procter & Gamble (P&G) collaborated effectively with retailers to keep P&G's products on the shelves. And P&G benefitted as a result. P&G recently reported a strong 2022 financial year with a 7 percent increase in organic sales in the face of significant cost pressures and a supply chain disrupted by the pandemic.

P&G's performance is a great example of how integrated business planning (IBP) done right can improve bottom-line growth.

This article will focus on IBP, which is at the core of many companies' supply chain processes. In this post, I discuss how companies are turning to artificial intelligence (AI) to overcome traditional pitfalls of manual and time-consuming processes, optimize their IBP, and strengthen business resiliency -- especially in the volatile and complex post pandemic era.

Pitfalls of Integrated Business Planning

IBP involves developing a supply chain plan for various time horizons and purposes. One key objective of IBP is to match demand with supply for the next cycle, typically thirty days. Traditionally, the process involves:

- The demand team creates a demand forecast for the upcoming month.

- The supply team evaluates their production capacity to meet the demand plan.
- Finance ensures that the plan aligns with the company's financial targets.

There are iterative adjustments and negotiations until executives agree on a plan that is mostly fixed, dictating what is manufactured and shipped.

The challenge with following a sequential process is the unpredictability of various factors. Suppliers may encounter difficulties in delivering what they had promised. Demand forecasts may not accurately reflect the actual orders. Customers may request special promotions. Storms can hamper the execution of plans in affected regions. Numerous other events can cause a considerable disparity between the monthly plan and the actual market demand.

Accurate demand forecasting requires real-time insight into consumer demand at the store level. But understanding the vagaries of consumer demand is extremely difficult, as the panic buying of 2020 amid the pandemic demonstrated. Retailers and consumer packaged goods (CPG) companies were caught flat-footed as unforeseen panic buying took hold throughout 2020, resulting in product shortages. And the onset of the Covid-19 pandemic in 2020 was just a warm-up for what was to follow. A global supply chain disruption, inflation, and the emergence of coronavirus variants have continued to wreak havoc with demand forecasting.

How AI Can Help with Integrated Business Planning

Using AI to manage vast amounts of data at a rapid pace surpasses human capabilities. This makes a business more efficient. Companies can capitalize on forecasting models that use AI, human judgment, and real-time third-party data to achieve high-accuracy forecasting. AI can identify behavioral patterns with appropriate data. When retailers combine AI with real-time information, such as weather and search trends, they can collaborate with CPG firms to establish accurate, near-term demand forecasting -- even at granular SKU level.

AI models also enable dynamic scenario planning and agile demand forecasting at a more frequent cadence. For instance, with AI, a retailer can analyze the likely impact of running a promotion at a specific date based on the anticipated actions of a competitor. How might the rising cost of gasoline in one city affect a planned promotion for a nonessential CPG product versus a staple good in rural areas versus cities? The potential scenarios are endless. They can be automated via AI optimization, which runs thousands of scenarios and recommends the ones that best suit a retailer’s business objectives.

In the case of P&G, they conduct demand/supply planning for products like Tide multiple times a day. This results in several adjustments to production and shipping throughout the day. On the other hand, for products such as Oral-B Electric toothbrushes, which has a global supply chain, the plan/execute cycle takes several weeks. This agility in quick scenario planning opens new opportunities. According to Bob Herzog, P&G Global Planning Digitization Leader for Supply Chain, the company can now quickly respond to incremental business requests. These include requests for additional promotions from retail customers – which can be accomplished within minutes, instead of several days.

Centific: Your Partner in Data and AI at Scale

Centific has developed offerings that address the challenge of integrated business planning. One of

our solutions is an all-in-one demand forecasting and revenue management solution that gives our client companies complete control over the consumer demand that forms the basis of all downstream forecasts. From driving revenue and market share to estimating demand for trucks, returns, production capacity, resources, warehouses, inventory, suppliers, and minimum order quantities, Centific can help to solve problems that are top-of-mind in today's market.

Centific demand forecast engine is self-learning and self-tuning two-layer ensemble AI model, running close to 400 model combinations, that connects to internal and external structured and unstructured data that can be trained in a day regardless of the category thereby, delivering unprecedented accuracy and enterprise level scalability.

To learn more, contact us.

For More Information

"The Future of Forecasting"

"How to Kill Your Surplus with AI-Driven Supply Chain Visibility"

"Memorial Day, Hot Dogs, and The Forecasting Conundrum"

"How AI Can Help Retailers and CPG Firms Create Magic Moments on Easter"

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