

# The impact of digital transformation on enterprise organizational structure

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**Abstract.** With the rapid development of information technology, digital transformation has become a key way for enterprises to enhance competitiveness and adapt to market changes. This paper aims to explore the impact of digital transformation on the organizational structure of enterprises. By explaining the concept and background of digital transformation, this paper analyzes the evolution trend of enterprise organizational structure in the digital age, and discusses in detail how digital transformation changes the organizational hierarchy, team collaboration mode, decision-making process and workflow of enterprises. The study found that digital transformation can significantly increase organizational flexibility, facilitate information sharing, improve the quality of decision making, enhance innovation, and increase work efficiency. Through the selection of typical enterprise case studies, this paper shows the specific impact of digital transformation on enterprise organizational structure, and puts forward corresponding countermeasures and suggestions. Overall, this study reveals the profound changes that digital transformation brings to enterprise organizational structure, and provides valuable reference and enlightenment for enterprise managers.

**Keywords:** Digital transformation, organizational structure, decision-making process, competitiveness enhancement.

## 1. Introduction

With the rapid development of information technology and the popularization of the Internet, digital transformation has become a key way for enterprises to enhance competitiveness and adapt to market changes. Digital transformation not only involves the upgrading of the technical level, but more importantly, has a profound impact on the internal organizational structure, business processes and even corporate culture. In this context, more and more enterprises are beginning to realize that only by actively embracing digital technology can they stand out in the fierce market competition. This paper aims to explore the impact of digital transformation on the organizational structure of enterprises. With the application of digital technology, the organizational structure of enterprises is undergoing profound changes, and the traditional hierarchical organizational structure is gradually developing into a more flat, networked and matrix-oriented direction. These changes not only affect the internal operational efficiency of the company, but also have a profound impact on the corporate culture and the way employees work. This paper expounds the concept and background of digital transformation, analyzes the evolution trend of enterprise organizational structure in the digital age, and discusses in detail how digital transformation changes the organization level, team cooperation mode, decision-making process and work flow of enterprises [1]. Through the case study of typical enterprises, it also shows the specific impact of digital transformation on the organizational structure of enterprises, and puts forward corresponding countermeasures and suggestions.

Overall, this study reveals the profound changes that digital transformation brings to enterprise organizational structure, and provides valuable reference and enlightenment for enterprise managers. By systematically studying the impact of digital transformation on enterprise organizational structure, this paper hopes to provide new perspectives and ideas for researchers and practitioners in related fields.

## **2. Literature review**

### **2.1. The concept and characteristics of digital transformation**

Digital transformation refers to the use of digital technology by enterprises to their business processes, organizational structure and value creation methods to carry out fundamental changes, such changes not only include the technical level of upgrading, more importantly, the enterprise's strategic positioning, organizational culture, management mode for comprehensive adjustment and optimization. The goal of digital transformation is to improve operational efficiency, enhance innovation, and ultimately enhance the customer experience. This process is not only a technical upgrade, but also involves an all-round change in corporate strategy, organizational culture, management mode and other aspects. The core of digital transformation is the use of information technology, especially big data, cloud computing, artificial intelligence and other advanced technologies, to restructure the operation model and business processes of enterprises. Its characteristics are that the transformation covers all levels of the enterprise. Digital transformation is not a partial reform of a single department or a certain business link, but a system engineering covering all levels of the enterprise. From strategic planning to daily operations, from product design to customer service, digital transformation runs through every step of the enterprise. Digital transformation is not a short-term project, but a long-term process. With the continuous development of technology and changes in the market, enterprises need to constantly adjust and optimize transformation strategies. This continuity means that companies need to build a flexible mechanism to be able to respond quickly to changes in the external environment. This requires constant adjustment and optimization of relevant strategies. Digital transformation emphasizes innovation using new technologies to create new business models and services [2]. Through the application of advanced technologies such as big data analysis, cloud computing and artificial intelligence, enterprises can develop brand new products and services to meet the diverse needs of customers. Innovation is not only technical, but also business model innovation, thus bringing new growth points for enterprises.

