Chapter 10
Blockchain Technology: Enhancing Hospitality Recovery and Safeguarding Data Privacy

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ABSTRACT

Blockchain technology is revolutionizing the hospitality sector by providing creative post-crisis recovery options and guaranteeing strong data protection. This chapter examines how blockchain builds confidence among players in the hospitality industry, improves operational efficiency, and secures transactions. Blockchain reduces data breaches, stops fraud, and simplifies consumer interactions using decentralized ledgers, smart contracts, and cryptographic security. The chapter also looks at how blockchain might help secure digital identities, smooth payment processes, and transparent supply chain management—all essential for boosting industry resilience and regaining consumer trust. The conversation also focuses on the practical uses, difficulties, and potential future developments of blockchain

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integration in the hospitality industry. Ultimately, this chapter offers a thorough foundation for comprehending how blockchain might aid in the industry's recovery while upholding strict data protection regulations.

INTRODUCTION

Since it generates employment opportunities and significantly contributes to GDP, the hotel industry has been a cornerstone of economic growth worldwide for a long time. The risks previously present in traditional operational models have been brought to light due to current issues such as the COVID-19 pandemic, cyber threats, and data breaches (Mohammad, 2025a). Blockchain technology has emerged as a potentially transformative instrument when the industry looks for novel ways to restore confidence, improve efficiency, and guarantee data safety (Rafique et al., 2020).

Blockchain technology, a decentralized and tamper-proof digital ledger, can potentially change several elements of the hospitality industry (Talukder & Kumar, 2024). These aspects include the security of client data, the protection of safe transactions, and the transparency of supply chains and loyalty programs. In contrast to traditional centralized systems, blockchain technology guarantees immutability, transparency, and security. As a result, it is an excellent solution for resolving the growing concerns over data privacy and fraud prevention in the business. Bringing back customers' faith is one of the most critical obstacles in the hospitality industry's revival (Yvonne et al., 2024). The increase in cyber threats that target hotels, airlines, and online booking platforms has increased guests' anxiety over managing their personal information. The capacity of blockchain technology to encrypt and safely store client information helps mitigate these risks, ensuring that sensitive data will remain private and protected. In addition, smart contracts, which are agreements that automatically carry out their terms and conditions (Kamath et al., 2024), can stream operations, reduce the number of middlemen, and increase the level of trust between service providers and their clients.

This chapter aims to investigate the different applications of blockchain technology in the hospitality industry, specifically focusing on how it might help with post-crisis recovery, data protection, and operational efficiency. It examines case studies of practical blockchain implementations, draws attention to potential problems, and assesses the prospects for blockchain adoption in the industry. By gaining a grasp of the strategic role that blockchain plays, professionals in the hospitality industry can make use of this technology to develop experiences that are more secure, transparent, and customer-centric in an environment that is becoming increasingly digital (Legris et al., 2003).