Replenishment Optimization

How grocery retailers can achieve higher profits and optimal stock availability for every store
Your Challenges

Profitable grocery retailing has always been about economies of scale. The ultimate goal for grocery and fresh retailers is a competitive business with increasing sales, improving revenues and profitable growth.

In a market with lowering margins, increasing complexity, fierce competition and growing customer expectations, being able to quickly respond to changing market needs is key. This is only possible by accurately forecasting future demand at a very granular level – per SKU, per day, per location. Optimizing replenishment decisions also ensures a balance between stock availability and waste.

A balance of stock and waste levels is harder to maintain because of the following factors:

- **Growing execution gap**
  Inability to align replenishment decisions with the business strategy, e.g. write-offs or out-of-stock rates

- **Scalability issues**
  Increasing numbers of formats, assortments and channels

- **Demand unpredictability**
  Inability to predict true customer demand with sufficient accuracy, given the complexity of the supply chain itself

- **The imperative of customer experience**
  Operationalizing brand values at SKU and store levels with local assortments

... and these are the typical symptoms of struggling grocery supply chains:

- **Revenue loss**
  Underestimating demand leads to loss of sales due to increased out-of-stock situations

- **Depressed margins**
  Overestimating demand leads to write-offs, especially for perishable goods

- **Capital lockup**
  Overestimating demand leads to storage costs from excessive safety stock

- **Time and resources**
  Not accurately estimating demand leads to frequent manual interventions
Blue Yonder Replenishment Optimization is a predictive application that allows automated store replenishment, reducing out-of-stock rates by up to 80% without increasing waste or inventory.

The solution is based on accurate and granular order forecasts, enabling a weighted optimization of waste levels and product availability, while reducing unnecessary manual interventions.

Replenishment Optimization offers an extremely high degree of automation and continual self-adjustment, allowing for a scalable and effective replenishment process across thousands of products at hundreds of store locations.

**Benefits**

- Accurate forecasts
- Strategic KPI alignment
- Best decisions, automated
- Continual self-adjustment

**10x**
Increased product availability

**80%**
Reduction in out-of-stock situations

**50x**
Fewer manual interventions
How Does Replenishment Optimization Work?

Replenishment Optimization

Decision delivery
- Daily delivery of optimized replenishment decisions for thousands of products in hundreds of stores
- Self-adjusting updates with new data

System integration
- Ready-to-use software as a service
- Central management of security and maintenance
- Automatic rollout of new features and improvements
- Easy integration into existing ERP/SCM systems via standard API

Determining the demand forecast
- Prediction of the demand for each individual store, product and day
- Using a detailed probability density function calculation

Strategic and operational alignment
- The retailer’s margin and revenue expectations are applied
- The calculation is optimized to meet strategic KPIs (e.g., out-of-stocks, waste or inventories)
- Consideration of stock levels, deliveries already scheduled, packaging and minimum order quantities

Up to 300 complex and interconnected factors impacting customer demand

External factors
- Weather
- Sales
- Price
- Stock availability
- Seasonality
- Public holidays

Internal factors
- Price
- Stock availability
- Seasonality
- Public holidays
- Weather
- Sales

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Why is the Blue Yonder Approach Different?

An important differentiator of our Replenishment Optimization solution is the level of granularity supporting the order recommendation.

Manual approach

Drawbacks
- Manual interventions
- Overcorrections

Financial planning

Try again

Weekly cycle

Demand prediction

Decide on order

Measure impact

Blue Yonder automated approach

Advantages
- Automation
- Self-adjustment

Choose strategic KPIs

Daily cycle

Self-adjustment

Automated replenishment decisions

Monitor outcome

Demand prediction

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Traditional approaches predict weekly demands, ours delivers daily recommendations per SKU, per store – essential for the fresh and perishable food category. Order forecasts are made daily for up to 14 days in the future. This frees up retailers’ time to deliver their brand promise and meet changing customer expectations.
Success Story

Kaufland: Fresh Food Replenishment

Challenge
Demand uncertainty with short-life fresh products led to safety stock overestimations and an increase in waste.

Solution
Using Replenishment Optimization, Kaufland achieved a high degree of automation for centrally planned daily orders. Moreover, production processes could be closely integrated into the supply chain as a whole, creating even more synergies with demand planning. Daily decisions are now aligned with the business strategy.

Results
- Minimized workload at an individual store level due to a centralized and automated ordering process
- Increased product availability for customers and, at the same time, considerably reduced write-offs

“For our organization, it is critical to have the right amount of goods and products available for the customers in each store. Automated replenishment based on accurate sales forecasts plays a key role. Working with Blue Yonder has resulted in a significant optimization of our processes.”

Ralph Dausch
Executive Board Member of Fresh Meat Products International, Kaufland
Value Delivered

**Speed to value**
- Operational processes can now be automated, improving productivity and reducing costs
- Rapid return on investment (within 3 to 6 months)
- Low maintenance after initial setup with a scalable and efficient rollout

**Retail domain expertise**
- Broad sector expertise
- Understanding and management of demand factors

**KPI strategic alignment**
- Balance of conflicting KPIs e.g. revenue/margin or availability/inventory
- Translation of KPIs (e.g. out-of-stock or write-off rates) into automated daily execution for concrete orders

**Process benefits**
- Leveraging both internal data (historical and current) and external data
- Best-in-class demand forecast recommendations per SKU and per day up to 2 weeks in the future
- Usage of machine learning algorithms, which ensure an automatic adjustment to new patterns

**Seamless integration**
- Standard API integration with existing internal ERP or SCM systems
- Managing the key challenges of integration, storage and processing in one service
About Blue Yonder

Blue Yonder is the leading provider of cloud-based predictive applications for retail. Every day, we deliver decisions to our customers that boost revenues, increase margins and enable rapid responses to changing market dynamics.

Our replenishment and pricing solutions are driven by sophisticated machine learning algorithms developed by one of the largest teams of PhD-level data scientists in retail.

Founded in 2008 in Karlsruhe, Germany, by former CERN scientist Professor Michael Feindt, Blue Yonder now operates in Europe and the United States.

We are backed by leading private equity firm Warburg Pincus and the OTTO Group. In 2014, we established the Data Science Academy to provide businesses with relevant data science know-how for retail.

Blue Yonder has been awarded the Gartner Cool Vendor Award 2015, the Experton Big Data Leader Award 2016 and the BT Retail Week Technology Award, among many others.