

Application of AI and IoT for the Logistics Sector in Vietnam

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Abstract - The logistics sector plays an increasingly important role in Vietnam's economic development because it supports domestic distribution, international trade, manufacturing, retail, agriculture, and the rapidly growing e-commerce industry. The development of Industry 4.0 has created new opportunities for improving logistics operations through emerging technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), cloud computing, big data analytics, robotics, and automation. Among these technologies, AI and IoT have attracted particular attention because of their ability to connect physical logistics assets with digital information systems and to transform large volumes of operational data into useful predictions and decisions. IoT enables logistics companies to collect real-time information from vehicles, warehouses, containers, cargo, equipment, and transportation infrastructure, while AI can analyze these data to support demand forecasting, route optimization, inventory management, predictive maintenance, delivery-time prediction, and automated decision-making. In Vietnam, the adoption of these technologies is increasing, but significant differences remain between large logistics companies and small and medium-sized enterprises. Challenges include high investment costs, limited digital infrastructure, shortages of skilled personnel, fragmented information systems, cybersecurity risks, and difficulties in integrating data across organizations. This report reviews the application of AI and IoT in logistics, examines previous studies related to smart logistics and digital transformation, and proposes an integrated approach for applying these technologies in Vietnam. The proposed solutions focus on intelligent transportation, smart warehouses, real-time cargo monitoring, predictive maintenance, demand forecasting, cold-chain management, computer vision, and integrated logistics platforms. The report argues that AI and IoT can contribute significantly to improving the efficiency, visibility, reliability, and sustainability of Vietnam's logistics sector when they are implemented together with appropriate data governance, cybersecurity, infrastructure development, and human-resource training.

Keywords - Internet of Things, AI, Logistic.

I. INTRODUCTION

Logistics has become an important component of Vietnam's economy because the country has experienced substantial growth in manufacturing, international trade, e-commerce, and regional supply-chain integration. Logistics activities tie up manufacturers to suppliers, distributors, retailers, ports, transportation companies, warehouses and end-users. The number and complexity of these activities has grown and demand for more efficient and reliable logistics has increased. Vietnam's logistics sector is therefore undergoing a gradual transformation from traditional logistics operations toward digitally connected and data-driven logistics. Government policies and industry development programs have increasingly focused on digital transformation,

technology adoption, infrastructure development and sustainable logistics as key directions for future development of the sector [1, 2].

Despite this development, Vietnamese logistics companies continue to face a number of operational challenges. Logistics performance can be negatively impacted by transportation costs, traffic congestion, inefficient vehicle utilization, warehouse operating costs, fragmented information systems, unpredictable delivery times and insufficient visibility of goods. These issues are especially critical in major economic hubs where the number of vehicles and shipments is high. With the development of ecommerce, customers' expectations also have grown, as they have come to expect accurate delivery information, quick delivery and flexible delivery services [3]. As a result, logistics companies need technologies that can provide accurate information about their operations and support faster and more effective decisions.

Artificial Intelligence and the Internet of Things provide important technological capabilities for addressing these challenges. The IoT enables physical logistics objects to be linked with information systems via sensors and communication technologies. GPS and telematics systems can be installed in vehicles, RFID and environmental sensors can be used in warehouses and devices can monitor location, temperature, humidity, and other conditions in containers. Data collected from these devices can be pushed to a centralized or distributed data platform, enabling logistics firms to gain real-time visibility of their operations. Previous studies have identified IoT as an important foundation for the development of intelligent and connected logistics systems [4], [5].

AI provides an additional layer of intelligence to these connected systems. Rather than just gathering data, AI can analyze previous and real-time data to uncover patterns and inform operations. Machine learning algorithms can predict demand, delivery times, abnormal conditions on vehicles, optimize transportation routes, and more. AI can also be combined with computer vision to inspect packages, containers, warehouses, and vehicles automatically. AI research in the supply chain shows that AI has been increasingly used for prediction, optimization, automation, and decision support [6, 7].

