

# *Study the Impact of Digital Transformation on Enterprise Resource Planning*

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**Abstract:** In the context of modern society, digital science and technology is reconstructing the global economic structure. China attaches great importance to promoting the development of digital economy and promoting the deep integration of digital economy and real economy. As an important part of industrial digitalization, digital transformation will have a profound impact on the transformation and upgrading of enterprises, which involves all aspects of enterprises, including the business model, resource planning, organizational culture and operation process of enterprises. With the rapid development and popularization of digital technology, its influence and role are becoming more prominent. Under the background of digital technology, it is necessary for enterprises to re-examine and further optimize and adjust their resource planning, improve resource utilization rate, and give full play to their resource advantages to ensure the healthy and sustainable development of enterprises. Based on this, this paper analyzes the process and main challenges of enterprise resource planning, introduces the impact of digital transformation on enterprise resource planning, and proposes relevant countermeasures.

## **1. Introduction**

Digital transformation is a high-level transformation based on digital upgrading and digital transformation. The digital transformation of an enterprise is a change measure to reshape its organizational culture, business model and operation process through digital technology, which is an important measure for an enterprise to adapt to the trend of modernization and an important guarantee for the healthy and sustainable development of an enterprise. For enterprises, digital transformation is not only a technological innovation, but also an inevitable choice for enterprises to cope with market changes and strengthen their competitiveness. The study on the impact of digital transformation on enterprise resource planning can help enterprises better cope with this change and better guarantee the high-quality development of enterprises.<sup>[1]</sup>

## 2. Overview of digital transformation

### 2.1 Core elements of digital transformation

The digital transformation of enterprises refers to the change measures of enterprises to reshape their organizational culture, business model and operation process through digital technology. The purpose of digital transformation of enterprises is to enhance their competitiveness, enable enterprises to better cope with market changes, and ensure the sustainable development of enterprises. The process of enterprise digital transformation is not only technical innovation, but also involves the improvement of enterprise resource planning, and even means the comprehensive strategic reorganization of enterprises. Technology integration, cultural transformation, process optimization, customer experience, and data-driven are among the core elements of enterprise digital transformation (Figure 1). Technology integration refers to the introduction of modern technologies such as artificial intelligence, cloud computing, and big data into the operation and management of enterprises, with the help of modern technologies to promote enterprise innovation, optimize enterprise management, and improve enterprise business efficiency. Cultural change refers to setting up digital thinking, innovating corporate culture, and creating a corporate culture that fits in with the digital age.<sup>[2]</sup> Process optimization refers to the use of digital tools to restructure the enterprise's previous business processes, aiming to achieve cost reduction and efficiency. Customer experience refers to enhancing the interaction between enterprises and customers based on digital means, narrowing the relationship between the two, and proactively providing personalized services to customers, so as to improve customer satisfaction. Data-driven refers to the use of data analysis and other means to provide more scientific and reliable reference and basis for corporate decision-making, ensure the scientific nature of corporate decision-making, and help the sustainable development of enterprises.

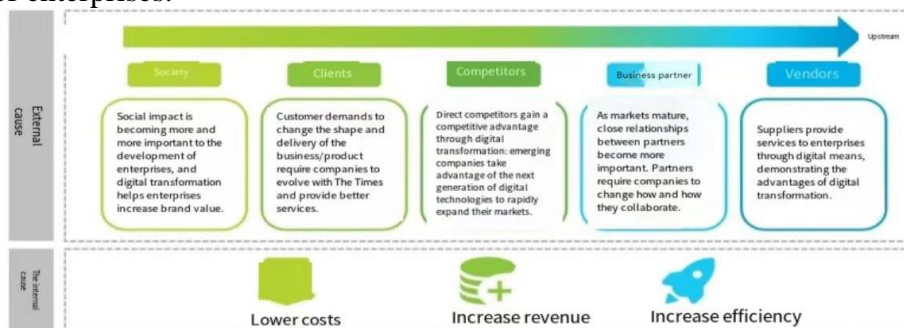


Figure 1: The core elements of enterprise digital transformation

### 2.2 Development trend and model of digital transformation

The development trend and mode of digital transformation show obvious diversified characteristics, mainly in the following aspects: First, in the process of digital transformation, enterprises gradually change from a single technology application to a comprehensive business integration, so digitalization is no longer limited to a certain business field, but will affect all aspects of enterprise production and operation. Secondly, the digital transformation of enterprises makes the position and role of customer center more prominent. With the support of digital technology, the communication and connection between enterprises and customers are closer, which makes it possible for enterprises to proactively provide personalized services to customers. In the process of enterprise development, enterprises can understand the personalized needs of customers through customer data analysis and provide targeted services. Better meet customer needs, improve

customer satisfaction. Once again, digital transformation promotes the transformation of enterprise business model, and platform-based business model will become the mainstream. In the process of operation, enterprises should not only provide services for customers, but also build a platform to connect with customers and build an open operation mode to help enterprises better respond to market changes. Finally, the digital transformation of enterprises makes it more important to ensure data security and compliance.<sup>[3]</sup>

