eTail Insights

THE FUTURE OF AI IN RETAIL AND ECOMMERCE

Opportunities, Challenges, and Emerging Use Cases

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CONTENTS

EXECUTIVE SUMMARY

The following report explores how artificial intelligence (AI) is poised to transform retail and eCommerce over the next three years through innovative use cases and growing implementations. With 85% of the surveyed respondents planning to increase their investments in AI technology in the next year, more and more brands will compete based on their ability to use AI solutions to enhance both internal operations and the customer experience.

Notably, AI is already delivering significant benefits, such as improved customer retention and increased employee productivity.

Moving forward, retail and eCommerce brands will increasingly leverage this technology for sustainability use cases, dynamic pricing optimization, fraud detection, and novel customer-facing solutions, such as AI-powered virtual try-on programs.

A FOREWORD FROM OUR PRODUCER

As 2025 continues, it's clear AI in retail has evolved from an emerging technology to a transformative force, reshaping our industry. Retail leaders are discovering AI applications across their businesses, from supply chain management to customer experiences. The ability to harness AI's power is rapidly becoming the key differentiator between industry leaders and those at risk of falling behind.

That's why I'm excited to present our H1 2025 eTail Insights report, The Future of AI in Retail and eCommerce. Its detailed analysis, along with insights directly from your peers, make it an actionable resource for those at the forefront of this transformation.

As you explore this report, consider how AI-driven innovations can propel your business forward. From advanced personalization and dynamic pricing to streamlined operations and marketing automation, AI's potential to drive growth and create meaningful consumer connections is immense. I hope our work helps both inform your AI strategies and inspire innovation among your teams.

Kristin Schoenstein

Chief of Staff

eTail

ABOUT THE RESPONDENTS

The eTail Insights research team surveyed 100 retail and eCommerce leaders, including C-level executives, vice presidents, directors, and department heads at retailers in a variety of verticals to generate the results featured in this report.

The respondents occupy a variety of roles in their organizations.

24% Marketing

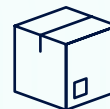**21%** Customer Experience

15% IT

14% Customer Analytics

14% eCommerce

12% D2C

Annual revenues among companies in the study ranged from

$100 MILLION to more than $10 BILLION

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KEY INSIGHTS

Among the respondents:

AI implementations are "very advanced" in:

59%
eCommerce

57%
Marketing

95%
will increase AI investment over three years.

77%
currently use AI for inventory management and demand forecasting.

58%
will use AI for dynamic pricing optimization in the next year.

57%
will use AI for sustainability optimization in the next year.

84%
have implemented AI-powered chatbots to improve digital shopping.

Most will explore these AI use cases in the next year:

57%
Virtual Try-On

67%
Loyalty Programs

76%
Voice-Activated Shopping Assistants

Two AI-powered innovations that will have the biggest impact:

48%
Dynamic Pricing Tools

40%
Virtual Try-On Solutions

Three most significant challenges to AI adoption:

47%
Integration Challenges

40%
High Costs

36%
ROI Measurement

Harmonize Your Commerce Journey

Deliver customer-centric experiences across every touchpoint

At Bazaarvoice, we've spent the last decade pioneering AI technology that has transformed how over 13,000 brands and retailers connect with shoppers.

From content moderation to customer sentiment insights and personalized recommendations, our innovate solutions support each step of the shopper journey, helping you turn every interaction into a meaningful moment.

Supercharge Your Commerce Engine

THE CURRENT STATE OF AI IMPLEMENTATION IN RETAIL AND ECOMMERCE

Artificial intelligence has become a cornerstone of innovation in the retail and eCommerce sectors, revolutionizing operations and customer experiences alike. As businesses continue to embrace AI technologies, understanding the current landscape and future trajectories is crucial for staying competitive in this rapidly evolving market.

