

# The Retail AI Revolution

Industry-Leading Voices Share  
How AI Will Reshape the Industry



# Foreword from the Producers

Welcome to the retail 'AI Revolution!' We're pleased to share this timely research report from eTail Insights that examines how artificial intelligence is reshaping our industry from the ground up.

Based on survey responses and conversations with senior retail and eCommerce leaders, our report provides insights into AI maturity, what's working in real-world deployments, and where the most significant gaps and opportunities lie. Whether you're wrestling with AI strategy development, navigating implementation, or preparing for the next wave of agentic systems, these practical insights can help.

Our goal at eTail is simple: to equip you with the insights and connections you need to step up, level up, build up, and keep up as our industry evolves. We'll continue these conversations with you at eTail Palm Springs in February 2026, where we'll bring together retail leaders to share strategies, solve challenges, and explore the future of digital commerce together. We hope to see you there.



**Elizabeth Robillard**  
Senior Portfolio Director  
**eTail**



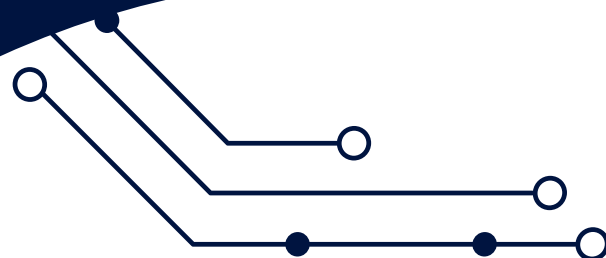
**Zainab Hayat**  
Senior Conference Producer  
**eTail**

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# Table Of Contents

2	Foreword from the Producers	15	How AI Will Transform Retail & eCommerce
3	Executive Summary	17	Conclusion: Strategic Imperative for AI-Driven Success in Retail & eCommerce
4	About the Respondents	17	Key Suggestions
4	Key Insights	18	About the Author
6	Current AI Capabilities in Retail and eCommerce	19	About Our Sponsor
10	Challenges and Priorities Arising from AI Implementation		
13	AI Investment Priorities and Workforce Strategies		



## Executive Summary

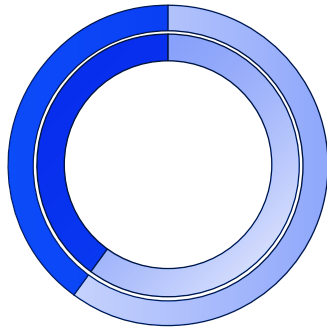
Nearly all retail and eCommerce organizations have adopted AI capabilities. However, leaders still face challenges with data privacy, implementation costs, and customer trust. Most organizations focus on tactical AI applications rather than strategic maturity. This leaves them vulnerable to emerging technologies like agentic AI systems.

Without strategic planning, the gap between current capabilities and readiness will continue to grow. This report explores how leaders are approaching AI planning, governance, and workforce development to realize the technology's full potential.

# About the Respondents

The respondents are senior leaders in marketing, IT, CX, customer analytics, eCommerce, and D2C.

## Annual Revenue



- 60% More than \$500 million
- 40% \$100 million to \$500 million

## Retail Sectors:

- Entertainment
- Food
- Travel
- Health and beauty

## Seniority:

- 25% C-suite
- 25% Vice President
- 25% Department Head
- 25% Director positions

## Key Insights

**Only 7%**

rate their AI implementations “very effective.”

**Only 4%**

have a comprehensive plan in place for AI.

**97%**

are at least “somewhat advanced” at AI-powered personalization.

**55%**

say AI-driven personalization is at least a “high priority”

**51%**

worry that AI agents will prioritize low prices over brand differentiation.

The biggest challenges to implementing AI:

• **50%**

Data privacy and compliance

• **49%**

High costs

• **47%**

Customer trust

**53%**

rate inventory and demand management as a top AI investment.

**77%**

will hire more AI and data science talent.



Formerly: CommerceHub + channeladvisor

# AI built for retail

Most AI in commerce is a flashy bolt-on of overpromised features and fragmented tools that don't scale. RithumIQ is different. It's the intelligence engine built into every layer of your Rithum solution, and it has been driving real outcomes for years.