### **3. Overview of enterprise resource planning**

#### **3.1 Enterprise Resource Planning Process**

Enterprise resource planning refers to a systematic and comprehensive management process for enterprise resources to ensure the healthy, long-term and high-quality development of enterprises. It is forward-looking and needs to be combined with the future development trend and development needs of enterprises to conduct resource planning to ensure the scientific allocation and efficient use of resources and help enterprises develop. Therefore, enterprise resource planning should not only be based on the present, but also focus on the future. Enterprise internal and external environment analysis is the premise and basis of enterprise resource planning. Enterprise internal analysis should not only pay attention to enterprise resources, but also analyze its own core competitiveness and development advantages, while external analysis includes market environment analysis, customer demand analysis and competitor analysis. Relevant departments can carry out enterprise resource planning according to the analysis results of various aspects and the long-term and short-term development goals of the enterprise. After enterprise resource planning is complete, you need to convert the plan into a specific implementation plan.<sup>[4]</sup> During this process, you need to plan resource allocation in detail to ensure resource utilization. It is worth noting that enterprise resource planning is not a one-time activity, but a continuous process. Enterprises should regularly monitor the implementation of resource planning, and optimize and adjust resource planning according to enterprise development needs and market environment.

#### **3.2 Main Challenges of enterprise resource planning**

The rapid change of market environment and the increasing competition environment bring many challenges to enterprise resource planning. Both market trends and competitors are key factors to be considered in enterprise resource planning, so changes in both will inevitably bring greater challenges to enterprise resource planning. In the context of modern society, the rapid pace of technological update, especially the rapid development of digital technology, has promoted the transformation of consumer behavior and market structure. In the process of enterprise development, it is necessary not only to face up to this technological change, but also to quickly adapt to this technological change, otherwise it will lag behind competitors and even be eliminated by the market. The intensification of market competition also requires enterprises to continuously optimize and adjust resource planning, give full play to their own resource advantages to enhance competitiveness, and ensure that they can remain invincible in the increasingly fierce competitive environment.<sup>[5]</sup> Faced with the rise of emerging markets, changes in consumer behavior and changes in competitors' strategies, enterprises should respond quickly, adjust their own resource planning in time, and formulate scientific and effective countermeasures, so as to avoid being eliminated by the market. In addition, social responsibility and energy saving and environmental protection are also issues that should be focused on in enterprise resource planning. In the process of development, modern enterprises should not only pursue economic benefits, but also consider the impact of their own development on the environment and society.<sup>[6]</sup>

### **3.3 New opportunities and problems under the background of digitalization**

Under the background of digitization, resource planning of enterprises brings new opportunities, but also brings new problems. The application of digital technology can provide more scientific and more reliable data support for enterprise decision-making, and help improve the scientific and efficiency of enterprise decision-making. Enterprises can use digital platforms to further expand the market, expand market share, and improve their economic benefits. In addition, the promotion of digital technology can help enterprises to develop new products, better meet the market demand, enhance the competitiveness of enterprises. The application of digital technology has improved the data analysis ability of enterprises, which can help enterprises more accurately insight into market trends, grasp the law of market changes, understand consumer demand, and make more scientific resource planning on this basis.<sup>[7]</sup>

Digitalization brings opportunities to enterprise resource planning, but also brings a series of problems, such as data security and privacy protection. In addition, the rapid update of technology requires enterprises to constantly update the skills of employees and infrastructure, which will bring huge economic pressure to enterprises.<sup>[8]</sup>

## **4. The impact of digital transformation on enterprise resource planning**

### **4.1 Influencing factors of enterprise resource planning**

Digital transformation will make data-driven decision-making become the norm. In the process of enterprise decision-making, more data analysis will be carried out with the help of big data technology, and the data analysis results will become an important reference for enterprise decision-making. This trend will make enterprise decision-making more scientific and efficient. In addition, technological innovation will also promote the innovation of enterprise operation means, especially the innovation of modern technology such as artificial intelligence and cloud computing will further enrich enterprise operation means, help enterprises efficiently expand the market, and further optimize enterprise resource planning. Technological innovation can help enterprises have a deeper insight into consumer behavior and market trends, and improve and adjust resource planning based on this, ensure the reasonable allocation of enterprise resources, improve resource utilization, and help enterprises develop in high quality. Digital transformation accelerates the flow of information and can help enterprises respond quickly to market changes, which makes enterprise resource planning more flexible, targeted and adaptable. In addition, digital transformation also requires enterprises to attach great importance to data security in resource planning, strengthen privacy protection, and avoid damage to their own interests and those of customers.<sup>[9]</sup>

