Research on the Strategy of Digital Transformation of Enterprise Human Resources under the Background of the New Era

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Abstract: In the new era, the rapid development of digital technology is profoundly affecting the human resource management model of enterprises.Digital transformation of enterprise human resources has become an important way to improve organizational efficiency, optimize talent allocation and enhance market competitiveness.Based on the enterprise management transformation in digital economy era, this paper discusses the digital development path of human resource management, and constructs the theoretical framework of enterprise HR digital transformation by combining resource-based theory, organizational change theory and performance-driven model.By analyzing the status quo and challenges of enterprise human resource digital transformation, it is found that enterprises still face many obstacles in technology integration, data security, organizational culture adaptability and employee digital literacy.In view of these problems, this paper puts forward some strategies such as digital recruitment, intelligent performance appraisal, online training and automatic salary management, and further puts forward core countermeasures such as data-driven talent management, technology-enabled HR management, organizational change to promote digital culture construction and data security guarantee.

Key words: enterprise management; hr digital transformation; data-driven; artificial intelligence; intelligent recruitment; performance management

Introduction

With the rapid development of globalization, information and intelligence, the business environment of enterprises has undergone profound changes, and the traditional management model is difficult to meet the needs of market competition and organizational development.The rise of digital economy urges enterprises to accelerate digital transformation to improve management efficiency, optimize resource allocation and enhance core competitiveness.In this process, human resource management, as a key link of enterprise operation, its digital transformation has become a necessary measure for enterprises to enhance human capital value and enhance organizational resilience.

The rapid development of digital

technologies, especially big data, artificial intelligence (AI), cloud computing, blockchain and automation technologies, is profoundly affecting the human resource management model of enterprises.AI can intelligently screen candidates in the recruitment process to improve talent matching efficiency; cloud HR system can optimize employee training and performance management to achieve remote collaborative office; big data analysis helps enterprises accurately understand employee needs and improve employee satisfaction and organizational performance.The application of these technologies not only improves the refinement of human resource management, but also promotes the transformation of enterprises from traditional human resource management mode to data-driven, intelligent and automated talent management mode.

1 Theoretical Basis Of Digital Transformation Of Enterprise Human Resources In New Era

1.1 Enterprise Management Transformation In Digital Economy Era

In the era of digital economy, the rapid development of information technology is profoundly changing the management mode of enterprises, among which the widespread application of digital technologies represented by big data, artificial intelligence (AI) and cloud computing in enterprise operation and management makes management decisions more accurate and efficient.Big data technology enables enterprises to accurately predict market trends and employee needs based on data analysis, thus optimizing human resource allocation.The application of artificial intelligence technology in recruitment, training

and performance management has greatly improved the automation level of human resource management.Intelligent recruitment system can quickly screen resumes, improve talent matching efficiency, and reduce artificial bias in the recruitment process.The popularity of cloud computing technology enables enterprises to conduct remote office, employee information management and online performance appraisal through human resource management system (HRMS), realize real-time storage and sharing of data, and improve management flexibility and collaborative efficiency[1].

1.2 Digital Development Path Of Human Resource Management

Under the traditional human resource management mode, enterprises mainly rely on offline recruitment, manual performance evaluation, fixed salary system and face-to-face training to manage talents.However, this model has many limitations, including low information flow efficiency, high management costs, insufficient data utilization, and difficulty in meeting the individual needs of employees.Under the current wave of digital transformation, enterprises gradually explore more efficient and accurate human resource management paths, relying on big data, artificial intelligence and automation technology to realize intelligent upgrading of human resource management[2].

The digital development path of human resource management mainly includes four core elements.The first is talent data analysis, that is, using big data analysis technology to collect, sort out and mine employees 'work performance, career development track and psychological state, and optimize enterprise talent reserve and

management decisions.The second is intelligent recruitment. Through AI resume screening, automatic interview scoring, accurate talent matching and other ways, the recruitment efficiency is improved, artificial bias is reduced, and enterprises can quickly find talents that best meet the post needs.The third is online training, which is based on cloud computing and intelligent learning system, providing personalized training programs for employees, enabling employees to learn independently according to their own needs and improving the overall skill level of the enterprise.Finally, automatic performance evaluation, enterprises can use data analysis and AI technology to quantitatively evaluate employees 'work efficiency, teamwork ability, innovation ability, etc., to ensure the fairness and objectivity of performance appraisal, and to provide personalized incentive schemes.Through the optimization and integration of these core elements, enterprises can achieve more accurate, efficient and flexible talent management, improve organizational efficiency and employee satisfaction[3].

