FILL DECISION
MAKING GAPS WITH

AI-Driven Demand Forecasting, Dynamic Pricing Tech

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INTRODUCTION

Retailers invested nearly **$5.9 billion** in 2019 on AI and machine learning-powered solutions, **according to IDC**, seeking to improve an array of operations across their businesses. These tools' ability to dig through large amounts of data quickly and efficiently give them useful roles in decision making at the corporate level, and they also can detect warning signs at stores and on web sites before potential problems affect the customer experience.

Retailers that take full advantage of these solutions will find both internal and customer-facing applications. This Tech Guide will provide retailers and brands with best practices for putting AI and machine learning solutions to practical use, including:

- The need to deliver an **enterprise-wide AI strategy** in order to gain real benefits;
- Why **demand forecasting is still the chief concern** among retailers deploying AI solutions across the supply chain;
- Understanding that **product availability and price comparison technology** is a must-have, especially as Amazon amends product prices every two minutes on average; and
- Giving supply chain and store operations professionals room to have a **small learning curve** for AI tech platforms, and preparing to deliver quick business results in one key area.

For AI Tech To Be Effective, Retailers Must Lead With An Enterprise-Wide Strategy

Before diving into AI technologies, it's important to understand the landscape of where the technology is today. As many as **86%** of retailers are experimenting with AI to forge new paths to growth, according to **data from Accenture**. But many retailers don't grasp the full value of the technology — while **70%** know how to pilot AI initiatives, these retailers are still struggling to scale it across the enterprise.

Retailers aren't specifically having trouble with the technology itself, but with the business processes required to take advantage of it, according to Vish Ganapathy, Managing Director, Lead – Global Retail Technology at Accenture. Good data management is one area where many retailers fall short — and given the amount of data scattered across the enterprise, retailers need to align their organizational resources so that they can tackle automated processes with an overarching strategy.

"If anything, AI is shining a very harsh light on the fact that **a lot of the retailers have tons of data, but the data is not necessarily good and clean**," Ganapathy said in an interview with *Retail TouchPoints*. "You still have master data, product hierarchy and merchandise hierarchy issues — we are doing massive projects with clients on just fixing that. On the people/process side, one department store we worked with last year said they just hired between 15 and 20 data scientists, and **while they're doing great work, it's within small pockets** — they're not seeing any particular benefits yet, or seeing how AI is changing how they think about customers."

Seeing these benefits come to life comes down to the democratization of data — making this information accessible to the average non-technical systems user.

"Your systems are your systems, and they can afford to be in silos, but **your data just cannot afford to be in silos**," Ganapathy said. "That's how we build AI engines — these brains — to work on top of these systems to make them work better and squeeze productivity out of them. That allows you to leverage new technologies without necessarily unearthing everything else going on within the retail enterprise."

Demand Forecasting Remains Primary Concern AI Tech Needs To Solve

Due to retailers' desire to predict their customer's next move, AI technologies have become synonymous with **demand forecasting**, including the ability to understand what merchandise is coming down the pipeline. By optimizing their supply, retailers theoretically don't have to spend as much on unnecessary inventory, which helps cut costs. Additionally, the optimization of supply based on demand can minimize out-of-stock issues in stores where demand is high.

Platforms that effectively forecast demand typically are designed to integrate data silos and use real-time analytics to extract patterns and ultimately present results, alerts and insights into specific shopping patterns dictated by region, weather and product popularity.

Chandra Subramanian, CEO Americas at **ORS Group**, an AI- and machine learning-powered big data analytics platform, noted that among retailers he has conversed with that are undergoing "transformation programs," the inability to correctly forecast demand has been a primary concern, along with store allocation and seasonal planning processes.

"Despite the fact that they have worked with many traditional technology players, they still don't have a very robust demand forecasting capability," Subramanian said in an interview with *Retail TouchPoints*. "They're finding out that the footprint of the store is changing and the buying behaviors of people are changing. They're not really adaptive to that change of demand, mostly in terms of identifying which store locations to keep if they're closing some, or if they should be using different measurements for store performance. They have the wrong kind of assortments in the stores. All of these are factors that they need to fix."

In summer 2017, **Brooks Brothers implemented the ORS RETa.i.L. solution to react more quickly to seasonal shopper demands**. By leveraging the "buy anything, get it anywhere (BAGA)" feature, the Brooks Brothers team can manage decision making around what locations are being used from an inventory fulfillment standpoint, based on algorithms that detect store capacity as well as both store and online demand. Two years after implementing the solution, Brooks Brothers:

- Reduced lost sales **87%** due to improved stock visibility and allocation across stores;
- Reduced total inventory **6%;** and
- Gained a greater understand of which merchandise has the most price elasticity.

AI Supports Smart Decisions Made At The Edge Of The Organization

By Fabio Zoffi

President and Executive Chairman, ORS Group

We live in a world today where we seek decisions made by machines. Machines are steering airplanes; they are deployed for counterintelligence and security, for driving directions, restaurant suggestions, and investment management. In business, machines deliver decisions on mortgage approvals and consumer credits, predict crop yields and the likelihood of diseases and trade stocks.

