

## Research on the Agents and Countermeasures of Digital Transformation of Small and Medium-sized Enterprises

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### Abstract

Digital transformation is the inevitable trend of enterprise development, the sudden Corona Virus Disease 2019 (COVID-19) pandemic is forcing enterprises to accelerate digital transformation and upgrading. The agents and difficulties faced by small and medium-sized enterprises in digital transformation are studied and analyzed, more targeted strategies are put forward, in order to accelerate the pace of digital transformation of small and medium-sized enterprises in China, and achieve high-quality and sustainable development.

### Keywords

Digital Transformation; Small and Medium-sized Enterprises; Agent.

### 1. Introduction

In the digital age, digitalization gives new momentum to the world economy, and the digital transformation of the industrial economy has become a general trend; small and medium-sized enterprises in China account for more than 99% of the total number of enterprises, they are the main force of economic and social development, digital transformation provides small and medium-sized enterprises with new business models and new development direction, it is an inevitable requirement for China's social and economic development and industrial structure optimization, and an inevitable measure for enterprises to conform to the trend of the times, follow the laws of the market, and create competitive advantages. Facing the "force" of COVID-19 pandemic, people need to further pay attention to and promote the digital transformation of small and medium-sized enterprises, actively explore, see the direction, accelerate the progress, and seek sustainable development.

### 2. Meaning of Digital Transformation

The so-called digital transformation, IDC believes that it is a way and method to use digital technology and capacity to drive enterprise business model innovation and business ecosystem reconstruction. In the report "Models and Paths of the Digital Transformation of Traditional Industries", the Development Research Center of the State Council of China pointed out that digital transformation is to use new generation of information technology build a closed loop of data acquisition, transmission, storage, processing and feedback, open up the data barriers among different levels and different industries, improve the overall operating efficiency of the industry, and build a new digital economy system. In summary, digital transformation is that enterprises use digital technologies innovate and reshape enterprise strategic systems, business models, business processes, production and operation, and organizational structure. etc., achieve business growth and enterprise development, that is to say, digital transformation helps enterprises solve practical problems and key problems, can create higher value for the enterprise, it is the enterprises' active, systematic and overall transformation and upgrading.

### **3. Agents of Digital Transformation of Small and Medium-sized Enterprises**

National grand strategies such as "Internet+" and "Made in China 2025" promote technological innovation, the deep integration of the Internet and the real economy, reshape the new industrial digital ecology, and provide the favorable external environment for the digital transformation of small and medium-sized enterprises, the main agents of the digital transformation of enterprises include the following four aspects.

#### **3.1 Follow the laws of the market and boost social and economic development**

From the social and economic perspective, IDC believes that the current slowdown in macroeconomic growth has affected all industries, and enterprises are under great macroeconomic pressure. The new round of technological revolution brought about by digitalization will bring unprecedented strategic opportunities and directional guidance for social and economic development, either transformation or elimination has become a reality that small and medium-sized enterprises cannot escape, small and medium-sized enterprises must follow the development laws of market, vigorously promote digital transformation and boost social and economic development.

#### **3.2 Enhance market competitiveness and improve customer satisfaction with digitalization**

From the perspective of market demand, it is mainly manifested in two aspects; on the one hand, digital marketing, digital customer experience, digital operations, digital products and services, and digital business models are the objective needs for small and medium-sized enterprises to implement digital transformation, on the other hand, digitalization improves the efficiency of office collaboration, product research and development, sales services, production and transportation, etc., and can launch new products and services more quickly and flexibly, small and medium-sized enterprises need to use digitalization to enhance their market competitiveness and improve customers satisfaction, and expand new space for enterprise development.

#### **3.3 Rapid development of the Internet brings pressure, and enterprises need to adapt to digital operations**

The birth and rapid development of new technologies such as big data, cloud computing, Internet of things and artificial intelligence are profoundly changing the way of human life and production, the development of mobile Internet has greatly improved the communication and transaction efficiency among enterprises; from the perspective of enterprise development, the pressure brought by the rapid development of the Internet has forced enterprise to change their offline operation models, use numbers run enterprises, open up data channels, integrate online and offline channels, and use numbers drive enterprise innovation and development.

#### **3.4 Pandemic accelerates the digital transformation of small and medium-sized enterprises**

The normalization of the pandemic prompts enterprises to seek self-help and further arouse their digitalization awareness, many enterprises accelerate the construction and launch of digital projects, and use digital tools actively expand cooperation with other enterprises in the ecosystem, try to expand new businesses, and explore new business models, and enhance the strategic height of digital transformation in the enterprises.