1.3 The Core Theory Of Enterprise Human Resources Digital Transformation

The digital transformation of enterprise human resource management involves several theoretical frameworks, among which resource-based theory (RBV), organizational change theory and performance-driven model are the important bases to understand the optimization of human resource management in the process of enterprise digital transformation.Resource Based Theory (RBV) emphasizes that the competitive advantage of an enterprise comes from the uniqueness of its internal resources and capabilities.In the digital transformation of human resource management, data, technology and talent are seen as core resources of the enterprise.By building an intelligent human resource management system, enterprises accumulate and utilize talent big data, improve recruitment accuracy, optimize talent management and training strategies, and thus enhance their competitiveness in the market[4].

Organizational change theory points out that in the process of digital transformation, enterprises must adjust their organizational structure and management model to adapt to the new technological environment and business needs.The digital transformation of human resource management is not only a technological change, but also a transformation of management concepts and corporate culture.Enterprises need to establish a flatter management structure so that management can obtain employee work data more quickly and make more efficient decisions.

Performance-driven model emphasizes that in digital human resource management, enterprises should take employee performance as the core goal, and use digital technology to optimize evaluation system and incentive mechanism.AI-based intelligent performance evaluation system can track employees 'work performance in real time and provide accurate performance feedback through data analysis, enabling enterprises to more effectively motivate employees and optimize talent development paths.Enterprises can use data analysis to predict employee career development trends, provide personalized training and development opportunities, thereby improving employee loyalty and career satisfaction, and ultimately

promote the overall performance of the enterprise[5].

2 Current Situation And Challenge Of Digital Transformation Of Enterprise Human Resources

2.1 Analysis On The Status Quo Of Enterprise Human Resources Digitalization Transformation

In recent years, with the rapid development of digital technology, domestic enterprises have made some progress in the digital transformation of human resource management.Through literature and case analysis, it can be found that there are significant differences in the development level of human resources digitalization among enterprises of different sizes and industries.Large-scale enterprises, especially those in the science and technology, Internet and financial industries, began to layout digital transformation earlier, and have basically realized the intellectualization and digitalization of human resource management.Alibaba, Tencent and other enterprises have built complete digital HR systems, including intelligent recruitment, automated performance appraisal, personalized training and employee development systems.In contrast, the digital transformation process of small and medium-sized enterprises is relatively lagging behind, mainly limited by capital, technology and management ability, and is still gradually exploring digital management mode suitable for itself.

2.2 Key Challenges Of Enterprise Digital Human Resource Management

Although the digital transformation of enterprise human resource management has brought many conveniences, it still faces a series of challenges in practice.At the technical level, the integration of information systems is difficult and the technical threshold is high.When enterprises promote digital HR management, they often face the problem of data incompatibility between different systems and difficulty in getting through.Attendance management system, performance appraisal system and training management system of some enterprises are provided by different suppliers, and the data between systems is isolated, resulting in low efficiency of information sharing.Small and medium-sized enterprises have insufficient technology investment, and it is difficult to afford expensive HR digital system and corresponding technical support, which affects the in-depth promotion of transformation.At the data level, businesses face data security, privacy protection, and data quality issues.HR digital management involves a large amount of sensitive information, including employees 'personal information, salary data, performance evaluation results, etc. If the data security protection is insufficient, it is vulnerable to network attacks or data leakage, which brings legal and reputation risks to enterprises.

3 Strategy Research On Digital Transformation Of Enterprise Human Resources In New Era

3.1 Basic Framework Of Hr Digital Transformation

Under the background of the new era, the digital transformation of enterprise human resource management has become an important means to improve organizational effectiveness and optimize talent management.The basic framework of digital transformation covers four

key links: recruitment, training, performance appraisal and compensation management, improving the accuracy and scientificity of human resource management in an intelligent, automated and data-driven way.In terms of digital recruitment, enterprises gradually adopt AI resume screening, intelligent matching and other technologies to optimize recruitment process.Traditional recruitment methods often require HR to manually screen a large number of resumes, while the application of artificial intelligence technology can improve the accuracy of talent screening through keyword matching, resume analysis and interview scoring.Enterprises can also analyze the matching degree of job seekers 'professional experience, skills and job requirements based on big data, realize accurate recruitment and improve the success rate of job matching.

