

Growing pains:

Mastering the challenge of fresh foods management

30%
of all food produced
is wasted

64%
of grocery retail
executives say fresh food
is key for sales growth in
the next 1-3 years

3%-6%
of cost of goods sold
go to wasted food

There's no question that fresh foods are critical to every grocery retailer's success. In fact, 64% of grocery retail executives say fresh food is the most critical department for driving sales growth. Not only do the quality and freshness play a significant role in shaping customer perceptions of a grocery chain's reputation, but exceptional service and consistency in these fresh products can also leave a lasting positive impression on customers, influencing their views for months or even years. In short, prioritizing fresh food management is essential for any grocery retailer aiming for long-term success.

In many ways, fresh foods management represents the "perfect storm" of inventory management challenges. Because it's dependent on many complex factors—including weather, labor availability and international logistics – product supply is always going to be uncertain. Consumer demand is also volatile, influenced by broad issues like inflation as well as microtrends like the most recent TikTok recipe craze.

Of course, short product shelf life is also a key challenge. As soon as produce is loaded into displays, the clock is ticking. Retailers need to

make intelligent decisions, at a rapid cadence, about pricing, promotions and other strategies in order to maximize profits, while minimizing waste.

With so much riding on the success of their fresh foods inventories, it's easy for retail employees to do everything in their power to avoid a stock-out. At every stage of the fresh foods supply chain, there's a natural tendency to add buffer inventory and safety stock. After all, no one wants to disappoint those shoppers who come into the store specifically looking for fresh foods.

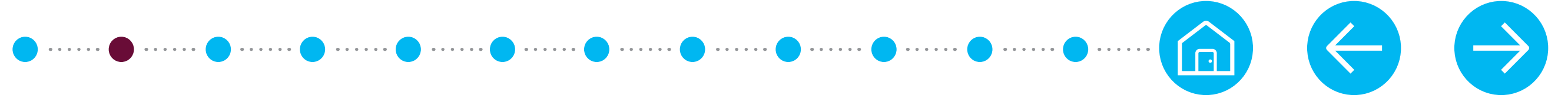
But, as everyone works in isolation to minimize that risk, a bullwhip effect is created across the supply chain—and actual demand is distorted until it's virtually unrecognizable. When store managers or fresh foods department heads place manual orders or override central orders—or when demand planners adjust a forecast because "it looks wrong" – that's the exact opposite of data-driven decisioning. It introduces an entirely new element of risk into the fresh foods supply chain. And yet it's a common practice today.

The great news is that grocery retailers have no need to base their financial and service results on

manual processes, flawed calculations, guesswork and human intuition. Automation, AI, ML, predictive analytics, and other advanced technologies provide a fact-based, objective solution. They enable retailers to gather near real-time data—from across the fresh foods supply chain—and translate it into dynamic forecasts, fast-moving ordering and replenishment processes, and profitable pricing strategies that move products off the shelf as quickly as possible, while maximizing both margins and availability.

If you're struggling to profitably manage your fresh foods inventories, it's probably because you're still relying on manual, inefficient and disconnected processes that aren't synchronized with volatile supply and demand.

This ebook outlines how advanced technology is simplifying the complexities of fresh foods management.



Fresh foods growth is an opportunity

You need to seize it

up to

50%

reduction of out-of-stocks*

up to

65%

reduction in waste*

29%

decrease in overstocks*

It's easy to focus on the many challenges involved in profitably selling fresh foods. And it is, in fact, a complex problem. Traditional planning and forecasting methods aren't built for the dynamic nature of both supply and demand. And product perishability leaves little margin for error.

In a recent study it was found that, unavailable, hidden, or damaged items can cause up to 8% revenue loss for retailer, losing billions and 27% of consumers would question their loyalty if out-of-stocks were frequent, and 21% would leave without buying other items. Another 27% would switch to a competitor. In today's hypercompetitive, omni-channel retail environment, consumers have plenty of other options—so the cost of mistakes is high.

