


Chapter 1

Cybersecurity Measures for Logistics Industry


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ABSTRACT

The logistics sector plays a crucial role in the worldwide economy by facilitating the efficient and punctual transportation of commodities and services. Nevertheless, the growing reliance on technological and digital infrastructure has highlighted the significance of implementing resilient cybersecurity protocols within the logistics industry. The occurrence of cybersecurity threats within the logistics industry may result in notable ramifications such as financial losses, impairment of reputation, and disturbances to the supply chain. The chapter investigates the various categories of cybersecurity threats confronting the logistics sector while furnishing instances of recent cybersecurity assaults perpetrated against companies within this industry. Furthermore, this chapter delves into several cybersecurity frameworks and strategies that can be adopted to forestall or alleviate these threats. By implementing these measures, logistics companies can secure their operations, clients, and affiliates from cyber threats.

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INTRODUCTION

As per a report by Transparency Market Research, the logistics industry is one of the swiftest growing sectors worldwide. The global logistics market was appraised at USD 8,186.2 billion in 2019, and it is anticipated to reach USD 12,975.64 billion by 2027, registering a CAGR of 5.7% from 2020 to 2027 (Choudhury, 2020). The logistics industry's expansion is primarily fueled by the upsurge in e-commerce and international trade (Singh, 2016; Priyadarshini et al., 2021). As more enterprises shift their operations online, the demand for logistics services to transport products to customers is escalating (Andrejić, 2019). The logistics industry assumes a pivotal role in fostering international trade (Suki et al., 2021). It enables enterprises to gain access to global markets and furnishes them with the requisite infrastructure for transporting commodities and services across borders. The logistics industry is fundamental to the advancement of international trade, which, in turn, is crucial for economic progress (Mangan et al., 2008). The logistics sector is responsible for administering enterprises' supply chains (Christopher, 2016; Gaur et al., 2022). The logistics industry entails harmonizing the transportation of commodities and services from suppliers to manufacturers, and eventually to retailers and customers. It assists enterprises in minimizing costs by streamlining the movement of goods and services (Y. Yu et al., 2016; Taj & Zaman, 2022). Logistics companies can curtail the expense of transporting commodities from one location to another by employing efficient transportation routes, warehousing, and inventory management techniques. This cost reduction can enable enterprises to sustain their competitiveness in the worldwide market (Ali et al., 2008; Humayun et al., 2021b). The logistics industry assumes a pivotal role in guaranteeing customer satisfaction (Chow et al., 1994). By delivering products punctually and in proper condition, logistics companies can aid enterprises in constructing a favourable reputation and retaining customers. The logistics industry has experienced significant transformations over time, propelled by technological advancements, alterations in consumer behaviour, and globalization. One such transformation is the introduction of containerization, which has revolutionized the transportation of commodities by making it faster and more effective. Another significant impact on the logistics industry is the advent of e-commerce, which has led to the emergence of novel technologies such as warehouse automation, last-mile delivery solutions, and real-time tracking systems (Bowersox, Closs & Cooper, 2019; Humayun et al., 2020).

Although the logistics industry is of paramount importance, it faces a plethora of challenges that can potentially disrupt its operations and undermine its ability to sustain international trade. Among the most significant challenges is the mounting intricacy of global supply chains, which has been amplified

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