

**AI IN RETAIL:
EXECUTIVES
EMBRACE
AUTOMATION
TO IMPROVE
SHOPPING
EXPERIENCE**

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EXECUTIVE SUMMARY

Artificial intelligence (AI) is revolutionizing retail. From providing product recommendations to boosting customer service, AI is empowering retailers to innovate. And retailers are well along the path toward rolling out AI-based solutions. The majority (60%) have already developed AI capabilities and are expanding them, while another 25% have AI-based solutions in place and are not planning to expand further for now.

Artificial intelligence (AI) and digitization are revolutionizing retail. From providing product recommendations to boosting customer service, AI is empowering retailers to innovate. And retailers are well along the path toward rolling out AI-based solutions. The majority (60%) have already developed AI capabilities and are expanding them, while another 25% have AI-based solutions in place and are not planning to expand further for now.

To better understand how AI is impacting the retail industry and what companies are doing to plan for the future, Honeywell and Wakefield Research surveyed 450 retail executives at companies across five key markets: the United States; Europe (United Kingdom, Germany); Brazil; India; and the Middle East (United Arab Emirates, Kingdom of Saudi Arabia).

Looking ahead, retailers are also dedicating more resources to AI. Globally, more than half (53%) plan to invest in AI capabilities in the next several years.

Retail executives see potential for AI to yield dividends from this investment throughout their supply chain. The two areas they expect to benefit most from AI developments are customer service (27%) and customer experience (26%).

While retailers see strong potential to improve their customer-facing operations via AI, they also believe the technology can bring benefits to the back office. Thinking about their companies' current priorities, the top three motivators for retail executives to implement AI-based technology solutions are to achieve hyper-personalized customer experiences (34%), supply chain and last mile optimization (33%), and smarter inventory and demand forecasting (33%).

Key Findings

- Only 1% of global retail leaders do not have AI-based solutions, and are not evaluating any at this time
- 85% have already developed AI capabilities and solutions. Of those,

60% are expanding them and 25% are not currently planning to expand

- 27% expect customer service to be one of the two areas that benefit most from AI developments.
- 34% are looking to implement AI-based technology solutions to achieve hyper-personalized customer experiences.
- 42% of retailers are using machine/camera vision technologies.
- 43% view complexity of AI models as one of the three greatest challenges for implementing AI within the retail industry.
- 32% see Generative AI or AI agents for store associates as one of the three top benefits of implementing AI-based tech solutions.
- 64% are using 2D barcoding technology, such as QR Codes, to capture data.

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Only 1% of the global retail leaders do not have AI-based solutions and are not evaluating any at this time. In fact, the majority have already developed AI capabilities and are expanding them (60%). This includes 70% whose companies have completely or mostly automated their data capturing process.

Some retailers appear satisfied with their AI-based solutions, as a quarter (25%) have these in place and are not planning to expand further for now.

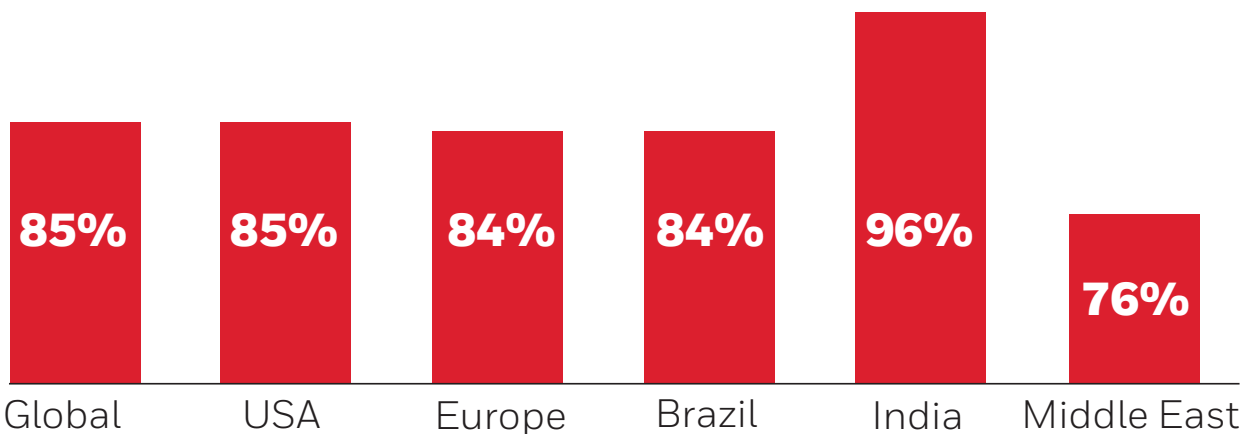
Among those who do not yet have AI-based solutions, 14% plan a pilot in some areas. Expect the pilots to come quickly. Among those without AI-based solutions but who plan to pilot them, 27% intend to invest in AI capabilities within a year.

