

Machine Learning and
Artificial Intelligence are
Driving Economic and Business
Recovery, But Is the Retail
Sector Behind in Adoption?



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THE GREAT RETAIL DISRUPTION

Retailers across the globe are facing a perfect storm as new and significant challenges continue to emerge – labour shortages, supply chain issues and inflation are growing threats that are fundamentally altering the industry. McKinsey recently noted that the US Consumer Price Index was up 5.4 percent for the 12 months that ended June 2021—its highest level since August 2008. In Europe, inflation surged past the European Central Bank's target of 2 percent in May 2021. And last July, the US Bureau of Labor Statistics reported that the US unemployment rate in May 2021 was down to 5.9 percent (from 13 percent a year earlier) and the share of unfilled job openings across nonfarm industries had risen to 6 percent—its highest figure in more than two decades.

Against this reality, brick-and-mortar retailers are faced with the challenge of offering superior customer service, as well as meeting and exceeding the expectations of a Covid driven and accelerated ecommerce savvy customer, and efficient product delivery within significant operational constraints. Optimum Retailing (OR) recently conducted a survey of senior retail leaders across Canada, the US and Australia and the EU, and found that a full 83.3 percent of respondents indicated that they are 'somewhat' or 'very concerned' about the impact of supply chain challenges and inflation on their operations and business recovery. Underneath the current pressures that have recently come to light are the pressures that have also grown slowly but steadily over the last few years – chief among them are the expectations customers have for a personalized experience and the expectations executives and shareholders have of strong store performance.

Brick-and-mortar retailers are under significant pressure and struggling to do more with less. They are focused on weathering the impact of the current inflationary environment but are balancing that priority with reducing Level of Effort (LOE) in stores to ensure staff spend more time selling, making sure stores are executing planograms accurately via a 'realogram', and having the right products at the right stores to target the right customers.





Retail may need to reboot faster than anticipated. New technology has the potential to be the catalyst for that reboot and recovery

THE MISALIGNMENT OF BRICK-AND-MORTAR OPERATIONS

Underneath this operational and financial pressure, the majority of retailers know they need a new operating model to succeed. Yet there is a lack of alignment between what their operations need and the actions being taken – or not taken – to emerge stronger.

As noted in a recent report, the ongoing impact of economic factors has put significant pressure on retailers to find new ways to combat inflationary headwind, and the COVID-19 pandemic has meant that retail may need to reboot faster than anticipated. New technology has the potential to be the catalyst for that reboot and recovery, yet a significant challenge stands in the way of getting there – adoption and understanding of machine learning (ML) and artificial intelligence (AI) among brick-and-mortar retailers remains low. Earlier this year KMPG released the results of a study called “Thriving in an AI World” in which 78 percent of retail respondents said it is difficult to stay on top of the constantly evolving AI landscape – a sentiment higher than leaders in other categories and industries. OR’s survey found similar results, with 83.4 percent of respondents saying they are only ‘somewhat aware’ of specific ML or AI-driven technology that is available to brick-and-mortar retailers today, with no respondents indicated they are ‘very aware’.

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THE TECHNOLOGY IMPERATIVE

The barriers to ML and AI adoption can be complex – from lack of awareness all the way to concerns over governance around ML/AI technology. But some technology is low hanging fruit for retailers, and there is an urgency with which leaders must look at aligning technology with what their brick-and-mortar retail operations need. Doing so has the power to positively impact customer service and a personalized experience, operational efficiencies, and the bottom line.

The ML/AI technology available to retailers today is readily accessible for a relatively low cost, and can drive significant gains in productivity and operational efficiencies virtually overnight. In 1965, former Intel CEO Gordon Moore made a prediction that fed into the modern digital revolution. By carefully observing trends, Moore predicted that computing would dramatically increase in power, and decrease in relative cost, at an exponential pace. The insight, known as Moore's Law, became a foundation for innovation, and that intersection between high power and low cost is where many retail technologies are at today.

In its 2020 State of AI report, McKinsey took a deep dive into the benefits of AI adoption across a broad range of industries, with some critical findings and insights for those exploring their ML and AI journey. Among the key findings were:

- Investing in AI: Many organizations are using AI as a tool for generating value and those companies plan to invest even more in AI as the result of the pandemic and its 'acceleration of all things digital'.
- The potential for an AI divide: The investment some companies are making into AI has the potential to create a divide between those more advanced with AI adoption and those still struggling to capitalize on the technology.
- The broad application of AI: In looking at specific functions, the majority of respondents reported revenue increases for inventory and parts optimization, pricing and promotion, customer-service analytics, and sales and demand forecasting.
- AI as a revenue generator. More than two-thirds of respondents who reported adopting AI for those uses say their revenue increased as a result.

Innovative technological advancements are happening all around, and the strategic adoption of retail technology is becoming critical to success. As McKinsey noted, organizations are at a crossroads and face an increasingly urgent need to capitalize on AI technology. Embracing an AI-driven technology strategy is no longer a nice to do, and those companies that wait may never catch up.



KEY TAKE-AWAYS

Despite the lack of adoption of AI among some brick-and-mortar retailers, many simple and turnkey AI driven solutions exist for the industry that can offset inflationary pressures, reduce costs, strengthen operational efficiencies, and increase margins.

