

Enterprise Digital Transformation Path Optimization Measures

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Abstract: *The marketization of digital technology has become the main theme of the development of the times, and the digital economy has become a new engine leading the development of the world economy. In recent years, with the continuous introduction of national digital policies, the continuous progress of emerging technologies, and the continuous release of endogenous needs of enterprises, digital transformation has gradually become the only way for enterprises to achieve high-quality development, and an important way for enterprises to achieve sustainable development and even overtaking curves. This paper focuses on analyzing the current difficulties that hinder the digital transformation of enterprises, and puts forward suggestions that conform to the systematic, efficient and rational implementation of digital transformation of enterprises, so as to provide strong support for enterprises to quickly adapt to the development of digital economy and accelerate the realization of digital transformation.*

Keywords: *enterprise digital transformation, organizational structure, technology cost*

1. Introduction

Enterprise digital transformation is a major change of social production mode in the digital age. With the continuous development of science and technology and the popularization of the Internet, especially the maturity of artificial intelligence technology, digitalization has become the mainstream trend of today's society. Traditional enterprises often rely on industry experience and traditional models in terms of business model, organizational structure, informationization degree and innovation ability, which is difficult to adapt to the development needs of the digital age [1]. With the continuous development and popularization of information technology, digital enterprises will occupy more and more market shares, and traditional enterprises need continuous transformation and innovation to adapt to market changes and challenges. Digital transformation is an important strategic choice for enterprises in the digital era, and it is the only way for enterprises to transform and upgrade.

Enterprise digital transformation is not only a technology upgrade, but also a change in corporate culture and management. Digital transformation can help enterprises optimize business processes, improve work efficiency and reduce costs. Through the use of digital technology, enterprises can realize automated and intelligent operation and management, reduce the expenditure of human resources, improve efficiency and quality; Can establish customer files, record customer purchase history, preferences and feedback, better understand customer needs, so as to provide more personalized and convenient services, fully meet the needs of different customers, improve customer satisfaction; It can better adapt to market changes, respond to market demand, launch new products and services, improve market competitiveness, and quickly occupy market share; It can collaborate with suppliers, customers, technology companies, etc., to integrate various resources and elements to form a digital ecosystem and jointly promote the sustainable development of the industry.

Enterprise digital transformation refers to the digital transformation of traditional enterprise business processes, service models and management methods, and the formation of digital marketing, digital production, digital service, digital management and other aspects of the business mode to meet the development needs of the digital era [2]. The core of digital transformation is to optimize the business process and management mode of enterprises through digital technology, improve the efficiency and competitiveness of enterprises, and achieve sustainable development of enterprises. Digital transformation requires enterprises to start from a global perspective, through the joint efforts of business operators and all employees, actively explore and constantly innovate, carry out all-round transformation in technology, talent, culture, organization and other aspects, and adjust at any time

according to their own conditions in the transformation process to adapt to the development trend of digital technology, in order to ultimately achieve the goals and effects of digital transformation.

2. Difficulties in enterprise digital transformation

2.1 Digital infrastructure is lagging behind

Existing operational systems and infrastructure is an important barrier to digital transformation. The technical architecture of the original operating systems and infrastructure may not adapt to the needs of digital transformation and cannot meet the technical requirements of digital transformation. For example, the network system may not be able to support the application of new technologies such as cloud computing, big data, and artificial intelligence, requiring a massive increase in servers and network equipment, as well as corresponding management departments and personnel. There is also an island phenomenon among departments of traditional enterprises, and the data formats and standards between different departments are inconsistent, which makes it difficult to communicate and share, and it is difficult to realize data integration and analysis. Traditional enterprises may not pay attention to the security and stability of data in the past, but when the digital transformation begins, the type and scale of data will increase dramatically, and there will be risks such as information leakage and data distortion.

2.2 Lack of professional digital talents

For the digital talents needed in the process of digital transformation of enterprises, most enterprises first choose to conduct digital training for existing employees and management to improve their digital skills [3]. However, this kind of training is also more difficult, because the existing employees need to complete the job first, the learning time is not guaranteed, and the learning efficiency is greatly reduced. Enterprises also need to consider the risk of loss of digital talents, because with the improvement of employees' digital skills, they will have higher market value and competitiveness, and may leave the enterprise due to salary, benefits, career development and other reasons.

