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Digital Transformation and the Strategic Role of Human Resources in Improving Organizational Performance

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Abstract

Digital transformation has become a major factor in improving organizational performance in the modern era. One important aspect in the success of digital transformation is the strategic role of human resources (HR). This study aims to analyze how digital transformation affects the role of HR and its impact on organizational performance. The method used in this study is the Systematic Literature Review (SLR), which allows for in-depth analysis of various previously published studies. The stages in the SLR include identifying research questions, searching for literature on trusted academic sources such as Scopus, IEEE Xplore, ScienceDirect, Google Scholar, and SpringerLink, and synthesizing findings related to the implementation of digitalization and HR management. The keywords used in the search include "Digital Transformation and Human Resource Strategy," "Impact of Digitalization on Organizational Performance," and "Challenges in Digital Transformation." The results of the study show that digital transformation has a significant impact on the strategic role of HR in organizations. Technology not only automates administrative processes but also enables HR to improve the effectiveness of talent management, accelerate organizational adaptation to change, and strengthen a culture of innovation. However, the success of digitalization depends not only on technology, but also on HR readiness and management support. Therefore, organizations need to implement appropriate policies, training strategies, and change management to ensure that digital transformation runs optimally and improves overall organizational performance.

Keywords: Digital Transformation, Human Resources, Organizational Performance, Strategic

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Introduction

Digital transformation in organizations is developing in response to the rapid advancement of information and communication technology. This change not only changes the way companies operate, but also how they interact with customers, business partners, and employees (Yanti, N., et al. 2024). One of the main factors driving digital transformation is the development of technologies such as artificial intelligence (AI), big data, the Internet of Things (IoT), and cloud computing, which open up new opportunities to improve operational efficiency and create added value. In addition, changes in consumer behavior that are increasingly dependent on digital services require companies to provide faster, more personal, and more accessible experiences anytime and anywhere (Ardiansyah, WM 2023). On the other hand, increasingly fierce business competition requires companies to continue to innovate so as not to be left behind. Digital transformation allows organizations to increase productivity, optimize services, and create new business models that are more relevant to market trends. Operational efficiency is also a strong reason for companies to adopt digitalization, where technology can help automate business processes, manage data better, and reduce operational costs (Ikaningtyas, M., NZ, MR, & Indira, S. 2024). Not only that, regulatory support and government policies in terms of data security, privacy, and digital infrastructure are increasingly encouraging organizations to adapt to this transformation. In



In addition to economic and technological factors, digital transformation is also a solution in dealing with the global crisis. For example, the COVID-19 pandemic has proven that companies that have implemented digitalization are more easily adaptable to emerging challenges, such as the implementation of remote work and online-based services (Bangsawan, G. 2023). Therefore, digital transformation is no longer just an option, but a necessity for organizations that want to survive and thrive in the modern era. With the right application of digital technology, companies can increase competitiveness, efficiency, and provide the best experience for customers and other stakeholders.

One of the main factors driving digital transformation is the change in consumer behavior that is increasingly dependent on digital services in everyday life. Customers now expect faster, more personalized, and more accessible experiences anytime and anywhere. This digital consumption pattern requires companies to improve their strategies, both in marketing, customer service, and data management to better understand consumer needs. The success of an organization in digital transformation depends largely on the extent to which they can effectively utilize data, optimize customer experience, and provide services that are relevant to current developments (Sudarmanto, E., et al. 2024).

In addition, increasingly tight business competition is also a factor that drives companies to carry out digital transformation. In this digital era, organizations that fail to adapt to technological changes risk losing their competitiveness and being left behind by more innovative competitors. Digital transformation allows companies to increase productivity, optimize business processes, and even create new business models that are more efficient and responsive to market needs. For example, many traditional retail companies have now switched to e-commerce and omnichannel platforms to reach a wider range of customers and provide a more convenient shopping experience (Pratiwi, I., & Bangsa, UP 2023). Operational efficiency is also the main reason for organizations to adopt digital transformation. By utilizing digital technology, companies can automate various business processes, manage data more effectively, and increase employee productivity. Technologies such as AI-based business process automation and data analytics help companies reduce operational costs, increase accuracy, and accelerate decision making. In addition, digitalization also helps companies increase transparency and collaboration, both within the organization and with external parties such as business partners and suppliers (Laksono, BA, & Nisa, FL 2024).