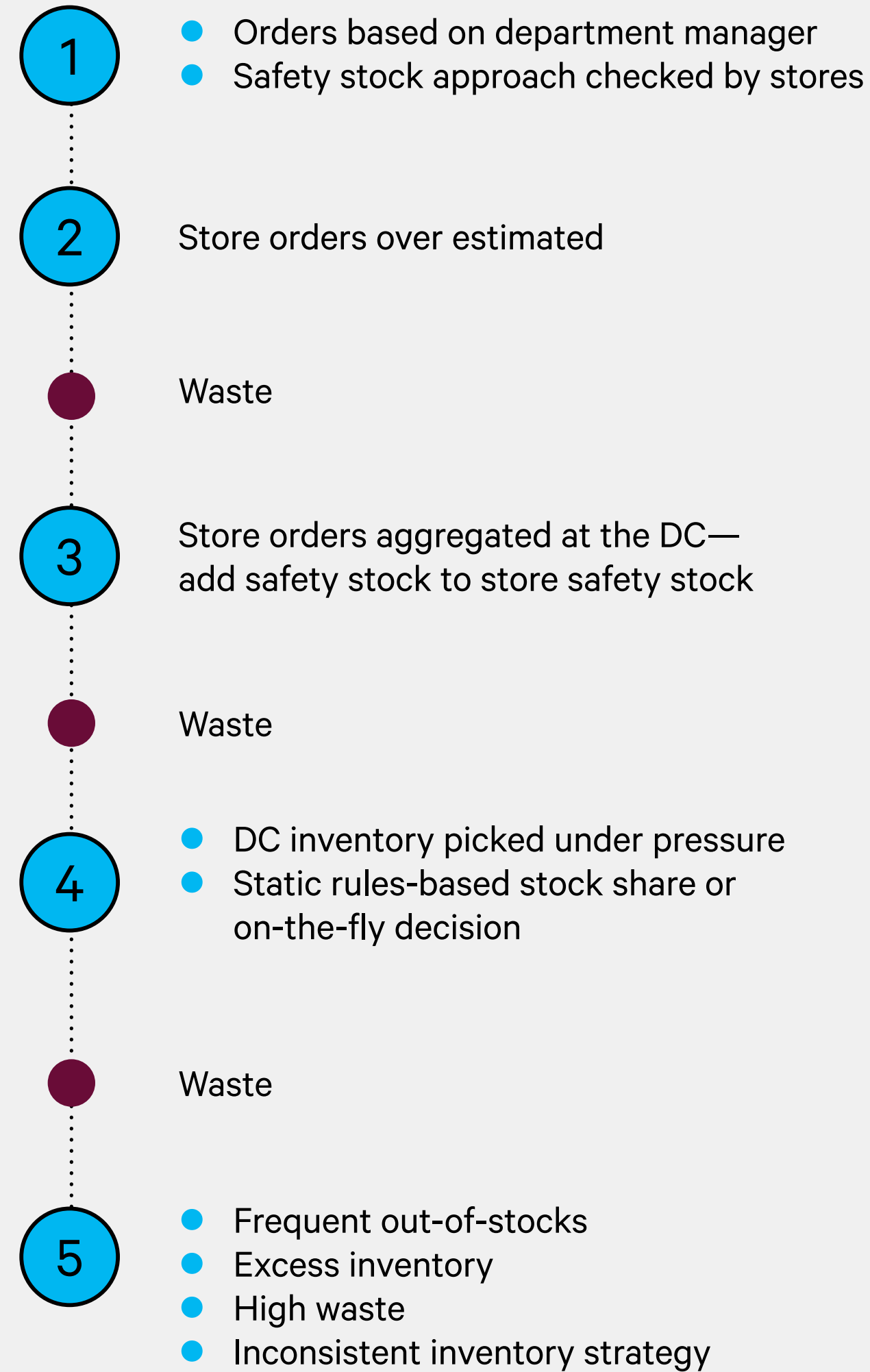
Instead of focusing on this delicate balancing act as a challenge, smart grocers are seeing it as an opportunity. They're embracing advanced digital tools to accurately forecast, order, replenish, and price their fresh products.

They're synchronizing store-level execution with the realities of the extended supply chain, as well as local demand drivers. They're using data science and process automation to react faster, more efficiently and more profitably to changing conditions.

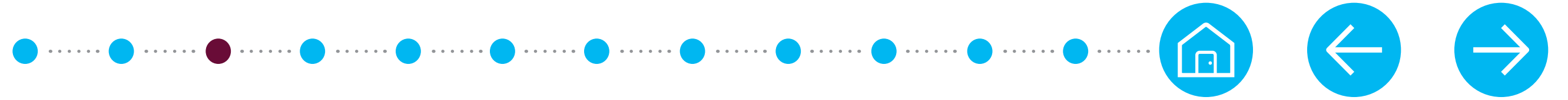
As a result, they're winning in the fresh foods category – and driving increased sales across the store.

*Real results from Blue Yonder customers

Today's fresh foods inventory management system



Poor shopping experience



Using stale outdated planning processes?

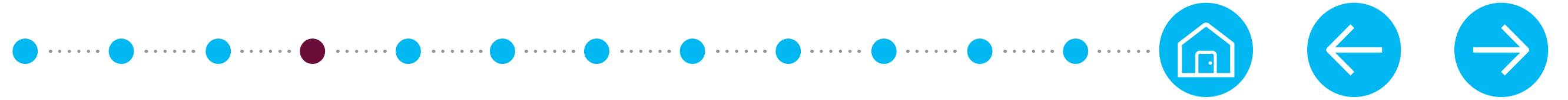
Historic approaches to fresh foods inventory management simply won't work in today's fast-changing world. They're based on static analysis, carried out by human planners using time-consuming manual processes. They fail to recognize the fast-changing nature of both supply and demand—and they're incapable of gathering and applying the near real-time data needed to make optimal decisions.

Human cognition, and planners' intuition, simply can't manage all the complexities. Fresh foods cost and quality vary day-to-day. Volatile supply and demand rarely align.

The typical response has been to give retail department managers responsibility for managing fresh inventories. But most human planners tend

to overstate in-store demand, while struggling to predict online demand. Both stores and warehouses lack the visibility and insight to act strategically, instead relying on intuition or best guesses. Fearing out-of-stocks, nearly every planner in the chain adds safety stock, causing waste to build up.

The end result? Costly mismatches between variable supply and demand. This leads to overworked staff, missed waste and sustainability targets and lost margins. And ultimately disappointed customers, hurting short-term revenues and long-term loyalty. To master the fresh foods challenge, advanced digital capabilities are a competitive requirement. To master the fresh foods challenge, advanced digital capabilities are a competitive requirement.