### **4. Difficulties Faced by Small and Medium-sized Enterprises in Digital Transformation**

#### **4.1 Inadequate understanding of the connotation of digitalization**

The survey data of IDC found that the level of digital transformation of China's small and medium-sized enterprises is significantly lower than that of large enterprises; and the transformation speed and success rate are also low. The reason is that the primary obstacle is that the ideas are difficult to change and the inconsistent, it mainly shows that the operators of small and medium-sized enterprises do not have thorough understanding for connotation of digitalization, the willingness of digital transformation is not strong, and the employees do not understand and disagree with digitalization, different departments in enterprise have different cognitions and understandings for digitalization,

and have different interest demands, which makes it difficult for departments to reach consistent goals and take unified actions.

#### **4.2 Lack of digital talents and funds**

The digital transformation of enterprises relies on new ideas, new technologies and new methods, requires all employees to support the digital transformation, however, traditional small and medium-sized enterprises have a small number of employees, low levels of information technology application, and do not have complete digital talent training system; moreover, facing the new conditions and new requirements for digital talents, it is difficult for enterprises to recruit qualified talents, and they are facing the "nowhere to start" dilemma, the scarcity and loss of talents have severely restricted the speed of digital transformation of small and medium-sized enterprises.

As a long-term and complex project, digital transformation requires continuous capital investment, small and medium-sized enterprises are relatively small in size, have great survival pressure, their financial strength is limited, however, digital transformation investment is slow and take a long time to become effective, the return period is long, especially operation in the later stages, this makes it difficult for small and medium-sized enterprises to successfully achieve their digital transformation goals, even if they can solve the funding problem through financing, they will be unwilling to invest limited funds in digital transformation and upgrading due to the survival pressure, the shortage of funds restricts the willingness of digital transformation and upgrading of small and medium-sized enterprises.

#### **4.3 Limitations of traditional management methods and the difficult coordination of industrial chain**

The digital transformation is an all-round, multi-angle, and full-chain transformation process when enterprises use digital technology; it not only requires the overall collaboration of the enterprise itself, but also the collaboration of all enterprises in the industry chain. Most small and medium-sized enterprises adopt family-style management, generally, operators make single decisions, and management relies on experience, it is difficult to form effective coordination between enterprise departments, lack effective management mechanisms and development strategic planning, do not carry out all-round planning for digital transformation, as a result, the digital transformation path is not clear and the direction is not clear, and only partial digital transformation or optimization can be carried out. Moreover, it is difficult for different enterprises in the industry chain to unify their understanding of digitization, the process is difficult to coordinate, and it is difficult to achieve data channels and shared data, which cause business coordination to be not ideal and difficult to ensure the transformation effect.

#### **4.4 Insufficient statistics of enterprise operation data and digital gap hinder the process of digital transformation**

The small and medium-sized enterprises will face more difficulties and challenges in the process of transformation in comparison with large enterprises.; on the one hand, most small and medium-sized enterprises are low in digitalization level, networking and intelligence foundation is weak, they have not yet integrated each business and data deeply, internal data is scattered in various business systems, cannot interconnect, and there are few and timely external data acquisition channels, resulting in insufficient statistics of business data, limited value, and narrow application scope, they are at a disadvantage in the competition with large enterprises. On the other hand, large enterprises have accumulated a large amount of user data, have more accurate grasp of user behavior, and occupy a dominant position in the competition, the digital divide between large and small enterprises hinders the digital transformation process of small and medium enterprises.

#### **4.5 Lack of core digital technology**

Small and medium-sized enterprises' own digital technology level is not high, and their network and intelligence foundation is weak, which is not enough to support the development, deployment, operation and maintenance needs of enterprise's digital platform; digital service providers in the

market are mixed, the digital transformation solutions provided are mainly general-purpose, it is difficult to meet the individual needs of different enterprises, and the lack of core digital technology has greatly affected the digital transformation of small and medium-sized enterprises.

## **5. Countermeasures of Digital Transformation of Small and Medium-sized Enterprises**

### **5.1 Deepen the digital policy guidance and foster digital transformation demonstration enterprises**

According to industry types and characteristics, optimize government services, strengthen policy support for the digital transformation of traditional industries, introduce strongly targeted and operational guidance policy system, integrate fiscal taxation, finance, talent, land and other policy forces, and make every effort to promote the digital transformation of small and medium-sized enterprises, especially in financial and taxation support, ensures the capital investment and use efficiency, and actively promotes relevant business-benefit policies to ensure effective implementation.