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- Cleaner, smarter product data that fixes itself
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adidas

THE HOME DEPOT

MARKS & SPENCER

WILLIAMS SONOMA  
CALIFORNIA

JIMMY KEY

Staples

FOSSIL

zalando

Walmart

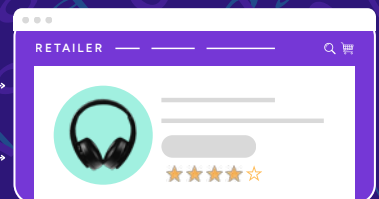


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# Current AI Capabilities in Retail and eCommerce

Most retail and eCommerce brands have embraced AI, and they continue to roll out new capabilities.



These capabilities are transforming several focus areas in the industry, including personalization, customer experience, supply chain management, and inventory optimization.

However, most organizations have not achieved true strategic maturity in AI implementation.

Only 4% of companies have a comprehensive AI plan in place. The majority are still developing their strategies (54%), and a significant portion are either experimenting (39%) or merely evaluating AI technologies without clear direction (3%).

## How would you describe your organization's AI vision and strategic approach?

We have a clear, comprehensive AI strategy driving organizational transformation.

4%

We have a developing AI strategy with some defined initiatives.

54%

We are experimenting with AI but lack a cohesive strategy.

39%

We are evaluating AI strategies but haven't committed to one yet.

3%

We have no formal AI strategy currently.

0%

I'm not sure about our AI strategic approach.

0%

Nonetheless, AI adoption is widespread in the industry. Most respondents report that their AI implementations are at least “somewhat advanced” across multiple capabilities.

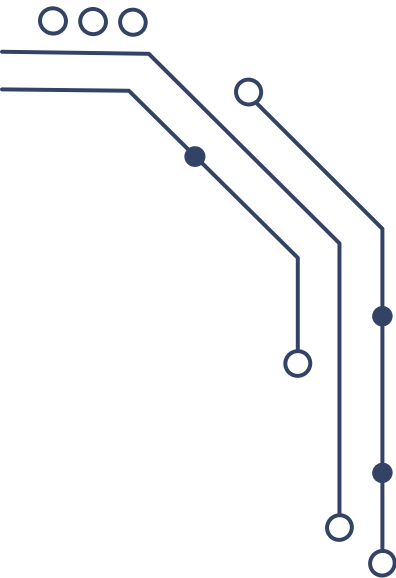
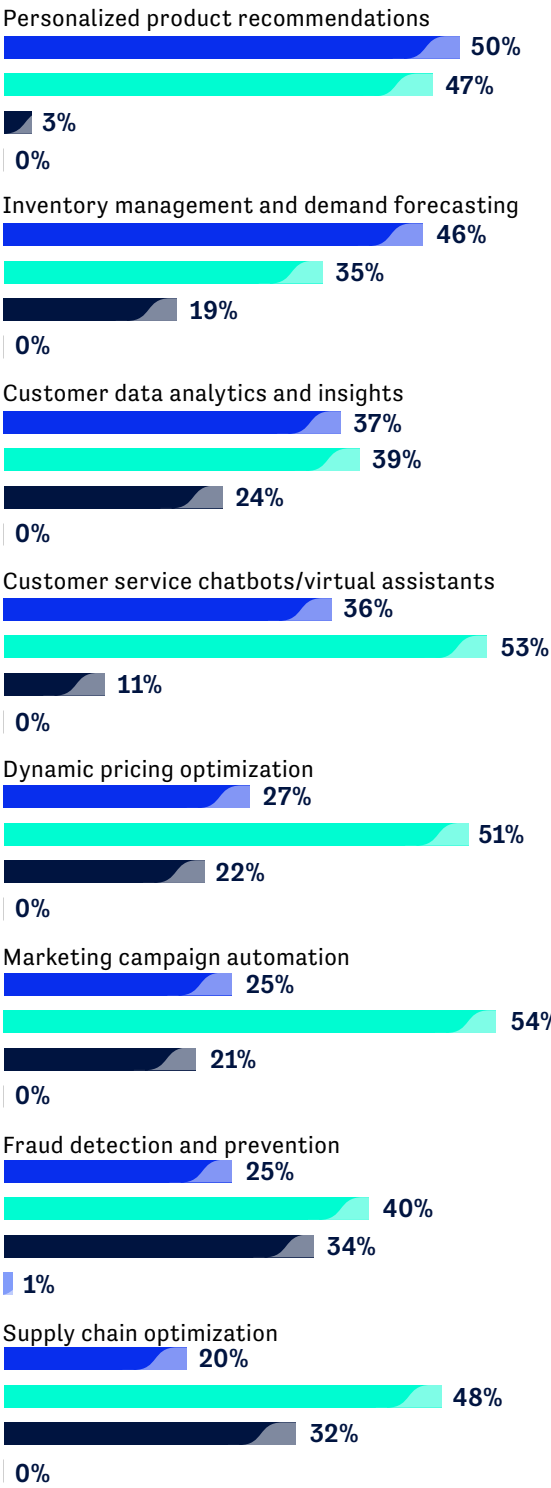
All of the respondents say their AI implementations for personalized product recommendations are “very advanced.” Significant portions of the respondents say the same about AI in inventory management and demand forecasting (46%), and in customer data analytics and insights (37%).