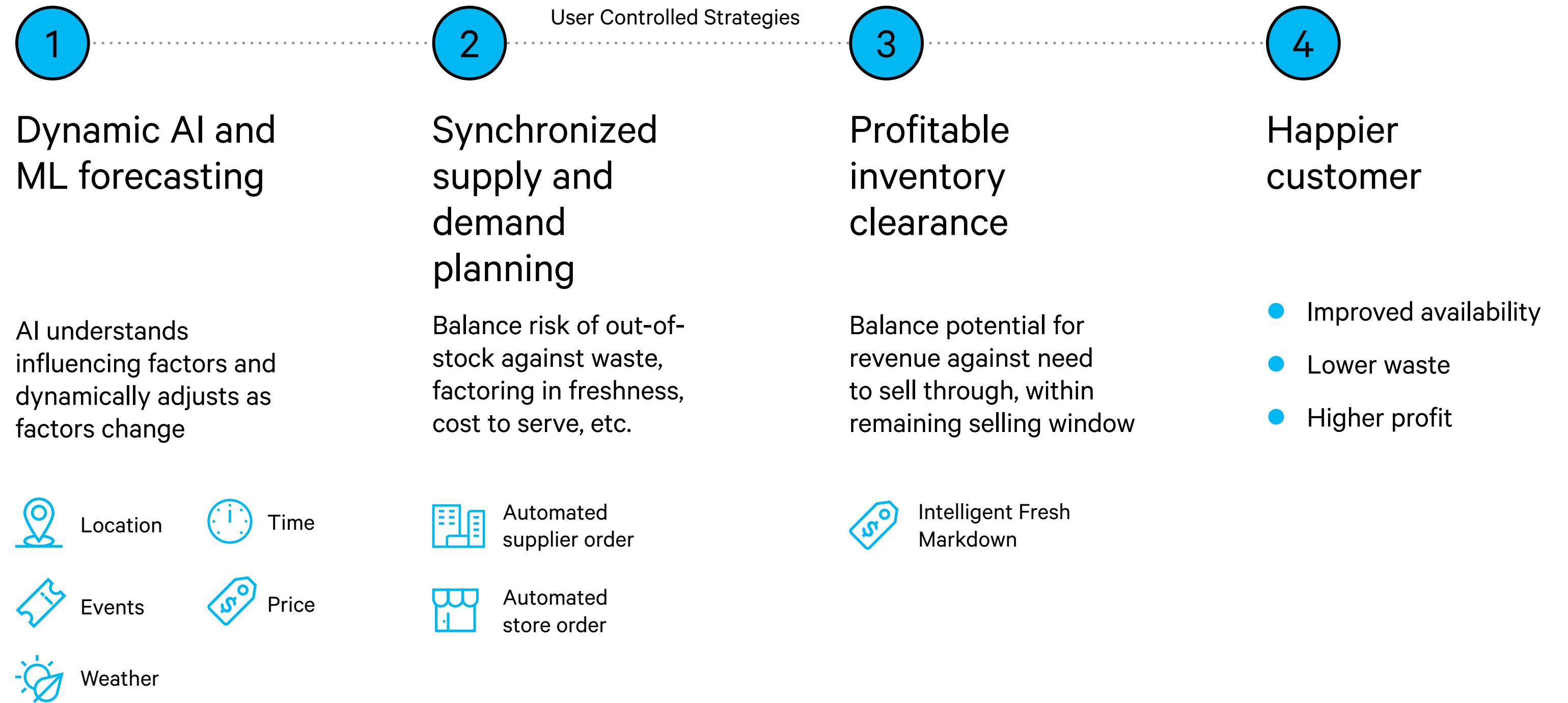
Digitalization

Digitalization simplifies the complexities of fresh foods management

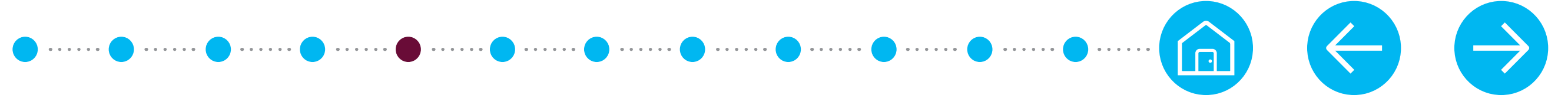
Imagine a fresh foods supply chain that's built for uncertainty on both the demand and supply sides. Where intelligent automation simplifies daily operations and improves cost, service and sustainability outcomes. Where optimized inventory levels help drive improved product freshness, greater availability and higher sales. Where fluid pricing maximizes sell-through and margins, while minimizing waste. And where human talent is directed at activities with the highest strategic value.

Digitalization enables the end-to-end supply chain to be driven by dynamic data signals from both the supply and demand sides. Based on these near real-time signals, shared strategic priorities guide a series of cascading decisions and actions across the supply chain, enabling a near real-time response as conditions change. Driven by AI and ML, optimization engines autonomously balance availability versus waste, and revenue versus sell-through.

A simpler, smarter fresh foods inventory management system



As predefined cost, service and freshness targets guide activities like ordering and replenishment, human planner intervention shifts to steering and exception management. In the store, automating processes like short code markdowns frees store associates to focus on customer service. Simply put, digitalization eliminates guesswork. It simplifies complexity. And it ensures the right decision is always made.