Investments in AI solutions are rolling out across regions. Among those investing, 69% already have AI solutions but plan to expand. This is especially true among larger retailers. Around half (53%) of retailers that are already using AI solutions, and have plans to expand those capabilities, have more than 10 locations.

Retailers without AI solutions are eager to jump on the bandwagon. Nearly all plan to invest in the near-term: 41% within a year and 45% within two years.*

Of all the countries and regions surveyed, Indian retailers are the most likely to be currently invested in AI solutions (96%), reflecting a strong embrace of technology.* Middle Eastern retailers, meanwhile, are the least invested in AI solutions (76%)*, though this could soon change. Forty-four percent of retailers in the Middle East plan to invest in the technology in the next two years.

Investment in AI Solutions by Region



1: Which of the following best describes where your company stands with regard to AI-based solutions?
Total saying "has AI-based solutions".

Of those surveyed who said their companies intend to invest in AI, they plan to do so sooner rather than later. Eighty-nine percent globally said they are either currently investing in AI or planning to invest within one to two years.

Dedicated teams are critical to evaluating and implementing AI solutions. The top three areas represented on these teams globally are IT (78%), store operations (43%) and customer experience (39%).*

SPOTLIGHT: FOCUS ON CUSTOMER EXPERIENCE

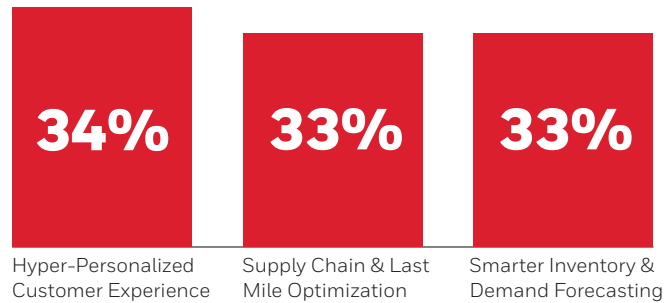
While retail executives see potential for AI to yield dividends across business functions, they’re most motivated to deploy the technology in order to improve customer experience.

For 34%, providing hyper-personalized customer experiences is a top three motivator to implement AI-based technology solutions – nearly on par with achieving supply chain and last mile optimization (33%) and smarter inventory and demand forecasting (33%). Delivering hyper-personalized customer

experiences is especially important in the U.S. (40%) and Brazil (40%). * Retailers see great potential for AI to boost their business. For instance, prioritizing customers is a big motivator as they look to improve customer experience (38%) and customer service (36%). But they also expect marketing (37%) and demand planning (36%) to strongly benefit from AI developments. Brazilian retailers, in particular, expect AI developments to boost the customer experience (44%).*

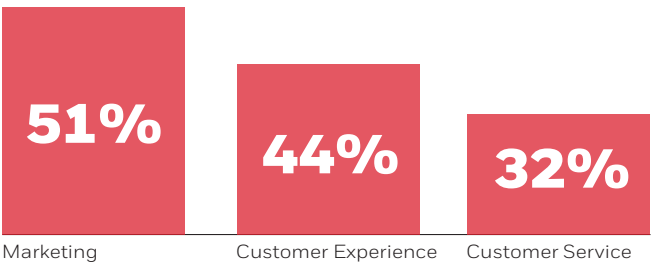
C-suite executives have even bigger expectations that AI developments can benefit their marketing efforts (51%). Like other executives, the C-suite is also bullish that the technology has the potential to help improve customer experience (44%) and customer service (32%). Retailers see a correlation between AI and customer service. Notably, 39% of retailers have a dedicated team for developing AI projects and capabilities within their customer experience departments.

Top 3 Motivators for Implementing AI-Based Technology Solutions
Among Total Sample, N = 450



5C. Thinking about your company’s priorities: Which of the desired outcomes would most motivate your company to to implement AI-based technology solutions?

