The Practical Path and Management Innovation of Team Digital Transformation

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Abstract: With the rapid development of information technology, digital transformation has become the key for enterprises to enhance competitiveness and adapt to market demand. This article delves into the practical path and management innovation of team digital transformation. Firstly, the theoretical framework of team digital transformation is discussed. Secondly, the practical path of team digital transformation is analyzed in depth. Finally, combined with the characteristics of digital transformation, management innovation strategies for team digital transformation are proposed, providing reference for enterprises to achieve digital transformation.

***Keywords*:** team; digital transformation; path; management innovation

1. Introduction

Under the current wave of digitalization, various industries are actively responding to and practicing digital transformation. As the basic unit of production and management, teams have also ushered in the era of digital transformation. The digital transformation of teams aims to utilize advanced information technology and management concepts to achieve intelligent, efficient, and refined management of the production process, providing strong support for enterprises to enhance competitiveness and adapt to market changes. Therefore, conducting research on the practical path and management innovation of team digital transformation is of great practical significance.

2. Theoretical Framework for Digital Transformation of Teams

2.1 Concept of Digital Transformation

Digital transformation refers to the process in which an organization or enterprise utilizes advanced digital technology and information technology to comprehensively reconstruct and upgrade its business, processes, culture, and value creation methods. In digital transformation, organizations not only simply move traditional business models to digital platforms, but also achieve digitalization, intelligence, and efficiency of business processes through technological innovation and management change. This transformation involves multiple aspects, including but not limited to the application of technologies such as data analysis and mining, artificial intelligence, Internet of Things, cloud computing, as well as changes in organizational structure, culture, management methods, and other aspects. The core goal of digital transformation is to enhance the competitiveness and innovation capabilities of organizations to adapt to rapidly changing market environments and emerging new technological trends, achieve sustainable development, and continuously create value.

2.2 Characteristics and Challenges of Team Management

Firstly, team management usually involves the management of small teams. Compared to the management of the entire organization, its scale is relatively small, but the management difficulty is not low because the relationships between team members are closer, and managers need to pay more attention to the situation of individual employees and team collaboration. Secondly, in practice, team management often needs to face complex and diverse work situations and tasks. Managers need to have more flexible response and problem-solving abilities to cope with management challenges in different situations. Thirdly, as team management often involves on-site management, managers need to timely regulate personnel and resources on site, which puts higher demands on their real-time decision-making and coordination abilities[1].

3. Analysis of the Practical Path for Digital Transformation of Three Teams

3.1 Technical infrastructure construction

Firstly, update and upgrade hardware facilities, including updating basic equipment such as computers, servers, and network devices, to enhance the ability of team information processing and transmission. Secondly, establish a stable and efficient network infrastructure, including expanding network bandwidth, optimizing network coverage, and strengthening network security measures, to ensure the rapid transmission of data and the security of information. Thirdly, choose suitable software systems or develop customized application software, such as Production Management System (MES), Quality Management System (QMS), Enterprise Resource Planning System (ERP), etc., to achieve digital management and automated operation of various team businesses. Fourthly, carry out the construction of data centers or cloud computing platforms to achieve centralized storage, unified management, and flexible deployment of data, and improve the efficiency and security of data utilization. Fifthly, strengthen information security management, including the application of encryption technology, access control, data backup and recovery measures, to ensure the stable operation of the team information system and the security and confidentiality of data. The progress statistics of the entire project are shown in the table.

Table 1. Statistical Table of Project Progress during the Technical Infrastructure Construction Stage

Entry name	Construction tasks	Planned start time	Actual completion time	state
Hardware facility updates	Upgrade server equipment			
	Update network devices			
	Update network devices			
Network infrastructure optimization	Expanding network bandwidth			
	Optimize network coverage			
	Strengthening network security protection measures			
Software system updates and deployment	Installing MES system			
	Deployment Task Management Tool			
	Configure Collaboration Platform			
Data center construction	Deploy cloud computing platform			
	Implement data backup and recovery strategies			
Information Security Management	Deploy data encryption technology			
	Optimize network coverage			
	Strengthening network security protection measures			

3.2 Construction of data-driven operation and management platform

Firstly, conduct a requirement analysis to gain a deep understanding of the team's workflow and management requirements, determine the functional modules and technical architecture of the platform, and ensure that the platform can meet the actual needs of the team. Secondly, it is necessary to select suitable software systems or develop customized platforms. The comparison of functions of different management platforms is shown in Table 2. Based on the results of demand analysis, suitable information tools and management platforms should be selected, such as MES systems, task management tools, collaboration platforms, etc. suitable for production management, or customized management systems should be developed to achieve digitalization, intelligence, and efficiency of team management. Thirdly, carry out system integration and data integration, integrate and connect various software systems and data sources, achieve data sharing and interoperability, and ensure the consistency and accuracy of information. Fourthly, configure and customize the platform, flexibly configure and customize platform functions according to the actual needs and characteristics of the team, such as setting work standards and processes for the team, setting task allocation and tracking mechanisms, establishing performance evaluation and incentive mechanisms, etc., to achieve standardization and process oriented team management[2].

