

Research on the Optimization of Corporate Innovation Management in the Context of Digital Transformation

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Abstract: This paper explores the profound impact of digital transformation on corporate innovation management. Addressing the challenges related to funding, technology, and organizational restructuring, it proposes four key optimization strategies: strengthening digital mindsets to reshape corporate culture; expanding business scopes to achieve cross-sector integration; developing intelligent platforms to enhance production and marketing efficiency; and intensifying talent cultivation to activate the core elements of innovation. The study aims to facilitate the deep integration of management and technology, enabling enterprises to convert digital advantages into core competitiveness for high-quality, sustainable development.

Keywords: Digital transformation; Innovation management; Digital economy

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1. Introduction

With the rapid advancement of technologies such as Big Data and Artificial Intelligence, digital transformation has emerged as a core driving force for the global economy and the “Digital China” strategy. It represents more than just a simple technological upgrade; it is a comprehensive transformation of corporate business philosophy, organizational structure, and management methods. Through digital means, enterprises can achieve deep optimization of business processes and scientific decision-making. Simultaneously, digital transformation has dismantled traditional hierarchical pyramid structures, fostering more flexible networked collaboration and an open innovation culture. This paper aims to explore the optimization strategies of corporate innovation management in the context of digital transformation, providing theoretical guidance and practical references for enterprises to enhance their core competitiveness amidst fierce market competition.

2. Digital transformation

2.1. Background and significance of digital transformation

With the rapid advancement of information technology, digital transformation has become a significant trend in global economic development. It represents more than just a simple technological upgrade; it is a comprehensive transformation of corporate business philosophy, business models, and management methods. Digital technologies, such as big data, artificial intelligence, cloud computing, and the Internet of Things (IoT), are profoundly reshaping the operating modes of various industries. By undergoing digital transformation, enterprises can achieve optimization of business processes, enhancement of operational efficiency, and improvement of customer experience, thereby maintaining a leading position in the fierce market competition ^[1,2].

2.2. Influencing factors of digital transformation

The influencing factors of digital transformation primarily consist of policy support, technological advancement, market demand, and internal corporate factors. Policy support serves as a significant catalyst for this process. Governments encourage enterprises to undergo digital transformation by formulating relevant policies and providing financial assistance. For instance, the Chinese government explicitly proposed the construction of “Digital China” in the “14th Five-Year Plan” to promote the development of the digital economy. Furthermore, technological advancement stands as a core influencing factor, while shifts in market demand also play a crucial role in propelling corporate change. As consumer demand for personalized and convenient services grows, enterprises must leverage digital means to optimize customer experience and satisfy market requirements.

2.3. Impact of digital transformation

The impact of digital transformation on enterprises is profound and extensive. Digital transformation can significantly enhance the operational efficiency of enterprises. Through digital technologies, companies can achieve the automation and intelligence of business processes, thereby reducing human errors and improving overall work efficiency. Moreover, digital transformation can bolster the innovation capability of enterprises. By leveraging big data analysis and AI, enterprises can more accurately understand market demands and conduct innovation in products and services. Furthermore, digital transformation can strengthen corporate competitiveness. Through digital means, enterprises can provide superior customer service and enhance customer satisfaction, thereby securing a favorable position in the fierce market competition.

3. Corporate innovation management

Corporate innovation management refers to the process where enterprises drive innovations in technology, products, services, and business models through systematic management methods and strategies to enhance their competitiveness and market positioning. The theoretical foundations of innovation management primarily include technological innovation theory, market innovation theory, and organizational innovation theory. Integrated Innovation Theory emphasizes that corporate innovation management should comprehensively consider these three aspects: technological, market, and organizational innovation. When conducting innovation management, enterprises must focus not only on technological progress but also on changes in market demand and the optimization of organizational structures. According to Integrated Innovation Theory, enterprises should coordinate innovations across these three dimensions through systematic management methods to achieve comprehensive development. By collectively applying these theories, enterprises can realize technological progress, market

expansion, and organizational optimization, thereby enhancing their overall competitiveness and market standing.