Which Retail Areas C-Suite Executives Think Could Benefit Most from AI Developments
Among Owners, Partners, C-Suite, N = 125



8. On a scale of 1 (no ability) to 10 (very strong ability), how would you rate your company’s ability to obtain trusted data in your retail operations? By trusted data, we mean data that is of high quality, free from error or biases, and captured in an accurate way.

RETAIL AREAS THAT WOULD BENEFIT MOST FROM AI DEVELOPMENTS

TOTAL	USA	EUROPE	BRAZIL	INDIA	MIDDLE EAST
Customer Experience 38%	Logistics & Distribution Centers 43%	Marketing 44%	Customer Experience 44%	Demand Planning 50%	Procurement 48%
Marketing 37%	Sales 42%	Customer Service/ Sales/Procurement 35%	Marketing 43%	Logistics & Distribution Centers/Customer Experience 41%	Customer Experience 46%
Customer Service/ Demand Planning 37%	Customer Service 40%	Demand Planning 34%	Customer Service 39%	Customer Service 36%	Demand Planning 34%

4C. Which of the following retail areas within your company would benefit most from AI developments?
Sample sizes: Total, N = 450; USA, N = 100; Europe, N = 140; Brazil, N = 80; India, N = 80; Middle East, N = 50

AI FOR BACK OFFICE

2

Though retailers see strong potential to improve their customer-facing operations via AI, they also think this technology can bring benefits to the back office.

AI can handle routine tasks like data entry, scheduling, and basic customer service. It can also analyze large amounts of data more quickly and accurately than humans, leading to better decision-making for inventory and demand planning.

Thinking about their companies' current priorities, retail executives' top motivators for implementing AI-based technology solutions include achieving supply chain and last mile optimization (33%) and smarter inventory and demand forecasting (33%).

Meanwhile, they view demand planning (36%) and logistics and distribution centers (34%) among areas that can also benefit strongly from AI developments.



Retailers have an abundance of advanced technologies they can turn to as they seek efficiency and ways to improve customer experience.

Tools like machine/camera vision technologies can make a huge difference in inventory management and loss prevention. AI-powered cameras can scan shelves to track inventory levels in real time, alerting staff to low stock or misplaced items to enable quicker restocking and to reduce out-of-stock situations. Computer vision systems can also detect and alert staff to suspicious activities, such as shoplifting, and flag unscanned items at self-checkouts to reduce theft and fraud.

Despite the advantages, only 42% of retailers are currently using machine/camera vision technologies. Usage drops in regions and countries where data privacy and compliance concerns act as a barrier to AI-related technology, and to 27% in Europe.

Optical Character Recognition (OCR), meanwhile, automates the extraction of text from images. When applied to retail, this technology can streamline tasks like inventory management, invoice processing, and customer data analysis. By converting physical documents into digital data, OCR improves efficiency and reduces errors.

Though only 42% of retailers are currently using OCR, usage rises to 64% in India.*

Augmented reality in retail also offers numerous benefits. It allows customers to visualize products in their real-world environments, try on clothes virtually, and receive personalized recommendations. At the same time, it empowers retailers to train employees more effectively, personalize marketing campaigns, and gather valuable customer data.

Globally, 31% of global retailers are using augmented reality to capture data, though this technology is even more prevalent in the Middle East (40%).*

While not as cutting-edge as some AI-enabled technologies, QR codes are a relatively advanced form of data encoding that continues to evolve. They offer advantages over traditional barcodes, such as higher capacity, faster scanning speeds, and the ability to handle various character sets, including Arabic characters.

Most retailers (64%) use 2D barcoding, such as QR Codes, to capture data, with usage rising to 76% in the Middle East.

In India, where enhanced customer service (40%) is the biggest motivator for implementing AI-based technology, 68% are using Machine/Camera Vision Technologies vs. 42% of retailers across geographies (total); 64% of retailers in India are using OCR vs. 42% for the total; and 39% of Indian retailers are using augmented reality vs. 31% total.*

In the U.S., where the top priority is delivering hyper-personalized customer service (40%), 64% of retailers are using AI vs. 54% in all regions.

In the Middle East, where computer vision for store operations (44%) is the lead motivator for implementing AI, 60% of retailers are using artificial intelligence vs. 54% in all regions.*

In Europe, where computer vision for store operations is a high priority (36%), only 27% are using Machine/Camera Vision Technologies.