In addition to digital training for existing employees and management, enterprise digital transformation also needs to introduce high-quality talents with certain digital skills. These talents need to have the digital skills and capabilities required by the current digital transformation phase of the enterprise to drive the implementation of the digital transformation of the enterprise. However, these highly skilled personnel are relatively scarce, because the skills and capabilities required for digital transformation are relatively new and complex, and talents with certain professional knowledge and practical experience are still scarce in the current job market.

2.3 Low utilization rate of digital technology

Enterprise digital transformation is a complicated change process, which needs to involve many aspects such as organizational structure, business process and personnel ability. In this process, employees and management are often accustomed to existing ways of working and processes, and there may be resistance to new digital tools and business processes [4]. Especially in the early stage of transformation, digital tools often cannot be used directly, and corresponding adjustments need to be made for the enterprise. Enterprise employees also need to undergo a large amount of training to transform into talents with digital skills, which will bring great discomfort to existing employees and management. Due to a lack of awareness and recognition of digital transformation, and a lack of understanding of the value and benefits of digital tools and business processes, they may believe that the existing way of working is already working and there is no need to change. Then there is the organizational structure and culture that can hinder digital transformation. In particular, large traditional enterprises may have conservative cultures and rigid organizational structures, which can lead to low utilization of digital technologies and hinder the digital transformation process.

2.4 Inadequate data protection system

Once a digital transformation is implemented, an enterprise will face an unprecedented amount of data, and if the enterprise does not have clear data protection policies and regulations, it will lead to a vague understanding of data protection and a lack of corresponding guidance and constraints. For example, there is no sound data rights management mechanism, resulting in too loose or confusing data

access rights, which may have the risk of unauthorized data access and abuse; A sound data backup and disaster recovery mechanism is not established, resulting in data loss or timely recovery, which has serious impact on service operations. No data encryption measures are taken. As a result, data is easily stolen or tampered during transmission and storage, which poses a threat to data security.

3. Enterprise digital transformation optimization path

3.1 Make assessment and planning

First of all, we must do a good job in the evaluation and planning of digital transformation of enterprises. Before digital transformation, enterprises need to evaluate their current situation, including their business model, organizational structure, and technical level. This information can be obtained through surveys, questionnaires, interviews, etc. The purpose of digital transformation is to meet the business needs of enterprises, so enterprises need to analyze their own business needs, including the analysis of the market, customers, competitors and other aspects, as well as the analysis of internal business processes and personnel. Digital transformation needs to rely on advanced technical means to support, so enterprises need to evaluate their own technical capabilities, including the assessment of existing technical equipment, software systems, technical personnel, and other aspects of the enterprise, as well as the future digital transformation required by the technical capabilities of the estimate. Digital transformation needs to invest a lot of manpower, material and financial resources, so enterprises need to analyze the cost benefit of digital transformation, including the return on investment and cost saving rate of digital transformation.

After assessing the current state of the enterprise, business needs, technical capabilities and cost-effectiveness, the enterprise also needs to develop a global plan for digital transformation. The plan includes goals and strategies, technology and platforms, data and analytics, organization and culture, security and risk. Enterprises need to develop practical digital transformation plans based on their own circumstances and market needs.

3.2 Improve infrastructure construction

In the process of enterprise digital transformation, infrastructure construction is a mandatory requirement, and digital transformation needs to rely on appropriate digital technology means and perfect infrastructure to support. Enterprises need to transform their existing network conditions and hardware devices, including improving network bandwidth, optimizing network topology, strengthening network security and other aspects of work to prepare for digital transformation. It is also necessary to select suitable digital transformation technologies according to its own business needs and technical capabilities, including cloud computing, big data, artificial intelligence, blockchain, Internet of Things and other technologies, which need to be selected or combined according to the actual situation [5]. Enterprises also need to take technical means to improve data processing capabilities, relying on advanced data processing technology and software systems to clean and process their own data to ensure the accuracy and integrity of data.