For example, some technology available today allows retailers to aggregate and integrate the vast amounts of data they have that live in various places. The value of data is greater than the sum of its parts, which makes some retail technology game changing for brick-and-mortar retailers.

For brand leaders looking to elevate their AI adoption and accelerate their AI journey, there are three critical places to start:

- 1.** Invest the time in understanding the retail technology solutions available. From virtual assistants to planogram compliance to predictive analysis, understanding how the various technologies available can impact retail operations will get leaders one step closer to aligning business strategy with evolving needs. Conferences such as NRF Big Show provide an efficient way for retailers to familiarize themselves with many of the ML and AI-driven technologies available today. Many solution providers that prioritize ML and AI also partner with other solution providers to deliver integrated solutions, so one partner can often provide valuable introductions or referrals.
- 2.** Take inspiration from others and learn from peers. Some (albeit relatively few) brick and mortar retailers are embracing technology and applying it in ways that make strong use cases and inspiration for those looking to start or accelerate their own ML and AI journey. Some retailers are also embracing and thinking about technologies in new ways, and there are things to be learned and information to be shared. For example, a number of retailers have been leaning on crowdsourcing which is empowering brand leaders to make smarter, faster, more informed business decisions. From those that crowdsource to validate and get feedback on product development, to Coca-Cola crowdsourcing a new alternative to sweetener, there are new ways to look at and use technology if the will is there. By applying that curiosity to ML and AI in the retail industry, it will make it easier to start accelerating the use of those technologies.
- 3.** Develop a strategic plan for long-term technology, ML and AI adoption. While the adoption of technology is paramount today, it is headed in a spectacular direction. Understanding what's on the horizon for ML/AI, and what future innovations might mean from a cost investment and skill set standpoint will set brick-and-mortar retailers up for success now and into the future as the industry continues to evolve. Again, conferences such as the NRF Big Show is a fantastic place to start in learning about where ML and AI are headed, and where those technologies have the potential to positively impact your business.



AI IN ACTION

While the retail industry has some gains to make in catching up to other industries embracing AI, there are several stand out examples of AI adoption across the brick-and-mortar retail industry.

H&M

H&M uses AI to address a number of challenges and opportunities – among them anticipating trends and inventory management. The retail company has more than 200 data scientists on staff dedicated to predicting and analyzing trends to inform their business strategy including what to buy and when to buy it, as well as where it should be placed in stores. The company leverages AI algorithms to capture and analyze search engine and blog information and content, using it to paint a picture of fashion trends.

Inventory management has been an issue that has plagued many retailers including H&M in recent years. H&M has received a substantial amount of attention for the amount of unsold clothes it has sat on, the cost of that additional inventory, and the sustainability issues that can go along with how companies get rid of excess inventory. To help manage those challenges, H&M has invested in AI-driven technology focused on demand planning, assisting with informed forecasting.

Zara

Fashion powerhouse Zara's use of AI has been extensive and reportedly includes employing AI robots to fulfill orders for the company's Buy Online Pick-Up in Store (BOPIS) service.

Zara also has partnered with AI-driven predictive marketing company Jetlore – acquired by PayPal in 2018 – to expand its use of AI. Crunchbase explains the use of the Jetlore platform in fast fashion: "Jetlore's AI-powered platform maps consumer behavior into structured predictive attributes, like size, color, fit, or style preferences, making it the only customer data platform for B2C businesses in the market. This structured data allows top tier retailers and large hospitality and media companies to optimize content and communication for the consumers, make better merchandising decisions, optimize search, and empower the next generation of customer service."



Verizon

Verizon has been adopting AI and ML rapidly and publicly. Verizon - the largest wireless carrier in the U.S. - began using AI in 2018 to determine the best locations to install transmitters for its ultra-wideband spectrum, and has been using AI-generated models to determine where to place their new 5G transmitters to ensure the best coverage.

On the back-end, Verizon employees use AI to streamline processes and optimize their operations. They have not only digitized planograms for their retail stores, which has become more common practice, but have gone further and started using AI to verify planogram execution. Verizon is currently using AI and ML-powered software to validate photos that employees have taken of store displays to ensure compliance. With the point of a smartphone and click of a button, AI can verify if a store display has been executed to HQ standards. This results in hours saved - in both head office and at the store level.

Verizon's investment in AI is proving to be advantageous, and to see a company like Verizon utilizing AI so broadly is a sign of the changing retail landscape.

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CONCLUSION

Brick-and-mortar retail leaders are dealing with disruption to the industry prompted by economic and business factors no one could have predicted a few years ago. The current environment and the reality of labour shortages, supply chain issues and inflation are changing the game and have made the adoption of new technology a must to survive and thrive. To weather the short-term storm while setting businesses up for future success, retailers need to embrace the visionary leadership needed to use AI for both short term gains and long-term strategic value.

There are opportunities all around to learn about, understand and leverage ML and AI-driven technology to improve operational efficiencies and strengthen brick and mortar retail performance. By investing the time to understand the retail technology solutions available; taking inspiration from others and learning from peers; and developing a strategic plan for long-term technology, ML and AI adoption, brick-and-mortar retailers can become a success story among those looking to come out ahead in today's environment.

The need and opportunity have never been greater.

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