In terms of training, digital transformation has driven the establishment of online learning and personalized development paths.Enterprises provide personalized learning solutions for employees by building online training platforms, combining artificial intelligence and big data analysis.Companies can recommend personalized courses based on employee skill assessment results, and dynamically adjust training content according to employee learning progress and ability improvement.This data-driven training model not only improves the learning efficiency of employees, but also helps enterprises optimize their talent training system and make talent development more precise.

The digital transformation of performance appraisal relies on data analysis technology to achieve more scientific performance management.Traditional performance appraisal methods often rely on subjective evaluation, and it is difficult to comprehensively measure employees 'contributions.The performance feedback system based on data analysis can carry out quantitative analysis through multi-dimensional data such as attendance, work results and cooperation, so as to improve the fairness and objectivity of assessment.Enterprises can adopt intelligent performance management tools to track employees 'performance in real time and provide targeted performance feedback to help employees adjust their work strategies in a timely manner and improve performance levels.

In terms of intelligent salary management, enterprises gradually introduce automatic salary calculation and precise incentive mechanism.The traditional salary management method has the problems of complicated calculation and high error rate, but the salary management system based on HRSaaS (Human Resource Management Software) can automatically calculate salary, tax and social security payment, reduce the error rate of manual calculation and improve the efficiency of salary payment.Enterprises can use data analysis to optimize salary structure, combine employee performance data to formulate accurate incentive mechanism, make salary incentive more scientific and fair, so as to enhance employees 'work enthusiasm and organizational loyalty.

3.2 Core Strategies For Digital Transformation

The digital transformation of enterprise human resource management requires not only the application of technology, but also the support of overall strategy to ensure the smooth progress and long-term sustainability of the

transformation.Enterprises need to establish a data-driven talent management system.The construction of enterprise talent database is an important foundation for digital transformation. Enterprises can collect and integrate employees 'work data, performance performance, career development path and other information through big data technology to provide accurate data support for talent management.Using big data to analyze employee growth trajectories and turnover tendencies, companies can take steps ahead of time to optimize talent retention strategies.The application of artificial intelligence can also predict the trend of talent flow, help enterprises accurately match job demand and talent supply, and improve the efficiency and accuracy of talent management.

Enterprises should use technology to empower human resource management and improve the intelligent level of human resource management.Building cloud-based human resource management systems (HRMS) is an important part of digital transformation.Cloud HR system can realize remote office, employee self-management, data sharing and other functions, improving the convenience and efficiency of HR work.Enterprises can use AI and automation tools to optimize recruitment, training, assessment and other processes, such as using AI to screen resumes and arrange intelligent interviews to improve recruitment efficiency; using automated training systems to dynamically adjust training content to improve employee learning effects.Through technology empowerment, enterprises can reduce the operating costs of human resource management and improve the flexibility and intelligence of organizational management.

4 Typical Enterprise Case Analysis

4.1 Internet Industry: Digital Human Resource Management With Bytedance

As the world's leading Internet enterprise, ByteDance shows strong technological innovation ability in the digital transformation of human resource management.The company uses artificial intelligence to optimize the recruitment process, selects candidates through intelligent algorithms, improves talent matching, and optimizes employee performance management systems with big data analysis.ByteDance widely uses AI technology during the recruitment phase to accurately analyze candidates 'resumes and assess the match between job seekers' experience, skills and job requirements through natural language processing technology (NLP).The company also analyzes employee performance based on big data and provides personalized career development advice to ensure the scientific and accurate growth path of employees.

Table 1 Main Measures of ByteDance Digital Management of Human Resources

Key Areas	Major Measure
AI recruitment	Improve candidate match by using intelligent algorithms to screen resumes
Smart Interview	Automatically analyze job seekers 'response quality and mood swings through AI technology
performance management	Optimize performance evaluation with big data analysis of employees "daily work data
employee growth	Personalized career development advice based on data analysis

From the case of ByteDance, it can be seen that the core advantage of Internet industry in human resource digital management lies in efficient data analysis ability and technology application ability.Through the combination of

AI and big data, the company effectively improved recruitment efficiency, optimized talent management mode, and promoted employee growth through intelligent performance appraisal.

