

Store Replenishment at Morrisons

How Morrisons adopted AI technology
to deliver on its promise to customers and
transform store replenishment



BlueYonder
a jda. company



Morrisons Dramatically Improves Demand Planning with AI Innovation

In the intensely competitive UK grocery sector, Morrisons like- for-like sales have significantly increased over the last 11 quarters.

The grocery retailer has achieved this by innovating around customer experience, at a time when loyalty has never mattered more; rising commodity prices and the falling pound are tightening consumer purse strings, while fierce rivalry is continually pushing supermarket retailers to raise their game.

To generate dramatic results, Morrisons focused on six priorities to turnaround its business, including an initiative to serve customers better. This was achieved in a number of important areas, including reducing queues at checkouts, and improving on-shelf availability.

To achieve this reduction in gaps, Morrisons invested in Demand Forecast & Replenishment solution (now JDA Luminate Demand Edge), which uses Artificial Intelligence (AI) technology to improve demand planning and reinvigorate replenishment based on customer behaviour in every store.

In just 12 months, Blue Yonder, a JDA company, optimized ambient and life-long replenishment among 26,000 SKUs across 130 categories, in all of Morrisons' stores. The result? Up to 30% reduction in shelf gaps, sales growth, and many more happy customers – demonstrated by the fact that like-for-like sales rose 1.7% in the final quarter of 2016, including Morrisons' strongest Christmas trading period in seven years.

During 2017 all of Fresh and Produce was added to the Blue Yonder Demand Forecast and Replenishment solution bringing the total number of SKU's managed to 29,000. This contributed to like-for-like sales growing 2.6% (excluding fuel) across the 2017 Christmas trading period - one of the best results of all the UK supermarkets.

About Morrisons

Headquartered in Bradford since 1899, Morrisons is a British company and one of the UK's largest food retailers with more than 120,000 colleagues in 494 stores serving over 11 million customers every week.

It is British farming's biggest supermarket customer and all Morrisons-branded fresh meat and everything on its butchers' counters is 100% British.

It is becoming even more competitive by cutting prices on groceries and continuing to offer great value on good quality products. It tailors the offer of each one of its stores to local tastes and demographics.

Morrisons also offers popular services including cafés, pharmacies, dry cleaners and over 300 petrol stations, with additional services being added all the time.

The Project at a Glance

Challenges



Improve availability of assortment



Increase profitability by reducing missed sales



Streamline complex IT infrastructure and category systems

Results

Up to

30%

shelf gap reduction

2-3 days

reduction in stockholding in-store



Achieved sales growth



Reduced waste and markdowns



Simplified and optimized replenishment



Increased employee productivity

Group Like for Like Sales Performance



Source: Morrisons/Blue Yonder

Putting the Customer at the Heart of Every Decision

In many ways, the catalyst for change at Morrisons was CEO David Potts joining the business in 2015. Potts had an acute focus on the customer, and on optimizing the in-store experience.

One of the biggest customer satisfaction barriers that Morrisons identified was product availability. Up until that point, the supermarket chain had relied on traditional systems to replenish its stores – mostly through manual orders made by in-store teams. This proved time consuming, created inconsistencies between stores, and was not always accurate.

To improve availability, Morrisons needed a solution that could solve its two biggest challenges: understocking and overstocking.

“The system is capital light, utilizing cloud technology and store specific historic sales data to forecast stock requirements. It is reducing costs and stock levels, while also saving time for colleagues, and providing a better offer for customers.”

David Potts
CEO, Morrisons

Outsourcing for rapid results

In order to deliver radical change quickly, Morrisons decided to outsource the project to a software vendor, in a collaborative partnership.

In order to deliver radical change quickly, Morrisons decided to look for a software expert that could provide a best-in-class solution in a rapid timeframe. This solution needed to deliver against some key requirements:

- Quick delivery, demonstrating rapid time to value
- Capital light, to integrate with existing IT system infrastructure whilst facilitating removal of legacy systems
- High level of automation to reduce manual intervention and free up Morrisons colleagues' time to focus on serving customers
- Highly accurate at an individual store/ product/day basis to increase product availability and reduce lost sales
- Utilizes self-learning technology to 'leapfrog' Morrisons against the rest of the market, future-proofing its replenishment capabilities

Morrisons immediately identified Blue Yonder as the industry leader in AI and Machine Learning innovation, and our Demand Forecast & Replenishment solution as the ideal technology to significantly enhance its demand planning and replenishment capabilities.

Delivering Change at Speed

Being driven by an expert team of PhD-level data scientists that specialise in retail, our Demand Forecast & Replenishment solution was incredibly quick to deliver AI functionality to Morrisons at scale.

