



Solving the Problem of Profitable CPG Distribution

Optimizing the distribution of CPG products is challenging. Advanced technology from Blue Yonder can help.

Every supply chain is complex, with tough decisions that need to be made at every stage. Making the right choices is critical to ensuring high levels of service, along with strong sales and margins.

Driven by volatile shopper demand, price competition, the power dynamics of the retail channel and, in many cases, product perishability, the consumer packaged goods (CPG) supply chain is especially complex.

Products must be sourced in the right quantities from the right distribution center. The right carrier and logistics scheme must be defined for each order. Complex fulfillment and delivery constraints must be considered — including truckload capacities, special picking or packing needs, handling requirements and labor availability. Customers may have different fulfillment needs. For example, Tier 2 retailers' orders may need to be single-sourced, as they expect single delivery to a centralized warehouse. But large, bulk orders for Tier 1 retailers may need to be split into multiple single truckload orders and delivered to individual stores.

Getting these decisions right is absolutely critical to operating profitably in today's environment of razor-thin margins. The winners will be those companies that can apply intelligent, dynamic sourcing logic that balances profitability with customer service, helping to avoid late-delivery penalties.

Not only does advanced logic automate these decisions, but it also proposes innovative new ways of working. For example, sometimes the most profitable and expedient distribution strategy may involve sourcing directly from the factory, which not only shortens lead times but also addresses the truckload capacity problem.

Additional challenges include the need to consider and preserve product freshness, the need to calculate available-to-promise (ATP) inventories accurately and the need to prioritize orders in a strategic manner. In addition, the CPG industry is characterized by large daily order volumes, which means making optimal choices quickly, at massive scale.

It's obvious, even at a glance, that the problem of profitable CPG distribution is too large and complex for human analysts to solve, because it exceeds human cognition.

Blue Yonder to the Rescue

The good news? Blue Yonder's Order Management solution has the capability to solve this complex problem in optimized manner, leading to profitable, responsive distribution capabilities that shift as conditions and priorities change. Enabled by artificial intelligence (AI) and machine learning (ML), Blue Yonder's optimization engines ingest enormous volumes of data, apply complex logic and make decisions that balance service goals with financial objectives.



In today's fast-changing world, static allocation, sourcing and order management plans don't make good business sense. Instead, every distribution decision needs to be dynamic in nature, to capture new opportunities and manage emerging disruptions.

Blue Yonder delivers a unique value proposition for CPG distribution supply chains, with flexible order management capabilities that are typically lacking in planning solution footprints. As an added advantage, Blue Yonder's platform-agnostic Order Management solution easily integrates with customers' planning solutions, regardless of the solution they are running. For example, about two-thirds of customers are running Blue Yonder Order Management alongside SAP systems.

Sound too good to be true? Blue Yonder already has over 75 successful customer deployments under its belt. Over a million inquiries are processed daily using this solution, with an average response time of 10 milliseconds.

Solving the Distribution Problem Across Multiple Dimensions

Blue Yonder Order Management is purpose-built to master the complexity of the modern CPG distribution environment, from end to end.

It analyzes all possible shipping locations and makes the best choice for each order, considering service levels, costs, constraints, and customer priorities and penalties. It leverages dynamic routing logic that considers novel schemes such as direct-from-factory. This intelligent solution also splits bulk orders strategically and optimizes batches, running scenarios to find the best balance between service and cost.

Transportation constraints like capacity, different equipment sizes and warehouse capacity are considered while promising. Blue Yonder's state-of-the-art optimization engine solves for a full order basket that represents each day's orders, autonomously rescheduling orders to optimize both costs and the on-time, in-full (OTIF) rate.

Blue Yonder Order Management also has a special ability to consider product freshness, expiration dates and customer-specific shelf-life policies. This is essential for successfully managing product inventories for many CPG categories.

Another big challenge for CPG companies? Allocating products strategically across channels and retailers, in order to protect relationships, drive sales and maximize margins. While human planners may struggle with this task, Blue Yonder applies intelligent rules and policies to automate allocations. This solution can also support early shipments of in-demand products to strategic customers.

Finally, Order Management works alongside the dedicated scheduling system, typically SAP, to coordinate and orchestrate the scheduling process, from material availability dates through shipping and arrival dates.





Complex Problems Demand a Best-in-Class Solution. Blue Yonder Delivers

Blue Yonder Order Management is designed to deliver advanced AI and ML, powerful optimization engines and predictive analytics via a flexible, augmentative, microservices-based approach. CPG companies can quickly achieve the seamless customer experience and real-time visibility that are demanded in today's marketplace, with a rapid time-to-value and the opportunity for future scalability. Blue Yonder's 40+ Order Management microservices can operate independently or seamlessly integrate to provide a modular architecture.

Commerce happens quickly. By processing thousands of transactions per second, Blue Yonder delivers the fast response times and robust performance needed to handle large CPG order

volumes. Blue Yonder also delivers the real-time visibility into inventory availability, order status and delivery times that customers have come to expect in today's fast-paced, hyper-competitive CPG landscape. Fulfillment can be dynamically optimized based on real-time data on product location and availability, delivery distance and transportation costs.

While accurate, profitable CPG distribution will always be a challenge, Blue Yonder Order Management helps companies make intelligent decisions, keep their promises and meet customer expectations — leading to growth in both revenues and margins.

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