AI and IoT are especially significant in the context of logistics because both are complementary technologies. IoT is used to connect physical assets and provide real-time data, and AI uses these data to make predictions and recommendations. For instance, GPS devices can be used for locating delivery vehicles, while an AI system can analyze traffic patterns, delivery schedules, historical travel times, and vehicle locations to suggest optimal routes. Likewise, warehouse sensors can be used to generate information regarding stock levels, and AI algorithms can analyze past sales and demand to see when to restock. In Vietnam, the combination of AI and IoT can help modernize logistics operations and enhance logistics company competitiveness. But it's not enough to buy technological equipment to achieve success with adoption. Businesses need to establish digital infrastructure, data management systems, cybersecurity, and human resources. The author thus conducted a literature review and introduces practical solutions for the logistics sector in Vietnam by combining AI with IoT, especially in transportation, warehousing, inventory management, cargo monitoring, maintenance, and logistics information systems.

II. RELATED WORKS

A. IoT Applications in Logistics

The Internet of Things is one of the basic technologies used to support smart logistics due to its ability to allow the interaction between physical objects and digital systems. In the traditional logistics application, information about the shipments and vehicles and inventory could be written down manually or be updated only at certain stages during the logistics flow. IoT has made this model obsolete with its ability to collect data from connected devices at any time. Sensors can monitor the location of vehicles and containers, measure temperature and humidity, record equipment conditions, and provide information about the movement of goods. This real-time data can enhance visibility and allow logistics firms to be more responsive to challenges in their operations.

Golpira et al. examined the development of Logistics-IoT and identified IoT as an important technological foundation for intelligent logistics systems [4]. Their work illustrates how connected logistics objects can help provide information for monitoring, coordinating, optimizing and decision making. IoT can thus play a role in

shifting from the traditional logistics model, which is often less well-integrated with information, to smart logistics, which is characterized by the tight coupling of physical processes and digital information systems.

Research on IoT applications in warehousing and logistics has also demonstrated the potential of connected sensors to improve inventory visibility, operational efficiency, and decision-making [5]. For instance, RFID technology can automatically identify the products and track movement through the warehouses. Environmental sensors can track the storage conditions, while cameras and connected devices can offer a warehouse activity perspective. Combined with logistics management systems, these technologies can yield real-time, more reliable information regarding inventory and operations.

The application of IoT is particularly relevant to Vietnam because logistics companies operate across large geographical areas and involve many different types of assets. Operational data can be usefully collected at truck, container, warehouse, cold-storage, port and distribution centres. Recent research on the Vietnamese logistics industry indicates that IoT is increasingly being considered as part of the digital transformation of logistics companies [13]. The use of IoT can therefore provide the data foundation required for subsequent AI applications.

B. Artificial Intelligence in Logistics

Artificial Intelligence provides logistics companies with the ability to analyze large quantities of operational data and use the results to support decisions. The logistics process includes numerous factors such as customers' demand, traffic, weather, vehicle availability, warehouse capacity, delivery schedules, fuel consumption, and inventory levels. These variables can become more and more challenging to use traditional decision-making processes. AI can analyze historical and real-time information and identify patterns that may not be easily recognized through conventional methods.

Toorajipour et al. conducted a systematic literature review of AI applications in supply-chain management and found that AI has been increasingly applied to areas including forecasting, optimization, planning, and operational decision-making [6]. The machine learning techniques are especially beneficial, as they can identify patterns in the past data and predict the future based on those patterns. In logistics, such forecasts can aid in demand forecasting, delivery time forecasting, fleet management, and inventory management.

Akbari and Do reviewed the application of machine learning in logistics and supply-chain management and identified prediction and optimization as important application areas [7]. Machine-learning systems can, for example, analyze historical transportation data to estimate future delivery times. They can also determine if there are any problems with the equipment before they happen by analyzing data about the vehicle. These capabilities enable logistics companies to shift from a reactive management approach to more predictive management.

AI can also help to optimize transportation. Traffic congestion and uncertain travel times can make transportation planning difficult, especially in large Vietnamese cities. An AI-enabled system could integrate data from GPS-enabled devices, traffic systems, past travel history, weather forecasts, and delivery needs to suggest routes and vehicle scheduling. As new information is added to the system, it can adjust its recommendations. This provides a more flexible approach than fixed transportation schedules.

Another crucial use is forecasting of demand. Effective forecasting of future demand is critical for logistics firms to optimize their warehouse space, vehicles, workforce, and stock. AI can analyze historical orders together with seasonal trends, promotional activities, regional demand, and other relevant information. Better forecasting can help businesses minimize overstocking and understocking without losing customers.

