

## Executive Summary

This report delves into the transformative potential of generative Artificial Intelligence (AI) within the retail supply chain. Through an analysis of key findings, it becomes evident that generative AI holds promise in revolutionizing every aspect of the connected supply chain. The technology's ability to generate specialized recommendations, dynamic adjustments, and efficient chatbot-driven customer service offers retailers a competitive edge and more. However, challenges such as implementation costs and other considerations must be navigated with diligence. Successful integration of generative AI demands a strategic approach that balances innovation with responsible and ethical deployment, ensuring that retail chains harness the technology's benefits while addressing potential risks and concerns.

PwC, as an industry-focused company that offers professional services such as audits, assessments, and consulting, has been at the forefront of the AI technology boom in recent years. Although artificial intelligence is not a recent technology, recent generative advancements in this sector have made it easier for businesses and consumers to access and race to take advantage of this technology. Through studying the histories of generative AI, the current implementation examples, use case studies, risks of implementation, and projecting future growth, our team's goal is to provide PwC and their clients with the most informed recommendations for any decisions to implement generative AI in any sector of the supply chain. What this report explores is the integration of generative AI in the retail supply chain. The studies and findings delve into the potential benefits, challenges, and strategic implications for businesses operating in the retail sector. Our primary goal was to evaluate the feasibility and impact of integrating generative AI.

Our team employed a multifaceted methodology in our research, including a comprehensive literature review and case studies of companies like Walmart and H&M that have successfully implemented generative AI in their supply chain. Additionally, our team reached out to the PwC team to gain more knowledge and information from them. Our research findings underscore the substantial potential of generative AI in revolutionizing the retail supply chain. Generative AI-driven algorithms have the most potential to enhance demand forecasting, optimize inventory levels, improve operational efficiency while reducing cost, and improve customer satisfaction. Successful implementation, however, requires a robust data infrastructure, leadership, solid technical abilities, and organizational readiness for generative AI implementation. While the benefits are promising, the integration of generative AI in the retail supply chain poses several challenges. These include concerns related to data security, the need for skilled personnel to manage AI systems, and potential resistance to change within organizations. To address these challenges, our team recommends a phased approach to implementation. Individual clients should use a variety of recommended methods to assess their own retail supply chain and identify areas for improvement. Performing technology audits and benchmarking current

performance metrics gathered from previous assessments with competitors can highlight areas calling for action. Collaboration with technology experts and continuous monitoring of AI systems are also crucial to ensure optimal performance and adherence to ethical standards.

Looking ahead, the integration of generative AI in the retail supply chain presents exciting opportunities for innovation. This includes the development of generative AI-governed operations, reducing management difficulties, and enhanced retailer and customer experiences. Companies that embrace these opportunities stand to gain a competitive advantage in the evolving retail landscape. In conclusion, this report provides valuable insights into the potential of generative AI in reshaping the retail supply chain. While challenges exist, strategic planning, organizational readiness, and a comprehensive understanding of generative AI's applications in business are essential for unlocking the full benefits of AI integration. PwC can leverage these findings to guide clients in navigating the complexities of adopting generative AI and positioning themselves for success in the retail industry.