And in Brazil, where enhanced customer service (43%) is the top motivator, artificial intelligence is the most frequently used technology to capture data (55%).*

SPOTLIGHT: FOCUS ON CUSTOMER EXPERIENCE

Retailers are adopting advanced technology to capture data in some countries and regions more than in others.

DESIRED OUTCOMES THAT WOULD MOST MOTIVATE RETAILERS TO IMPLEMENT AI-BASED TECHNOLOGY

TOTAL	USA	EUROPE	BRAZIL	INDIA	MIDDLE EAST
Hyper-personalized customer experiences 34%	Hyper-personalized customer experiences 40%	Gen AI or AI agents for store associates/Enhanced customer service 33%	Enhance Customer Service 43%	Enhance Customer Service 40%	Computer vision for store operations 44%
Supply chain & last-mile optimization/smarter inventory & demand forecasting 33%	Gen AI or AI agents for store associates 37%	Supply chain & last-mile optimization/Labor planning & workforce optimization 31%	Marketing 43%	Supply chain & last-mile optimization/smarter inventory & demand forecasting 35%	Hyper-personalized customer experiences 38%
Gen AI or AI agents for store associates/Enhanced customer service 33%	Smarter inventory & demand forecasting 40%	Hyper-personalized customer experiences 30%	Smarter inventory & demand forecasting 29%	Gen AI or AI agents for store associates 34%	Supply chain & last mile optimization/Better merchandising decisions/Omnichannel experience integration 32%

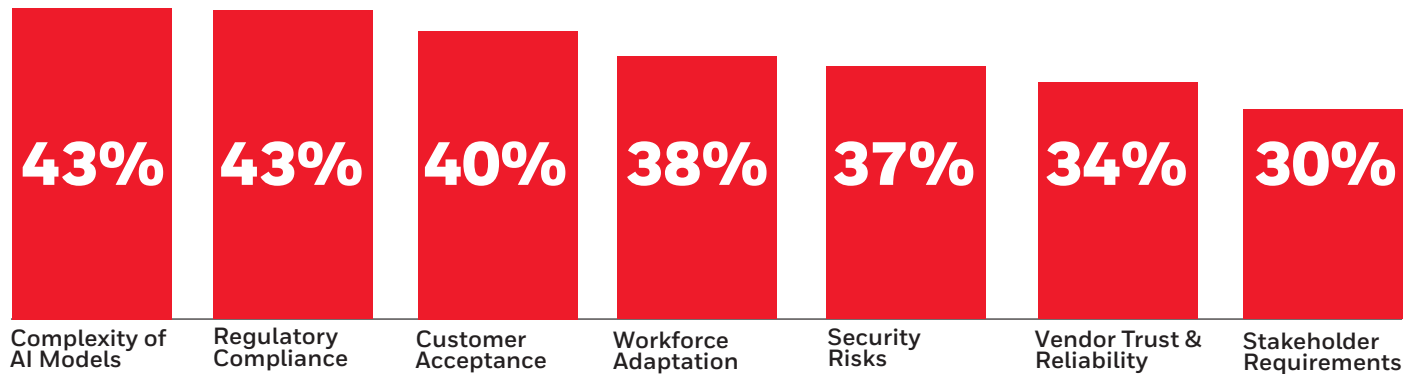
4C. Which of the following retail areas within your company would benefit most from AI developments?

Sample sizes: Total, N = 450; USA, N = 100; Europe, N = 140; Brazil, N = 80; India, N = 80; Middle East, N = 50

Despite the widespread adoption of AI in retail, executives have concerns about rolling out this technology. These concerns underscore a need for retailers to find trusted partners as they step up their use of AI.

Greatest Challenges for Implementing AI Within the Retail Industry

Among Total Sample, N = 450



7. Of the following, which do you feel are the greatest challenges for future AI implementation within the retail industry?

For 43%, the complexity of AI models and regulatory compliance are two of the three greatest challenges for implementing AI within the retail industry. Customer acceptance (40%), or lack thereof, is also perceived to be a top challenge, though customer acceptance is less of a concern in the Middle East (34%) and Brazil (31%).*

To a slightly lesser extent, retailers are also concerned about variables like workforce adaptation and security risks as they implement AI: 38% worry about workforce adaptation and 37% are concerned about security risks. More than a third (34%) also view vendor trust & reliability as a challenge.