By surveying the successful cases of digital transformation of typical small and medium-sized enterprises, formulating digital transformation implementation guidelines, fostering digital transformation demonstrations, and providing reference and lesson for other small and medium-sized enterprises; in allusion to the needs of regional pillar industries, fostering a group of digital solution providers, giving full play to the advantages of industry associations in integrating social information resources, training digital economy talents, and studying and developing new digital economy technologies, the industry association takes the lead to establish the research institution for the digital transformation of small and medium-sized enterprises, develop targeted solutions; effectively play their service and coordination role, promote coordination between government and market, upstream and downstream linkages in the industrial chain, large enterprises drive small and medium-sized enterprises and other measures, and provide guidance and assistance for the digital transformation of small and medium-sized enterprises.

### **5.2 Cement the awareness of digital transformation and build the digital talent training system**

Although digital transformation is a "head project", it also requires the support of all employees in the enterprise for digital transformation, as far as small and medium-sized enterprises are concerned, the operators' idea plays a key role in the digital transformation; the operators need to truly understand the connotation of digital transformation, upgrade the existing organization, create harmonious and stable humanistic and institutional environment, form own organizational culture and enterprise values, improve the digital literacy of all employees, improve the internal force and capacity of the enterprises, and establish the development idea of enterprises in digital transformation.

In allusion to the explosive growth of demand for digital talents in small and medium-sized enterprises and the serious imbalance between the supply and demand ratio of digital talents, enterprises can adopt the "internal transfer + external talent introduction" method, on the one hand, encourage the original personnel of the enterprises to continuously learn and improve, on the other hand, increase the intensity and continuity of the introduction of digital talents, introduce corresponding professionals, and form the "composite" digital transformation work team; moreover, cooperate with universities, training institutions, and consulting companies to build digital talent training base of small and medium-sized enterprises together, build digital talent training system, continuously provide high-quality talents for the digital transformation of enterprises, and truly support the continuous advancement of the digital transformation of enterprises.

### **5.3 Rely on the digital service system and carry out upgrade and practice of digital transformation**

With the rise of new infrastructure, the infrastructure required for digital transformation of enterprises is becoming more and more perfect, including the construction of an industrial public service system that provides technical, organizational and management empowerment for small and medium-sized

enterprises, when it is difficult to implement all-round digital transformation, small and medium-sized enterprises can rely on public resources and existing platforms, start from their own needs and pain points, find the transformation plans that suit the enterprises' own maturity and development strategy, according to the principle of urgent use first, gradually carry out digital transformation from point to area; such as digital office, digital marketing, etc., while fully enjoying the model dividends brought by the Internet, reducing the initial costs and risks of digital transformation, promoting the adaptation of employees to new ideas and new methods, and laying the foundation for the following and more in-depth digital transformation.

Moreover, enterprises should learn to introduce digital technologies, accelerate online and offline integration, actively conduct upgrade and practice of digital transformation, realize business model transformation, management reform and operation optimization, and fully enjoy the dividends brought by digital innovation and reform, and drive innovation and development of enterprises.

#### **5.4 Build the digital ecosystem and achieve complementary advantages in digital transformation**

In order to solve the deficiencies of small and medium-sized enterprises in resources and technology, they can jointly build and share digital transformation equipment and effectively use existing funds; realize complementary technological advantages, jointly produce and develop new products; build new supply chains, open up new marketing channels, achieve win-win cooperation of small and medium-sized enterprises; by establishing industry alliances, industry associations or other forms of industry organizations with scientific research institutions and universities, multi-party resource linkage, achievement sharing, and benefit sharing mechanisms are realized, digital ecosystem is formed, which strongly supports the digital transformation of small and medium-sized enterprises.

### **6. Conclusion**

During the "14th Five-Year Plan" period, digital transformation is the general trend, this process will not be accomplished at one stroke, it is difficult to generate huge benefits in a short time, we should grasp the policy dividends and industrial dividends of digital transformation, make the best use of the situation and act according to circumstances in accordance with to the industry and the enterprises' own endowment, take countermeasures applicable to the digital transformation of small and medium-sized enterprises, promote digital transformation and upgrade in continuous iteration and evolution, and achieve high-quality development of the enterprises.

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