Notably, more than 50% of the respondents say they have “somewhat advanced” implementations of AI in marketing campaign automation (54%), customer service chatbots (43%), and dynamic pricing optimization (51%).

Areas with the lowest levels of implementation include fraud detection and prevention, as well as supply chain optimization.

How would you rate your organization's current level of AI implementation across the following areas?

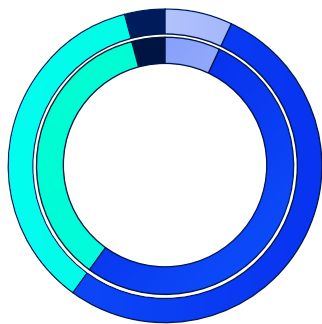
- Very advanced
- Limited implementation
- Somewhat advanced
- Not implemented



As a result of these advancements, 60% of the respondents say their AI applications have been “somewhat effective” in achieving business objectives. They’ve at least met most of their expectations.

However, more than one-third (36%) say their AI implementations have been “minimally effective.” They’ve met some of their expectations, but with limited impact.

For the AI applications you currently have implemented, how effective have they been in achieving business objectives?



- 7% Very effective: They have significantly exceeded expectations.
- 53% Somewhat effective: They have met most expectations.
- 36% Minimally effective: They have met some expectations, but with limited impact.
- 4% Not effective: They have failed to meet expectations.
- 0% It is too early to determine their effectiveness.
- 0% We have not implemented AI applications yet.

The most prominent business outcomes attributed to AI are improved inventory management (60%), more accurate demand forecasting (58%), increased order and customer lifetime value (54%), and greater cost savings in customer service (53%).

Although AI adoption is widespread across key operational areas, the industry’s low maturity in strategic planning and a focus on “somewhat effective” implementations suggest that AI’s full potential remains untapped. Moving from experimentation to systematic, results-driven deployment is the new frontier for retail leaders aiming to maximize value and impact.

Which of the following measurable business impacts have you experienced from AI implementations?





## Practitioner Perspectives: The State of AI in Retail & eCommerce

At eTail events, retail and eCommerce practitioners have acknowledged AI's transformative potential while also recognizing significant limitations. They believe generative AI, specifically, has meaningful uses, but it may not be ready for full enterprise-scale deployment.

Current applications show promise in creative content generation, customer service automation, and product discovery. Although practitioners report being "starry-eyed" by AI initially, they can quickly identify its limitations.

There is a consensus that human augmentation should be the priority, rather than replacement. AI excels at automating menial tasks like image editing, demand forecasting refinement, and product tagging, but it requires human oversight for strategic decisions, creative direction, and quality assurance.

*"AI is really about trust. People who use these tools need to feel confident in the results or know how to check and improve them. It's important to focus on a specific use case and prove that AI brings value. The best approach is to start with something small that's easy to verify, build trust from those results, and then expand step by step."*

**Joshua Ashley, Senior Director, Head of Data Science, New Balance, "Transforming Retail at Scale: the AI Readiness Imperative," eTail Boston 2025**



# Challenges and Priorities Arising from AI Implementation



Retail leaders face significant hurdles as they integrate AI into their operations. Data privacy and compliance emerge as the top challenges, with 50% of respondents citing it as their biggest obstacle, followed closely by high costs (49%) and customer trust concerns (47%).