In addition to technological factors and business competition, government regulations and policies also play a role in driving digital transformation. Many countries have issued regulations that support digitalization, such as policies related to data security, privacy protection, and the development of digital infrastructure. The government is also trying to accelerate digitalization in the public sector, encouraging more efficient and digital-based administrative services. With increasingly stringent regulations on data management and cybersecurity, companies are also required to ensure that their digital systems are secure and in accordance with applicable standards. Not only that, digital transformation is also a key factor in organizational readiness to face global crises. The COVID-19 pandemic is a real example of how companies that have adopted digitalization are better prepared to face challenges, such as the implementation of remote work, online-based services, and operational digitalization (Bangsawan, G. 2023). Organizations that have implemented digital technology earlier have proven to be able to survive and even grow faster than companies that still rely on conventional systems. Therefore, digitalization is no longer just a trend, but a necessity for organizations to remain relevant and competitive in the future. With the rapid development of technology and increasing market expectations, digital transformation is not only an option, but has become a primary need for organizations that want to survive and grow. The right application of digital technology can help companies improve efficiency, competitiveness, and provide a better experience for customers and other stakeholders. However, the success of digital transformation does not only depend on the adoption of technology alone, but also requires changes in culture, strategy, and the readiness of human resources in managing and optimizing existing technology. Therefore, organizations must

have a clear vision, strong leadership, and readiness to continue to adapt to changes in the dynamic digital era (Fauzi, A. et al. 2023).

Human resources (HR) have a very important role in the digital transformation process, because they are the main drivers of change in the organization. Digital transformation is not just about adopting technology, but also involves changing work culture and a more innovative mindset. HR with digital skills are able to create new innovations, increase efficiency, increase productivity, and reduce dependence on manual processes (Ibnu, A. 2023). On the other hand, strong digital leadership is needed to guide the team in dealing with change, overcome resistance, and align digital strategies with business goals. Data security and privacy are also major challenges in the digital era, so HR who have an understanding of cybersecurity can help protect company data from various threats. In addition, qualified digital skills also enable HR to optimize customer service through data analysis, so that they can create a more personal and effective experience. Companies that have digital-ready HR will adapt more quickly to market changes, accelerate innovation, and have an advantage in business competition. Therefore, investment in developing digital skills and a culture of innovation is the key to success for organizations in facing digital transformation (Hanum, SH, 2024).

In addition, rapid technological developments require upskilling and reskilling for human resources so that they can master new competencies that are relevant to the needs of the digital industry. Some skills that are increasingly important in the digital era include data analysis, artificial intelligence (AI), cloud computing, and cybersecurity. Human resources who have skills in these areas will not only increase the company's operational efficiency but can also create innovations that provide added value to the organization. Therefore, investment in human resource development through technology-based training, courses, and education is something that cannot be ignored if companies want to remain competitive in the digital era.

Furthermore, innovation and adaptability are important factors in taking advantage of opportunities arising from digitalization. With the ever-changing business ecosystem, companies need human resources who have an innovative and flexible mindset in facing new challenges. Human resources who are able to think creatively will find it easier to find solutions to complex business problems, optimize work processes, and increase the Company's competitiveness (Employment, PP, & INDONESIA, KKR 2021). In many cases, the success of digital transformation depends heavily on the extent to which human resources can utilize technology to create positive change in the organization. In addition, the importance of collaboration between humans and technology cannot be ignored. Although technologies such as automation and artificial intelligence are increasingly developing, the human factor still plays a major role in managing and directing the use of these technologies effectively. Machines can increase productivity, but creativity, empathy, and strategic decision-making are still human strengths that cannot be completely replaced by technology. Therefore, companies need to ensure that their human resources have a good understanding of how to work synergistically with technology, so that digital transformation can run more optimally.