The survey reveals that AI implementation is most advanced in the eCommerce and marketing departments, with 59% and 57% of respondents respectively reporting "very advanced" AI implementations.
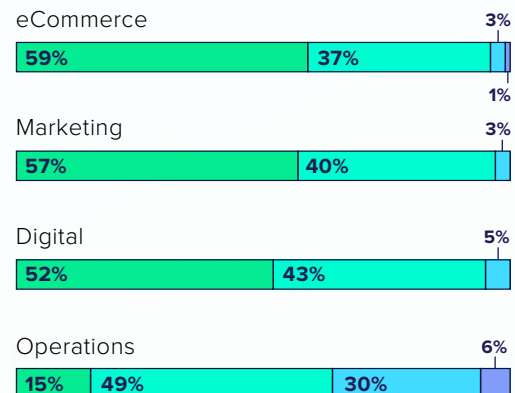
In other words, there is a high level of adoption in customer-facing areas of the business. This suggests that retailers are prioritizing AI solutions that directly impact sales and customer engagement.

However, there's room for improvement in operations, where 36% of respondents describe their AI implementations as either "not very advanced" or "not advanced at all." This disparity indicates a potential opportunity for businesses to enhance their operational efficiency through automation and generative AI integration.
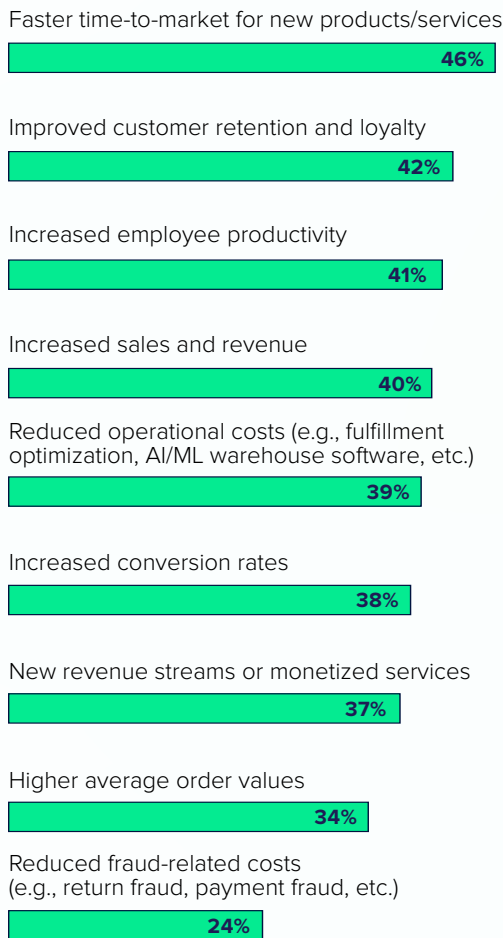
AI streamlines various operational aspects. It handles repetitive tasks like order processing and inventory updates, reducing errors and freeing up resources. It can even be used in fraud detection, cybersecurity, demand forecasting, and product optimization.

In your view, how advanced are your organization's current implementations of artificial intelligence across the following departments?

- **Very advanced**—We are using all the latest AI tools and capabilities.

- **Somewhat advanced**—We are keeping pace with the most important AI tools and capabilities.

- **Not very advanced**—We are using some AI tools and capabilities but are missing critical ones.

- **Not advanced at all**—We only have basic AI tools or capabilities or haven't implemented AI at all.

eCommerce
| 59% | 37% | | 3% |

Marketing
| 57% | 40% | | 1% 3% |

Digital
| 52% | 43% | | 5% |

Operations
| 15% | 49% | 30% | 6% |

Which of the following core benefits have you realized thanks to your existing implementations of artificial intelligence?

Faster time-to-market for new products/services
46%

Improved customer retention and loyalty
42%

Increased employee productivity
41%

Increased sales and revenue
40%

Reduced operational costs (e.g., fulfillment optimization, AI/ML warehouse software, etc.)
39%

Increased conversion rates
38%

New revenue streams or monetized services
37%

Higher average order values
34%

Reduced fraud-related costs (e.g., return fraud, payment fraud, etc.)
24%

The benefits of AI implementation are already being realized across the retail and eCommerce industries, but they are more notable in certain areas. For example, 46% of respondents report faster time-to-market for new products and services, 42% have seen improved customer retention and loyalty, and 41% have experienced increased employee productivity.

These outcomes demonstrate the tangible value AI brings to retail and eCommerce businesses, spanning from operational agility to customer satisfaction and workforce efficiency.