C. Integration of AI and IoT

Although AI and IoT can be implemented independently, their combination creates greater potential for logistics applications. The physical connection and real-time data collection comes from IoT, and the analysis, prediction and decision-making come from AI. This creates a continuous relationship between the physical logistics environment and the digital management system.

For instance, a logistics fleet between Hanoi, Hai Phong, Da Nang and Ho Chi Minh City. Vehicles with GPS and telematics have the ability to continuously transmit data on location, speed, fuel usage, engine state, and driving patterns. An AI system can analyze these data together with historical traffic patterns and delivery requirements. If the system detects congestion on a planned route, it can find an alternative route and alert the driver or fleet manager. The same data can also be used to predict maintenance requirements and analyze fuel efficiency.

The integration of AI and IoT can similarly improve warehouse operations. Sensors and RFID systems can track product movements and location, and AI can be used to analyse inventory patterns and make suggestions for storage or replenishment. This forms a smart warehouse where physical processes are all monitored and data-driven decisions made at all times. AI, IoT, big data, cloud computing, and other Industry 4.0 technologies have been the focus of recent research as interrelated aspects of intelligent supply chains [9] [10]. This means that logistics digitalisation is shifting from a series of technological solutions to digital ecosystems.

D. Smart Warehousing

Warehousing is one of the key applications of AI and IoT because warehouses have massive inventory and repetitive tasks like receiving, storing, picking, packing, and dispatching. Errors in these processes can result in incorrect shipments, delays, additional labor costs, and customer dissatisfaction.

Internet of Things can enhance warehouse visibility by providing automatic monitoring of products, equipment, and environment. RFID can provide information about the identity and location of products, while sensors can monitor temperature, humidity, equipment status, and warehouse occupancy. Cameras can provide additional information about warehouse activities.

AI can use this information to optimize warehouse operations. Machine-learning models can be used to monitor inventory movement and forecast demand. Computer-vision systems can spot damaged packages or check shipments. AI can additionally support identifying appropriate merchandise places, considering product demand, dimensions, weight, and regularity of merchandise motion.

For smart warehouse management in Vietnam, the study reveals that AI, Internet of Things (IoT), connectivity, big data, automation, and data-driven decision-making are increasingly critical elements in warehouse development [15]. These technologies are especially significant for massive distribution centres and ecommerce warehouses with high volumes of products and transactions.

E. AI and IoT in Transportation and Ports

Another significant sector where AI-IoT is being utilized is in transportation. GPS, sensors and telematics systems can deliver continuous data from the vehicle. This data can be utilized to track fleet location, fuel usage, driving habits, delivery status and vehicle health. AI can use these data to support fleet management and route planning. A logistics company can detect inefficient routes, estimate delivery times, and decide the distribution of the vehicles between customers. Another advantage of predictive maintenance is that it can detect abnormal trends in your engine or equipment parameters and warn you about unexpected failures before they occur.

The ports are particularly significant for Vietnam as maritime transport accounts for a considerable share of international trade. AI can be used for predictive traffic management, port operations, resource allocation, and equipment maintenance. Machine-learning applications in port operations have been studied, showing that data-driven approaches can be useful for enhancing port decision-making and operational performance [11].

The combination of IoT and AI can therefore provide ports with continuous information about containers, vehicles, cranes, and other equipment while AI systems analyze this information to support operational planning. Such applications could contribute to improving coordination between ports, shipping companies, trucking companies, warehouses, and other logistics providers.

F. Digital Transformation Challenges in Vietnam

The adoption of AI and IoT in Vietnam is affected by several organizational and technological challenges. Large logistics enterprises may have enough financial resources and technical strength to invest in digital technologies

while small and medium sized enterprises may struggle to invest in them. Sensors, software, cloud systems, system integration and employee training may be key cost challenges. According to the study on digital transformation in Vietnamese logistics enterprises, organizational capability, leadership, employee skills, technology facilities and other factors are crucial factors that impact the transformation process [12]. This means, it is not possible to manage technology adoption without managing organizational development. AI, IoT and big data usage in logistics in Vietnam also has been studied, with the identified challenges being investment needs, lack of skilled labor, digital infrastructure, management awareness and regulations [13, 14]. The results indicate that Vietnam should proceed with a gradual and coordinated digital transformation process instead of rushing into adopting cutting-edge technology without prior preparation of suitable infrastructure and capacity.