For those already invested in AI, regulatory compliance is the greatest challenge (50%).

High-quality data is critical to glean the beneficial insights and advantages of AI. As they make AI-related decisions, executives prioritize data quality, privacy, and security.

A majority of executives are confident that their companies can obtain trusted data in their retail operations. Trusted data means data that is high-quality, free from error or biases, and captured in an accurate way. In fact, 76% would rate their company's ability to obtain trusted data in retail operations as "very strong." Confidence rises for executives at companies that have mostly or completely automated their data capturing process (80%) and among executives with an IT function (83%).

Retailers are well on their way toward automating data capture. A majority of executives (53%) would describe the level of automation in their company's data capturing process as completely or mostly automated – including 61% of those with 10 or fewer locations.

At the same time, nearly half (46%) view their company's data capturing process as only somewhat or a bit automated, which represents an opportunity to further automate data capture.

As they make AI-related decisions, executives are focused on the data they will obtain. The three factors that most heavily weigh on their AI-related decisions are: data quality & management (45%); data privacy & compliance (43%); and security risks (38%).

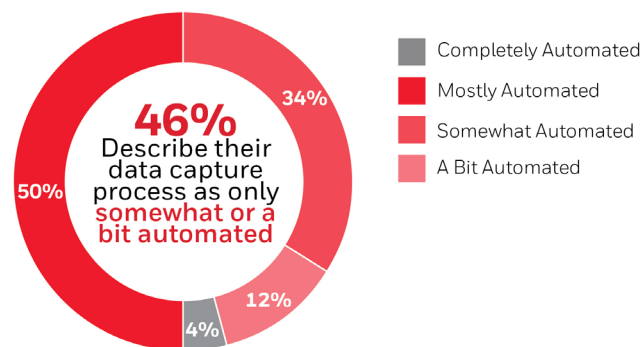
When it comes to data capturing, companies are using a variety of technologies. A majority (64%) are using 2D barcoding such as QR codes and GS1 Digital Link, 1D barcoding (61%), or artificial intelligence (54%). And nearly half (47%) are using radio-frequency identification (RFID) or sensors (45%).

COMPANY ABILITY TO OBTAIN TRUSTED DATA:

Globally, 75% of surveyed leaders say their company's ability to obtain trusted data in retail operations is very strong.

Automation in the Data Capture Process

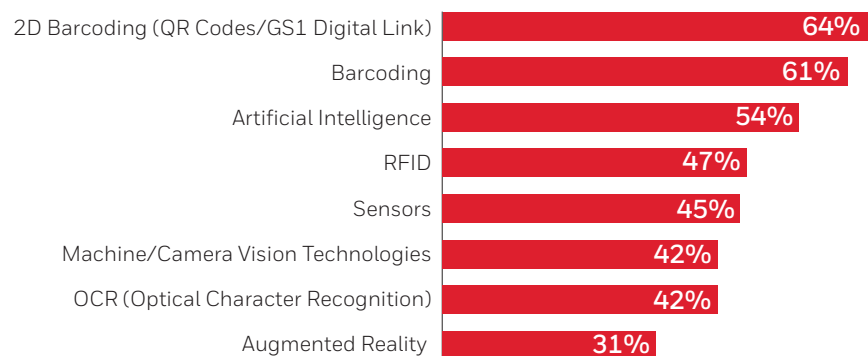
Among Total Sample, N = 450



9. How would you describe the level of automation in your company's data capturing process?

Types of Data Capture Technology Retail Companies are Using

Among Total Sample, N = 450



Which of the following types of data capturing technologies is your company currently using?

| Artificial intelligence is changing the way we shop.

The vast majority of retailers (85%) have already incorporated AI-based solutions into their operations. For retail executives, the biggest opportunities for rolling out AI involve improving customer experience and service.

And yet, concerns about data privacy and customer acceptance are holding some retailers back from engaging deeper with the technology. The most commonly used tools for capturing data continue to be barcodes and QR codes.

One factor preventing retailers from going further with AI is trust and reliability in vendors. This presents an opportunity for technology companies to step up their support, especially since retailers already using AI largely feel like the data they are collecting is high quality, free from error or biases, and captured in an accurate way.



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