5 key digital capabilities

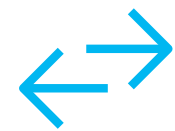
Distinguish the fresh food leaders

Today's advanced digital solutions are purpose-built to master the complexities of the fresh foods challenge. Digitalization enables five key capabilities that not only improve financial and sustainability performance, but also the shopping experience.



High levels of automation

Relying on human planners and manual processes simply takes too long—and results in too many errors. Digital solutions, guided by data science, make decisions and execute them in seconds based on predefined financial, service and product freshness goals.



Synchronized supply and demand planning

Fresh foods planning processes must be designed to consider supply-side volatility. Product shortages are all too real. Digital tools can assess demand and supply levels in near real time, then match them, store by store and product by product, to maximize profits, service, sustainability, and other metrics.



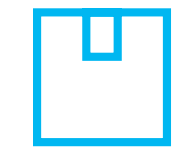
Profitable inventory clearance

Digital clearance-pricing solutions not only apply the right data science to maximize margins and minimize waste, but they support a fast, frequent markdown cadence that doesn't rely on human effort and analysis.



Dynamic forecasting

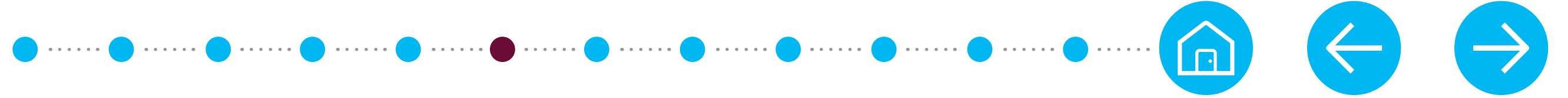
Consumer demand changes faster, and in more complex ways, than humans can comprehend. And historic sales mean nothing in today's fast-moving world. Advanced forecasting engines, driven by probabilistic algorithms, allow grocers to react in near real time to demand changes at the local level.



Equally dynamic ordering and replenishment, tightly coupled to demand

Ordering and replenishment processes need to honor demand uncertainty. It's not smart or profitable to pass a single replenishment prediction to an ordering system, with predetermined levels of safety stock.

Replenishment needs to be dynamic, aligned with near real-time demand insights. It also needs to be low-touch to maximize efficiency.



Automation

drives increased speed, accuracy and profitability

Scarce human talent, rising labor costs and distributed decision-making contribute to the challenges of managing fresh foods. Not only are manual planning processes time-consuming, but they're error-prone and limited in scope. It's time for a fresh take on inventory management, driven by automation.

Automation allows the end-to-end supply chain to be guided by a shared perspective on both supply and demand, as well as shared financial, service and sustainability targets.

The fresh foods supply chain, driven by digitalization and automation, looks very different:



Demand planning

Demand planning enhances the understanding of demand drivers and customer behavior, leading to higher planner productivity and improved inventory management, ensuring more efficient and effective operations.



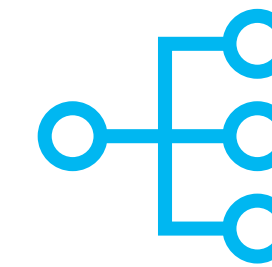
Supply planning

Supply planning is aligned with demand to ensure an accurate, profitable match across channels and retail locations. Suppliers have near real-time visibility into likely future orders to help reduce the "doom loop" that keeps stores in a constant state of out-of-stock or overstock.



Markdown Pricing

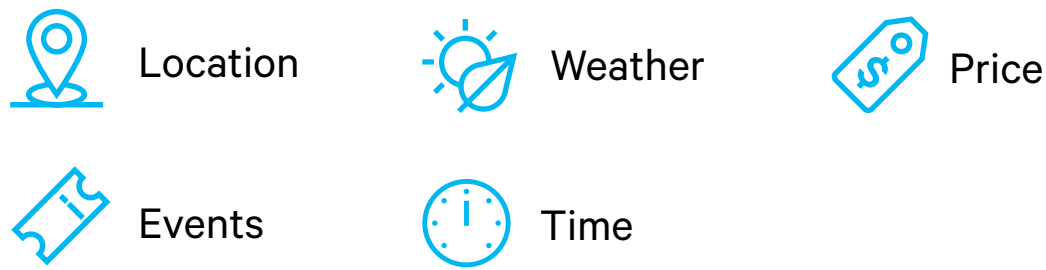
Markdown pricing is driven by near real-time information on product freshness combined with the understanding of shoppers' near real-time demand. Stores can profitably clear their short-code inventory and create space for new stock based on data and dynamic pricing schemes, instead of fixed rules or employee intuition.



Ordering and Replenishment

Ordering and replenishment are driven by the near real-time forecast, and the risks of over- or under-ordering are clear and quantifiable. The daily order generation cycle is flexible and dynamic, sending inventory where it's most likely to sell. Warehouses automatically redistribute inventory when supply cannot meet demand in the most cost-efficient way.

Blue Yonder AI understands the complex (human) network and uses it to predict uncertain customer demand



A dynamic forecast

Minimizes inventory risk and maximizes margins

Consumer demand is one of the most volatile components in the fresh foods supply chain. Shoppers are simultaneously influenced by many factors, including the weather, the day of the week, pricing and promotions, the store location, and upcoming holidays and events. At any point in time, some factors will dominate over others, especially at the local level.