Today's businesses survive depending on how effectively they can sense and react to situations in a dynamic and unpredictable world. Influences from geopolitical issues, weather and diseases to rapidly changing customer expectations will require businesses to make decisions at the edge.
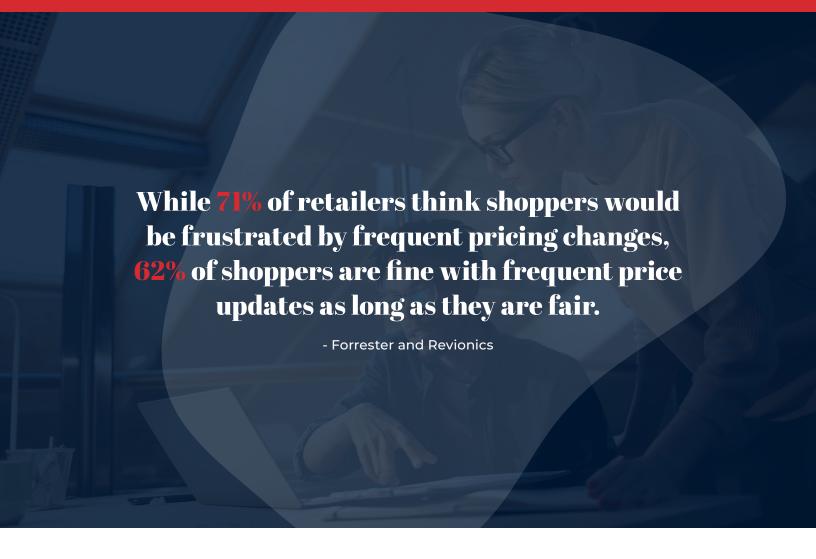
Traditional approaches to retailing, which includes forward-looking multi-seasonal planning, merchandising, sourcing and supply-chain decisions, are strangling retail companies. The proof is in the spate of recent bankruptcies. All of these organizations had one common factor — a complete mismatch between demand and supply.

Business models, when examined granularly, are made of two elements: data and decisions. Data, the new oil, is now abundant and getting richer by the minute; and in turn, decisions need to be made rapidly at the edge of the organization — where demand meets supply.

The key to leveraging Artificial Intelligence (AI) in your business is to understand that machines can crunch enormous amounts of data, find patterns and trends in that data, provide scenarios to key decision makers in the value chain, and make those decisions when they need to be made in a split second. Using AI, businesses can move all critical decisions including Capital Budgeting, Merchandising, Sourcing, Supply Chain, Allocation and Fulfillment closer to the market and closer to the season, creating the Supply Chain at the Edge™. Businesses can design multiple levels of supply chain and use machines to suggest mitigation strategies, deciding how — and where — to fulfill a customer request from.

For example, one of our customers, a large global eyeglass manufacturer, uses our solutions to decide what to manufacture, where, when and how much, as well as where to store and where to fulfill demand from. The machine balances the network multiple times during the day and mitigates any disruption to the supply chain. The customer saw zero stockouts; increased customer satisfaction; reduced global inventory; and freed up $200 million in cash flow within six months.

AI and Machine Learning will allow organizations to create a cybernetic view of value chains, as opposed to the classical process view, and this will be the key to success in the connected world.

While 71% of retailers think shoppers would be frustrated by frequent pricing changes, 62% of shoppers are fine with frequent price updates as long as they are fair.

- Forrester and Revionics

Pricing Optimization, Product Availability Become Must-Haves As Shopper Preferences Change

Going hand in hand with understanding consumer demand is getting products to shoppers at the right price. Leveraging AI-powered platforms to optimize pricing strategies becomes pivotal, especially as major retailers such as **Amazon** and **Walmart** stay ahead of the pack on price points, even going so far as to dynamically price products based on real-time demand.

"In an environment where consumers can so easily use Google or do a quick search on a different price comparison app, [giving them] access to product availability and price comparisons, it's not just a good-to-have, it's a must-have," said Sanjeev Sularia, CEO of Intelligence Node in an interview with *Retail TouchPoints*.

Additionally, putting a pricing optimization solution in place decreases a retailer's risk of running a failed promotion — saving millions in potential revenue losses — because the retailer can combine internal product and sales data with external market and consumer data to generate projected sales totals.

Sularia predicted that with global economic certainty, more brands and retailers will shift towards implementing advanced AI-driven pricing capabilities. He noted that although **Amazon** has a catalog size as expansive as **270 million products**, its average response time to change a price due to a consumer movement is only **two minutes**.

Retailers may hesitate to implement dynamic pricing technology for fear that shoppers will be turned off by its results. However, while **71%** of retailers think shoppers would be frustrated by frequent pricing changes, **62%** of shoppers are fine with frequent price updates as long as they are fair, according to a **joint study from Forrester and Revionics**.

However, most of these retailers (**76%**) do believe AI-driven pricing would have a positive impact on shoppers. These retailers are increasingly recognizing that their price doesn't necessarily have to be the lowest — but it does have to be transparent. Electronic shelf labs (ESLs) are one example of a technology that delivers transparency to the brick-and-mortar side of pricing. While dynamic pricing has been an asset to retailers that have implemented these strategies online, ESLs give retailers a chance to use AI to automate all the time- and labor-consuming tasks that come with changing prices on the store floor.

Don't Throw Retail Professionals Into The Deep End – Start With A Small Learning Curve

When implementing these technologies, retailers need to ensure that there is a small learning curve for the employees that will be working with the tech on a daily basis, according to ORS Group's Subramanian. Not everyone in charge of supply chain management or store planning is a data scientist or IT professional.

"They don't have time to learn a new product since they're constantly coming in and adjusting plans," Subramanian said. "From an implementation standpoint, **start at one area and show immediate business results**. If pickup allocation or capacity planning has been a problem, retailers should identify one issue and figure out how to get all of their vendors to collaborate within their planning process."

Upon seeing success at these points, teams are likely to be more comfortable scaling the technology into other actionable areas.

ABOUT THE AUTHOR

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Glenn Taylor is a retail journalist covering all aspects of the industry with interests tilted toward AI-driven personalization, conversational commerce and financial/business related news.

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