These three challenges underscore the delicate balance retailers must strike between innovation and responsibility.

*“AI is excellent at identifying all the hidden patterns in non-normalized data. We’ve used it to understand what people are asking and what themes are arising in their conversations. We then tailor our messaging around those themes, so instead of waiting for someone to ask the question, we can answer them up front.”*

**Department Head, eTail Boston 2025**

## Which of the following challenges has your organization faced when implementing AI solutions?

Regulatory compliance and data privacy concerns  
50%

High implementation and maintenance costs  
49%

Customer acceptance and trust issues  
47%

Difficulty measuring ROI and business impact  
45%

Vendor selection and technology reliability  
41%

Integration with existing legacy systems  
37%

Change management and employee resistance  
37%

Lack of technical expertise and skilled personnel  
33%

Data quality and integration issues  
32%

Insufficient budget allocation for AI initiatives  
10%

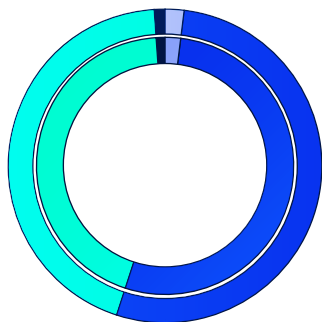
This does not apply.  
0%

Other (please specify)  
0%

Despite these obstacles, the industry's commitment to AI remains strong, especially when it's being used to improve the customer experience. An overwhelming 55% of respondents rate AI-driven personalization as either a high priority (53%) or a top priority (2%) in their customer experience strategy.

This demonstrates that retailers view personalized experiences as essential to staying competitive, even amid implementation challenges.

### How important is AI-driven personalization in your customer experience strategy for the next 12 months?



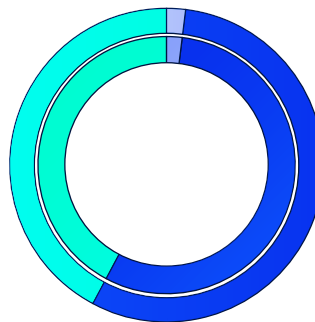
- 2% Top priority: This is critical to our competitive advantage.
- 53% High priority: This is important for customer satisfaction.
- 44% Moderate priority: This is nice to have, but not essential.
- 1% Low priority: This is not a focus area currently.
- 0% Not a priority: Other initiatives take precedence.
- 0% I'm not sure.

However, preparation for the next frontier of AI reveals a concerning gap. When it comes to making products discoverable by agentic AI systems, 98% of respondents are either only partially prepared (56%) or still in early exploration stages (42%).

Only 2% of the respondents are “fully prepared.” They already have AI-friendly structured product feeds and governance in place. If more organizations don't reach this point, the industry may be caught off guard by the rapid emergence of AI agents in commerce.

Lack of preparedness could lead to errors, which could cause compliance issues and potential backlash from customers.

### How prepared are you to make your products discoverable by agentic AI?



- 2% Fully prepared: We already have AI-friendly structured product feeds and governance in place.
- 56% Partially prepared: We have pilots and/or integration(s) in progress.
- 42% Early exploration: We are still determining our requirements.
- 0% Not prepared: We want to do this but haven't given it much thought.
- 0% N/A: We are not interested in making our products discoverable by agentic AI.


This concern is amplified by a strategic worry shared by 51% of respondents: they fear that AI agents will prioritize lowest prices over brand differentiation as commerce shifts into agentic environments.


This finding reveals a critical tension in the industry. While retailers invest heavily in building distinctive brand experiences, they worry that autonomous AI shopping assistants may reduce their carefully crafted differentiation to simple price comparisons.


Without the right preparations, this could potentially commoditize entire categories and erode the premium positioning many brands have worked years to establish.


## What concerns you most about commerce shifting into agentic AI environments?


AI agents prioritizing lowest price over brand differentiation  51%

Lack of visibility into AI-driven decisions  31%

Reduced ownership or control of the customer relationship  15%

Data privacy and compliance risks  3%

We have no concerns about shifting into agentic AI environments.  0%

Other (please specify)  0%

## Practitioner Perspectives: Key Challenges of Generating Value from AI

Based on analysis of practitioner discussions from eTail conference transcripts, the biggest challenges of generating value from AI implementations center on establishing trust, overcoming organizational resistance, and proving ROI.