### **2.2. Traditional model of enterprise organization structure.**

Traditional organizational structures usually adopt a Hierarchical Structure, that is, a top-down chain of command and a clear division of labor system. The characteristics of this structure include: strict hierarchical system, clear management hierarchy, and high concentration of power. Enterprises usually show a pyramid-shaped structure, from the top board of directors, CEO to middle managers, and then to grass-roots employees, each layer has a clear scope of power and division of responsibilities, which ensures the strict ordering and execution of orders step by step; Clear functional division of labor, the responsibilities of each department are clear and professional. The financial department is responsible for financial management, the Marketing Department is responsible for marketing, and the technical department is responsible for product research and development [3]. This clear division of labor enables each department to focus on its core functions. Standardized workflow, fixed workflow, easy to manage and control, standardized workflow allows enterprises to carry out effective supervision and control of each link, reduce uncertainty, improve predictability and control; The information transfer mainly flows up and down the chain of command, the senior managers convey the instructions downward, and the grass-roots employees report the work progress upward. While this vertical mode of communication facilitates the execution of commands, it also limits horizontal communication and the free flow of information. With the development of information technology, this traditional hierarchical structure has gradually exposed some shortcomings, such as low efficiency of information transmission, increased possibility of information distortion and omission. The decision-making process is slow, and because power is highly concentrated in the hands of top managers, many important decisions need to be approved at various levels. This makes the decision-making process tedious and unable to respond quickly to market changes. In a rapidly changing business environment, this slow decision-making mechanism

often leads to missed opportunities [4]. The lack of incentive to innovate, rigid hierarchies and standardized work processes limit employee autonomy and creativity. Employees often can only perform tasks according to established procedures, and there is no room for active thinking and innovation. This kind of environment is not conducive to stimulating the innovation potential of employees, thus hindering the innovation development of enterprises.

### **2.3. Current status and insufficient research on the impact of digital transformation on enterprise organizational structure.**

In recent years, the research on the impact of digital transformation on enterprise organizational structure has gradually increased. Researchers generally agree that digital transformation has led to significant changes in the organizational structure of enterprises. The application of digital technology makes information transfer more rapid and direct, reduces the need for intermediate management levels, and thus flattens the organizational structure. The use of digital tools promotes collaboration across departments, breaking down traditional functional barriers and forming a more flexible team collaboration model. Digital technology makes the decision-making process more data-driven, improving the accuracy and efficiency of decision making. Through the application of digital tools and platforms, enterprises are able to coordinate and manage internal workflows more efficiently, improving overall operational efficiency.

Although there have been many studies on the impact of digital transformation on enterprise organizational structure, there are still some shortcomings: First, the theoretical framework is incomplete, most of the existing studies focus on the impact of a specific aspect, and there is a lack of a comprehensive theoretical framework to systematically analyze the overall impact of digital transformation on enterprise organizational structure. Second, empirical research is insufficient. Most studies stay at the theoretical level and lack sufficient empirical data support, which is difficult to fully reflect the actual effect of digital transformation[5]. Third, industry differences are not considered enough. Different industries face different challenges and opportunities in the process of digital transformation, and existing studies rarely consider inter-industry differences.

There is also a lack of long-term impact studies, most of which focus on short-term impact and lack in-depth discussion on the long-term impact of digital transformation on enterprise organizational structure.

