

Artificial Intelligence in Supply Chain Market Assessment, By Component [Hardware, Software, Services], By Size [Small-scale Business, Mid-scale Business, Large-scale Enterprise], By Solution Type [Fleet Management, Risk Management, Supply Chain Planning, Warehousing Management, Virtual Assistant, Freight and Shipping Management, Others], By End-user [Automotive, Healthcare, Aerospace, Manufacturing, Retail, Food and Beverages, Other], By Region, Opportunities and Forecast, 2017-2031F

<https://marketpublishers.com/r/AF8DCD451274EN.html>

Date: March 2025

Pages: 225

Price: US\$ 4,500.00 (Single User License)

ID: AF8DCD451274EN

Abstracts

Global artificial intelligence in supply chain market size was valued at USD 5.05 billion in 2023, which is expected to reach USD 31.08 billion in 2031, with a CAGR of 25.5% for the forecast period between 2024 and 2031.

Artificial intelligence is revolutionizing the supply chain sector by enhancing operational effectiveness, cutting expenses, and raising customer satisfaction. Artificial intelligence in supply chains has the power to fundamentally change how goods are handled, distributed, and moved. In the coming years, supply chains will likely become more autonomous as AI-driven systems will handle a large portion of the procedures from delivery to procurement. Businesses that can invest in and set up their operations to make use of AI's potential in the supply chain can gain a clear competitive edge from the technology. Large volumes of supply chain data may be ingested by AI-enabled solutions, which can identify production issues, upstream or downstream shortages, certify supplies and components, and follow them across the whole supply chain.

Artificial intelligence and automation have been increasingly prevalent in supply chains over the last ten years, providing organizations with the chance to improve productivity, enhance customer experience, and eliminate expenses. The application of artificial intelligence in supply chains has grown significantly. For instance, according to the recent Mecalux, S.A. data published in September 2023, 90% of executives intend to invest more than USD 1 million a year in cutting-edge technologies, and 58% of them believe that AI has the most potential to revolutionize the sector and provide them a sustained competitive edge. Digital supply chains are becoming a global trend due to the increased investment in technology. Furthermore, 86% of the participants anticipate that supply networks will become 'autonomous, digital, connected, agile, and intelligent' by 2027.

For instance, in November 2023, Amazon SageMaker presented five enhanced features, such as accelerated model training, reduced installation expenses, and a no-code feature in SageMaker Canvas. SageMaker facilitates ML innovation at scale by training industry-leading models like Jurassic-2, Stable Diffusion, IDEFICS, Falcon 40B and 180B, and StarCoder.

Logistics Automation Promote the Market's Growth

By enabling the application of AI technologies to optimize and simplify many areas of logistics and supply chain management, logistic automation contributes to artificial intelligence in the supply chain market. Demand forecasting, better routing and delivery, better loading procedures, and improved inventory management are being done with AI.

For instance, AI can assist companies in forecasting demand, figuring out the best routes for delivery trucks, and better control stock levels. The expansion of artificial intelligence in the supply chain market is being driven by greater efficiency, cost savings, and improved customer satisfaction that result from this integration of AI into logistics and supply chain management.

For example, in November 2023, with Oracle Fusion Cloud Inventory Management, Oracle unveiled more mobile features for managing medical inventory. The features are designed to decrease inventory errors, increase the effectiveness of restocking, and improve visibility for more accurate demand forecasting and stock availability.

Warehouse Automation Fueling to Artificial Intelligence in Supply Chain Market

By using AI technologies to improve productivity, efficiency, and safety in warehouse management, warehouse automation is leading the way in the supply chain industry's integration of artificial intelligence. Cobots and other AI-enabled technologies are being used in warehouses to automate tedious operations, streamline workflows, and enhance inventory management. Businesses can increase overall operational efficiency, expedite order fulfillment, and achieve higher inventory control accuracy by utilizing AI. The market for supply chains is being revolutionized by the incorporation of AI into warehouse automation, which results in lower costs, higher customer satisfaction, and a more responsive and flexible supply chain.

For instance, in October 2023, Oracle NetSuite enhanced NetSuite Analytics Warehouse with AI-powered capabilities, enhancing data management for healthcare companies and other sectors. The upgrades assist clients in developing analyses that boost productivity, cut expenses, and improve client comprehension, which can contribute to the utilization of data for innovation and expansion.