For example, many practitioners deploying AI agents don't fully trust them without human oversight.

They explain that they require a “human in the loop” concept, so outputs and results can be verified.

Agents can be “so driven to complete the task” that they find unintended paths to outcomes, according to one leader.

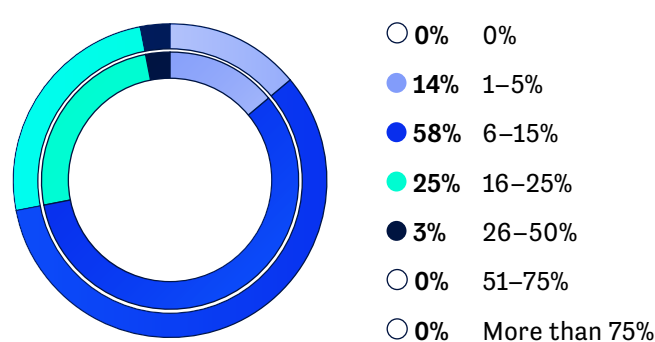
Lack of trust is also a key consideration in organizational resistance. While some employees are reluctant to adapt to AI due to fear of job replacement or difficulty adjusting to change, others need more reassurance that AI technologies can actually improve their workflows, not create more problems for them to manage.

Finally, it's still difficult to attribute business value directly to specific AI solutions. Third-party products, such as ChatGPT, lack server-side infrastructure to capture ROI. Furthermore, moving workflows over to AI doesn't necessarily equate to cost or time savings, at least not until those processes are mature enough to make a noticeable difference.

# AI Investment Priorities and Workforce Strategies

Organizations are devoting significant resources to artificial intelligence expansion and AI-related initiatives. Specifically, 58% are devoting 6–15% of their IT budgets to such projects.

What percentage of your total IT budget is currently allocated to AI-related initiatives?



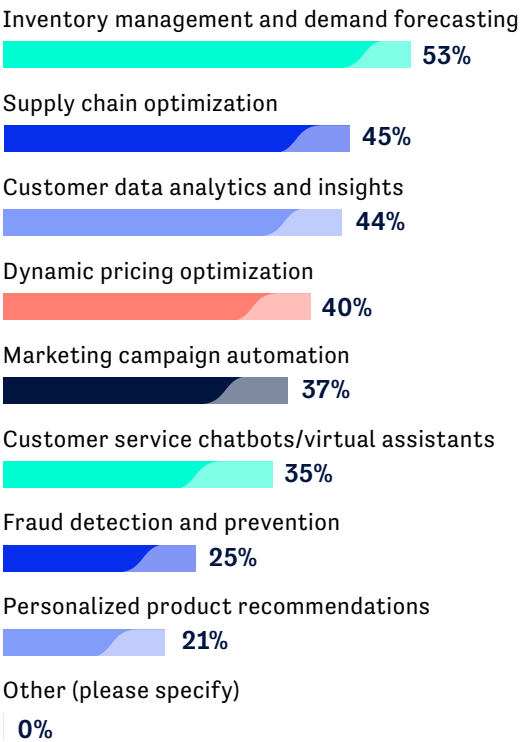
With those funds, leaders are prioritizing operational efficiency as they plan their AI investments for next year. Inventory and demand management leads the way at 53%, followed by supply chain optimization at 45% and customer analytics at 44%.

These investment priorities reveal a practical, behind-the-scenes focus rather than consumer-facing applications. While customer analytics ranks

third, the emphasis on inventory management and supply chain suggests organizations are prioritizing cost control and operational performance over flashy customer experiences.

This likely reflects current economic pressures and the immediate ROI available from streamlining operations.

Which of the following AI applications are your top three investment priorities for the next 12 months?



The workforce impact of AI adoption shows two simultaneous trends. At 77%, a strong majority of firms are actively hiring AI and data science talent, signaling a serious commitment to building internal capabilities. At the same time, 56% are reducing headcount in areas where AI automates tasks.

AI is reshaping retail jobs, not simply eliminating them. Companies need specialized expertise to manage AI systems, even as automation reduces certain roles.

Many organizations appear to be net-positive on employment as they invest in this transformation, though the nature of work is clearly evolving.