## **3. Elements of digital transformation and evolution of enterprise structure**

### **3.1. Key elements and drivers of digital transformation**

By introducing advanced digital technologies such as cloud computing, big data analytics, Internet of Things (IoT), artificial intelligence (AI), etc., to enhance the technical strength of enterprises. Use digital technologies to redesign your business processes to increase efficiency, reduce costs, and increase flexibility. By adjusting organizational structure, optimizing team collaboration and improving decision-making mechanism, organizations can be more adaptable to the digital environment. Foster an open, innovative and agile corporate culture that encourages employees to embrace new technologies and drive continuous improvement. With the rapid development of information technology, especially the maturity of cloud computing, big data, Internet of Things, artificial intelligence and other technologies, enterprises have more tools and means to achieve digital transformation. Increasing consumer demand for personalized, instant, high-quality services is forcing businesses to enhance the customer experience through digital means. In the digital age, competition may come from new entrants outside of traditional industries, such as technology companies or start-ups, making it imperative for companies to constantly innovate to maintain a competitive edge. Through the application of digital technology, enterprises can achieve automation and intelligence, thereby reducing operating costs and improving profit margins. The government has issued a series of policies and regulations to support digital transformation, providing a good external

environment for enterprises. The enterprises own change requirements are also the driving factors for digital transformation.

The impact of digital transformation on enterprises is all-round, not only involving the technical level, but also covering the business process, organizational structure, corporate culture and other aspects. By introducing digital tools and technologies, businesses can streamline business processes, increase productivity, and reduce human error. Digital transformation is driving organizations to become more flat and networked, reducing management layers and enhancing team collaboration. The data-driven decision model enables enterprises to make more accurate decisions based on real-time data, improving decision quality and efficiency. The application of digital technology provides more opportunities for enterprises to innovate, and through means such as data analysis and artificial intelligence, enterprises can quickly respond to market changes and launch new products and services. Digital transformation enables businesses to better understand customer needs, provide personalized services, and enhance customer satisfaction and loyalty.

### **3.2. The evolution of enterprise organizational structure**

The organizational structure of enterprises in the digital age presents a new trend of changes, which are mainly reflected in the following aspects: reducing management levels, improving the efficiency of information transmission, and enhancing organizational flexibility; Break departmental barriers, form cross-departmental cooperation, and improve collaborative efficiency; Adopt project management, flexibly mobilize resources, adapt to the rapidly changing market environment; A decentralized management model is implemented through technologies such as blockchain to enhance transparency and trust. These trends reflect the profound impact of digital technology on the organizational structure of enterprises. With the advancement of digital transformation, enterprise organizational Structure shows a diversified development trend, the main types include: Flat organizational structure reduces the management level, improves the efficiency of information transmission and decision-making speed. The characteristics of this structure include: fewer management levels, fewer management levels, usually only two or three levels, such as senior managers-project managers-employees; Enhance the communication efficiency, the speed of information transmission is fast, the intermediate links are reduced, and the decision-making is faster; Increased flexibility, a more flexible organization, able to respond quickly to market changes; Encourage innovation, employees have more autonomy, and encourage innovative thinking and action.

The organizational Structure after digital transformation is mainly divided into three types: First, Network Structure, which breaks the traditional departmental boundaries and forms a flexible collaborative network through cross-departmental cooperation. The characteristics of this structure include: inter-departmental collaboration, the formation of collaboration network between different departments, sharing resources, and improving collaborative efficiency. Flexible task teams that form temporary teams according to project needs and disband after completing specific tasks. Decentralized decision-making, decision-making authority decentralization, encourage the team to make independent decisions, improve the efficiency of execution. Information sharing, through the digital platform to achieve real-time information sharing, enhance transparency. The second is the Matrix Structure, which combines the characteristics of functional structure and project structure to form a dual reporting relationship. Features of this structure include dual reporting relationships, where employees report to both functional and project managers, enabling flexible resource deployment. Project management, allocate resources according to project needs, and return the resources to the original department after the completion of the project. Improve flexibility, be able to quickly respond to market changes, adapt to changing business needs. To promote innovation, people from different backgrounds cooperate, which promotes the exchange of knowledge and the collision of innovative thinking. The third is the Decentralized organizational Structure, which realizes decentralized management through technologies such as blockchain and enhances transparency and trust. Features of this structure include distributed management through blockchain

technology, reducing reliance on a central authority. All transaction records are open and transparent, enhancing trust. The formation of autonomous communities, through the consensus mechanism to achieve self-management. It reduces unnecessary approval processes and improves decision-making and execution efficiency.

