



PoV

Reimagining Omni Retail with AI



How the new road to retail is being paved?

Everyone's talking about AI—how it's transforming customer experiences and more recently, the implications of ChatGPT and generative AI. From Netflix recommendations to Amazon's walk-out technology, Uniqlo's fit finder, hailing an Uber, iRobot's vacuum cleaner, Google Lens's optic recognition, and map navigation, AI is a part of our daily lives. In retail, its enriching both the front-end shopping experience and backend efficiencies. You might not even realize, but 90% of e-commerce websites today use AI-powered chatbots.

While there are future concerns of AI causing bias, data misinterpretation, and job loss, it's also saving lives, ensuing safety during the COVID era and, and improving efficiency. As we rely more on technology, balancing AI's problem-solving with human creativity is crucial. In fact, responsible AI deployments essential.



The power of AI in retail

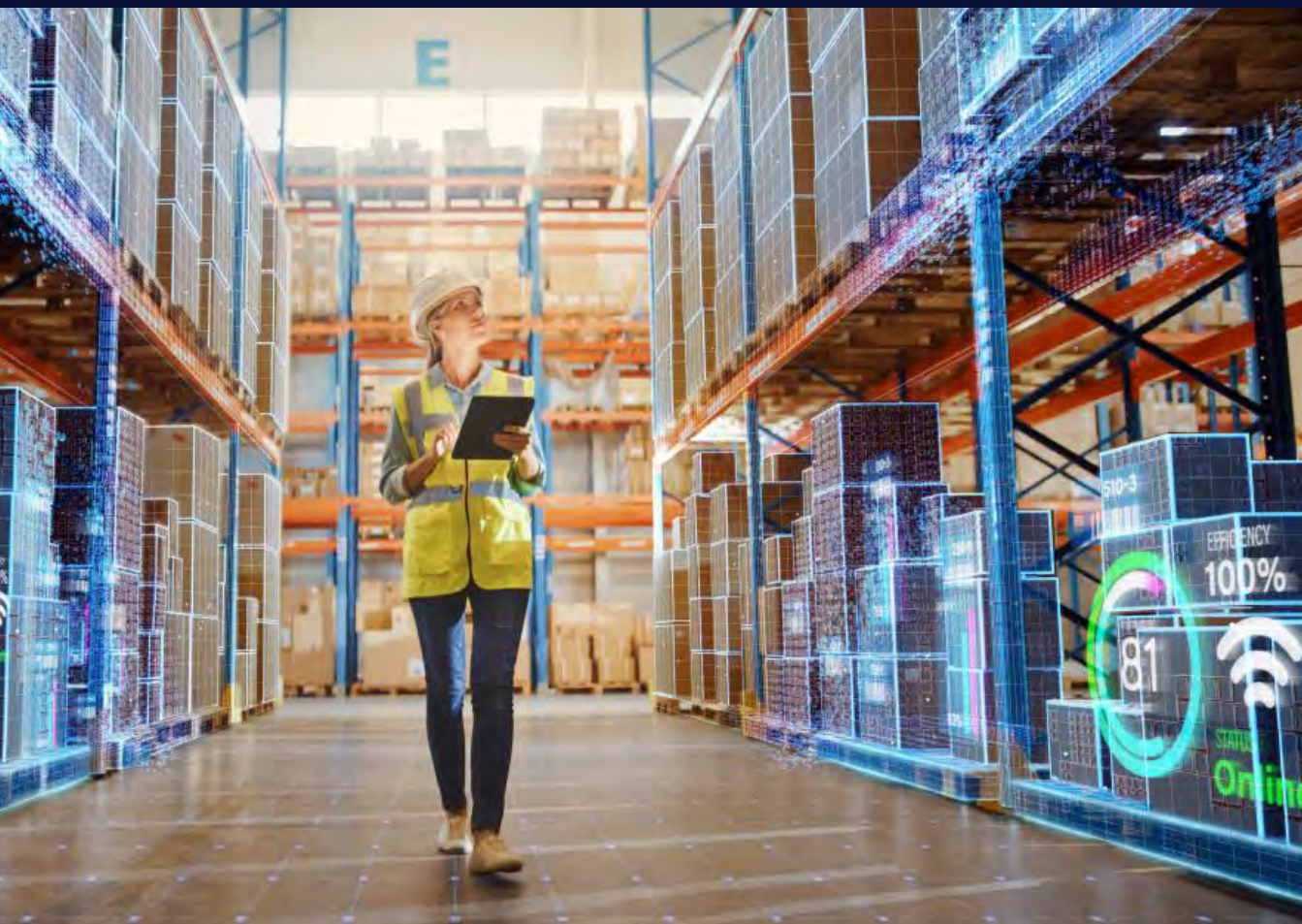
According to a 2024 survey¹ by NVIDIA 69% of retail and e-commerce leaders have embedded AI into their business operations. AI is increasingly powering e-commerce capabilities, from personalized recommendations and voice-enabled shopping to facial recognition payments for customers and demand forecasting. When considering in-stores experiences, the predictive models of AI help in planogram compliance, cashier-less checkouts, and AR/AI apps for customers and associates. These use cases bring omni-channel experiences to life.