And shopper behaviors are increasingly a moving target. A full 62% of consumers reported that they have significantly changed their shopping habits from the previous year, including the brands and retailers they prefer, as well as the times and frequencies of their trips. Backward-looking sales forecasts—even those that “add on” new sales projections—are insufficient to reflect the fast-changing nature of demand.

Enabled by AI and probabilistic algorithms, Blue Yonder’s forecasting engines not only gather near real-time data from a range of internal and external

sources, but they also consider the relative strength of various influencing factors. The result? A view of the full spread of demand at the SKU/store/day level as a probability density.

Blue Yonder’s probability model is superior to a single forecasted value because it reveals the real risks of low or excess inventory, which allows retailers to make informed decisions about store ordering—and exert greater control over fresh-foods performance. Fueled by advanced AI, the process of risk identification is automated to support near real-time decision-making. The forecasting engine ingests enormous volumes of data about store locations, pricing, day of the week, weather, and other influencing factors, then quickly produces a probabilistic prediction that quantifies the risk of waste alongside the risk of out-of-stocks. Grocers can make intelligent choices with a full awareness of their risk exposure.

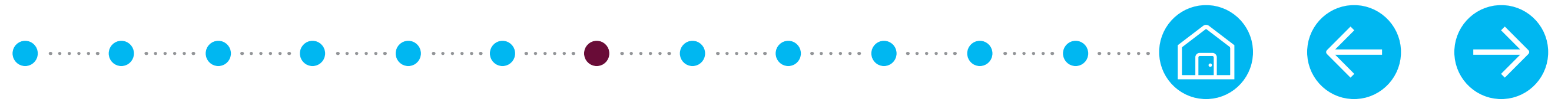


Blue Yonder helped Supermercados Peruanos improve its forecast accuracy to

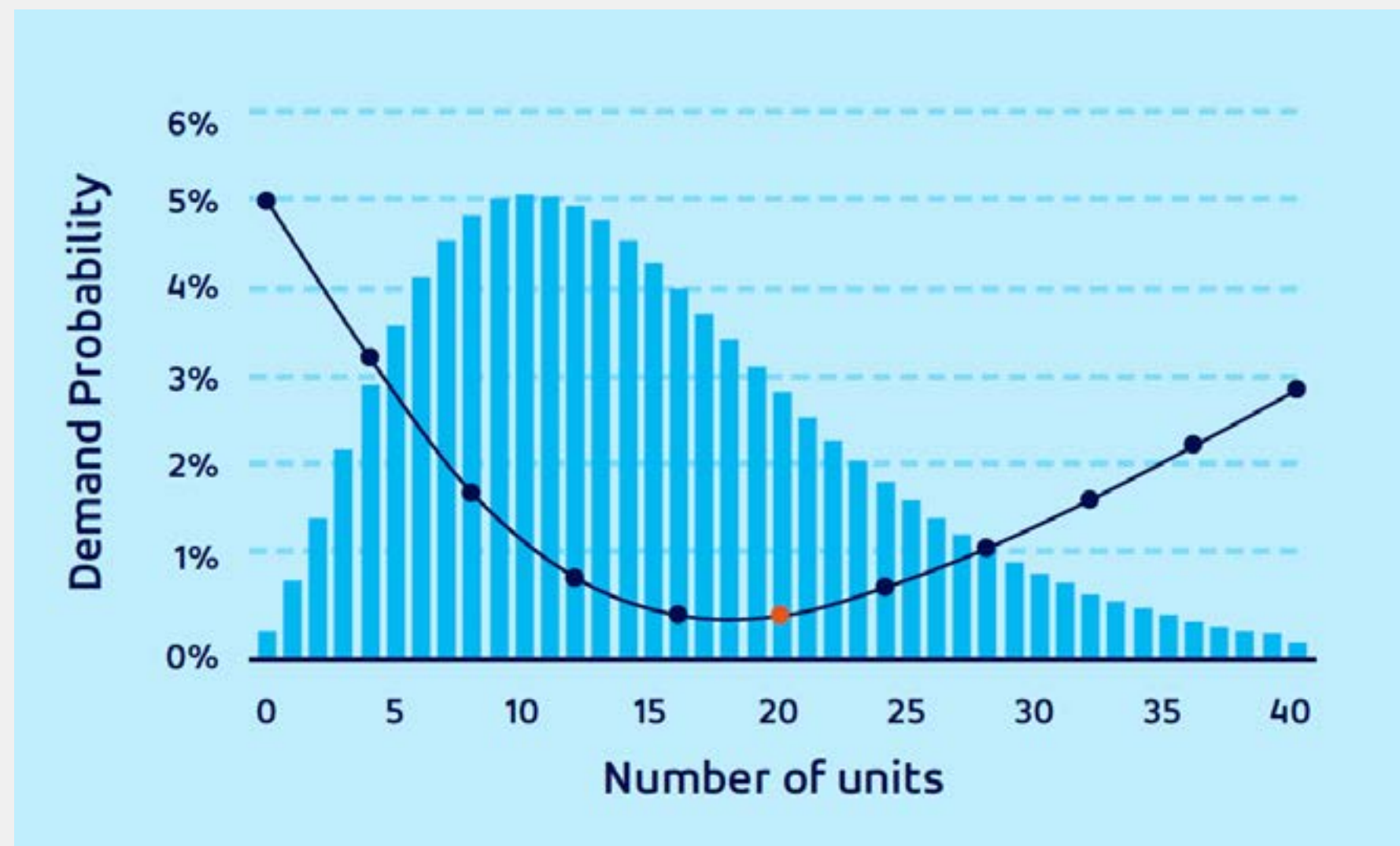
95%

for ultra-fresh foods

[Learn More](#)



Best-balance ordering links stock levels directly to the dynamic demand forecast on a store-by-store and product static safety stock levels.