How will your organization's investments in AI technology change over the next three years?
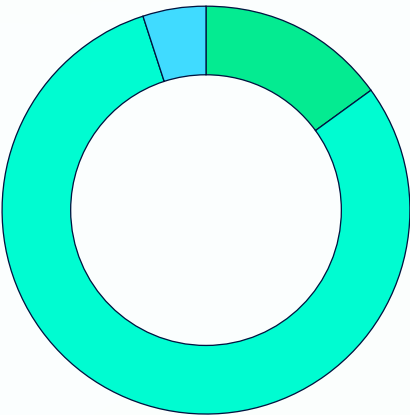
15% Increase substantially

80% Increase somewhat

5% Stay about the same

Looking ahead, the industry's commitment to AI is clear, with 80% of respondents planning to increase their AI investments "somewhat" over the next three years, while 15% anticipate substantial increases.

This widespread intent to boost AI spending underscores the technology's perceived importance in driving future success. It also suggests that companies are confident in the returns they're seeing from their current AI implementations and are eager to expand their capabilities.

However, it could also suggest that we are in the midst of an AI "arms race." Many leaders are concerned about falling behind their competitors when it comes to this technology, so they are eager to secure resources for implementation.

In the coming years, AI applications in retail and eCommerce will be even more innovative than what we currently see in the marketplace. As businesses continue to refine their AI strategies and overcome implementation challenges, the gap between AI leaders and laggards may widen, potentially reshaping the competitive landscape of the industry.

Importantly, organizations that are struggling to close the gap between competitors should start by identifying viable use cases for AI and demonstrating a return on investment to stakeholders.

> *We're a small and scrappy team, so hiring multiple artists or renderers wasn't ideal. Around that time, ChatGPT and Generative AI were emerging, so we started experimenting. We found we could use existing shots to quickly create variations, like swapping countertops or trying different kitchen styles. This allowed us to simplify our workflow, save time and money, and still meet the needs of e-commerce photography."*

— **Michael Challinger,**
  Chief Executive Officer, **Houzer**, "Revolutionizing Retail,"
  eTail Boston 2024

Lucidworks

STOP LOSING CUSTOMERS TO BAD SEARCH

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95% revenue lift

55% increase in relevancy

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AI USE CASES FOR OPERATIONS AND THE DIGITAL SHOPPING EXPERIENCE

Artificial intelligence is rapidly transforming the operational landscape of retail and eCommerce, offering innovative solutions for both internal processes and customer-facing experiences. As retailers continue to embrace AI technologies, they are discovering new ways to optimize their operations and enhance the digital shopping journey for consumers.
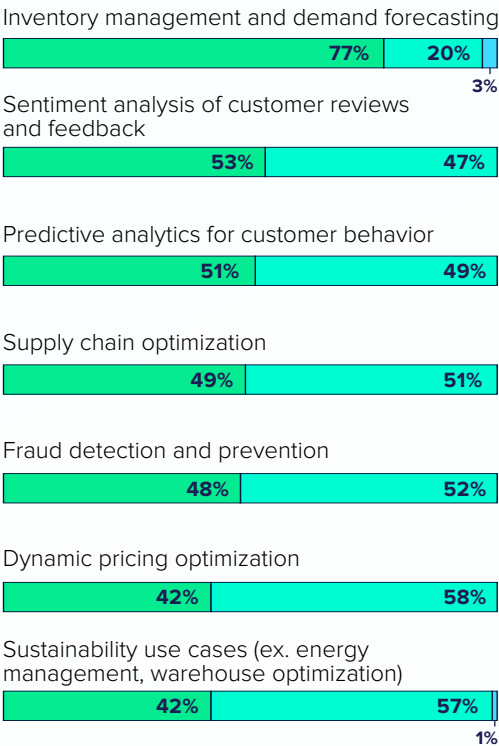
A substantial 77% of respondents are currently utilizing AI for inventory management and demand forecasting. AI's ability to identify trends and incorporate patterns into decision-making can help in optimizing stock levels and predicting consumer demand. This ultimately leads to reduced costs and improved efficiency in supply chain management.