Retail leaders are planning AI strategies for the long run, taking multiple AI projects to flight plan rather than one at a time. They are using AI to drive business transformation in areas of supply chain, merchandising, marketing, finance, and accounting, modernizing their processes to become faster, more automated, and infused with accurate decision-making. IDC research indicates² that the total AI-centric systems market will reach \$300 billion by 2026, with retail accounting for approximately 15%, growing at an unprecedented CAGR of 29% over last three years.



How AI can accelerate omni retail value?

Here are five key areas where AI adoption in retail has been successful, delivering value at scale across channels.



01 AI supported personalized recommendation

AI's biggest playground is in creating personalized shopping recommendations, especially online and in social commerce. According to Forbes, 92% of consumers are willing to share personal data to allow fashion brands to tailor and personalize product offerings. Retailers need AI and machine learning to handle the massive data points for predictive recommendations. Imagine a brand with 10,000 active SKUs, 100 stores, and a loyal customer base of 1 million. If 60% of these customers are engaged on social media, crunching two years of transactional history and crawling the web for trends involves over 915 million data points. Behind this impressive feat is a team of specialists designing AI engines to decide which recommendations to show. So the question is, are retailers still investing heavily in this space? Yes!

As per KPMG's 2023 retail top priorities, 51% of C-suite executives plan to spend more on customer experience, the second biggest priority after supply chain efficiency. ³

Optimal application: AI hyper-personalization tools safeguard customer privacy, optimize AR and VR for personalized experiences across channels, and implement ChatGPT-powered search and post-purchase chatbot personalization.



02 AI in product and merchandising decisions

AI aids in making data-backed decisions in design and merchandising, moving beyond gut instincts. From creating AI-designed outfits for fashion shows to new flavor R&D at PepsiCo, designing AI merchandise dashboards to reduce overstock, or IKEA's AI-powered 3D design, AI's capabilities are vast. DALL-E2, for instance, can turn text into images, enhancing product development processes.

AI can generate new product designs, collaborate with creative teams, and use AI-powered analysis and predictions for successful new product introductions. AI has proven to make product development faster and smarter⁴ up to 600% by providing actionable data points when they matter most.

Optimal application: AI tools predict goal scenario planning, optimize micro-assortment mixes, minimize markdowns, and design product combinations for new products.



03 AI in marketing

AI usage in marketing has skyrocketed. According to Salesforce, up to 84% of marketing leaders used AI in the last couple of years, nearly three times more than pre-COVID levels.⁵ AI's early use in retail involved sending personalized customer communications on email about abandoned carts or "we miss you" messages. The 2023 AI marketing report by Influencer Marketing Hub shows AI's widespread use in chatbot/customer service, content production (44%), conversion optimization by 12.3%, and predictive analytics by 12.2%. Moreover, leaders spend 40% of their marketing budgets on AI-driven campaigns.⁶

ChatGPT and generative AI are set to disrupt marketing further. ChatGPT has partnerships with companies like Instacart and Shopify to power their shopping assistance chatbots. It can generate personalized content or create product descriptions, speeding up the listing process.

Optimal application: AI predicts cost to serve, uses generative AI messaging for personalized customer communication, and enhances content generation and curation.



04 AI in supply chain efficiency

AI boosts supply chain operations in multiple ways. From warehouse robotics and demand forecasting to IoT in manufacturing and inventory management, AI enhances efficiency. Examples include RPA order processing, digital twin simulations for critical alerts, predictive maintenance to lower costs, and ML algorithms predicting store-level demand.

Retailers like Zara use AI for demand forecasts, adjusting production schedules accordingly. Lowe's uses camera detection for shelf replenishments, and Walmart's Me@Walmart app helps associates find items in delivery cartons. A McKinsey report shows that 94% of retailers see omni-channel fulfillment and 80% see AI in integrated omni planning as top use cases.⁷

Optimal application: AI makes dynamic adjustments to demand forecasts, triggers alerts and readjusts production and replenishment projections, and sends real-time supply chain insights for action.