Best-balance ordering

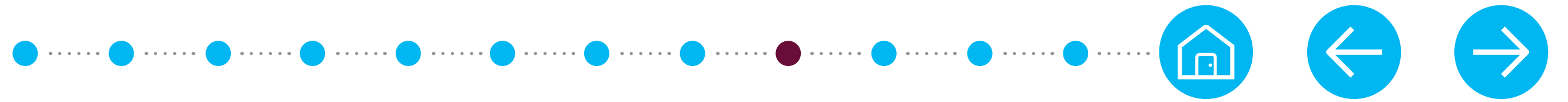
Enables retailers to “tune” their fresh foods performance

Most fresh foods orders today are calculated based on safety stock policies that are designed to compensate for demand uncertainty—but only address the risk of being out-of-stock. They fail to address the equally important issue of excess inventory, or the significant demand differences that exist across stores and across products.

Blue Yonder’s probabilistic forecasting approach enables grocers to eliminate static safety stock policies and adopt a more dynamic, demand-driven approach to ordering. They can create localized orders based on a range of risk factors, considering lost sales on one hand and waste on the other. They can also consider product quality, freshness or other characteristics as they create the perfect order. Blue Yonder calls this approach best-balance ordering. Best-balance ordering equips fresh foods managers to set ideal stock levels for each product in each store, based

directly on the localized demand forecast. Best-balance ordering accounts for both the risk of waste and the risk of out-of-stocks—and it enables retailers to “tune” their results. By assigning a relative cost to each competing goal, orders can be automated based on plain language like “I value availability more than controlling waste.” Blue Yonder’s order management engine then automatically calculates orders with the lowest penalties.

The real beauty of best-balance ordering? It transforms uncertainty from a challenge into a strategic asset. As demand conditions change, or priorities change, ideal stock levels also change fluidly and automatically.



Replenishment

Low-touch replenishment distributes inventory profitably and automatically

Fresh foods replenishment has historically been seen as almost impossible to automate due to its complexity, so store associates have been left to manage this task on their own. Overstocks, out-of-stocks, lost sales, and high levels of waste have been a persistent challenge, as the complexity of this task exceeds human cognition.

In addition to being error-prone, manual replenishment locks store employees into a “head down” task instead of allowing them to interact with shoppers, guiding purchases and improving fresh foods presentation. Grocers need to maximize the productivity and contributions of their fresh foods associates.

Recent advances in AI and ML make it possible to drive a dynamic replenishment process that, like the ordering process, is linked directly to the near real-time demand forecast. Blue Yonder has taken a leadership role in this area, offering a low-

touch replenishment capability that’s accelerated, seamless and incredibly efficient.

Blue Yonder supports a continuous replenishment process that is highly automated, exception-driven and tightly coupled to a simplified ordering process. Stores and warehouses function as a single, synchronized entity, powered by data-driven feedback loops, to ensure the most profitable placement of inventory.

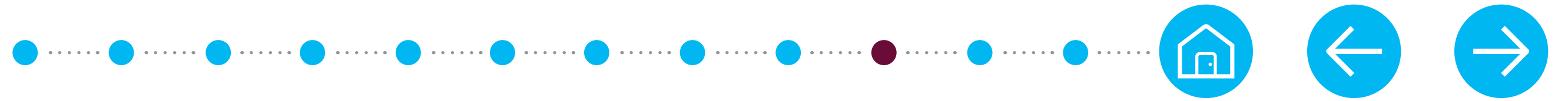
Stores benefit from a lower level of overall inventory and fewer deliveries to the loading dock, with fresh foods flowing directly to the shelf. Store associates spend less time handling inventory and more time ensuring a frictionless consumer experience. Improved availability drives higher sales and ensures fewer substitutions, improving shopper satisfaction and ensuring a return visit.

Sainsbury’s

Blue Yonder helped Sainsbury’s unlock significant savings and achieve a 170 bps improvement in ambient availability year-on-year by utilizing real-time forecasting to optimize the sales, waste, and stock equation.

Explore low touch automated replenishment





Aligning Supply

With demand drives accurate, achievable replenishment

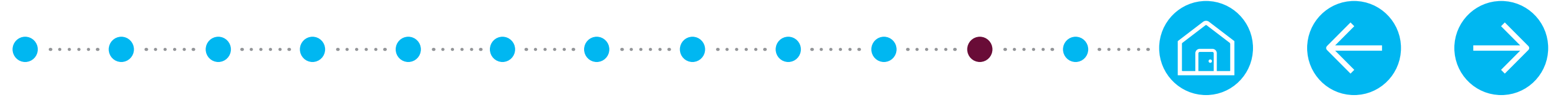
While the majority of stock-outs are created by inaccuracies in the replenishment process and supplier shortages, supplier shortages are also a prominent contender. Demand-side uncertainty gets a lot of attention, but an equal challenge is managing uncertainty on the supply side. After all, even the most accurate forecasting and replenishment processes won't guarantee fresh foods success unless products are actually available.