## How is your organization addressing the impact of AI on your workforce?

We are hiring new talent with AI and data science expertise.



We are reducing our workforce in some areas where AI provides automation and/or efficiencies.



We are actively retraining employees to work alongside AI systems.



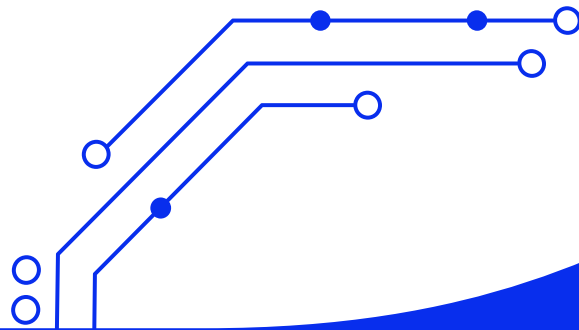
We are focusing on augmenting human capabilities.



We are not formally addressing the impact of AI on our workforce at this time.



Other (please specify)



## Practitioner Perspectives: Agentic AI is the Next Frontier

Conversations between retail and eCommerce leaders and eTail Insights suggest that Agentic AI is the next big focus for AI investment. Although leaders have expressed concerns about the trustworthiness of AI agents, they recognize that their potential to deliver value is high.

Unlike generative AI that produces content, agentic systems follow the cycle: perceive, reason, decide, act, learn, and collaborate. Practitioners see applications in demand forecasting refinement, inventory optimization, and pricing.

Forward-thinking organizations are building hierarchies of specialized agents where one agent reviews another's work. This creates a conflict resolution mechanism through orchestration layers.

Nonetheless, achieving this type of hierarchy will require explicit guardrails, with each one telling agents "Expressly what not to do," as one practitioner put it. More importantly, checkpoints involving human intervention must be integrated for high-stakes decisions.

# How AI Will Transform Retail & eCommerce

In conversations with eTail Insights, the respondents shared their most successful AI implementations to date and what specific business value they delivered. They also shared their perspectives on how AI will reshape their sector.



## AI Implementations Delivering Real Value

Respondents report tangible success with AI across marketing, operations, and customer engagement, often delivering measurable improvements in efficiency and revenue. Marketing applications dominate, particularly around personalization and automation.

One respondent says that “one of our biggest successes was AI’s role in optimizing our email subject lines,” while another achieved significant results with AI-optimized send times: “Open rates went up significantly when we built a custom AI model to optimize our email marketing send times based on individual customer behavior.”

These efforts extend to content generation at scale, ad targeting, and personalized recommendations that directly drive conversions.

Operational gains are equally impressive. AI-powered inventory management emerged as a frequent win, with retailers praising systems that reduce stockouts, predict demand with precision, and enable location-specific promotions.

“We are using AI for inventory management now, and it has been a game changer,” shares one respondent, capturing the sentiment echoed by many.

Dynamic pricing models allow retailers to stay competitive while protecting margins, and AI-driven fraud detection significantly reduces chargebacks and coupon abuse. Supply chain optimization, waste reduction for perishables, and predictive maintenance for equipment further demonstrate AI’s ability to streamline back-end operations.

Customer support and experience improvements round out the value proposition. AI chatbots cut response times dramatically, while sentiment analysis tools enable faster identification and resolution of recurring issues.



Statements like, “We used AI to enhance sales of seasonal items” and “AI has helped us understand peak arrival patterns, which led to smarter staffing and in-store preparation” illustrate how retailers are deploying AI to anticipate customer behavior and allocate resources more effectively, ultimately creating smoother, more responsive retail experiences.

### Perspectives on How AI will Reshape the Sector

Respondents to the study see AI as a game-changing force in retail and eCommerce, with impacts spanning both operational efficiency and next-level customer experiences. There is a resounding belief that AI will automate repetitive tasks, such as price tagging, inventory tracking, and even workforce scheduling.

One respondent says, “AI will start automating a lot of manual tasks like price tagging or tracking inventory in real time, making operations smoother and faster,” underscoring anticipated gains in speed and accuracy.

A major theme is hyper-personalization fueled by AI. From tailored promotions to individualized product recommendations, retail is expected

to feel increasingly intuitive: “making browsing in-store as personalized as when shopping online,” predicts one participant.