05 AI for good

AI for Good is a UN digital platform where AI innovators collaborate to tackle social, environmental, and humanitarian challenges. From healthcare solutions, climate data monitoring, to transparent fund and vaccine disbursement, responsible AI development can improve our world. The fashion retail industry, the second-largest polluter, needs to respond with green tech, minimizing waste, and promoting conscious consumption and production. Examples include Taranis’s agriculture AI platform using drones to monitor crops and reduce water usage, Nestle’s AI in production to minimize waste, Walmart’s AI for fresh food inventory planning, Levi’s AI models, and Prewave’s tool checking suppliers for ethical practices compliance. Carrefour’s AI bakery project reduced waste by 15%, and McKinsey reports AI can reduce prediction errors by 50% and overall stock amounts by 20-50%, giving compelling reasons to use AI for sustainability. MIT reports the cloud now has a larger carbon footprint than the airline industry, and a single data center might consume electricity equivalent to 50,000 homes.⁸

Optimal application: AI for energy and emissions monitoring and reporting, early waste prediction and management, transparency, maximizing recycled materials, and using greener data centers.



Balancing art and science to leverage AI benefits

This is the era of conscious and responsible retail, balancing the speed needed for omnichannel business with power of AI. Companies prioritize the adoption of AI to increase efficiency, control costs with automation, and scale digital experiences while being sustainable.

At LTIMindtree, we have partnered with many RCG companies to accelerate their digital transformation using AI and ML. Our propriety solutions, like Fosfor, Apex, and NXT Insights powered by AI, have unlocked business benefits such as **personalization driving 40% higher intent to purchase**, improved forecasting accuracy driving **3% incremental sales**, and back-office automation improving the auditing process by 50%. With expertise in strategy, merchandising, stores, omnichannel, supply chain operations, manufacturing, data, and sustainability, we guide our clients through multiple use cases from proof of concept (PoC) to large scale deployment.

Retailers leveraging AI tools effectively while preserving their unique point of view to connect with customers and improve process efficiencies stand to gain a competitive advantage in the crowded market.

Wrap up

In a rapidly changing retail landscape, AI is transforming customer experiences and operational efficiency. From personalized recommendations to smarter supply chains, its applications are vast. As retailers embrace this technology, they not only drive growth but also enhance sustainability and ethical practices. By balancing innovation with a human touch, businesses can create meaningful connections with customers, ensuring they thrive in a competitive market while paving the way for a brighter, more responsible retail future.

Citations

- i. *How AI is reinventing the world of retail*, UST AlphaAI Team:
<https://www.ust.com/en/insights/how-ai-is-reinventing-the-world-of-retail>
- ii. *Worldwide Spending on AI-Centric Systems Forecast to Reach \$154 Billion in 2023*, NEEDHAM, 7 Mar 2023:
<https://www.idc.com/getdoc.jsp?containerId=prUS50454123#:~:text=The%20ongoing%20incorporation%20of%20AI,left%20behind%20%E2%80%93%20large%20and%20small>
- iii. *Executives top challenges priorities*, KPMG, 2023:
<https://chainstoreage.com/kpmg-retail-executives-top-challenges-priorities-2023>
- iv. *Cognitive computing gets creative*, Jason Grech, IBM:
<https://www.bbc.com/storyworks/future/an-intelligent-future/cognitive-computing-gets-creative>
- v. *26 Impressive Examples of AI in Marketing*, Phil Norris, Social Media Strategies Summit, April 3, 2024:
<https://blog.socialmediastrategiessummit.com/10-examples-of-ai-in-marketing/>
- vi. *Artificial Intelligence (AI) Marketing Benchmark Report*, Djanan Kasumovic, Influencer Marketing Hub, January 25th, 2024: <https://influencermarketinghub.com/ai-marketing-benchmark-report/>
- vii. *Global AI Survey AI proves its worth, but few scale impact*, McKinsey Analytics, McKinsey & Company:
<https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Artificial%20Intelligence/Global%20AI%20Survey%20AI%20proves%20its%20worth%20but%20few%20scale%20impact/Global-AI-Survey-AI-proves-its-worth-but-few-scale-impact.ashx>
- viii. *Green Intelligence: Why Data And AI Must Become More Sustainable*, Bernard Marr, Forbes, March 22, 2023:
<https://www.forbes.com/sites/bernardmarr/2023/03/22/green-intelligence-why-data-and-ai-must-become-more-sustainable/?sh=394cdf1f7658>

Author bio



Nupur Gupta

Managing Principal, RCG, LTIMindtree

Nupur Gupta is the Managing Principal for the RCG domain practice at LTIMindtree. She has over 24 years of expertise in the retail industry, focusing on business consulting, thought leadership, fashion and merchandising.

LTIMindtree is a global technology consulting and digital solutions company that enables enterprises across industries to reimagine business models, accelerate innovation, and maximize growth by harnessing digital technologies. As a digital transformation partner to more than 700 clients, LTIMindtree brings extensive domain and technology expertise to help drive superior competitive differentiation, customer experiences, and business outcomes in a converging world. Powered by 81,000+ talented and entrepreneurial professionals across more than 30 countries, LTIMindtree — a Larsen & Toubro Group company — solves the most complex business challenges and delivers transformation at scale. For more information, please visit <https://www.ltimindtree.com/>.