Blue Yonder's best-balance ordering concept also helps address this challenge. It enables unconstrained orders to be fed up the supply chain, communicating demand uncertainty all the way to the supplier. When product supply is short, or warehouse receipts are over expected volumes, store orders are automatically recalculated against the available supply in near real time. Best-balance ordering ensures that these calculations are performed strategically and consistently across all stores, minimizing negative

impacts when fresh foods supply is constrained. As products become available, best-balance ordering performs new calculations.

It's easy to see why this dynamic approach is smarter and more profitable than static allocation rules. It minimizes supply-induced bullwhips by factoring in demand uncertainty across the supply chain, even in supplier orders and order projections. Best-balance ordering automatically smooths the peaks and valleys of out-of-stocks and excess inventory caused by demand supply imbalances.

Instead of making on-the-fly decisions such as defining "priority stores" or having warehouse managers make intuitive allocation decisions, today grocers have an AI- and ML-enabled solution that accounts for both demand and supply uncertainty—and drives optimal decisions no matter how quickly, or how often, conditions shift.



Intelligent Markdown Pricing

Improves sales
and margins

Given the complexities of fresh foods inventory management, it's not surprising that waste can be as high 11% for some categories. While the inventory management challenge is complex and driven many factors, too many grocers are attempting to manage the last phase—short-code product clearance—via manual processes and frequent, expensive employee touchpoints.

No matter how smart the forecasting, ordering and replenishment processes become, there will always be a need for short-code clearance. Product perishability, as well as real-world shopper behaviors, will never be an exact science. And shoppers rarely respect first-in, first-out principles when choosing fresh foods.

Short-code inventory is an unfortunate fact of life, but retailers can still maximize their margins by making intelligent markdown decisions. The key is relying on digital solutions that have been designed to automate this task, instead of leaving critical clearance-pricing decisions to store employees acting on intuition.

Blue Yonder's short-code markdown capabilities apply ML to quantify the uncertainty of the fresh foods clearance process. By calculating price elasticity in near real time on an SKU/store/day specific basis, the Blue Yonder solution positions grocers to predict how responsive their shoppers will be to each new price change. Blue Yonder also produces an intraday demand forecast that helps build store-specific markdown prices based on the amount of short-code inventory remaining at any point in time.

By leveraging Blue Yonder's industry-leading technology, short-code products can be turned into a positive revenue stream instead of adding to waste. In addition, Blue Yonder helps store associates work much more efficiently in an area that's typically high in effort, but low in return.

[View intelligent markdown pricing case study](#)

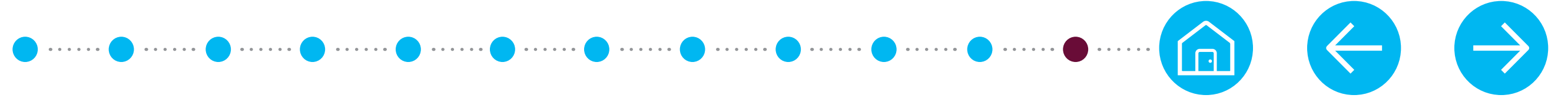


“With Blue Yonder fresh food clearance, we now have one daily markdown touch point that allows us to make a significant saving in labor costs and improved store associate productivity. We have an AI optimized price for each item, defined by store-specific sales history, store-specific forecasted sales and store-specific stock on hand, linked to events outside our control such as weather”.

— Head of Supply Chain Development,
Morrisons

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Why Blue Yonder?

We offer a fresh approach, based on advanced technology, data science and near real-time responsiveness

Every day, grocery retailers around the world rely on Blue Yonder solutions to successfully navigate complex challenges like fresh foods inventory management. Blue Yonder was recently named a Leader in the 2024 Gartner® and Magic Quadrant™ for Supply Chain Planning Solutions and The Nucleus Research 2024 Supply Chain Planning Technology Value Matrix, which evaluated the product portfolio, market presence and customer value proposition of major software providers in this area.

Built on advanced AI and ML, and driven by automation, Blue Yonder's retail solutions span the end-to-end grocery supply chain—and integrate to deliver a synchronized, orchestrated response across functions.

[Learn More](#) 

Demand Planning

Leveraging the best of all worlds, Demand Planning combines Blue Yonder's technology with Microsoft and Snowflake's cloud capabilities. It enhances plan accuracy, AI-driven insights and planner experience, resulting in increased revenue, higher profitability, and savings through inventory and waste reduction across the supply chain.

Supply Planning

Blue Yonder Supply Planning creates highly optimized plans to minimize stockouts and maximize inventory turnover while adapting to changing market conditions. With Supply Planning, you can ensure the right inventory is in the right place, regardless of volatility, with faster, more agile supply planning for enhanced efficiency.

