Stay Ahead of Continuous and Rapid Change with a Dynamic Supply Chain

The supply chain landscape has shifted rapidly over the past two years. Digital channels are ubiquitous, and physical stores are seeing a revolution. Market dominators are now creating high-tech, omnichannel experiences that represent a drastic departure from traditional retail. Meanwhile, new challengers are playing a digital-only game, offering the ultimate in consumer convenience as their primary calling card.

These trends accelerated during the pandemic, when digital was the only viable channel for many consumers. Changes in consumer behavior that normally would have happened over decades took hold in just a matter of months.

This shift is placing new pressure on already stressed supply chains. In turn, organizations now need supply chain insights that go far beyond what traditional demand planning and forecasting methods can deliver.

Customers Want Products on Demand, via Their Preferred Channel

Weeks-long delivery windows. Surplus stock from fast-changing trends. Escalating costs exacerbated by inefficiencies. Lost sales. The pains created by inefficient supply chains and ineffective demand planning are reverberating right down to the consumer.

Customer buying habits and expectations have changed, making it impossible to predict their wants, needs, and purchasing habits with traditional methods. The ultimate challenge for the supply chain today is to have the right product in the right place at the right time—and at a competitive price. Achieving this requires a shift from simple forecasts and demand plans to an agile supply chain that is continuously optimizing based on real-time data insights.

A dynamic supply chain allows organizations to benefit from, rather than be hindered by, the top drivers of change:

- **Changing customer expectations.** New entrants and business models have retrained consumers to expect on-demand access to the products and services they want, when they want them, and through a whole range of new channels. Companies must ensure they can meet these needs to keep up with competitors, including the likes of Amazon with their same-day, or even two-hour, delivery times.

- **Pervasiveness of digital channels.** Today, digital channels and delivery modes dominate, but brick-and-mortar and click-and-collect retail models are certainly not dead. To remain competitive, traditional retailers must manage an omnichannel experience.

- **Acceleration of these trends by COVID-19.** The pandemic brought massive lifestyle changes: remote work, uncertain holidays, outdoor dining, and new hobbies. Volatility and ever-changing consumer behavior have become the new norm, making it impossible to predict trends well in advance.

To successfully navigate customer unpredictability and changing trends, retailers and consumer packaged goods companies (CPGs) face a seemingly unsurmountable task: how to meet the needs of consumers in an increasingly competitive environment. This requires a modern approach to forecasting and demand planning.

Accurate Forecasting Drives an Agile and Dynamic Supply Chain

The challenge for retailers and CPGs is to not only provide exceptional service consistently, but also to meet demand with adequate supply. And they must do this against a backdrop of increased customer uncertainty and far-from-frictionless international logistics.

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Stockpiling inventory at multiple distribution locations while increasing transport capacity is one option, but this brute-force approach is too cost prohibitive and wasteful to be effective.

Meanwhile, reacting to customer orders with a just-in-time supply approach no longer works because of the mismatch between lead times and consumer expectations. The only answer is to work smarter.

Putting data analytics to work at enterprise scale brings the intelligence necessary to build the future of resilient and agile supply chains. Cost excellence, exceptional customer experience, and dramatically improved sustainability can then move within reach.

4 Pillars of Next-Generation Supply Chain Intelligence

The complexity of today's global supply chain demands artificial intelligence (AI) and a data-driven approach to balance customer needs with cost management and efficiency. Four pillars enable organizations to achieve a resilient supply chain.

1. **Integration of dynamic data to shift from transactions to behaviors.** Accurate forecasting and demand planning relies almost entirely on analyzing data. Traditional point-of-sales data alone cannot capture the complexities of consumer behavior. New data sources must be incorporated to get a more holistic view of the customer, including data on travel disruptions, the weather, fleet status, and sustainability. This new data, combined with traditional transactional data, creates more accurate predictions to drive the supply chain.

2. **Forecast frequency that matches dynamic customer needs.** Monthly or weekly forecasts do not deliver insights in time. Daily, intraday, or real-time forecasting is needed to see what inventory is needed where and ensure it's always available in the right place, at the right time. An added benefit is the increase in flexibility, which allows retailers and CPGs to adapt to fast-changing demand driven by the environment. Organizations can minimize delays while generating significant savings and increasing revenue from satisfied customers.

3. **Granularity for better predictions.** Modern data collection and analytics techniques have transformed customer and product segmentation capabilities. Retailers and CPGs can do better than large segments across multiple markets. Instead, they can come down to the individual customer and product level. Moving to a segment of one provides increased accuracy and precision. Individual reviews on mobile apps, browsing behaviors, and social media use can be powerful indicators to understand customer intentions.

4. **Sophisticated analysis for layered forecasting with multiple models.** Detecting and forecasting customer needs accurately requires more than a single analytic model. Consumers do not simply react to one event or need; they respond to a series of stimuli that all intersect. Multiple models to understand the primary stimuli are essential to ensure the right analytic technique is leveraged against the type and format of data being captured. Consistent measurement is key, requiring multilayered forecasts that consider each input and weight their impact at an individual product level and ideally down to an individual customer level.

Achieve Analytics-Driven Business Outcomes

Supply chains demand agility and resiliency in the face of continuous and rapid change—and with a growing urgency around sustainable operations. By taking a sophisticated data-and-analytics-driven approach, retailers and CPGs can:

- Increase customer satisfaction
- Increase fulfilment efficiency
- Lower their carbon footprint

Organizations must rethink their forecasting and demand planning to:

- Leverage new data sources to improve accuracy
- Increase the frequency of forecasting to improve visibility
- Increase granularity to account for behaviors and drivers of change
- Apply sophisticated analytics to respond to changing customer dynamics

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Teradata and Its Partners Empower a Dynamic Supply Chain

Teradata, along with its partners like Antuit.ai and SAS, can deliver a real-time, resilient, and agile supply chain solution. The solution improves forecasting and demand planning to meet customer expectations while achieving operational excellence. Benefits include:

- **Integrating dynamic data at scale** to include more signals from diverse sources that can improve predictability

- **Providing near real-time, agile forecasting** to enable responsiveness to changing consumer buying patterns

- **Gaining granular insights** to help localize actions, drive improved demand visibility, and enable targeted actions for omnichannel inventory optimization

- **Using sophisticated analytics to evolve demand plans** and drive improvements in fulfillment while ensuring sustainability and cost efficiency

The connected ecosystem is helping to build the supply chain of the future, today. Retailers and CPGs can benefit from the combined technologies, resources, and knowledge of Teradata and its partners. Together, our integrated solutions enable companies to:

- **Improve visibility** by leveraging Teradata VantageCloud, the complete cloud analytics and data platform, to integrate data sources at greater frequency—even in near real time.

- **Benefit from a pre-built Retail or CPG Data Model** that captures and brings together the supply chain data integral to an intelligent demand forecast.

- **Activate sophisticated AI and analytics** to build next-gen forecasting and demand planning models that leverage complex pattern recognition to find key predictive drivers.

- **Apply analytics at scale** for greater analytical sophistication and accuracy with models running at a granular product/SKU or customer level to create real-time forecasts.

- **Integrate insights** with third-party tools that support sales and operational processes, and unlock a range of additional use cases and business benefits.

About Teradata

Teradata is the connected multi-cloud data platform company. Our enterprise analytics solve business challenges from start to scale. Only Teradata gives you the flexibility to handle the massive and mixed data workloads of the future, today. Learn more at **Teradata.com**.

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