### **4.2 The impact of digital transformation on the formulation and execution of enterprise resource planning**

The impact of digital transformation on enterprise resource planning is multifaceted, especially on the formulation and implementation of enterprise resource planning. In the process of making enterprise resource planning, enterprises need to grasp the needs of consumers and understand the changing trend of the market by means of data analysis, so as to ensure the scientific nature of enterprise resource planning. The application of digital tools such as robot learning and artificial intelligence can help enterprises improve their market forecasting ability and better grasp the law of market changes. This can help enterprises better avoid risks in the process of enterprise resource planning. Digital transformation also has an important impact on the implementation of enterprise resource planning. On the one hand, digital transformation enhances the flexibility of enterprise

resource planning and improves the execution efficiency of enterprise resource planning. During the implementation process, enterprises can understand the problems in the enterprise resource planning in the first time through real-time data monitoring and analysis, and optimize and adjust the resource planning in time. On the other hand, with the support of digital tools, the communication efficiency between teams is higher, which can better guarantee the consistency and effectiveness of the implementation of enterprise resource planning. In short, digital transformation makes the formulation and execution of enterprise resource planning more flexible and efficient, and also requires enterprises to continuously strengthen infrastructure construction and talent construction. On the one hand, these changes strengthen the ability of enterprises to cope with the market, and on the other hand, create new opportunities for high-quality development of enterprises.

## 5. Case study

This paper takes a certain type of enterprise as an example to explore the impact of digital transformation on enterprise resource planning. The company, which belongs to the equipment category, has fully demonstrated the process of leveraging technological innovation to help enterprise resource planning in the process of digital transformation. The company has taken a number of key measures in the process of digital transformation, which not only promoted the production and operation efficiency of the company, but also had an important impact on enterprise resource planning. In the process of digital transformation of the enterprise, data analysis technology is used to further optimize production and inventory management, and also greatly improve the efficiency of the supply chain. In the process of enterprise resource planning, big data technology is used for data analysis to help enterprises accurately predict market demand conditions, optimize and adjust production and inventory levels based on this, and further optimize logistics arrangements based on data analysis results. This can improve the production management and inventory management level of enterprises, not only can enable enterprises to better meet the market demand, but also can avoid a large number of inventory squeeze, reduce the inventory risk and inventory costs of enterprises, but also can better meet the needs of the market and customers. In addition, in the process of digital transformation, enterprises also use the network platform to expand their own business, further expand the market share of enterprise products, enhance the influence of enterprise products, highlight the competitive advantage of enterprises, and strengthen the digital influence of enterprise brands. In addition, the company has also taken a series of measures to strengthen production management in the production process, such as real-time monitoring of the production process with the help of information technology, the use of sensor technology to monitor the operating status of production equipment. Through these measures, the production quality and production efficiency of the enterprise are better guaranteed, which is of great significance for enhancing the competitiveness of the enterprise and enhancing the brand influence of the enterprise. At the same time, through the monitoring of the production process, the utilization rate of enterprise resources can be further improved, which can effectively reduce the waste of resources, help enterprises reduce operating costs and improve economic benefits. It is not difficult to see from this case that digital transformation will have an important impact on enterprise resource planning. In the process of enterprise resource planning, more development perspectives should be applied to look at problems, improve the adaptability and foresight of enterprise resource planning, and make digital transformation become the help of high-quality development of enterprises.

## 6. Coping strategies

Digital transformation will have an important impact on enterprise resource planning, including

both positive and negative impacts. In view of the negative impacts, enterprises need to take corresponding countermeasures to minimize the negative impacts, or transform the negative impacts into positive impacts, so as to help the high-quality development of enterprises. In the process of digital transformation, enterprises need to establish a clear digital vision, and the determined digital vision should be consistent with the development strategy of the enterprise. In addition, enterprises should do a good job of internal and external analysis, clear market demand and their own resource advantages, and determine the priority of digital transformation according to this, and then formulate a scientific and feasible digital strategy. At the same time, enterprises also need to build a sound monitoring and evaluation mechanism to supervise and evaluate the implementation process of digital strategy, and make timely optimization and adjustment.

## 7. Conclusion

Digital transformation will have an important impact on enterprise resource planning, providing a more comprehensive and reliable basis for enterprise resource planning, and promoting enterprise resource planning process to pay more attention to market changes and consumer demand, pay more attention to the rational allocation of resources and improve resource utilization rate, help improve enterprise resource advantages and strengthen enterprise competitiveness. However, it should be clearly analyzed that the impact of digital transformation also includes negative impacts, and enterprises need to take appropriate measures to minimize the negative impacts or directly transform them into positive impacts, so as to help the healthy and sustainable development of enterprises with the help of digital transformation.

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