Blue Yonder launched the deployment with a three-month pilot project in the run-up to Christmas; Morrisons' busiest and most critical trading period. Due to its success, the following 12 months, we optimized ambient and long-life replenishment among 26,000 SKUs across 130 categories in all of Morrisons' stores.

2018 saw the introduction of short life fresh products as well as fruits and vegetables to the Blue Yonder solution, making a total of 29,000 SKU's under the Blue Yonder solution.

A key factor in the speed of implementation was the easy integration into the Morrisons IT landscape as the Blue Yonder solution used interfaces that were already in place.



Why AI?

Morrisons dramatic improvement in replenishment capabilities is down to the fact that Blue Yonder's Demand Forecast & Replenishment solution uses cutting-edge AI technology.

Not only can AI automatically forecast orders daily per store and per SKU to meet customer demand, its self-adjusting capabilities mean demand can be optimized down to product level – factoring in influences including store demand patterns, seasonality, weather, and promotions.

In this way, AI delivers much more than just transforming daily ordering from a highly resource-intensive task to full automation; the more data our solution processes, the more intelligent it becomes. And therefore, decision making becomes based on being able to model what is going to happen, not just what has happened previously.

And because Demand Forecast & Replenishment is a cloud-based solution, it is scalable. For Morrisons, this means the grocer can respond quickly to changes in customer demand, and in the wider market.

AI technology has also enabled Morrisons to close the execution gap, optimizing availability while reducing wastage, enhancing shelf presentation and meeting stockholding targets.



13 Million Decisions Every Single Day

By deploying Blue Yonder's Demand Forecast & Replenishment technology, Morrisons can now make 430 million calculations and 13 million automatic decisions every single day – at far greater scale, and more accurately and consistently than previously.

In addition, the granularity of information available is enabling Morrisons to enhance the customer experience down to store level; incorporating factors like shelf sizes and consumer buying patterns, rather than taking a 'clustered' approach to planning and replenishment. Our technology has already:

- Improved shelf gaps by up to 30%
- Reduced stockholding in store by 2-3 days

A Better Store Experience for Customers and Staff

Our solution uses AI science to create accurate predictions and automate ordering per product, per store, while balancing multiple and competing KPIs.

And by automating and simplifying its ordering system, customer-facing employees have more time to do what they do best: focus on serving the customer. In fact, the solution is so popular among store managers - who are normally very sceptical about new IT systems - that they asked head office to roll it out across more categories even quicker than originally scheduled.

The Future Looks Fresh

By being bold with its approach, Morrisons has not only caught up to the competition, it is rapidly accelerating ahead of them in terms of customer experience.

The initial project was so successful that Morrisons quickly introduced Demand Forecast & Replenishment across the majority of its product groups. This included a wide range of fresh foods and produce - a critical aspect of a supermarkets assortment in terms of customer perception. This is central to the Morrisons customer promise as it owns much of its fresh supply chain and differentiates itself on the quality and breadth in this area of the store."

And because the solution is built using AI, as Demand Forecast & Replenishment processes more data for Morrisons its demand planning and forecasting capabilities will become even more effective over time, being able to detect and respond to changing consumer demand patterns.



Blue Yonder and Morrisons were honored with the IGD Award 2017 for Supply Chain Innovation for improving key business metric - on-shelf availability using AI technology

"Our new automated ordering system is now fully operational in all stores across all food categories, and we expect it to continue to improve availability and save time for colleagues in the important period ahead over Christmas and New Year. We were pleased the new system was named Supply Chain Innovation of the Year at the recent IGD Awards."

David Potts
CEO, Morrisons



About Blue Yonder

Blue Yonder, a JDA company, is a leading provider of artificial intelligence (AI) and machine learning (ML) solutions that enable retailers, consumer products and other companies to intelligently transform their operations and make more profitable, automated business decisions that deliver higher profits and optimized customer experiences.

With AI/ML learnings embedded into their core supply chain and merchandising processes, companies can respond quicker to dynamic market conditions and customer preferences, resulting in increased revenues and margins.

Developed by one of the largest teams of PhD-level data scientists dedicated to retail and the supply chain, Blue Yonder's AI/ML solutions deliver more than 600 million intelligent, automated decisions a day.

Blue Yonder was founded in 2008 in Karlsruhe, Germany, by former CERN scientist Professor Michael Feindt and acquired by JDA Software in 2018. The company has received numerous awards, including the Experton Big Data Leader Award 2016, the BT Retail Week Technology Award, the IGD Award 2017 for Supply Chain Innovation.

Blue Yonder provides its solutions through Microsoft Azure and was named one of Microsoft's retail partners of the year in 2018.

Blue Yonder

Best decisions, delivered daily

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