3.3 Actively cultivate digital talents

Actively cultivate digital skills talents, you can train the existing employees of the enterprise or directly introduce digital talents from outside. The digital talents cultivated by the existing employees of the enterprise through training and learning need to provide competitive salaries and benefits, provide good career development and promotion opportunities, provide more training and learning opportunities, encourage lifelong learning, improve their professional skills and practical experience, and enhance the sense of belonging and loyalty of highly skilled talents. For the digital talents imported from outside, enterprises can establish a cooperation mechanism with colleges and universities. On the one hand, through campus recruitment and intern programs, enterprises can attract high-quality talents cultivated by schools to provide sufficient talent reserve for digital transformation. On the other hand, it can establish scientific research relations with universities and research institutions, share digital technology research and development and practical experience, improve the efficiency and quality of digital transformation, and promote the sustainable development of digital transformation.

3.4 Promote the application of digital technology

Enterprise digital transformation is not only the upgrading of technology and infrastructure, but also an important work of enterprise culture construction and employee thinking mode change. Companies need to build a culture of digital transformation through internal promotion, training and discussion, so that employees understand the importance and necessity of digital transformation. Enterprises also need to encourage employees to participate in the skills training and learning of digital transformation through incentive mechanisms, so that employees can actually feel the improvement of labor efficiency brought by digital transformation in their own work. Successful experiences of digital transformation can also be promoted through internal sharing, experience exchange and other means to form discussions among employees, so that employees fully understand the actual effects and results of digital transformation.

3.5 Strengthen the support and protection of data by laws and regulations

The support and protection of enterprise data includes two aspects: First, enterprises need to improve their own system construction, formulate clear regulations on data collection, use, storage and sharing, and clarify the responsibilities and obligations of employees when processing data. Technical measures for data security such as data encryption, access control, and security audit should be taken to ensure the security and integrity of data during transmission and storage. Second, it is necessary to formulate relevant laws and regulations at the government level, strengthen data privacy protection and data security requirements, establish a punishment mechanism for data violations, strengthen supervision and law enforcement, and provide legal aid and relief channels. This can ensure that enterprises comply with laws and regulations in the process of data processing and protect the legitimate rights and interests of data subjects.

3.6 Continuous improvement and innovation

Enterprise digital transformation is a process of continuous improvement and innovation. Digital transformation is not a one-time task, but a long-term process that requires companies to continuously identify and solve problems, and constantly improve and innovate. Companies need to keep an eye on trends in digital technology and introduce new technologies and tools to improve the efficiency and effectiveness of digital transformation. Enterprises need to continuously study the market, competitors and customer needs, and redesign and innovate and optimize their business models to adapt to the new opportunities and challenges brought by digital transformation. It is necessary to continuously improve the ability of data analysis and mining to obtain more business value. In order to better support the implementation of digital transformation, it is necessary to continuously optimize the organizational structure, improve organizational efficiency and efficiency, and constantly train and introduce talents to ensure the reserve of digital talents and ensure the normal development of digital business of enterprises.

4. Development trend of enterprise digital transformation

4.1 Enterprises will strengthen the integration and utilization of private traffic to improve the conversion rate of digital marketing

From CCTV's "King" to Weibo V, the constant changes in brand communication channels and methods make enterprises quickly adjust their strategies after a short period of discomfort and anxiety, and gradually master the diversified and fragmented new communication methods in the digital era. However, the traffic price of Weibo, Wechat public number and other platforms is not cheap, in the case of rapid rise in enterprise cost expenditure, the conversion rate has not risen, enterprises have been looking for lower cost, higher conversion rate of accurate channels. The rise of Internet celebrities, bloggers, Wechat public number big V and other we-media and the popularity of self-media platform live streaming with goods have made the channels for enterprises to reach customers more direct and diversified, so that their attention to private domain traffic continues to rise. However, the integrated use and effective management of these emerging channels by enterprises have not kept up in time, resulting in uncertain communication effects and cargo results, and rollover is common. In the future, private domain traffic will become a complete marketing system that matches the business model of the enterprise itself, rather than just a marketing means that is solely responsible for by the Marketing

Department and completely dependent on the Internet platform. Enterprise private domain is an important part of enterprise digital system, and distribution channels, sales, and shopping guides are facing comprehensive integration and coordination [6]. With the support of the enterprise private domain system, enterprises will launch marketing activities such as gift cards, member points, and group distribution accordingly to improve the conversion rate of digital marketing.