Sentiment analysis of customer reviews and feedback is another area where AI is proving valuable, with 53% of respondents leveraging this technology. This application of AI allows retailers to gain deeper insights into customer satisfaction and product performance.

By analyzing sentiment in real-time, organizations can quickly identify and address issues in the customer journey, including in the post-purchase experience. For instance, AI-powered sentiment analysis can help detect patterns in negative feedback related to returns, allowing retailers to streamline mores specific areas of their return processes or address product quality issues proactively.

Which of the following internal, operational use cases for AI is your organization currently leveraging, and which will you explore within the next year?

- 🟢 We are currently using AI for this.
- 🟩 We will explore using AI for this within the next year.
- 🔵 We aren't currently using AI for this and have no plans to explore it within the next year.

Inventory management and demand forecasting

| 77% | 20% | |
3%

Sentiment analysis of customer reviews and feedback

| 53% | 47% |

Predictive analytics for customer behavior

| 51% | 49% |

Supply chain optimization

| 49% | 51% |

Fraud detection and prevention

| 48% | 52% |

Dynamic pricing optimization

| 42% | 58% |

Sustainability use cases (ex. energy management, warehouse optimization)

| 42% | 57% | |
1%

Moreover, this technology enables businesses to maintain ongoing engagement with customers by identifying opportunities for follow-up communications or personalized offers based on their expressed sentiments. With the right AI tools, sellers can make predictions about delivery times and set clear expectations with customers. They can even deliver automated, personalized messages to customers after they've made a purchase.

Predictive analytics for customer behavior is being employed by 51% of respondents, indicating a growing focus on anticipating consumer needs and preferences. This application of AI enables retailers to tailor their offerings and marketing strategies more effectively, potentially leading to increased sales and customer loyalty.

Retailers and eCommerce leaders are also planning to explore new AI use cases within the next year. Sustainability-focused applications, such as energy management and warehouse optimization, are on the radar for 57% of respondents. This trend reflects the growing importance of environmental considerations in retail operations and the potential for AI to drive eco-friendly practices.

Dynamic pricing optimization is another area of interest, with 58% of respondents planning to explore this capability. AI-driven dynamic pricing can help retailers maximize revenue by adjusting prices in real time based on various factors such as demand, competitor pricing, and inventory levels.

Finally, fraud detection and prevention (52%) and supply chain optimization (51%) round out the list of AI use cases that retailers plan to explore. These applications demonstrate the potential for AI to enhance security measures and further streamline operational processes.
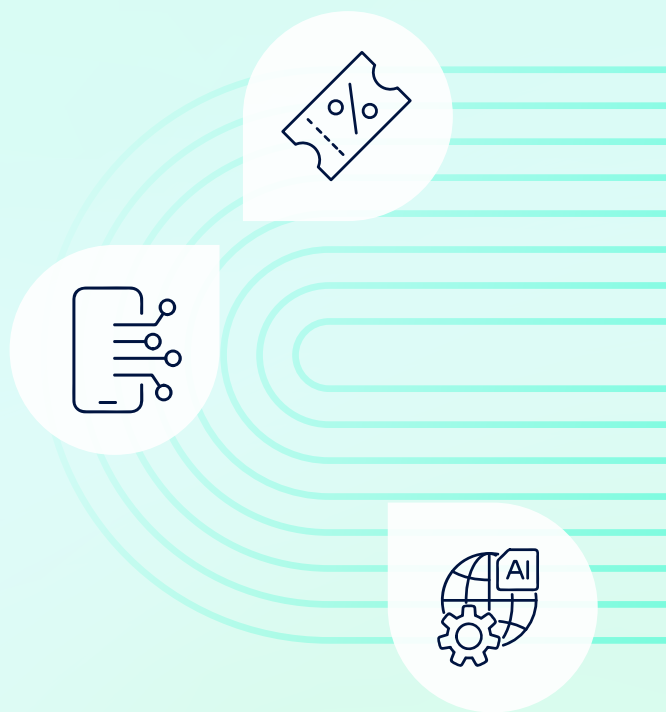
Which of the following AI-powered tools or features have you implemented to improve the digital shopping experience for customers, and which will you explore within the next year?

