

# Chapter 14


## Digital Risk Management in Digital Transformation Contexts

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### ABSTRACT

*Digital transformation drives innovation and efficiency but introduces complex risks that challenge traditional risk management approaches. Based on a qualitative literature review, this paper explores the intersection of digital transformation, innovation, and risk management, emphasizing the need to adjust traditional risk management strategies to meet digital risk challenges, including holistic strategies that integrate data protection, information security, and stakeholder considerations. While existing literature often focuses on risks like cybersecurity, broader implications for governance, innovation, and entrepreneurial ecosystems remain underexplored. Additionally, philosophical, sociological, and political analyses of digital threats are rarely integrated into organizational strategies. This study proposes a comprehensive framework to guide future research on digital risks, ensuring secure, sustainable, and resilient digital initiatives. Understanding the complexity of digital risks helps organizations to balance opportunities and challenges in the evolving digital economy.*

Digital transformation has become a key driver of economic and social change, fostering new business models, increasing efficiency, and stimulating innovation. Advances in information and communication technologies, digitization, and connectivity have created significant opportunities and risks for businesses and their ecosystems. While extensive literature highlights digital transformation's benefits, including competitive advantages and enhanced customer relationships, fewer studies address its constraints and associated risks. Empirical research largely focuses on strategy implementation, cultural shifts, and process adaptation to digital transformation, with major consulting firms and academic institutions

such as Deloitte, PwC, McKinsey, Massachusetts Institute of Technology (MIT), Harvard, and Cornell contributing practical insights.

Despite its advantages, digital transformation introduces complex risks that challenge traditional approaches to innovation and risk management. Extensive research on this intersection examines cybersecurity, data protection, and information security risks. The growing exposure of business ecosystems to cyber threats expands attack surfaces, intensifying the need for robust technological infrastructure and security mechanisms<sup>1</sup>. Meanwhile, broader digital risks remain underexplored. These issues are particularly relevant as digital economies increasingly rely on data as their most valuable asset.

From a competitive perspective, studies document the rapid transformation of production structures and the shift of economic power to major technology firms. Digital businesses, particularly those anchored in platform-based models, challenge traditional industrial conglomerates, disrupting workforce structures and reshaping strategic considerations related to innovation portfolios and risk management. In this evolving landscape, corporate leaders must balance innovation opportunities with emerging threats., including algorithmic biases, workforce displacement, misinformation, and evolving regulatory requirements. Additionally, increased supply chain interdependencies and reliance on monopolistic digital platforms introduce new commercial and technological vulnerabilities, further undermining trust in the digital economy.

Recent studies explore digitalization's broader consequences on individuals, society, and politics. However, these analyses primarily adopt philosophical, psychological, sociological, or economic lenses rather than business management perspectives. While academically and socially relevant, such studies seldom influence corporate decision-making, despite the direct impact of digital risks on human capital and business ethics. As a result, corporate executives, boards, and innovation leaders often overlook the broader implications of digital risks, focusing predominantly on cybersecurity rather than considering digital transformation's multifaceted risks and opportunities.

This paper examines digital risks or threats from multiple perspectives, emphasizing existing knowledge gaps and their relevance to organizational strategy. It argues that companies must extend their risk management frameworks beyond cybersecurity threats to encompass algorithmic biases, skills shortages in the technology sector, misinformation, regulatory compliance, and digital supply chain dependencies. Traditional risk and innovation management approaches may be inadequate for navigating this evolving and complex landscape, necessitating the development of more comprehensive frameworks integrating innovation and risk management.

Emerging frameworks increasingly prioritize data as a strategic asset, influencing business decision-making at multiple levels. This paper conducts a qualitative analysis of studies and frameworks addressing digital risks within organizations, contextualizing them within the growing prevalence of digital transformation. It explores the intersection of innovation and risk management, underscoring the theoretical and empirical challenges organizations face. Additionally, it highlights the necessity for business leaders to develop a holistic understanding of digital risks, ensuring that both digital transformation initiatives, and innovation and risk management strategies remain innovative and sustainable.

The following section examines how digital transformation reshapes innovation management, influencing risk assessment and mitigation strategies. It contextualizes digital risks within the evolving business environment, emphasizing the importance of digital ecosystems in shaping competitive dynamics. Additionally, it discusses shifts in analytical perspectives on digital technologies, outlining key developments in the field. The next section addresses whether traditional risk management methodologies adequately capture and mitigate digital risks, presenting insights from current debates. Finally, the

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