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Leveraging Emerging Technologies to Enhance Global Supply Chain Performance and Sustainability

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Abstract

Emerging technologies like Artificial Intelligence (AI), Blockchain, the Internet of Things (IoT), Industry 4.0, Machine Learning, Smart Contracts, Cloud Computing, Robotics, Automation, Autonomous Vehicles, Drones, and Digital Twin systems are transforming global supply chains. These technologies are enhancing efficiency, resilience, and sustainability, giving businesses strategic advantages by optimizing processes, improving decision-making, and elevating customer experiences. AI and Machine Learning provide predictive insights to anticipate disruptions and manage inventory, while IoT and Digital Twin systems offer real-time monitoring and simulation for better transparency and proactive action. Blockchain improves trust and traceability, and smart contracts automate and streamline processes. Cloud Computing enables scalable, efficient data management, while robots and automation boost productivity in manufacturing and logistics. Autonomous vehicles and drones make deliveries faster and more efficient. Combined, these technologies create interconnected and adaptive supply chains that respond quickly to disruptions and optimize resources, reduce waste, and support ethical practices for greater sustainability. This summary highlights the significant impact these technologies have on building modern, efficient, and sustainable global supply chains that offer businesses strategic advantages and better customer experiences.

Conference Track

Operations, Logistics and Supply Chain Management