#### **4. The impact of digital transformation on enterprise organizational structure**

The traditional hierarchical organization structure usually has multiple management levels, low efficiency of information transmission, and long decision-making cycle. By reducing layers of management, digital transformation makes information transfer more direct and decision making faster. For example, through online collaboration tools and instant messaging platforms, top managers can communicate directly with front-line employees, reducing intermediate links and improving the speed and accuracy of information flow. The application of digital technology has made the decision-making process more decentralized. Through data analysis tools and automated decision support systems, grassroots employees can gain more decision-making authority, thus improving the flexibility and response speed of decision making. Cross-sectoral collaboration has become the norm, and the proliferation of digital tools has made it easier. Through the collaboration platform, employees in different departments can share information and work together in real time, breaking down functional barriers in traditional organizations. For example, project management software such as Asana, Trello, and others enable seamless collaboration between multiple departments. Digital transformation has led to more AD hoc project teams that can be quickly formed and disbanded according to the needs of the project, increasing the flexibility of the organization. Project team members, often from different departments, collaborate effectively through digital tools.

Digital transformation enables companies to leverage technologies such as big data analytics and artificial intelligence to make decisions based on real-time data. The data-driven decision model improves the accuracy and efficiency of decision making. For example, through data analysis platforms, companies can monitor market dynamics in real time and adjust strategies in a timely manner. The application of digital tools enhances the transparency of the decision-making process, and all decision-making grounds and processes can be recorded for easy traceability and audit. This not only improves the quality of decision making, but also enhances trust within the organization. Digital transformation makes work processes more automated by introducing automated tools and technologies. For example, through robotic process automation (RPA) technology, enterprises can automatically perform highly repetitive work tasks, improving work efficiency. Digital technology makes it possible to work remotely, and employees can Get work done in the cloud from anywhere. This flexibility not only increases job satisfaction for employees, but also reduces office costs for businesses.

Digital transformation enables companies to respond quickly to market changes and adjust their strategies in a timely manner. For example, with social media monitoring tools, companies can learn about consumer feedback in real time and make adjustments quickly. The flat organizational structure and flexible team collaboration model enable enterprises to deal with uncertainty and change more flexibly. For example, companies can quickly adjust team configurations based on market demand. Digital tools make information transfer more real-time and efficient. Through instant messaging tools and collaboration platforms, information flows more smoothly within enterprises. Digital transformation makes knowledge management more systematic, and enterprises can accumulate and share experiences through knowledge management systems (KMS) to enhance organizational learning capabilities. The decision model based on big data analysis makes the decision more objective and scientific. Through data analysis tools, enterprises can obtain a large amount of market data to provide a basis for decision-making. All decision bases and processes can be documented for easy traceability and audit.

The cross-departmental collaboration mode promotes the exchange and integration of knowledge in different fields, which brings more innovation opportunities for enterprises. For example,

cooperation between technology departments and marketing departments can lead to new products and services. Digital transformation encourages innovative thinking, and companies stimulate the innovative potential of employees by offering innovation incentives and training programs. Through the application of automation tools, enterprises can reduce repetitive labor and improve work efficiency. For example, with RPA technology, companies can automatically handle large amounts of data entry.