Another challenge in the digital era is data management and information security. Data has become one of the most valuable assets for companies, and its ability to manage and analyze data well will provide a competitive advantage. However, on the other hand, cybersecurity threats are also increasing, so companies must ensure that HR has sufficient skills in data management and digital security. Awareness of the importance of data protection and strict security policies must be instilled in the work culture so that companies can avoid the risk of information leaks that can harm the business. Furthermore, the use of technology in customer service is also an important aspect of digital transformation. HR who understands how to use technology such as chatbots, big data analysis, and customer service automation will be able to provide a better experience for customers. In an

increasingly digital-based business world, a good customer experience can be a determining factor in the success of the Company (Suryawijaya, TWE 2023). Therefore, companies need to equip HR with the ability to manage customer interactions digitally in order to build stronger customer loyalty. Thus, digital transformation is not only about implementing technology, but also about how HR can adopt, adapt, and optimize the technology in every aspect of the business. Companies that want to succeed in the digital era must realize that investing in HR development is a strategic step that cannot be ignored. By having competent, innovative, and technology-oriented HR, companies can ensure that they not only survive, but also thrive amidst increasingly rapid changes.

This study aims to analyze how digital transformation is implemented in organizations and identify the drivers and barriers in the digitalization process. In addition, this study also focuses on the strategic role of human resources (HR) in supporting and implementing digital transformation, including the competencies and skills required. By understanding the relationship between digital transformation and the role of HR, this study aims to assess the impact of digitalization on improving organizational performance, both in terms of efficiency, productivity, and innovation. The results of this study are expected to provide strategic recommendations for organizations in managing HR optimally in order to adapt to the development of digital technology.

The benefits of this research cover various aspects, both for organizations, HR, academics, and policy makers. For organizations and management, this research can provide insight into the importance of the role of HR in the success of digital transformation and help in designing effective digitalization strategies. Meanwhile, for HR and employees, this research can improve understanding of the digital skills needed to be more adaptive and innovative in facing technological changes. In addition, for academics and researchers, this research can be an additional reference in the literature related to digital transformation and HR management. Finally, for the government and policy makers, this research can provide data and insights to formulate policies related to HR development in the digital era and support digitalization initiatives in various industrial and government sectors. Thus, this research is expected to provide significant contributions to the business world, academics, and public policy in facing challenges and opportunities in the era of digital transformation.

Method

This study uses the Systematic Literature Review (SLR) method to review and analyze various literatures that discuss digital transformation and the strategic role of human resources in improving organizational performance. The SLR method was chosen because of its systematic and structured approach in collecting, evaluating, and synthesizing previously published research. By using this method, research can gain in-depth insights into trends, challenges, and strategies that have been implemented in the context of organizational digitalization and human resource management (Harianja, LR, et al. 2024). The stages in the SLR begin with the identification and formulation of research questions, which focus on how digital transformation is implemented in organizations, the strategic role of human resources in supporting these changes, and the challenges faced in implementing digitalization. After that, a literature search was conducted through various academic sources such as scientific journals, conference proceedings, books, and industry reports available in databases such as Scopus, IEEE Xplore, ScienceDirect, Google Scholar, and SpringerLink. The keywords used in the search include "Digital Transformation and Human Resource Strategy," "Impact of Digitalization on Organizational Performance," and "Challenges in Digital Transformation."

After the literature was collected, selection and screening were carried out based on inclusion and exclusion criteria. Inclusion criteria included articles that discussed aspects of digital transformation, the role of HR, and its impact on organizational performance, while exclusion criteria included articles that were irrelevant, not based on empirical data, or did not use a strong academic approach. To ensure that the selection was carried out objectively, this study applied the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) technique. The next step was data analysis and synthesis,

where the screened literature was categorized based on main themes, such as digital transformation implementation strategies, HR skills and competencies needed, and the impact of digitalization on organizational productivity. The results of various studies were compared to identify patterns, research gaps, and the latest trends in this field.

In the final stage, interpretation and conclusion are made, which summarize the main findings from the reviewed literature. These conclusions are then used to provide strategic recommendations for organizations in managing human resources to support digital transformation effectively. In addition, this study also identifies opportunities for further research that can deepen the study in a particular context. With this SLR approach, research can present evidence-based analysis and contribute to the development of digitalization strategies and HR management in improving organizational performance.

