Investigation and Analysis on the CurrentSituation of Digitaltransformation of Xin yang Enterprises

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Abstract: ThepurposeofthisresearchonDigitaltransformationofXinyangenterprisesistograsptheneeds,speedandfollow-upguarantee ofXinyangenterprises'transformation under the planning of 2035's long-term goals. Based on the survey of more than 20 enterprises in Xinyang City, we adopted field visits, telephone inquiries and other ways to creatively summarize the cognition of Xinyang enterprises on the application of digital technology; The digitalization of operation and production management implemented by Xinyang Enterprise; The organizational guarantee system of Xinyang Digital transformation. According to the research results, this paper puts forward the direction of Digital transformation of Xinyang government and enterprises, as well as the research results on the demand for talents of Xinyang Digital transformation, and puts forward corresponding countermeasures.

Keywords: enterprise Digital transformation, innovative value, realistic value, main obstacles, coping strategies

Introduction

In2021, the 14th Five Year Plan for National Economic and Social Development of China and the Outline of Vision and Objectives for 2035, digitalization occupies an exclusive part, ranking in the fifth part of "accelerating digital development and building a digital China," which will become the action program for Digital transformation development in the next five to fifteen years.

1. Research background

In 2021, the added value of China's manufacturing industry accounted for 27.4% of GDP, with a total amount of 31.4 trillion yuan, ranking first in the world for 12 consecutive years. The report of the 20th National Congress of the Communist Party of China pointed out that we should "support the development of small, medium-sized and micro enterprises,""support the development of specialized and new enterprises,""promote new industrialization," and "promote the deep integration of the digital economy and the real economy," which pointed out the direction of progress for us to promote the Digital transformation of small and medium-sized enterprises and provided fundamental compliance. Intelligent manufacturing is both a challenge and an opportunity for China. The development of intelligent manufacturing is a core component of the equipment manufacturing industry, which plays a substantial supporting role in developing the national economy. China issued the strategic plan of "Made in China 2025" to build manufacturing power in 2015. The digital economy's development enables the high-quality development of the real economy of the equipment manufacturing industry. It realizes the "Made in China 2025" as soon as possible.

Many traditional manufacturing enterprises in China have created intelligent factories by applying digital technology, built cloud platforms to create industrial ecosystems, improved conventional physical products, or developed new innovative home products using digital technology and achieved great success. Traditional manufacturing enterprises such as Haier, BYD, and Midea have successfully used digital technology to inject new vitality into their development and gained market competitiveness in the digital economy. However, many manufacturing enterprises still need to work on participating in digital activities, fail to enjoy the dividends of digital development, and even fall into development crises. Therefore, based on the actual needs of China's economic growth and the development status of manufacturing enterprises, it is of great practical significance to research the Digital transformation of Xinyang enterprises.

2. Overall goal and vision of enterprise Digital transformation

In today's society, new technologies constantly promote market reshaping, and consumer and customer demands are becoming personalized, diversified, and real-time. In this environment, new forms of competition are continually emerging, and disruptive innovation of products is pushing new products. Enterprises need agile, on-demand supply chains and automated and highly elastic manufacturing systems. With cloud computing, the Internet of Things, artificial intelligence, mobile Internet, and other new technologies and capabilities, enterprises can use Digital transformation to improve their customer acquisition, cost reduction, efficiency increase, develop and innovate products to gain market advantages and sustainable development quickly. Through Digital transformation, enterprises expect to achieve four points: first, intelligent business decision-making, enterprises can accurately grasp customer needs in real-time and rationally allocate resources; The second is the integration of management and operation, achieving horizontal, vertical, and end-to-end collaboration among departments to timely and efficiently solve operational problems; The third is the ecological value cooperation, effectively connecting and integrating the value chain, and achieving shared and win-win development; The fourth is to transform and innovate with agility, align technology with business capabilities and levels, and dynamically lead the market.

3. The Innovative and Realistic Value of Project Research

This research will investigate into Xinyang industrial cluster and deeply understand the key issues affecting Digital transformation. The innovation value is summarized as follows:

3.1 Innovative Summary of Xinyang Enterprises' Cognition of the Application of Digital Technology

This survey investigated enterprises in Xinyang City through field visits, telephone surveys, and data review, including leading enterprises and development enterprises in green construction clusters, intelligent manufacturing clusters, and electronic information clusters. The research involves the Digital transformation of enterprises from basic cognition to transformation path, transformation pain points, the effect of enterprise informatization management, production system management, etc. The design of the problem covers multiple aspects of enterprise Digital transformation, which is highly professional and practical. From the research situation, the surveyed personnel can clearly describe enterprise informatization management; This shows that most Xinyang enterprises have built a basic cognitive framework for Digital transformation and have a good sense of change.