Despite the numerous opportunities brought by digital transformation, enterprises encounter significant challenges during implementation as follows:

- (1) Digital transformation requires substantial financial investment. Enterprises need to purchase new hardware equipment and software systems, and conduct employee training, all of which demand significant financial support ^[3];
- (2) Digital transformation requires enterprises to possess high technical capabilities. Enterprises must master emerging technologies such as big data, artificial intelligence, and cloud computing, which places high demands on their technical proficiency ^[4];
- (3) Digital transformation necessitates changes in organizational structures and management models. Traditional organizational structures and management models struggle to adapt to the requirements of digital transformation, requiring enterprises to make corresponding adjustments.

4. Optimization strategies of corporate innovation management in the context of digital transformation

4.1. Strengthening digital mindsets

Digital mindset is an essential attribute for corporate transformation. Enterprises should enhance employees' digital skills through systematic training, enabling them to proficiently utilize digital tools to increase efficiency and deepen their technical application capabilities ^[2]. Simultaneously, fostering a culture that encourages innovation is vital; enterprises need to establish fault-tolerant mechanisms, allowing employees to learn from failures while exploring digital solutions ^[1]. Furthermore, internal seminars, innovation competitions, and knowledge-sharing platforms can effectively promote communication among employees, break fixed mindsets, and stimulate digital creativity within the organization.

4.2. Expanding business scopes

In the digital era, enterprises should actively implement diversification strategies. Relying on precise data mining to conduct market research, they can identify investment opportunities and increase investment in technology, marketing, talent cultivation, and other innovative fields. Beyond internal process optimization, enterprises must seek cross-sector collaboration, co-launching innovative products with industry experts and investment institutions to expand customer coverage and increase market share ^[5,6]. Furthermore, by engaging in business outsourcing and acquisitions, enterprises can accelerate cross-sector integration and more keenly seize market opportunities.

4.3. Developing intelligent platforms

Advanced intelligent platforms serve as a powerful support for digital transformation. By gathering, storing, and analyzing massive volumes of information, these platforms assist enterprises in gaining insights into business processes and market shifts, thereby facilitating scientific decision-making ^[3]. The introduction of IoT and automation technologies to construct smart production chains can significantly optimize production processes, enhance output quality, and conserve resources. Simultaneously, leveraging digital technologies to build comprehensive marketing and logistics systems enables precise promotion and improves transportation efficiency, effectively reducing corporate operational risks and transportation costs.

4.4. Intensifying talent cultivation

Talent is the core resource for corporate innovation. Enterprises need to establish professional training systems to enhance employees' digital skills ^[4]. The introduction of mentorship systems can help new employees quickly integrate into the corporate culture and achieve the transfer and inheritance of experience. Meanwhile, enterprises should provide diversified career development paths, promotion opportunities, and welfare guarantees to encourage employees to explore new fields. Building an open innovation platform where employees are encouraged to express their creative ideas freely is a key pathway to stimulating their initiative and converting individual wisdom into the driving force for corporate development.

5. Conclusion

In summary, digital transformation has fundamentally reshaped corporate innovation management. It brings both unprecedented opportunities and significant challenges. Although digital technologies such as big data, artificial intelligence, and cloud computing can greatly improve operational efficiency, innovation capability, and market competitiveness, enterprises must overcome substantial financial, technical, and organizational obstacles to integrate them successfully. To address these challenges, this paper proposes four key optimization strategies. First, enterprises should strengthen digital mindsets to foster an innovation driven culture. Second, they should expand business scopes through diversification and cross sector collaboration. Third, they should develop intelligent platforms to enable data driven decision making and process automation. Fourth, they should intensify talent cultivation to unlock the core drivers of innovation. By implementing these strategies systematically, enterprises can achieve a deep integration of management and technology. They can then transform digital potential into tangible competitive advantages. This study provides theoretical insights and practical guidance for enterprises pursuing high quality and sustainable development in the digital economy era. Future research may further explore industry specific pathways and quantitative assessments of these optimization strategies.

Disclosure statement

The authors declare no conflict of interest.

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