



From Sneakers to Superapp: Nike's Transition to a Tethered Digital Platform

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Abstract. Amidst the global wave of digital transformation, the study of digital transformation has emerged as a pivotal research focus. This research delves into the case of Nike, a leading enterprise in the sportswear industry, as a typical example. The methodology employed is an in-depth case analysis, systematically examining Nike's digital transformation pathway and its implementation outcomes. The study concentrates on three critical areas: first, how digital technologies empower product innovation, including the development of personalized customization; second, how digital platforms (such as Nike+ and Nike ID) reconstruct consumer experiences, enhancing user engagement and sales conversion; and third, how data-driven supply chains optimize operational management to improve enterprise efficiency, achieving precise inventory control and rapid market response. The findings reveal that digital transformation not only significantly enhances operational efficiency but, more importantly, builds a technology-empowered differentiated competitive advantage. Specifically, the product development cycle has been substantially shortened, customer evaluations of services have markedly improved, and inventory management accuracy has significantly increased. These changes have enabled the enterprise to maintain a leading position in the fiercely competitive market. The digital transformation pathway derived from this study provides insights for enterprises in the same industry, particularly in terms of technology application and commercial value transformation. The research outcomes offer significant implications for traditional manufacturing enterprises in advancing digital strategies, demonstrating how technological innovation can achieve business value addition and business model upgrades.

Keywords: Digital Transformation, Product Innovation, Consumer Experience, Operational Efficiency.

1 Introduction

In the wave of the deep integration of technology and business, enterprises are constantly undergoing digital transformation, moving from basic digitalization to intelligentization. By applying cutting-edge technologies such as artificial intelligence and big data, enterprises continuously build their digital core competitiveness, while actively exploring innovative business models and product forms to drive deeper changes

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and development for the enterprises. This evolution process is reshaping the operational methods of traditional industries and creating new growth opportunities for the enterprises. For enterprises competing in the global market, the operational characteristics of the supply chain are the exchange of a large amount of data and information. In the current rapidly changing business environment, the acceleration of globalization and the increasing diversification of consumer demands are reshaping the competitive landscape. At the same time, the development of technology brings both new opportunities and unprecedented challenges. These factors jointly exert pressure on modern supply chain management, including increased difficulty in resource coordination and enhanced demand for operational flexibility. In this context, enterprises urgently need to deeply integrate digital technologies into all aspects of supply chain management and build intelligent supply chain systems to improve operational efficiency, enhance process transparency, and ultimately achieve rapid response and continuous optimization of the supply chain. This digital transformation is not only a necessary means to address current challenges but also a strategic choice for enterprises to maintain competitive advantages in the future market [1]. As a global leading sports brand, Nike must transform from a traditional product manufacturer to a digital service provider. In addition to applying digital technologies such as artificial intelligence and big data, it needs to further focus on the application innovation of cutting-edge technologies such as artificial intelligence and blockchain, and continuously build core competitiveness in the digital era through the coordinated development of intelligent design, digital products, and membership ecosystems. This round of technological revolution not only reshapes the modes of product development and consumer experience, but also drives the strategic upgrade of enterprises from sports equipment providers to sports health service platforms, demonstrating the exemplary value of the integration of traditional manufacturing and digital technology. Based on the above, this study focuses on the digital transformation practice of Nike Company, using the research method of case analysis, with the emphasis on exploring the application effects of digital technologies in products, consumers, and operations management. The research aims to reveal the internal mechanism of how digital transformation enhances the competitiveness of enterprises, providing a reference implementation path for the digital development of the sports apparel industry.

2 Introduction to Nike Company

Nike is a globally leading sports brand, headquartered in Oregon, USA. The brand focuses on the research and production of various sports products, including sports clothing, professional sports shoes, and various sports equipment. The establishment of the company originated from the joint entrepreneurial dream of a university track and field athlete and his coach [2]. In the mid-1960s, the two founders each invested a small amount of capital to establish a start-up company specializing in sports shoes, initially named "Blue Ribbon" [2]. In the early 1970s, the company officially changed its name to Nike and began to rapidly develop. In recent years, the company has continuously