III. PROPOSED SOLUTIONS

The proposed solution is a combination of an AI-IoT architecture where physical logistics operation is integrated with digital systems through the use of sensors and communication. The data that can be gathered from vehicles, warehouses, cargo, equipment and customers could be kept and processed in a cloud or hybrid computing environment. AI models can then process the data, make predictions, give advice, and make decisions automatically for logistics managers and operational systems.

The first major application is intelligent transportation. Vietnamese logistics companies can equip vehicles with GPS and telematics devices to monitor location, speed, fuel consumption, engine conditions, and driving behavior. These data can be fed into a centralized logistics platform that uses AI-powered algorithms to process traffic data, historical travel patterns, delivery schedules, and vehicle availability. This information can be applied to optimize route planning and delivery time estimation. When traffic or other conditions change, the system can provide updated recommendations. This method can make transportation more visible and support more efficient utilization of companies' vehicle fleets.

The second major application is smart warehouse management. RFID, cameras, barcode systems, weight measurement, environmental measurement can be integrated within the warehouse to help monitor inventory and operating conditions. Logistics managers can have near real-time information regarding product locations, quantities, rather than mainly depending on manual inventory records. AI can analyze inventory movement and demand pattern to help with replenishment and warehouse space planning. Computer vision and robotics can also be used to further automate product identification, picking, sorting, and inspection in large warehouses.

The third application is predictive maintenance. Logistics firms manage a huge fleet of trucks, forklifts, conveyors, refrigeration systems, cranes and many other equipment. Unexpected equipment failures can lead to the delays and extra expenses. IoT sensors can continuously monitor equipment conditions, while AI can analyze sensor patterns to identify indications of potential failures. Then maintenance can be scheduled to avoid a major failure. This can help to increase equipment availability and minimize unplanned downtime.

The fourth application is intelligent cold-chain management. Food, seafood, agricultural products and pharmaceutical products are examples of temperature sensitive products that must be transported and stored under specific environmental conditions. IoT temperature and humidity sensors can track the condition of cargo continuously and send data to the logistics platforms. The system can instantly notify logistics personnel if temperatures exceed acceptable ranges. AI can also review past temperature and equipment data to detect when future temperature issues may arise. The fifth application is AI-based demand and inventory forecasting. Logistics companies can use historical orders, seasonal patterns, regional demand, promotions, and other relevant information to estimate future demand. Better demand forecasting can help with better inventory allocation and warehouse planning. It also can support logistics companies to arrange vehicles and manpower resources based on demand forecasts.

The sixth application is computer vision. AI-powered cameras can automatically check packages, containers, vehicles and warehouse activities. Computer-vision systems can detect faulty packages, read vehicle license plates, track loading and unloading processes, count products, and monitor activities in the warehouse. They can minimize manual inspections and enhance the uniformity of logistics processing.

The seventh application is the development of an integrated digital logistics platform. The logistics ecosystem in Vietnam is diverse and made up of manufacturers, shipping firms, freight forwarders, warehouses, ports, transportation firms, retailers, and customers. They are typically different information systems that these organizations employ. A common platform based on standardized data and APIs could allow relevant information to be exchanged more efficiently. Such integration would provide a stronger foundation for AI because AI models require sufficient and reliable data.

The final solution concerns cybersecurity and data governance. As logistics companies connect more devices and systems, the amount of sensitive operational data increases. Companies need to have the right authentication, encryption, access control, backup systems, network protection, and security monitoring. Data quality is also crucial, as flawed or incomplete data can diminish the accuracy of AI models. Therefore, cybersecurity and data governance should not be viewed as an extra feature, but an integral part of AI-IoT logistic systems. The implementation of these technologies should be gradual because different logistics companies have different levels of technological maturity. For businesses with minimal digital capability, the first step is to start with secure digital record keeping, GPS tracking, cloud systems and basic IoT monitoring. Once a considerable amount of information has been collected, they can incorporate AI applications like forecasting, route planning, and predictive maintenance. Higher-tech organizations can then take steps to deploy robotics, computer vision, autonomous systems, and integrated digital platforms.