- We are currently using this AI-powered tool or feature.
- We will explore using this AI-powered tool or feature within the next year.
- We aren't currently using this AI-powered tool or feature and have no plans to explore it within the next year.
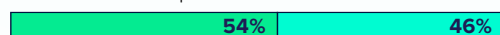
Chatbots for customer service
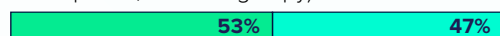| 84% | 16% |
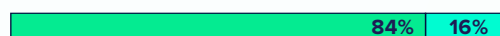
Personalized estimated delivery date predictions at checkout
| 59% | 41% |

Personalized product recommendations
| 55% | 45% |

Visual search capabilities
| 54% | 46% |

Automated content generation (product descriptions, marketing copy)
| 53% | 47% |

Personalized website experiences and layouts
| 48% | 51% | 1% |
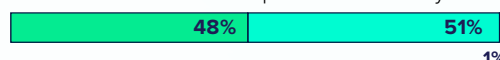
Personalized content for digital journeys and customer touchpoints
| 45% | 53% | 2% |
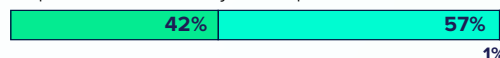
AI-powered virtual try-on experiences
| 42% | 57% | 1% |

AI-driven loyalty programs and customer retention strategies
| 33% | 67% |
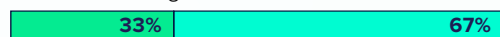
Voice-activated shopping assistants
| 24% | 76% |
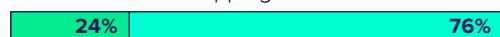
On the customer-facing front, AI is already making a significant impact on the digital shopping experience. Chatbots for customer service lead the pack, with an impressive 84% of respondents having implemented this technology. This high adoption rate reflects the growing importance of providing instant, round-the-clock customer support in the competitive eCommerce landscape.

Personalized estimated delivery date predictions at checkout (59%) and personalized product recommendations (55%) are other popular AI-powered features. These implementations showcase how AI is being used to enhance the customer experience by providing more accurate information and tailored suggestions.

Visual search capabilities (54%) and automated content generation (53%) are also being widely adopted, indicating a trend towards more interactive and efficient shopping experiences. These technologies can help customers find products more easily and provide rich, engaging content without significant manual effort from retailers.

Looking to the future, retailers are setting their sights on even more advanced AI-powered tools. Voice-activated shopping assistants are at the forefront for future implementations, with 76% of respondents planning to explore this technology within the next year. This high level of interest suggests that voice commerce could soon become a mainstream feature in eCommerce platforms.

AI-driven loyalty programs and customer retention strategies are on the horizon for 67% of respondents. Organizations are likely to prioritize more sophisticated, data-driven approaches to customer relationship management compared to what they currently use with traditional CRM tools.

> *We created something called 'Glasses Eraser' within our virtual try-on tool. We use computer vision and generative AI to allow customers to keep their current glasses on while they're trying on new ones virtually. We wanted to take away some barriers and make it less cumbersome for the customer—we know that trying on the breadth of the assortment is great, but it can also be overwhelming."*
>
> **— Sandy Gilsenan,** SVP, Chief Retail and Customer Experience Officer, **Warby Parker**, "The Evolving Customer Experience," **eTail Boston 2024**

Meanwhile, AI-powered virtual try-on experiences (57%) and personalized content for digital journeys (53%) are set to further enhance the online shopping experience, bridging the gap between digital and physical retail experiences. As we will learn, this application of AI and augmented reality (AR) technology is one of the most exciting for retailers.

These insights reveal a retail and eCommerce landscape that is rapidly evolving through the integration of AI technologies. From optimizing internal operations to revolutionizing customer interactions, AI is poised to play an increasingly central role in shaping the future of retail.

THE IMPACTS AND CHALLENGES OF AI ADOPTION

Although artificial intelligence will reshape retail and eCommerce for good, industry leaders are aware of both its transformative potential and the challenges that come with adoption.