## 5. Case studye

### Case 1: Digital transformation in retail

A large retail enterprise is faced with increasingly fierce market competition and changing consumer demand. In order to enhance their competitiveness, companies have decided to implement digital transformation by introducing advanced digital technologies to optimize internal operational processes and enhance the customer experience. Companies have introduced big data analytics platforms to collect and analyze data on customers' shopping behavior to better understand customer needs and preferences. Through data analysis, companies are able to predict consumer trends and adjust inventory and marketing strategies accordingly. Using cloud computing technology, enterprises realize the digital management of supply chain. By monitoring inventory levels and logistics status in real time, companies can respond quickly to market changes, reduce inventory overruns, and improve supply chain efficiency. The company has established an omnichannel sales model combining online and offline to provide customers with a seamless shopping experience through multiple channels such as e-commerce platforms, mobile apps and physical stores. The application of digital technology makes it convenient for customers to buy goods at anytime and anywhere. With digital tools, companies are providing more training and development opportunities for their employees. Employees can obtain the latest business knowledge and technical skills through the online learning platform to improve work efficiency and service quality.

Companies have reduced management layers and enhanced the efficiency of information transfer. Top managers can communicate directly with front-line employees, reducing intermediate links and improving decision-making speed. By building project teams, employees from different departments can work together across departments to solve problems together. For example, the Marketing Department works with the information technology department to develop new customer engagement platforms. Companies that encourage remote working and flexible work schedules, and enable employees to work from home through digital tools, have increased employee job satisfaction and productivity.

Through omnichannel sales models and personalized marketing strategies, companies have significantly improved customer satisfaction. Customers can get a consistent service experience across multiple channels, enhancing brand loyalty. Digital supply chain management and real-time data analytics enable businesses to manage inventory and logistics more efficiently, reducing costs and improving overall operational efficiency. Cross-departmental cooperation models and employee empowerment programs have inspired employees' awareness of innovation, and the company has launched a number of innovative services, such as self-checkout systems and intelligent recommendation engines, to further enhance competitiveness.

### Case 2: Digital transformation in manufacturing

A large manufacturing enterprise is faced with the problems of low production efficiency, high cost and unstable product quality. To address these challenges, companies have decided to implement digital transformation. The Internet of Things (IoT) technology is introduced to monitor the status of the production line in real time through sensors and smart devices to achieve digital management of the production process. Through data analysis, enterprises can find and solve production bottlenecks in time and improve production efficiency. Using blockchain technology, companies have achieved transparent supply chain management. All raw material procurement, production and logistics information is recorded on the blockchain, increasing the transparency and traceability of the supply

chain. The enterprise has established an intelligent storage system, and realizes the automatic storage and retrieval of materials through robot technology and automation equipment. The intelligent storage system not only improves the utilization rate of the warehouse, but also reduces human error. Enterprises provide skills training to employees through online learning platforms to help those master new digital technologies, improve work efficiency and quality control. The enterprise adopts the project management mode, and sets up temporary teams according to different production projects, which improves the flexibility and allocation efficiency of resources. When the project is over, team members return to their respective departments. Through the formation of cross-functional teams, employees of different specialties can work together to solve complex production problems. For example, the production department collaborates with the research and development department to develop new production processes. Enterprises have realized decentralized decision-making mechanisms through digital tools, and employees can make decisions based on real-time data, improving the accuracy and response speed of decisions.

To improve production efficiency, the application of intelligent manufacturing and intelligent warehousing systems has significantly improved production efficiency, reduced production cycles and reduced costs. Through real-time monitoring and data analysis, enterprises can find quality problems in time, because of timely detection, enterprises not only grasp the initiative of remedial measures, but also win sufficient time. Timely and decisive corrective measures have improved the production efficiency of enterprises and increased economic efficiency, and the product defect rate has been reduced from 7 percent before to 4 percent now; the pass rate has increased from 75/100 before to 81/100 now. In this category alone, the annual cost of enterprises is reduced by 1.5 percentage points, and the economic efficiency is improved by 2.6 percentage points. The application of blockchain technology makes the supply chain more transparent, enhances the trust of suppliers and customers, and improves the overall efficiency of the supply chain. Digital transformation has stimulated the innovative consciousness of employees, and enterprises have continuously launched new products and services through technological innovation, enhancing market competitiveness.