Table 1. AI and IoT Applications for Logistic Sector in Vietnam

Logistics Area	IoT Technologies	AI Technologies	Main Applications
Transportation	GPS, telematics, vehicle sensors	Machine learning, optimization	Fleet monitoring, route planning, ETA prediction
Warehousing	RFID, barcode, cameras, environmental sensors	Machine learning, computer vision	Inventory monitoring, picking, inspection
Inventory	RFID, connected shelves	Demand forecasting	Demand prediction and replenishment
Cold chain	Temperature and humidity sensors	Anomaly detection	Real-time temperature monitoring
Fleet maintenance	Engine, vibration, and equipment sensors	Predictive analytics	Predictive maintenance
Ports	Container sensors, cameras	Machine learning and optimization	Container and equipment management
Delivery	GPS and mobile devices	ETA prediction	Delivery tracking and customer information
Security	Cameras and access sensors	Computer vision and anomaly detection	Cargo and facility monitoring

The following roadmap presents a practical approach for Vietnamese logistics companies.

Table 2. AI and IoT Development Steps for Logistic Sector in VIETNAM

Implementation Stage	Main Focus	Key Activities	Expected Outcome
Stage 1	Digital foundation	Digitize records, standardize data, integrate existing systems	Reliable digital information
Stage 2	IoT deployment	Install GPS, RFID, sensors, and telematics	Real-time operational visibility
Stage 3	Data integration	Establish cloud or hybrid data platforms and APIs	Connected logistics information
Stage 4	AI analytics	Introduce forecasting, ETA prediction, optimization, and predictive maintenance	Data-driven decision-making
Stage 5	Intelligent automation	Introduce computer vision, robotics, and automated decision support	Higher operational automation
Stage 6	Ecosystem integration	Connect shippers, carriers, warehouses, ports, and customers	Integrated logistics ecosystem
Continuous	Security and human resources	Improve cybersecurity and train employees	Sustainable digital transformation

IV. CONCLUSION

Traffic congestion is a complex problem that cannot be solved by road construction alone. Hanoi needs a transportation system that can continuously monitor traffic, forecast the future state of traffic, and adjust to changes in traffic demand. This paper was proposing a hybrid solution that combines AI cameras, IoT sensors, GPS/mobile data, edge computing, traffic prediction, adaptive traffic-signal control, green-wave coordination, incident detection, intelligent parking, and centralized traffic management.

The next step should thus be the transition from the individual use of AI to a fully network-wide intelligent transportation system, predictive and intelligent. Real-time IoT data, AI forecasting, reinforcement learning, digital twin, connected vehicles, public transportation and human supervision are all components of such a system. With careful implementation, AI and IoT can contribute to Hanoi's aims of decreasing congestion, travel time, enhancing road safety, minimizing pollution, and streamlining emergency response, as well as providing a basis for a smarter and more sustainable urban transportation system.

AI and IoT offers great potential for enhancing Vietnam's logistics industry. Using AI to process data generated by IoT can generate real-time visibility by linking vehicles, warehouses, cargo, equipment and infrastructure, and then turn them into predictions and recommendations, and then automated decisions. The combination of these technologies can support important logistics activities including intelligent transportation, route optimization, delivery-time prediction, smart warehousing, inventory forecasting, predictive maintenance, cold-chain monitoring, computer vision, and port management.

Previous studies demonstrate that IoT has become an important technological foundation for smart logistics, while AI and machine learning have increasingly been applied to prediction and optimization in supply-chain management [4]–[8]. Research on Vietnam specifically shows that the logistics sector is increasingly using digital technologies, yet the deployment of AI and IoT is still limited due to investment expenses, infrastructure constraints, a lack of qualified personnel, data fragmentation, cybersecurity risks, and organizational issues [12]–[15]. Vietnamese logistics firms should therefore undertake a gradual digital transformation. The first step is to set up a secure digital infrastructure and gather good quality operational data. Then, IoT can be used to link vehicles, warehouses, cargo and equipment. When the amount of data is enough, AI can be incorporated to help

with demand forecasting, route optimization, predictive maintenance, inventory management, and other decision support applications. Computer vision, robotics, and automated logistics operations can then be added to advanced companies.

In conclusion, AI and IoT should be viewed as complementary technologies that can transform logistics from a largely reactive and fragmented system into a more connected, predictive, and data-driven system. The success of their adoption in Vietnam will rely on investment in technology, data governance, cybersecurity, human resource development, interoperability, management commitment, and the proper implementation strategies. With these supporting conditions, AI and IoT can provide an important technological foundation for developing a more efficient, transparent, resilient, and sustainable logistics sector in Vietnam.