Results and Discussion

The Concept of Digital Transformation in Organizations

Digital transformation in organizations is the process of adopting and utilizing digital technologies to increase efficiency, innovation, and value for customers. This transformation is not only about implementing new technologies, but also includes changes in work culture, business strategy, and company operations. Some of the main elements in digital transformation include the use of technologies such as cloud computing, artificial intelligence (AI), Internet of Things (IoT), and Big Data to support operational efficiency (Qothrunnada, NA, et al. 2023). In addition, changes in culture and mindset are important factors so that organizations can be more innovative, adaptive, and data-based in decision making. One of the main aspects of digital transformation is improving customer experience through more personalized and faster services, such as chatbots and omnichannel. Digitalization also helps in operational efficiency by automating business processes, such as the use of ERP (Enterprise Resource Planning) systems. Moreover, digital transformation allows organizations to develop new digital-based business models, such as e-commerce and subscription-based services.

The benefits of digital transformation are significant, including increased efficiency and productivity, higher competitiveness, and accelerated data-driven decision-making. However, this process also faces various challenges, such as resistance to change, data security issues, and large initial investment costs. Even so, many sectors have succeeded in implementing digital transformation, such as the banking industry which uses mobile banking and AI for customer service, the retail sector which utilizes e-commerce and data analytics for shopping personalization, and manufacturing which applies IoT and AI to increase production efficiency. With the increasingly rapid development of technology, digital transformation has become an unavoidable necessity for organizations to remain relevant and competitive in the digital era (Nurlaila, N., et al. 2024).

There are several key elements in digital transformation that play an important role in its success. One of them is the application of digital technologies such as cloud computing, artificial intelligence (AI), Internet of Things (IoT), Big Data, and automation that can improve operational efficiency and accelerate business processes. In addition, cultural and mindset changes are key factors in ensuring the success of digital transformation. Organizations must encourage a more innovative, adaptive, and data-driven mindset at all levels, from management to employees. Without a supportive cultural change, even the implementation of advanced technology will not provide maximum results. Therefore, training and education for employees regarding technology and the benefits of digital transformation are important steps that must be taken (Roberto, A. 2020). In addition to technological and cultural aspects, digital transformation also focuses on improving customer experience. With digitalization, companies can better understand customer needs through data analysis and provide more personalized and faster services. For example, the use of AI-based chatbots in customer service can help answer questions with faster and more accurate responses. The use of an omnichannel system also allows customers to interact with the company through various platforms, be it social media, mobile applications, or websites, thereby increasing customer convenience and satisfaction (Rismanto, C., et al. 2025).

Research conducted by Aulya Essy Ritonga, Kariaman Sinaga, and Siswati Saragi (2023) entitled "The Influence of Digital Transformation on Human Resource Development (HRD) at the Population and Civil Registration Service (Disdukcapil) of Pematangsiantar City" aims to determine the extent to which digital transformation influences the development of HRD for employees at the Disdukcapil of Pematangsiantar City, as well as supporting and inhibiting factors in the process. The results of the study show that digital transformation provides convenience in service, with the indicator of technology design for public services obtaining the highest percentage of 83.75%. In addition, the aspects of training and self-study and ease of understanding reached a value of 73.61%, so it can be concluded that there is a significant influence of digital transformation on HRD development. Meanwhile, another study that did not include the author's name (2023) in the journal "Challenges and Strategies of Human Resource Management in the Era of Digital Transformation: Literature Study" identified various challenges faced by HR in the era of digital transformation, such as non-standard work models, job polarization, unemployment due to technology, skills gaps, changes in the work environment, and corporate data security. To overcome these challenges, the study proposed several strategies, including digitalization of employment, implementation of evaluative functions, training and development management, talent selection, work flexibility, and integration of corporate data management. Furthermore, another study that also did not include the author's name (2023) entitled "The Impact of Technology and Innovation in Human Resource Management in the Digital Era" provides a comprehensive overview of HR management in an ever-evolving digital environment. The focus of this study is on identifying essential competencies for HR, as well as analyzing the opportunities and challenges faced. The results of the study highlight that the integration of technology and innovation in HR management can improve operational efficiency and organizational competitiveness. However, there are challenges such as the cost of implementing advanced technology and the need for more skilled HR. Therefore, this study emphasizes the importance of education and training to ensure the readiness of human resources in facing changes that occur in the digital era.