Respondents expect retailers to leverage AI for more effective segmentation, predicting customer needs before they emerge, and customizing everything from loyalty programs to product displays in real time.

AI’s influence will also extend into strategy and innovation.

“Next year, retailers will begin using AI to inform strategic decision-making,” a respondent emphasizes, highlighting AI’s value for demand forecasting, sustainability efforts, and fraud prevention.

With AI acting not just as a reporter but as an immediate actor, the retail sector anticipates moving “from reactive to predictive,” ushering in a new era where data-driven insights allow for smarter, more responsive business decisions.



*“Now that artificial intelligence is embedded in everything we do, people are starting to see ways it can help us tackle challenges or even turn those challenges into new opportunities. Many of the brands we work with want to know how AI can help them become more flexible, adapt quickly, and use their data to make their creative efforts more effective.”*

**C-Suite Executive, eTail Boston 2025**



# Conclusion: Strategic Imperative for AI-Driven Success in Retail & eCommerce

Retailers have rapidly adopted AI with notable gains in inventory management and customer service. However, most recognize their efforts remain tactical and fragmented. Despite operational improvements, few organizations have fully realized AI's potential for transforming customer experiences, improving efficiency, or reducing costs.

The research highlights major gaps in AI planning and implementation. Specifically, retailers lack comprehensive AI roadmaps, struggle to convert efficiency gains into differentiation, and are unprepared for disruptive agentic AI systems.

For true impact, leaders must move from isolated use cases to unified strategies grounded in clear governance and specialized talent. The urgency to mature AI strategy is growing, as new technologies make systematic planning more critical than ever.

Organizations that treat AI as a foundational business capability will lead the way.

## Key Suggestions

**Develop a comprehensive AI strategy that extends beyond tactical implementations.** Most retailers are experimenting with AI without a clear strategic direction, limiting their ability to realize transformative business value and competitive differentiation.

**Establish robust governance frameworks for AI agent deployment before widespread adoption.** The industry's lack of preparedness for agentic AI systems poses significant risks to brand differentiation and customer trust if autonomous shopping assistants reduce products to simple price comparisons.

**Prioritize AI initiatives that strengthen brand differentiation rather than just operational efficiency.** While inventory management and supply chain optimization deliver immediate returns, retailers must balance these investments with AI applications that enhance unique value propositions and customer experiences.

**Build specialized AI talent acquisition and retention strategies to support long-term transformation goals.** The majority of organizations are hiring AI and data science professionals, but success requires comprehensive workforce development that combines technical expertise with retail industry knowledge and strategic thinking capabilities.

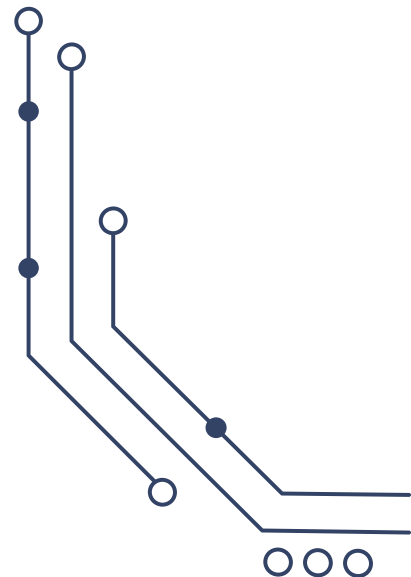
# About the Author

## eTail Insights

eTail Insights, the industry research and digital publishing arm of eTail, delivers cutting-edge data and analysis on trends, challenges, and opportunities in the retail and eCommerce sectors. Through comprehensive research reports, webinars, and thought leadership initiatives, we empower senior-level retail leaders to make informed strategic decisions and stay ahead in the rapidly evolving digital landscape.

Our deep industry intelligence not only informs retail leaders but also connects innovative solution providers with key decision-makers, fostering a dynamic ecosystem that drives the future of digital retail.

For more information, please visit [wbrinsights.com](http://wbrinsights.com).



# About Our Sponsor



Rithum (formerly CommerceHub and ChannelAdvisor) is a leading global commerce solution that supports the entire commerce journey—from product listing and discovery to order fulfillment and performance optimization. By streamlining the path to purchase, Rithum enables brands and retailers to operate more efficiently, so they can maximize profitability.

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