4.2 The Internet of Things and the Internet are deeply integrated, and the data-driven manufacturing industry has entered the new era of planned economy

The digitization of manufacturing continues unabated. From product design, CNC machine tools, 3D printing to a large number of applications of robots and black light factories, intelligent manufacturing has entered a new stage of development, from everyone interconnection, man-machine interconnection to the Internet of things, ecological interconnection. In the future, the development of intelligent manufacturing will be the deep integration of the Internet of Things and the Internet, through sensors, data monitors and other means, the original is not concerned about, it can't collect industrial big data, through data analysis technology real-time perception of the dynamic production equipment, timely reminder into the pre-maintenance state. Similarly, through the application of the Internet of Things and 5G communication technology, remote control and maintenance can be achieved to ensure that equipment products maintain normal working conditions. For consumer goods, the integration of the Internet of Things and the Internet allows enterprises to monitor the product flow in real time and grasp the real market demand, which is conducive to the development and upgrading of new products and product strategic planning. Industrial big data has supplemented the original data blind spots, effectively combined with the ever-changing management applications, and promoted the transformation of enterprise management to a higher vision of the industrial Internet platform. The digital marketing and procurement digital platform is effectively connected with the enterprise management system, forming a data-driven industrial ecology, making the manufacturing industry as a whole enter an era of production planning based on effective demand forecasting. The entire supply chain operates more lean and orderly, so that the economic operation gradually enters the new era of planned economy based on data intelligence.

4.3 Data intelligence will become the main direction of enterprise AI application

Artificial intelligence is divided into three stages: operational intelligence, perceptual intelligence and cognitive intelligence. Operational intelligence allows the system to "save and calculate", perceptual intelligence allows the system to "listen and speak, see and recognize", and cognitive intelligence allows the system to "understand and think", that is, associative reasoning. Cognitive intelligence is the most important direction in the future application of data intelligence, and it is also the core force to promote the digital transformation of enterprises. As an important asset of the enterprise, data can best reflect the real situation of the enterprise. The data center should be used to collect the data more real-time and dynamically from various systems for inventory sorting. Data from various fields should be integrated, including financial data, business data, internal data, external data, etc., to form a unified data platform, turn data into knowledge and insights, and empower the scene, first-line departments and business departments. In the future, digital information collection, information transmission and data analysis technology must rely on the advancement of Internet technology, and the development of digital to a certain stage, with the in-depth integration of human wisdom, and the development of artificial intelligence represented by the era of intelligence. When digital technology and intelligent technology are combined, it can be more comprehensively driven to reshape the enterprise value chain. Based on artificial intelligence natural language understanding and knowledge graph data interaction analysis technology, data intelligence will bring greater help to future data analysis and empower enterprise business development.

5. Conclusion

Although enterprise digital transformation has become the trend of The Times and can bring huge benefits to enterprises, there will still be many problems in the real implementation process, which need to be solved one by one. One is to reach a consensus on digital transformation within the enterprise. The top management and all departments fully understand the importance of digital transformation to the enterprise, actively learn new technologies, new applications and new knowledge, and reach a consensus to promote the diagnosis, planning and implementation of digital transformation,

and help all departments coordinate resources to solve problems in a timely manner when they encounter problems in the implementation process, so as to achieve systematic, orderly and efficient progress. The second is to do a good job in the diagnosis of internal digital development status. Third, we need to plan the top-level design of digital transformation. In combination with the actual situation of the enterprise and through docking the overall strategy of the enterprise, we need to carry out top-level planning for the enterprise digital transformation, form the basic principles, objectives, overall blueprints, sub-blueprints, overall content, stage goals, development paths, etc., promote the effective coordination of all departments and levels of the enterprise, and unify the overall understanding, thinking, goals, and actions. Only in this way we can ensure that the plan is completed on time and the target is reached. Through benchmarking, we can understand the experience and lessons of outstanding digital transformation demonstration enterprises in the industry, learn how other enterprises carry out digital transformation, and practice on the shoulders of others, not behind closed doors.

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