Table 2. Comparison of Functions of Different Management Platforms

Management Platform	Functional characteristics	Advantage	Applicable scope
MES system	Production plan management, process control, production execution monitoring, quality management and other functions	Real time monitoring of production situation to improve production efficiency	Production and manufacturing field
Task management tools	Functions such as task allocation, progress tracking, work feedback, and task priority management	Easy to use, convenient for task management and team collaboration	All walks of life
Collaboration platform	Online collaboration, document management, team communication, scheduling and other functions	Promote team collaboration and improve work efficiency	Cross departmental collaboration
ERP system	Functions such as order management, procurement management, inventory management, financial management, etc	Realize unified management and coordination of enterprise resources	Various types of enterprises
BI tools	Functions such as data analysis, report generation, visual display, and decision support	Helping enterprises quickly gain insights into data and optimize decision-making	Data driven enterprises
CMMS system	Equipment management, maintenance management, preventive maintenance, troubleshooting and other functions	Improve the reliability and stability of equipment	Equipment maintenance field
Human Resource Management System	Functions such as employee file management, salary and benefits management, performance evaluation, recruitment management, etc	Simplify human resource management processes and improve management efficiency	Various types of enterprises

3.3 Adjustment of Human Resources and Training Strategies

Firstly, conduct personnel structure and capability analysis to determine the talent structure and skill requirements required for digital transformation, identify existing human resource gaps and skill gaps, and provide targeted training and supplementation. Secondly, develop a training plan, including technical training, business training, and management ability enhancement. Based on the actual situation of team members and the needs of digital transformation, develop corresponding training content, methods, and plans to ensure the comprehensiveness and effectiveness of the training. Thirdly, strengthen the construction and integration of training resources, including establishing internal training institutions or platforms, introducing external training resources, developing online training courses, etc., to meet the training needs of team members at different levels and needs. Fourthly, strengthen the implementation and tracking of training, supervise the execution of training plans, adjust and optimize training plans in a timely manner, and ensure the achievement of training results[3].

4. Management Innovation Strategies for Digital Transformation of Teams

4.1 Management process optimization and innovation

Firstly, a comprehensive review and analysis of traditional management processes should be conducted to identify tedious, inefficient, or repetitive processes, as well as issues with poor information and communication, in order to provide a basis for subsequent optimization. Secondly, information technology and digital tools can be utilized to optimize and reconstruct management processes, such as introducing task management systems, workflow automation tools, etc., to achieve automated processing of task allocation, tracking, and feedback, improving work efficiency and response speed. Thirdly, optimize the decision-making process, adopt a data-driven decision-making model, provide more scientific and accurate basis for decision-making through data analysis and prediction, reduce decision-making risks, and improve decision-making efficiency. Fourthly, it can promote organizational flattening and decision-making decentralization, endow team members with more autonomy and responsibility, stimulate their innovation potential and work enthusiasm, and enhance the flexibility and adaptability of the organization.

4.2 Improvement of communication and collaboration mechanism

Firstly, using online collaboration platforms or team communication tools such as Slack, Microsoft Teams, etc., establish a unified communication platform to achieve real-time communication and information sharing, reduce communication time and cost, and improve communication efficiency and effectiveness. Secondly, promote cross departmental or cross team

communication mechanisms, establish cross functional teams or project teams, break down information barriers between departments, promote information flow and sharing, and enhance team collaboration and innovation capabilities. Thirdly, optimize meeting management, reduce ineffective meetings and meeting time, use online meeting tools or video conferencing systems to achieve remote meetings and remote collaboration, and improve meeting efficiency and participation[4].

4.3 Performance evaluation and innovation of incentive mechanisms

Firstly, data-driven performance evaluation methods can be adopted, utilizing digital tools and systems to quantitatively evaluate the work performance of team members, including production efficiency, quality indicators, work completion time, etc. Performance evaluation can be based on objective data to reduce subjective bias and improve the fairness and accuracy of the evaluation. Secondly, a multidimensional performance evaluation system can be established, which not only assesses the work performance of employees, but also considers their learning and growth, team collaboration, innovation ability, and other aspects to comprehensively evaluate their comprehensive quality and contribution, stimulate their comprehensive development and continuous progress. Thirdly, personalized incentive mechanisms can be adopted to develop personalized incentive plans based on the different work performance and needs of employees, such as providing salary incentives, promotion opportunities, skill training, project rewards, etc., to meet the diverse incentive needs of employees, enhance their work motivation and satisfaction.

4.4 Knowledge Management and Building Learning Organizations

Firstly, a knowledge base or online learning platform can be established to collect and organize the experience, techniques, and best practices of the team, forming a knowledge resource library for learning and reference, and providing a platform for employees to learn and improve. Secondly, establish an expert sharing and mentor system to encourage experts and outstanding employees within the team to share their experiences and knowledge, guide the growth of new employees, and promote the inheritance and innovation of knowledge. Thirdly, it can promote team learning and collaboration, organize regular team learning activities and exchange meetings, share project experiences and learning experiences, promote communication and cooperation among team members, and enhance the overall level and creativity of the team. Fourthly, a learning evaluation mechanism can be established to regularly evaluate the learning outcomes and ability improvement of employees, encourage continuous learning and improvement, and create an atmosphere and culture of a learning organization[5].

5. Conclusion

In summary, the practical path and management innovation of team digital transformation is a complex and lengthy process that requires enterprises to have a long-term vision and firm determination, constantly innovate and practice, in order to achieve the goal of digital transformation and provide strong support for the sustainable development of enterprises. In the future, digital technology will be further integrated into all aspects of team production management, and intelligence and automation will become mainstream. Meanwhile, data will become the core of team management and decision-making, and data-driven management models will be more widely applied.

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