promoted brand innovation and digital transformation through measures such as acquiring technology companies and developing digital service platforms [2]. In the development history of the sports goods industry, Nike has demonstrated an astonishing growth rate. When the brand was founded in 1972, its annual sales were only over 3 million US dollars. Subsequently, it maintained double-digit growth for several consecutive years. By the early 2000s, Nike had occupied approximately 90% of the global sports shoe market, with annual sales exceeding 16 billion US dollars, leaving traditional competitors far behind [3]. The key factors for Nike's rapid success in a short period of time lie not only in its unique corporate culture, but also in innovative brand marketing methods [2]. The company, with "Just do it" as its core concept, connects the brand with consumers' emotions through compelling visual content and real stories [2]. This marketing strategy is not simply about selling products, but rather inspiring people's enthusiasm for exercise and the spirit of self-challenge, making choosing Nike a form of expressing one's attitude towards life [2]. Thus, Nike's brand marketing strategy covers traditional advertising channels and digital media platforms, demonstrating its strong cross-platform influence, and further strengthening the brand image. At the same time, on digital sales channels such as social media and official websites, Nike has successfully built a stable user base, enabling consumers to identify with the brand value. This marketing system significantly enhances public awareness of the brand and further promotes the dissemination of the brand's philosophy.

3 The Reasons for Nike's Business Model Changes

3.1 Driven by The Development Trend of The Industry

Currently, the global sports goods market has formed a dominant pattern led by several major brands such as Li-Ning, Adidas, and Nike. These leading enterprises have almost monopolized more than 90% of the entire industry's market share. However, upon a closer examination of the products of each brand, it is evident that both the product design style and market positioning strategy exhibit a high degree of homogeneity [4]. Under such a social background, sports brands have seized the opportunity for transformation. They apply a series of digital information technologies such as artificial intelligence and cloud computing to enhance production efficiency, improve business models, management processes, product quality, and product services. This is done to adapt to the unpredictable market and consumers' preferences. Nike, following the development trend, not only regards digital transformation as its core strategy but also continuously increases its investment in technology. At the same time, Nike has optimized the entire process from product design to terminal retail, thereby improving the operational efficiency of the brand and further consolidating its advantages. As a result, it has led industry innovation and become the "leader".

3.2 Ensure Product Quality

Product quality is directly linked to brand reputation, costs, and consumer choices. Nike has established blockchain full-chain traceability through digital transformation, building a blockchain on the entire process from raw materials to production and logistics, achieving precise traceability of products, improving the efficiency of locating and recovering defective products, effectively enhancing the quality of sold products, thereby increasing consumers' trust and satisfaction in the product brand.

3.3 The Transformation of Consumers in The Digital Age

Facing the digitalization trend, modern consumers demonstrate a stronger ability for independent thinking. They not only can recognize the marketing purposes of enterprises, but also actively express their own opinions. Some consumers even have a resistance to excessive marketing behaviors, believing that frequent advertising campaigns are inappropriate interference in their personal consumption decisions [5]. Therefore, during the process of digital transformation, Nike further understood the needs and preferences of consumers. By using big data to analyze marketing methods that are more acceptable to consumers, it accurately targeted and applied marketing methods that are more suitable for consumers and launched products that meet their preferences. This not only reduced people's resistance to the brand, but also met the demand for personalized services of consumers, thereby enhancing the brand's competitiveness in the market.

4 Nike's Digital Transformation Path

4.1 Transform the Collected User Data into Commercial Value

In 1999, Nike launched Nike Company ID. One year before this offline project was implemented, Nike also introduced Nike Company+ [6]. Nike Company+ is capable of collecting and providing feedback on the personal exercise habits and individual preferences for sports equipment of the company's consumers. By 2012, the application scope of Nike Company+ had expanded from the running category to all products of Nike Company [6]. At the same time, Nike built a complete user data system through the Nike+ and Nike ID platforms. This system enables the collection of all-round data of consumers from product purchase, use to after-sales service, providing support for the company's Consumer Direct Offense digital marketing strategy [6]. Additionally, the platform not only collects user feedback to guide product development, but also provides personalized equipment recommendations and training plans based on users' exercise data and product usage [6].

