


Chapter 7


Securing the Digital Supply Chain Cyber Threats and Vulnerabilities


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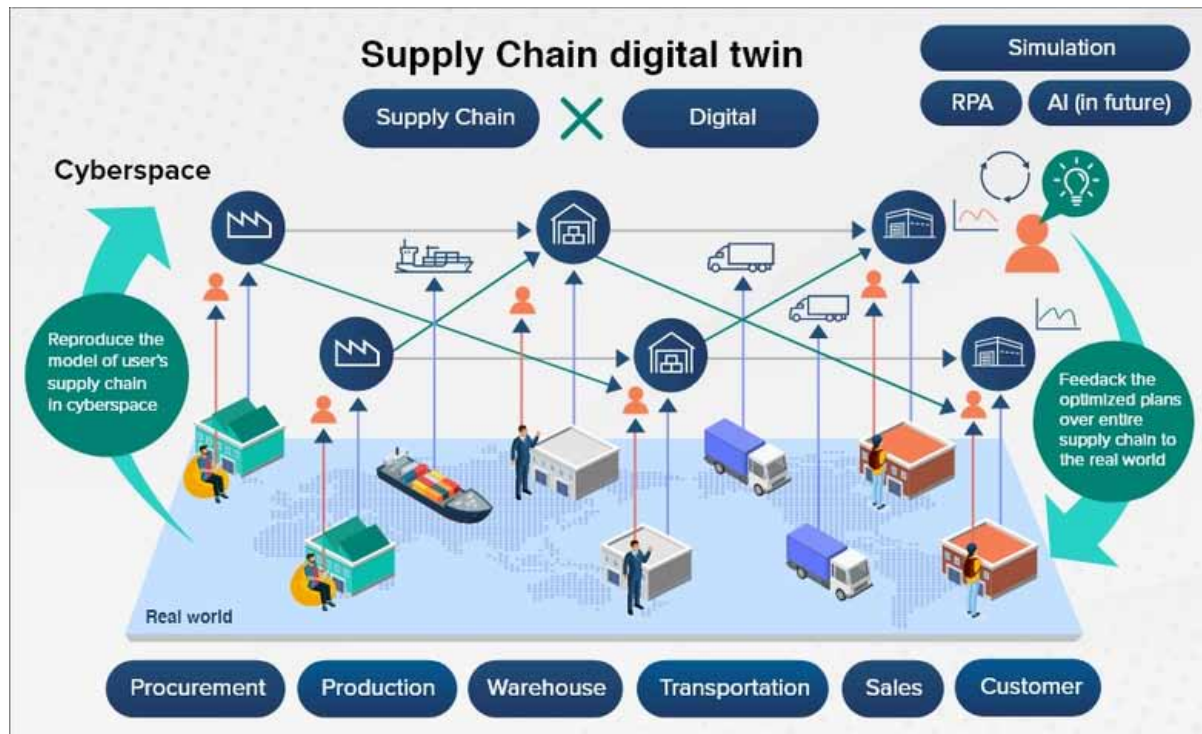
ABSTRACT

The digital supply chain has become an integral part of modern business operations, enabling efficient and streamlined processes. However, with the rapid advancement of technology, the supply chain landscape has become increasingly vulnerable to cyber threats and attacks. This chapter explores the critical issue of cybersecurity within the context of the digital supply chain, aiming to equip professionals and practitioners with the knowledge and strategies to safeguard their operations. Lastly, the chapter sheds light on emerging technologies and future trends and concludes with a call to action for securing the digital supply chain. It also highlights the future challenges and directions in cybersecurity for the supply chain, urging professionals to stay vigilant and adapt to evolving strategies and technologies. Overall, this chapter serves as a comprehensive guide for securing the digital supply chain, empowering readers to fortify their operations against cyber threats and ensure the resilience of their supply chain networks.

INTRODUCTION

Overview of the Digital Supply Chain

Figure 1. Digital supply chain
(Hitachi, Ltd., 2020)



The concept of the digital supply chain has emerged as a transformative force within the field of supply chain management. By leveraging advanced technologies, this approach seeks to improve operational efficiency, visibility, and responsiveness. In response to the rise of digitalization, organizations from various industries are increasingly adopting digital supply chain strategies to gain a competitive advantage in the global marketplace. This section presents a comprehensive overview of the digital supply chain, encompassing its key components, benefits, and challenges. The information is drawn from a synthesis of scholarly research and industry reports. At its core, the digital supply chain involves the integration of various digital technologies into traditional supply chain processes. These technologies include artificial intelligence (AI), big data analytics, the Internet of Things (IoT), cloud computing, and blockchain. By incorporating these advancements, the digital supply chain enables the efficient collection, analysis, and utilization of vast amounts of data. This data-driven approach facilitates real-time decision-making, predictive analytics, and automation, thereby driving improvements in overall supply chain performance (Gaur et al 2022). According to a study conducted by Garay-Rondero et al. (2019), organizations that successfully implement digital supply chain solutions can experience notable enhancements in efficiency, cost reduction, customer satisfaction, and overall performance. Within the digital supply chain

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