3.2 Innovative summary of the digitalization of operation and production management in Xinyang enterprises

Among the enterprises surveyed this time, 80% of them have started Digital transformation in the field of operation management, and promoted practical exploration by purchasing standardized products, building their systems, etc. 60% of enterprises have carried out automation equipment transformation to varying degrees, owned industrial robotic arms, AGV automatic guided vehicles, and applied machine vision; 46% of enterprises have established intelligent workshops or are using Manufacturing execution system in their production systems. Digital transformation is the trend of the times. Most enterprises have begun to follow the movement, and the spontaneous choice of micro subjects based on their own needs has an excellent internal consistency with the leadership of national strategies.

3.3 Innovative summary of the organizational guarantee system of Xinyang enterprises in Digital transformation

The survey data shows that nearly half of the sample enterprises that have implemented enterprise informatization transformation have set up special departments to promote Digital transformation related work, and a considerable number of enterprises' Digital transformation has been valued by enterprise leaders, with high-level leaders participating in overall coordination, such as group enterprises. Generally, the decision-making and implementation of the Digital transformation of enterprises are synchronized with the group's Digital transformation; Ecological partnership enterprises, with leaders forming a collaborative leadership mechanism, jointly building an industrial cooperation ecological resource system; For R&D enterprises, the head of the enterprise will comprehensively coordinate Digital transformation.

3.4 Innovative tracking of Digital transformation direction of Xinyang government and enterprises

In 2021, Xinyang issued the "2021 Key Points for Xinyang Industrial Integration Work", aiming to cultivate six provincial intelligent workshops and factories, create 33 municipal-level intelligent manufacturing pilot demonstration enterprises, and promote the construction of 50 critical intelligent transformation projects.

3.5 Innovative Research on the Demand of Xinyang Enterprises for Talents in Digital transformation

The sample enterprises are very fond of Journeyman, especially in the optical processing industry, and there is an urgent demand for professional processing talents. The need for undergraduate and specialized skills in sample enterprises is converging, while the demand for skilled workers is slightly lower. Enterprises in intelligent manufacturing and electronic information clusters have a high demand for professional talents, mainly in the mechanical and electrical fields. With the promotion of Digital transformation and industrial Internet, enterprises' demand for computer talent is also increasing. In response to the current talent cultivation mode of vocational education and combined with the production and operation needs of enterprises, the sample enterprises have high expectations for students willing to learn from vocational schools to enter the enterprise. Practical operation ability is also highly valued by the enterprise. The enterprise also requires vocational school students to have solid professional theoretical knowledge and certain management concepts.

4. Xinyang enterprises face significant obstacles in Digital transformation

4.1 Most enterprises are in the early stage of Digital transformation, lacking an overall strategy

Among the sample enterprises in this survey, the proportion of intelligent manufacturing clusters without Digital transformation is as high as 28%, and the balance of electronic information clusters without Digital transformation is 14%; 43% of intelligent manufacturing clusters are in the initial exploration stage, while 14% of electronic information clusters are in the initial exploration stage; Overall, the cumulative proportion of intelligent manufacturing clusters is 71%, while the cumulative balance of electronic information clusters is 28%. From this perspective, most enterprises in Xinyang's intelligent manufacturing cluster are still in the early stage of Digital transformation. Among the sample enterprises that have not undergone Digital transformation, there are generally the following factors: first, based on their own business confidentiality considerations; Secondly, based on social software such as DingTalk and WeChat currently in use, the enterprise is running well; Thirdly, considering the size of the enterprise; Fourthly, most enterprises are independent individuals without forming a group scale effect, and there is little demand in upstream and downstream supply chain management, group control, and coordination management. In addition, in considering the Digital transformation of enterprises, many enterprises do not have a clear understanding of the current investment and future benefits; There is also a lack of clear understanding of critical issues such as how to explore technology dividends and policy dividends. Most companies' current transformation measures are only tools and means to achieve specific goals at specific stages, needing forward-looking and systematic top-level design and overall coordination at the execution level. From organizational systems to business logic, most still rely on existing business structures, making it challenging to drive product and business innovation— the underlying driving force for business innovation and ecological reconstruction.

4.2 Uncertainty exists in the input and output of Digital transformation, which inhibits the enthusiasm of enterprises for investment

Before the Digital Revolution, enterprises reduced costs and improved efficiency through information technology while reducing the market's costs. In the enterprise's Digital transformation the implementation of the enterprise's Digital transformation is constrained by the cost of equipment automation transformation, the cost of customized purchase of information management software, and the cost of upgrading intelligent workshops and intelligent production lines.