Conflicts of Interest

The authors declare that there is no conflict of interest concerning the publishing of this paper.

V. REFERENCES

1. Ministry of Industry and Trade of Vietnam, *Vietnam Logistics Report 2023*, Ministry of Industry and Trade, Hanoi, 2023.
2. Ministry of Industry and Trade of Vietnam, "Implementation Plan for the Vietnam Logistics Services Development Strategy Toward 2050," 2026.
3. World Bank, *Connecting to Compete 2023: Trade Logistics in an Uncertain Global Economy—The Logistics Performance Index and Its Indicators*, World Bank, Washington, DC, 2023. Online: <https://documents1.worldbank.org/curated/en/099042123145531599/pdf/P17146804a6a570ac0a4f80895e320dda1e.pdf>
4. H. Golpîra, S.A.R. Khan, and S. Safaeipour, "A Review of Logistics Internet-of-Things: Current Trends and Scope for Future Research," *Journal of Industrial Information Integration*, vol. 22, p. 100194, 2021. [Google Scholar](#) | [Publisher Link](#)
5. A.A. Mostafa, et al., "Applications of the Internet of Things for Optimizing Warehousing and Logistics Operations: A Systematic Literature Review and Future Research Directions," *Computers & Industrial Engineering*, vol. 171, p. 108455, 2022. [Google Scholar](#) | [Publisher Link](#)
6. R. Toorajipour, et al., "Artificial Intelligence in Supply Chain Management: A Systematic Literature Review," *Journal of Business Research*, vol. 122, pp. 502–517, 2021. [Google Scholar](#) | [Publisher Link](#)
7. M. Akbari, and T.N.A. Do, "A Systematic Review of Machine Learning in Logistics and Supply Chain Management: Current Trends and Future Directions," *Benchmarking: An International Journal*, vol. 28, no. 10, pp. 2977–3005, 2021. [Google Scholar](#) | [Publisher Link](#)
8. Y. Yan, et al., "Reinforcement Learning for Logistics and Supply Chain Management: Methodologies, State of the Art, and Future Opportunities," *Transportation Research Part E: Logistics and Transportation Review*, vol. 162, p. 102712, 2022. [Google Scholar](#) | [Publisher Link](#)
9. M. Javaid, et al., "Internet of Things Research in Supply Chain Management and Logistics: A Bibliometric Analysis," *Internet of Things*, vol. 12, p. 100318, 2020. [Google Scholar](#) | [Publisher Link](#)
10. "A Bibliometric Analysis of IoT Applications in Logistics and Supply Chain Management," *Heliyon*, vol. 10, 2024. [Google Scholar](#) | [Publisher Link](#)
11. S. Filom, A.M. Amiri, and S. Razavi, "Applications of Machine Learning Methods in Port Operations: A Systematic Literature Review," *Transportation Research Part E: Logistics and Transportation Review*, vol. 161, p. 102722, 2022. [Google Scholar](#) | [Publisher Link](#)
12. P.T. Vu, et al., "Unpacking the Enablers and Barriers to Digital Transformation in Vietnamese Logistics Companies: A Qualitative Analysis," *International Journal of Innovative Research and Scientific Studies*, vol. 8, no. 2, 2025. [Google Scholar](#) | [Publisher Link](#)
13. H. Alii, et al., "Artificial Intelligence and IoT in Logistics Management for the Intelligent Supply Chain Management for the Future Era," in *Proceedings of the 2025 International Conference on Computational Innovations and Engineering Sustainability (ICCIES)*, 2025. [Google Scholar](#) | [Publisher Link](#)
14. B.H. Phong, et al., "Applications of Artificial Intelligence (AI) in the Logistics Industry in Vietnam: Opportunities and Challenges," *International Journal of Scientific Research and Management*, vol. 13, no. 5, pp. 2202–2207, 2025. [Google Scholar](#) | [Publisher Link](#)
15. N.T.X. Hoa, L.T.N. Hang, and N.D. Kien, "Towards Smart Warehouse Management in Vietnam: A Review on AI and IoT Integration in the Logistics Industry," in *Proceedings of the International Conference on Emerging Challenges: Business Dynamics in Disruptive Economy*, Springer, 2026. [Google Scholar](#) | [Publisher Link](#)