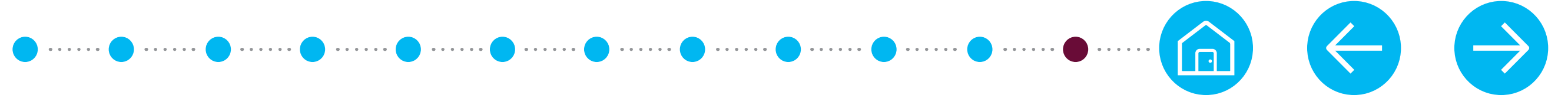
Fresh food markdown

Blue Yonder Real-Time Pricing solution improves markdown performance and aligns with consumer sentiment towards waste reduction, ensuring fair and competitive pricing by considering inventory levels, weather, and events.

Ordering Management Microservices

Blue Yonder Order Management Microservices deliver real-time inventory visibility to support profitable omni-channel commerce. Shoppers can see product availability, reserve products for purchase and understand their fulfillment options. On the retail side, an intuitive mobile application optimizes the process of receiving, prioritizing, picking, packing and delivering consumer orders.





Why Blue Yonder?

Only Blue Yonder delivers an end-to-end, connected platform to optimize omni-channel retailing

There's no doubt that the world of grocery retailing has changed dramatically. Not only are shoppers buying more groceries online, but they're also demanding more flexible fulfilment and delivery options.

Have retailers evolved quickly enough in their capabilities to successfully address these changes?

As the retail landscape has changed, Blue Yonder has developed leading-edge capabilities, backed by the most advanced AI and ML, that position grocers to master the challenge of omni-channel selling.

Blue Yonder's end-to-end solution portfolio enables grocery retailers to create the kind of seamless, consumer-focused experience that can only be delivered when the supply chain is connected, and when workflows are orchestrated across functional silos. Blue Yonder allows the end-to-end supply chain to operate as a fluid ecosystem, synchronizing solutions across planning, execution, labor, e-commerce, and delivery. From the warehouse through the final sale, retailers can adapt to demand shifts, smooth supply-side shortages, grow their sales across channels, manage talent shortages and other resource volatility, and meet consumers' price and service expectations via an orchestrated approach that delivers the most value.

Unlock greater value by synchronizing end-to-end capabilities

Unified view of demand and constraints with real-time, shared data:

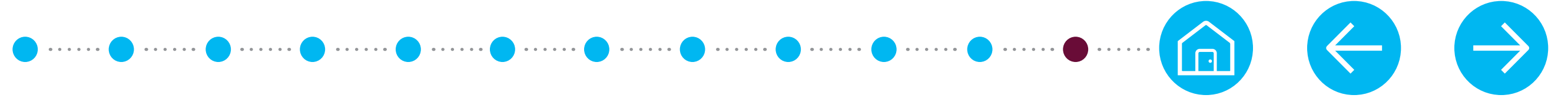
- Planning coordination across every channel
- Synchronized, constraint-aware workflows
- Improved processes with AI and ML
- Proactive and dynamic decisionmaking
- End-to-end over multiple horizons
- Support for short and long lifecycle products



“Omni-channel is at the heart of our strategy and customer proposition, where we want to provide a great customer experience and a seamless user journey. We have been extremely impressed by Blue Yonder OMS microservices, which we will deploy across our grocery, clothing and general merchandise segments.”

— Chief Information Officer, ASDA





Why Blue Yonder?

Blue Yonder's customer results speak for themselves

Blue Yonder has helped dozens of the world's top retailers improve their revenues, margins and service levels. In fact, 76 of the top 100 retailers worldwide use Blue Yonder software. The following are just two customer success stories focused on fresh foods management.



Loblaw supercharges forecasting with blue yonder demand planning

After 10+ years of developing an extremely mature demand forecasting process, Loblaw hit a wall trying to further improve its forecast accuracy and availability. Listen as Mark Bednis, vice president of supply chain analytics, describes how Blue Yonder's ML forecasting helped Canada's food and pharmacy leader break through this barrier—and achieve its goals.

- Lost sales reduced by 50%
- Reduced inventory by >\$500 million
- Forecast accuracy improved by >20%
- 23% reduction in presentation stock
- Higher employee satisfaction rate and reduced turnover

Learn More



Globus cr reduced out-of-stock rate by 20%

Globus Group has 18,500 employees and operates in three countries. In addition to a total of 47 hypermarkets, 91 DIY stores and six electronics stores in Germany, the Globus Group also includes 15 full-range stores in the Czech Republic, 15 in Russia, as well as two DIY stores in Luxembourg.

With Blue Yonder's Planning

- Comprehensive forecasting with increased accuracy for decision making
- Improved data quality, data processes, technical, and business processes
- Centralized and automated store-based promotion process
- 20% reduced out-of-stock rate
- 15% improved promotion presentation rate
- 40% reduced promotion leftover stocks
- 85% increased automation rate
- Less strain on supply chain through smoothing of delivery patterns

Learn More



Ready to simplify your fresh food management?

Blue Yonder is at the forefront of revolutionizing fresh food management for grocers with intelligent solutions that drive reductions in waste, shrink, and excess labor while boosting sales and margins. By harnessing the power of ML, you can streamline operations, synchronizes manual processes and enhances the overall shopper experience.

Join the ranks of the world's top retailers who have already seen significant improvements in revenues, margins and service levels with Blue Yonder.

Visit Now





blueyonder.com