4.2 Manufacturing: Huawei's Talent Digitization Strategy

Huawei, as the world's leading manufacturing technology enterprise, has also achieved a high degree of digitalization in its human resource management.Huawei uses data analytics to drive talent development decisions and build an intelligent HR system to improve organizational effectiveness.Through data-driven talent management, Huawei is able to accurately predict talent flow trends and optimize configuration for the needs of different business units.The company has also implemented a comprehensive digital upgrade in employee training, customizing personalized learning programs for employees based on big data, and improving the efficiency of employee skill development.Huawei has also established an intelligent performance management system to ensure the fairness and scientificity of performance appraisal.

Table 2 Key Strategies for Huawei's Digital Human Resources Management

Key Areas	Main Strategy
data-driven decision making	Optimize talent allocation and improve recruitment accuracy through big data analysis
digital training	Personalized training programs for employees with an online learning system
performance assessment	Intelligent systems to quantify performance data to ensure fair review
employee development	Use data analysis to develop career paths and enhance employee loyalty

It can be seen from Huawei's case that the focus of manufacturing enterprises in human resource digital management is data-driven

talent management system.Through accurate data analysis, enterprises can achieve more scientific staffing, improve the pertinence of employee training, optimize performance appraisal mechanism, and promote the improvement of overall organizational effectiveness.

4.3 Traditional Enterprise: Digital Hr Transformation Of a State-Owned Enterprise

Compared with Internet and manufacturing enterprises, traditional state-owned enterprises started late in the digital transformation of human resource management, but in recent years they have also actively explored the application of digital technology.Based on the traditional HR management mode, a state-owned enterprise gradually introduces the digital recruitment, training and performance appraisal system, and realizes the upgrading of management mode.The company uses an intelligent recruitment system to optimize the talent acquisition process and an online training system to upgrade staff skills.The company also uses intelligent performance appraisal tools, combined with data analysis to improve the accuracy and transparency of employee appraisal.The following are the key initiatives of the state-owned enterprise in the digital transformation of human resources:

Table 3 Core Practices of HR Digital Transformation in Traditional State-owned Enterprises

Key Areas	Major Measure
recruitment management	Introducing intelligent recruitment system to improve talent screening efficiency
staff training	Optimize training content with online learning platform

performance assessment	Using data analysis technology to improve the fairness of assessment
organization optimization	Promote the digital upgrading of HR system and improve management efficiency

According to the case of this state-owned enterprise, although the traditional enterprise started late in the transformation of digital HR, it is still gradually promoting the digital upgrading of management mode.Through intelligent recruitment, online training and data-driven performance management, the company has successfully improved the efficiency of human resource management and optimized talent development strategy, laying the foundation for further deepening digital management in the future.

5 Conclusion

The digital transformation of enterprise human resource management is a key measure to enhance organizational competitiveness and optimize human resource allocation in the new era.With the rapid development of artificial intelligence, big data, cloud computing and other technologies, enterprises have improved management efficiency and accuracy of talent management through intelligent recruitment, online training, data-driven performance appraisal and automated salary management.By analyzing the practical cases of different enterprises, this paper discusses the core strategies of enterprise HR digital transformation, including constructing data-driven talent management system, technology-enabled HR management, promoting organizational change and strengthening data security guarantee.These strategies not only improve the operational efficiency of the enterprise, but also enhance the professional development experience of employees, thus promoting the sustainable development of the enterprise.

References

[1]Enterprise Risk Management for Life Sciences Companies: Navigating Challenges Across the Organizational Lifecycle[J].M2 Presswire,2025,21-34

[2]Huber C ,Kraus K ,Meidell A .Integrating the balanced scorecard and enterprise risk management: Exploring the dynamics between management control anchor practices and subsidiary practices[J].Management Accounting Research,2025,54-72

[3]Yanxue Y .Research on the Integration Path of Enterprise Management Accounting and Financial Accounting: Taking Construction Enterprises as an Example[J].Proceedings of Business and Economic Studies,2024,7(6):119-124.

[4]Gleißner W ,Berger B T .Enterprise Risk Management: Improving Embedded Risk Management and Risk Governance[J].Risks,2024,12(12):196-196.

[5]Ross S N ,Mashinini M P ,Shibi S C , et al.A new intelligent approach of surface roughness measurement in sustainable machining of AM-316L stainless steel with deep learning models[J].Measurement,2024,98-102