Through the above two case studies, we can conclude that the impact of digital transformation on the organizational structure of enterprises is positive and beneficial. Flattening the organizational hierarchy: It reduces the management hierarchy, improves the efficiency of information transmission, speeds up decision-making, and enhances the flexibility of the organization. Cross-departmental cooperation mode and project management enable employees of different specialties to work together and improve the collaborative efficiency of the organization. The data-driven decision model enables enterprises to make more accurate decisions based on real-time data, improving decision quality and response speed. Through the application of automation tools and technologies, enterprises optimize work processes, improve work efficiency and quality control capabilities.

## **6. Coping strategies and suggestions**

### **6.1. Tactics**

Digital transformation is a systematic project, which requires enterprises to plan from the strategic level and make corresponding adjustments in organizational structure, business process, technology application and other aspects. Companies need to be clear about their vision and goals for digital transformation and ensure that all employees understand the direction and purpose of the transformation. At the same time, based on the transformation objectives, it is necessary to develop a detailed digital strategic plan, including short - and long-term goals, and concrete steps to achieve these goals. A digital transformation team consisting of experts from different departments should be set up to drive the implementation of the transformation. Select leaders with a digital mindset and ability to play a key role in the transformation process. Select appropriate technology platforms and tools according to the needs of enterprises, such as cloud computing, big data analysis, Internet of Things (IoT), artificial intelligence (AI), etc., to ensure the compatibility and integration of new technologies with existing systems and avoid the generation of information islands. On this basis,

employees are encouraged to accept new things and cultivate an open, innovative and agile corporate culture.

The new organizational structure should be more flexible and able to respond quickly to market changes. Reduce management layers, improve information transfer efficiency and decision-making speed. Break down traditional functional barriers and promote collaboration between different departments. Decisions should be based on real-time data to ensure accuracy and efficiency. Select leaders with digital mindsets and capabilities to drive digital transformation efforts. Assemble teams of experts from different departments to solve complex problems together. Motivate employees to participate actively. To this end, it is necessary to conduct necessary technical training for employees through online and offline ways, so that employees can master computer operation, basic knowledge of the network, common office software and other technologies

## 6.2. Future research directions

Further improve the automation level of the scheme, use machine learning and artificial intelligence technology to achieve adaptive adjustment and intelligent protection of security policies, and improve the intelligence of the system. Research how to make the solution better adapt to the needs of different industries and application scenarios, improve its compatibility, so that IT can seamlessly connect to the existing IT ecosystem. It is necessary to further strengthen the protection of various regulations to ensure that the program operates within the legal framework. On the premise of ensuring security, how to improve the user experience is also a matter of concern, and future research can explore how to find a better balance between security and convenience.

## 7. Conclusion

Digital transformation has become a key way for enterprises to enhance competitiveness and adapt to market changes. This paper systematically studies the concept of digital transformation and its impact on enterprise organizational structure, and reveals the profound changes that digital transformation brings to enterprise organizational structure. Through case analysis, the concrete effect of digital transformation in practical application is demonstrated. The strategies and suggestions put forward in this paper provide valuable reference and enlightenment for enterprise managers. Digital transformation not only changes the organizational hierarchy, team collaboration models, decision-making processes, and workflows, but also significantly improves organizational flexibility, information sharing, decision quality, innovation, and productivity. By clarifying transformation goals, establishing transformation teams, strengthening technology infrastructure construction, adjusting organizational structure, emphasizing employee training and development, and creating a good corporate culture and leadership, enterprises can better meet the challenges of digital transformation and benefit from it. It is hoped that the research in this paper can provide useful reference and inspiration for researchers and practitioners in related fields, and jointly promote the healthy development of digital transformation. Through continuous exploration and practice, enterprises can maintain competitive advantage and achieve sustainable development in the digital age. Although the research in this paper has made some achievements, there are still many fields worth exploring in the future.

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