4.2 Strengthen The Technological Foundation and Promote Digital Transformation

Since the end of 2017, Nike has accelerated its digital transformation globally to drive the continuous growth of its entire business [7]. During the process of digital transformation, Nike actively promoted its digital transformation strategy. By establishing the Nike official flagship store on Tmall and the WeChat mini-program, the company deeply understood the product preferences of Chinese consumers, laying the foundation for precise marketing and service upgrades [7]. At the same time, Nike built a complete digital product system, including mobile application platforms such as SNKRS and the official App. With the continuous introduction of innovative functions like Nike Fit, these digital platforms continuously improve consumers' experience with the products [7]. These series of digital initiatives not only strengthened the brand's market competitiveness, but also enabled Nike to maintain its "leader" position in the digital transformation of the sports goods industry [7].

4.3 Innovative Enterprise Management Enhances Efficiency

Although big data technology can significantly enhance the management level of enterprises, at present, some enterprise managers still have a lack of innovation consciousness. These managers have a relatively superficial understanding of the potential value of big data, so they still follow the traditional management model and only use the data for basic information recording and organization work, failing to deeply, comprehensively and systematically explore the commercial value behind the data, resulting in a significant reduction in the practical application effect of big data technology in enterprises [8]. Therefore, Nike Company should innovate its management to strengthen the company's management level and business processes, in order to reduce unnecessary resource waste and accelerate the speed of leadership decision-making and improve operational efficiency.

4.4 Accelerate The Layout of The Entire Digital Industrial Chain and Lead High-quality Development

Through a comprehensive digitalization of the entire production and sales chain, Nike has efficiently coordinated product development and terminal sales. This measure directly promoted the company's high-quality development. Accelerating the digitalization of the industrial chain not only reduced the costs in each link within the company, but also because the data flow runs through the entire chain, Nike has transformed from "selling products" to "providing services", achieving a double increase in the company's profits and brand value, and also enhancing consumers' recognition of the brand.

5 Challenges and The Future

5.1 The Core Contradiction Faced by Digital Transformation

Enterprise digital transformation is a gradual process. Although numerous studies and practices have proven the positive effects of digitalization on business development, due to limitations such as capital investment, professional talent, and technical reserves, most enterprises still face numerous challenges when attempting to achieve a deep integration of digital transformation with their existing businesses [9]. Currently, for Nike Company, the core contradictions in digital transformation are two-fold. Firstly, Nike Company relies too heavily on the consumer data collected by big data. The consumer data collected by big data has enhanced the company's understanding of consumers, optimized traditional services to move towards high-end services, and increased brand loyalty. However, as society develops, people are increasingly concerned about personal privacy, and legal regulations regarding this are becoming stricter, which will limit Nike Company's collection of consumer data and, naturally, affect the benefits brought about by it. Secondly, the large-scale investment made by Nike Company for digital transformation takes a long time to yield certain benefits, which contradicts the short-term and rapid return expectations of the company's internal and capital markets.

5.2 Industry Environment

At present, the competition in the sports goods industry is becoming increasingly intense. International leading brands such as Nike and Adidas, as well as local brands like Anta and Li-Ning, are jointly competing for market share [10]. Nike, as the industry leader, has always maintained the concept of "the gap between it and its competitors is far less than its own potential", demonstrating its determination for continuous innovation [10]. However, the market landscape is quietly changing. Local brands like Anta are rapidly rising, putting great pressure on the traditional giants in the sports goods industry [10]. Among them, Anta's development trajectory is particularly remarkable [10]. Starting from a small factory in Jinjiang, it grew into the third-largest enterprise in the industry with a market value of over 100 billion yuan in less than 30 years [10]. According to its mid-year financial report in 2019, the company's revenue exceeded 14.8 billion yuan, with a year-on-year growth of over 40% [10]. What is more noteworthy is that the Italian brand FILA, which Anta acquired in 2009, achieved great success in the Chinese market, positioning itself as "sport and fashion". In the first half of 2019, FILA contributed 6.54 billion yuan in revenue, accounting for 44% of the total revenue, and its gross profit margin reached 71.5% [10]. This successful case not only proves the operational capabilities of local enterprises, but also poses a direct and powerful competition to Nike's Nike Lab and other sport and fashion product series [10]. Facing the current new market environment, Nike urgently needs to re-examine its competition strategy [10]. On one hand, it needs to maintain its product innovation advantage; on the other hand, it also needs to respond to the challenges from Anta and other rising stars in the segmented market [10]. Especially in the Chinese market, how to balance the high-end positioning and the needs of the general public will become a key factor