According to the survey, 48% of respondents believe that AI-driven dynamic pricing will have the biggest impact on shopping experiences in the next three years. This technology optimizes prices in real-time based on demand, inventory, and competitor data, allowing retailers to maximize revenue and stay competitive during times of rapid change in the market.

The high percentage of respondents highlighting this innovation suggests that pricing strategies are becoming increasingly sophisticated and data-driven, potentially leading to more efficient market adaptation, as well as personalized pricing for consumers.

Advanced AI-powered virtual try-on and product visualization experiences are seen as the second most impactful innovation, with 40% of respondents emphasizing its importance. This aligns with the previous finding that most companies plan to explore AI-powered virtual try-on solutions within the next year.

Immersive and interactive online shopping solutions have proven beneficial for eCommerce sales as well as extremely useful for customers who don't wish to shop in-store. For example, AR technology on smartphones enables consumers to view items in their homes and even on their bodies before they buy online, removing one of the long-standing barriers between eCommerce and traditional shopping experiences.

Which of the following two AI-powered innovations do you think will have the biggest impact on shopping experiences in the next three years?

AI-driven dynamic pricing that optimizes in real-time based on demand, inventory, and competitor data
48%

Advanced AI-powered virtual try-on and product visualization experiences
40%

Hyper-personalized product recommendations using multimodal AI (text, image, video)
36%

AI-enabled autonomous stores with cashier-less checkout
34%

AI-driven product development using consumer data and trend analysis
29%

Emotion AI for analyzing customer sentiment and tailoring experiences
13%

When it comes to challenges in AI adoption and implementation, integration with existing systems and processes emerges as one of the most significant hurdles, cited by 47% of respondents. This suggests that many retailers are struggling to seamlessly incorporate AI technologies into their current infrastructure, potentially slowing down the pace of innovation.

Overcoming this challenge will likely require substantial investments in IT infrastructure and a strategic approach to digital transformation.

"

To scale AI effectively, we established clear policies and processes. Teams can get support from the AI team to secure approvals, speed up their projects, and ensure proper governance. Whether working with an existing vendor, a new one, or experimenting with tools like ChatGPT, teams have the autonomy to proceed while still benefiting from AI team guidance. This approach has allowed us to scale AI initiatives faster than we anticipated."

— **Dan Marques,** SVP of Global Digital Commerce, **Crocs**, "Revolutionizing Retail," **eTail Boston 2024**

In your view, which of the following will be the three most significant challenges to AI adoption and implementation at your organization over the next three years?
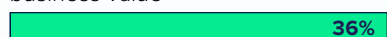
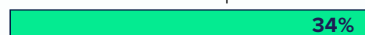Integration challenges with existing systems and processes
47%
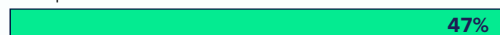
High costs of AI implementation and maintenance
40%
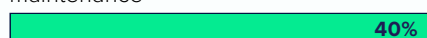
Difficulty in measuring ROI and proving business value
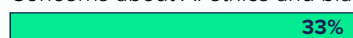**36%**

Lack of internal AI expertise and talent
34%

Resistance to change from employees or leadership
34%

Data quality and availability issues
33%

Concerns about AI ethics and bias
33%

Regulatory and compliance challenges
24%

Difficulty in selecting the right AI use cases and technologies
19%

The high costs of AI implementation and maintenance are another major concern, with 40% of respondents highlighting this as a significant challenge. While the potential benefits of AI are widely recognized, the financial barriers to entry remain substantial for many organizations. As AI technologies mature and become more accessible, this challenge may diminish, but for now, it remains a key consideration for businesses planning their AI strategies.

Lastly, 36% of respondents say difficulty in measuring ROI and proving the business value of AI is a significant challenge. This underscores the need for better metrics and evaluation frameworks to assess the impact of AI investments. Developing standardized approaches to measuring AI's contribution to business outcomes will be crucial for justifying continued investments and optimizing AI strategies.

As organizations work to overcome these hurdles, we can expect to see more sophisticated AI applications emerging, particularly in areas like dynamic pricing and virtual product experiences. The coming years will likely be marked by continued innovation and refinement of AI strategies as retailers seek to balance the costs and complexities of implementation with the transformative potential of these technologies.

