

#### **Business context**

Manufacturers wake each day to the daunting (and costly) challenge of ensuring 24-hour on-demand availability. Before products can be made available for purchase, the right amount of inventory must be built and precisely positioned across different network nodes. This requires companies to manage a large investment of inventory in their supply chains with flawless execution to keep customers in stock. In doing so, they must avoid adding excess stock to their networks or burdening their plants with constantly shifting order schedules.

Ensuring agile and profitable execution requires balancing all of the factors that determine inventory placement; including demand signals, customer service targets, safety-stock policies, product shelf-life constraints and production capacity, all while keeping inventory costs low. Many manufacturers have also started selling direct to end consumers via e-commerce, further complicating where to position inventory across the network to ensure profitable delivery.

#### The Blue Yonder solution

Whether developing product for the end-consumer or another business, companies need a planning solution that can synchronize optimized inventory placement and timing throughout their distribution networks, while respecting environmental complexities and constraints. Inventory plans and orders must consider differing customer priorities, lead times, transportation constraints, shipping and receiving calendars, safety-stock policies and production constraints.

Part of Blue Yonder's Luminate Planning solution suite, Blue Yonder Replenishment is designed to help build and position the optimal amount of inventory to the different nodes in your network. Now your inventory can be available for your operations and for your customers just when needed.

# Real results

Out of stock reduction up to

80%

Product availability increased up to

**10X** 

Reduced manual interventions up to

50X

## **Key features**

- Multi-tier: Develops multi-tier time-phased orders, shipments and receipts. Optimizes multi-tier constrained supply allocations
- Balances Constraints: Balances vendor-level and transportation constraints with purchase order optimization

The solution uses forecast and end-customer demand signals to plan production, replenishment builds, seasonal pre-builds and inventory movements between stocking locations while respecting network-wide constraints.

Replenishment begins with the setting of optimal inventory policy decisions through safety-stock strategies. The solution then reconciles the forecast with incoming orders to create the distribution requirements that are pulled through the supply chain based on demand signals and inventory policies. Advanced "sense-and-respond" algorithms enable replenishment to adapt to daily changes in demand signals to help avoid costly stock-outs and overstocks driven by unexpected orders and unsynchronized promotional ordering. In many networks, production is a key constraint to satisfy demand, so the solution can create a constrained production plan to ensure that supply is available from manufacturing operations to distribute throughout your network.

The replenishment solution also supports advanced vendor managed replenishment with cutting-edge order optimization logic that triggers customer orders based upon an optimal economic order frequency and safety- stock policy. This logic enables users to create optimal orders across your entire line on an equal time supply basis. By minimizing the need to create expedited orders for a small number of items between the standard order cycle, the solution helps you maximize profitable order planning and execution.

- Multiple Models: Utilizes multiple safetystock models ranging from coveragebased calculations to statistical analysis that calculate presentation and display requirements
- **Lifecycle Transitions:** Manages item lifecycle transitions and product substitutions

### Key benefits

- Provides allocation and replenishment in a single solution
- Provides the capability to source a percentage of total need from multiple sourcing points
- Addresses requirements of date-sensitive items with advanced planning
- Supports product transitions and out-of- stock substitutions
- Supports overstock and alternate source transfers

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