Demand Forecasting Drives Artificial Intelligence in Supply Chain Market

Supply chain operations can be optimized, thereby overstocking and stockouts can be prevented, and future demand can be predicted by using AI technologies, which are the driving force behind artificial intelligence in supply chain market. To produce precise demand estimates, artificial intelligence systems examine vast amount of data, including past trends, seasonality, and outside influences. This makes it possible for companies to better plan their marketing and production initiatives, modify inventory levels, and respond to market fluctuations. Demand forecasts using AI are transforming supply chain management through lower costs, better customer satisfaction, and more dynamic and efficient supply networks.

For instance, in April 2023, Coupa Software introduced new platform solutions to enhance business continuity and supply assurance, enabling organizations to make more informed spending decisions that promote efficiency, profitability, and purpose.

Asia-Pacific Dominates the Global Market

Asia-Pacific dominates the artificial intelligence in supply chain market owing to a higher level of understanding and awareness of the prospects for the development of AI in the economy, fueled by the efforts of organizations and governments in the region. The region's market is being driven by the expanding developments in supply chain solutions and the increasing focus on the implementation of artificial intelligence.

Further driving growth in the Asia-Pacific artificial intelligence in supply chain market are the region's rapidly expanding economy, its youthful, tech-savvy population, and the growing acceptance of Internet of Things.

For instance, in November 2023, Amazon Web Services (AWS) revealed four features for AWS supply chain, which include supply planning, sustainability, visibility, and generative AI.

Recent Government Measures are Spurring the Market

Artificial Intelligence in the supply chain market has undergone a major transformation as a result of recent government efforts. Governments globally have acted to encourage the use of AI after seeing how it can revolutionize supply chain operations. These programs include offering grants and funds to stimulate AI research and development, developing legal frameworks to guarantee the moral and responsible application of AI, and encouraging cooperation between the public and private sectors. Governments in the logistics and transportation sectors are fostering innovation, increasing productivity, and advocating sustainable practices by sponsoring the research and application of AI throughout the supply chain.

For instance, in October 2023, The Global AI Governance Initiative was established to encourage the ethical advancement and worldwide oversight of artificial intelligence. The initiative seeks the creation of transparent, equitable, and effective governance frameworks and highlights the necessity of equal rights and opportunities for all countries in the development and governance of AI.

Impact of COVID-19

The COVID-19 pandemic had a positive effect on artificial intelligence in the supply chain market. The use of artificial intelligence in supply chain operations was increasing gradually before the COVID-19 pandemic, with businesses using AI tools for logistics optimization, inventory control, and demand forecasting. On the other hand, the pandemic brought attention to the weaknesses in global supply systems, causing bottlenecks and obstructions. The application of AI to supply chain resilience and risk management has received more attention in the aftermath of the COVID-19 pandemic. Predictive analytics and machine learning are two examples of AI-powered technologies that are being used to improve supply chain operations' visibility, agility, and flexibility so that businesses can react to any disruptions with ease.

Impact of Russia-Ukraine War

The Russia-Ukraine war has made a significant impact on the global supply chain, including artificial intelligence in the supply chain market. Unprecedented supply chain risks in 2022 brought about by the war have caused delays in transit, shortages of essential goods, and disruptions in several different businesses. Global leaders have adopted AI in supply chain management to lessen the effects of the war and enhance visibility, forecasting, and decision-making, but the crisis has spurred innovation. The war has brought attention to the necessity of robust and flexible supply chains, which is propelling the use of AI-powered tools to manage the changing environment and reduce interruptions.

Key Players Landscape and Outlook

The global artificial intelligence in the supply chain market is extremely competitive, with major companies having fierce competition for dominance. One significant player is Amazon.com, Inc., which uses AI to improve its delivery and logistics processes. AI-powered supply chain optimization and predictive analytics solutions are provided by Google, IBM Corporation, and Microsoft Corporation. Coupa Software Inc. offers spend management and procurement solutions powered by AI. The supply chain AI market is expected to grow and see increased industry adoption, according to optimistic projections. It is anticipated that the industry will continue to grow and innovate due to the integration of AI technologies including robotic process automation, machine learning, and natural language processing. These innovations will improve supply chain operations' sustainability, efficiency, and visibility.

In November 2023, SAP SE collaborated with Airbus to use SAP Integrated Business Planning for supply chain to transform industrial planning. Faster, more responsive production planning and increased manufacturing efficiency are possible through greater integration, collaboration, and transparency of cloud solution.

In October 2023, Infor Nexus and LSQ collaborated to extend supply chain finance initiatives and working capital, lowering obstacles for non-US suppliers, and granting early payments to international suppliers via an intuitive platform.

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

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