4.3 Limited internal and external cooperation in the process of enterprise Digital transformation, challenging to implement

The critical value of enterprise Digital transformation is to help enterprises surpass their resource capacity limitations with the connectivity of digital technology and data resources, realize the collaboration and dynamic optimization of internal and external multi-stakeholders, amplify the value benefits of transformation, and feedback to all participants. This requires both strong coordination and meticulous implementation.

From the perspective of the promotion of the sample enterprises, the lack of talents for Digital transformation, the overall low level of management of the departments and personnel promoting the transformation, the lack of cross-subject organization cooperation mechanism and platform, and other reasons have greatly affected the realization of the transformation effect.

4.4 Insufficient supply of cost-effective and highly adaptable digital tools has raised the threshold for enterprise transformation

The input-output and transformation effect of Digital transformation of enterprises should be accurately diagnosed, scientifically designed, and dynamically evaluated in combination with the characteristics of the industry and the stage of enterprise development. Different sectors greatly differ in R&D design, production and manufacturing, operation management, after-sales service, procurement, and marketing. Most Xinyang enterprises are manufacturing and processing enterprises with a wealth of experience and knowledge in processing and manufacturing, complex automation transformation processes, and a need for more emphasis on the accumulation and standardization of manufacturing process knowledge. As a result, when applying digital technology tools for business restructuring, the devices require specific modifications, resulting in not being used and not being used by anyone.

4.5 Poor policy transmission mechanism, affecting the inclusivity of policy implementation and the sense of achievement for enterprises

The Digital transformation of enterprises is a long-term process. From the initial exploration of the financial system to the automatic upgrading of equipment, to the construction of the entire intelligent workshop and intelligent factory, systematic policy system support is needed, including the cultivation of transformation subjects, the supply of transformation resources, the supporting infrastructure for transformation, and the improvement of the transformation industry system. Effective policy transmission is a systematic and dynamic process, and enterprises need to promote multiplier effects through policy guidance.

5. Main countermeasures to accelerate the Digital transformation of Xinyang enterprises and promote the quality and efficiency of enterprises

5.1 Improve the Digital transformation talent training system of Xinyang industrial cluster enterprises in a multi-level and all-round way

The Digital transformation of an enterprise is both a top job project and a full staff project. It requires the company leaders to base on the industry development trend and take the Digital transformation as an opportunity to drive the overall strategic upgrading. It also requires the support of various professionals and the psychological recognition and action support of all employees for Digital transformation. The survey of sample enterprises in Xinyang shows that most enterprises still need to thoroughly explore the causes and effects of Digital transformation and upgrading, especially the demand for Digital transformation talents. The reason is the need for more talent. Given the demand of Xinyang enterprises for leading skills, digital operation management talents, digital system development professionals, digital application practice talents, and other talents at different levels in the process of Digital transformation, it is suggested to strengthen the guiding role of policies, give full play to the accumulated advantages of colleges and universities, various technical colleges, enterprises, platforms, and other parties, Based on the organic combination of industrial ecological needs and talent echelon, improve the training system of Digital transformation talents from multiple dimensions. First, introduce Digital transformation leading skills to support Xinyang enterprises to improve quality and efficiency; Second, encourage Xinyang entrepreneurs and senior managers to visit Digital transformation benchmark enterprises on the spot; Third, attach importance to the existing professional talents related to Digital transformation; Fourth, increase the order based training mode for innovative Digital transformation talents; Fifth, to assist the improvement of digital literacy and skills of enterprise talent teams; Sixth, build a talent sharing ecosystem for enterprises in Digital transformation.

5.2 Provide financial support for the digitalization of Xinyang enterprises through a combination of fiscal, tax, and economic measures

The sample enterprises often mentioned that capital is the most crucial resource bottleneck problem of Digital transformation. In promoting Digital transformation of enterprises, the implementation time is extended, the transformation difficulty is prominent, the talent shortage is severe, and the implementation cost is high. The government must combine various targeted policy tools accurately and comprehensively and play the role of fiscal, tax, and financial policies in realistic incentives, guiding signals, and incentive regulations. Encourage and drive the aggregation and investment of social resources such as corporate funds.

5.3 Encourage group enterprises, upstream and downstream enterprises in the industrial chain, and supply chain to strengthen digital collaboration

In the advanced Digital transformation benchmark enterprises, the network cooperation mechanism of vertical cooperation subjects such as suppliers, manufacturers, and customers, horizontal cooperation subjects such as enterprises, universities, and research institutes, and other subjects such as governments, intermediaries, incubators, and financial institutions is usually realized. It is recommended that Xinyang enterprises create and protect a fair market environment for cooperation and competition, drive the effective promotion of cooperation mechanisms among enterprises within the integrated industrial cluster, guide leading enterprises in Henan Lingrui Pharmaceutical and other industries to leverage their advantages in capital, brand, and production supply and marketing systems, and open up and share resources and capabilities.

Reference:

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