CONCLUSION: THE MOST SUBSTANTIAL CHANGES TO RETAIL AND ECOMMERCE DUE TO AI ADOPTION

As artificial intelligence continues to reshape the retail and eCommerce landscape, industry leaders are anticipating significant transformations in their operations and customer interactions. The conclusion of our survey reveals a collective vision of AI's impact on the future of retail, highlighting key areas of change and innovation.

Retail and eCommerce leaders expect AI to play a pivotal role in streamlining consumer-facing operations, but also internal processes like employee training and onboarding. For example, one respondent says that "training for new staff will be personalized and interactive, making the onboarding process smoother."

The adoption of AI is also expected to drastically reduce manual tasks in stores and back-office operations, enabling businesses to cut operating costs significantly while increasing market share through superior and more personalized customer experiences.

"AI will handle repetitive tasks, allowing employees to focus on building relationships with customers," says one IT director.

Indeed, personalization emerges as a key area of transformation, with AI-powered technologies enabling more nuanced and relevant product recommendations. Retailers hope to leverage AI to offer tailored suggestions and experiences that make customers feel valued without encroaching on their privacy.

The application of AI in inventory and logistics management is anticipated to significantly change supply chain operations. Industry leaders foresee improvements in accuracy and efficiency, enabling businesses to respond more effectively to consumer demands and market trends. This enhanced capability in inventory management and demand forecasting is likely to result in reduced stockouts, optimized distribution, and ultimately, a more responsive and agile retail ecosystem.

Finally, as AI becomes more deeply integrated into retail operations, decision-making processes are expected to become increasingly data-driven. Retailers plan to leverage AI's analytical capabilities to gain deeper insight into consumer behavior, market trends, and operational efficiencies.

This shift towards AI-powered analytics is likely to lead to more informed strategic decisions. Over the next few years, it will produce a retail landscape that is more adaptive to changing consumer preferences, supply chain disruptions, and relevant economic trends.

KEY SUGGESTIONS

1

Prioritize AI integration across all departments, especially in operations where implementation is lagging.

This will help balance AI adoption throughout your organization and unlock efficiency gains in areas like inventory management and supply chain optimization.

2

Invest in robust data management and unification systems to power AI-driven personalization efforts.

A solid data foundation is crucial for integrating AI effectively, which can be a significant challenge for companies.

3

Develop a clear strategy for addressing ethical concerns and data privacy issues surrounding AI implementation.

Proactively addressing these challenges will build trust with customers and mitigate potential risks associated with AI adoption.

4

Explore AI-powered solutions for dynamic pricing, virtual try-on experiences, and conversational commerce.

These emerging applications of AI technology have significant potential to enhance the customer experience and drive revenue growth in retail and eCommerce.

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Co-Founder & CEO
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ABOUT THE AUTHOR

eTail Insights

We launched eTail in 1999 and have been dedicated to supporting the growth of the retail industry ever since. What started off as 100 people in a room discussing where this sector is headed has led to 2,000 senior-level eCommerce executives being inspired whilst learning and developing their company as well as their careers.

For more information, please visit **www.etailwest.wbresearch.com.**

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Narvar is the #1 platform for intelligent personalization "beyond buy," trusted by 1,500+ of the world's most admired brands—including Sephora, Levi's, Sonos, Warby Parker, and LVMH. Powered by IRIS™, Narvar leverages billions of data points to create seamless experiences that build trust, safeguard operations, and unlock sustainable growth. Recognized multiple times by Fast Company as one of the most innovative companies, Narvar is redefining the post-purchase journey—from returns and exchanges to tracking, notifications, and fraud prevention—simplifying the everyday lives of consumers while driving business success for retailers.

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Founded in 2005, Bazaarvoice is headquartered in Austin, Texas, with offices in North America, Europe, And Australia. For more information, visit **www.bazaarvoice.com**.

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Advanced search requires both intelligent technology and powerful infrastructure. Lucidworks brings its robust enterprise-grade platform together with Google Cloud's capabilities to deliver a search experience that understands your users and adapts to their needs in real-time — what we call the next generation of search and discovery technology.

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For more information, please visit **smartcat.ai.**