determining the future market landscape [10]. Therefore, although Nike remains the leader of global sports brands, in the face of increasingly fierce global market competition, the challenges it faces cannot be underestimated. Nike needs to further strengthen its brand advantages and precisely grasp the changes in consumer demand, so as to maintain its competitiveness in the fierce market competition. This competitive environment of "not advancing means losing" is testing Nike's strategic determination and adaptability.

5.3 The Commercial Potential of Virtual Products

Traditional footwear design and manufacturing face challenges such as high research and development costs, long production cycles, and low personalization levels [11]. However, the application of 3D virtual simulation technology has brought a revolutionary breakthrough to the industry [11]. By using digital technologies such as VR virtual reality and AR augmented reality, enterprises can achieve visual presentation of product design, significantly improving development efficiency and meeting consumers' personalized needs [11]. Driven by rapid technological development and changes in consumption concepts, the virtual product market is experiencing explosive growth [12]. Virtual goods, such as sports shoes, represent a virtual commodity with innovation and collectible value, demonstrating significant commercial potential [12]. Nike has perceived and seized this trend, establishing the RTFKT digital studio based on the concept of the metaverse [12]. This platform has made breakthrough progress in the virtual shoe field: In early 2021, RTFKT specially designed a virtual shoe inspired by Cybertruck for Tesla CEO Elon Musk [12]. This digital shoe, which was not actually produced, was "worn" on Musk's feet through post-processing synthesis technology and was ultimately sold for 15,000 US dollars, setting a sales record for virtual shoes at that time and again causing a market sensation in February 2022 [12]. RTFKT once again sparked a market frenzy in March 2022, collaborating with young crypto artist Fewocious to launch three NFT sports shoes priced at 3,000, 5,000, and 10,000 US dollars respectively [12]. Approximately 600 virtual shoes were sold within 7 minutes, with a total sales amount exceeding 3.1 million US dollars [12]. These successful cases not only verify the market's acceptance of virtual products but also demonstrate the innovative application prospects of digital technology in the sports goods industry. The rise of virtual products is reshaping traditional business models. Through blockchain technology to ensure the uniqueness of digital collectibles, it not only meets the pursuit of young consumers for individualization and technological sense but also opens up new revenue channels for brands. The practices of Nike and other enterprises show that the integration of virtual and real products strategy will become an important direction for future industry development.

6 Conclusion

This study conducted an in-depth analysis of the digital transformation practices of the international sports brand, Nike, to reveal the crucial role of digital technologies in re-shaping the enterprise's operational model and enhancing market competitiveness. The research found that a successful digital transformation not only alters the technological foundation of the enterprise but also drives systematic changes in business processes and business models. In terms of product innovation, the application of digital tools significantly improves the efficiency of research and development and the level of product personalization; in the consumer experience domain, the construction of digital platforms effectively enhances user engagement and brand loyalty; in the operational management aspect, the data-driven decision-making mechanism significantly improves the response speed and resource allocation efficiency of the enterprise. The study also discovered that many enterprises encounter certain difficulties during the transformation process. For instance, incompatible new and old systems, lack of data sharing among departments, and a shortage of professionals proficient in digital technologies are some of these issues. These problems mainly arise from insufficient preparation by the enterprises and the failure to plan the transformation steps in advance.

Based on the research findings, this paper suggests that enterprises adopt a systematic approach for digital transformation: first, establish an organizational mechanism that aligns with the digital strategy and cultivate a data-driven decision-making culture; second, attach importance to the training and recruitment of digital talents; third, start the transformation from the most effective areas. These measures help enterprises overcome the difficulties encountered during the transformation process and fully leverage the potential of digital technologies.

The main value of this study lies in its reference value for traditional enterprises. It uses real cases to illustrate how digital transformation should be carried out. However, as each enterprise is different, these experiences cannot be fully copied. In the future, more transformation cases of different types of enterprises need to be studied to summarize more comprehensive experiences.

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