On the other hand, digital transformation also has an impact on operational efficiency. Business processes that were previously carried out manually can now be automated, reducing human error, and increasing productivity. The use of Enterprise Resource Planning (ERP) systems allows companies to integrate various business functions, such as finance, logistics, and human resources, in one centralized platform. In addition, digital transformation opens up opportunities for organizations to develop new digital-based business models, such as e-commerce, subscription-based services, and the sharing economy. However, behind its various benefits, digital transformation also faces many challenges. One of the main challenges is resistance to change, both from employees and management. Many organizations have difficulty changing their work culture and old habits that have become ingrained. Therefore, it is important for companies to build an effective communication strategy and provide adequate education and training for employees so that they can understand the benefits of the change. In addition, data security and privacy issues are a major concern in digital transformation. With the increasing use of internet-based technology, the risk of data leaks and cyber attacks is increasing, so organizations need to invest resources in data protection and strict security policies. Another challenge is the relatively large initial investment costs, especially for small and medium-sized companies that have budget constraints (Rauf, R., et al. 2024).

However, many industries have successfully implemented digital transformation and gained significant benefits. For example, in the banking sector, mobile banking services and the use of AI in risk analysis have increased efficiency and provided a better experience for customers. In the retail sector, e-commerce is growing with the use of data analysis to provide product recommendations that match customer preferences. Meanwhile, in the manufacturing industry, the implementation of IoT and AI in the production process has increased efficiency, reduced operational costs, and improved product quality. With the continuous development of technology, digital transformation is no longer an option, but a necessity for organizations that want to stay relevant and competitive. Organizations that are

able to adapt quickly to digital changes will have a better competitive advantage in the market. Therefore, digital transformation must be carried out comprehensively with a mature strategy, the right technology support, and changes in organizational culture that support innovation and sustainable growth.

The Strategic Role of Human Resources in Digital Transformation

Human Resources (HR) plays a strategic role in supporting the success of digital transformation in organizations. One of its main roles is to develop employees' digital skills through upskilling and reskilling programs so that they are ready to face technological changes. In addition, HR is also responsible for creating a digital culture that encourages innovation, collaboration, and adaptation to change. In this transformation process, change management is an important aspect to overcome employee resistance to new technologies, which can be done through effective communication strategies and adequate support (Zega, AW, et al. 2024). In addition, HR plays a role in recruiting and retaining competent digital talent by creating a flexible and innovative work environment. Optimizing productivity is also a major focus, where the use of technologies such as automation and data analytics can increase work efficiency. On the other hand, developing digital leadership is important so that leaders not only understand technology but are also able to inspire and guide teams in the digital ecosystem. Finally, HR must ensure that digital transformation has a positive impact on employee experience by adopting AI-based technologies that increase engagement and job satisfaction. By carrying out this strategic role, HR can ensure that organizations not only adopt new technologies but also have a workforce and culture that are ready to succeed in the digital era.

The Impact of Digital Transformation on Organizational Performance

Digital transformation has a significant impact on organizational performance, especially in improving operational efficiency and employee productivity. With the adoption of technologies such as automation, artificial intelligence (AI), and cloud computing, organizations can optimize business processes, reduce human error, and accelerate workflows. In addition, the use of big data and analytics allows for faster and more accurate data-based decision making. From the customer side, digital transformation improves their experience through more responsive and personalized services. Organizations that are able to adapt to digital technology also gain stronger competitiveness and drive innovation in business models, products, and services. In addition, digitalization helps in reducing operational costs with better workforce efficiency and resource management. However, behind these various benefits, organizations also need to face challenges such as cybersecurity and data protection. Therefore, the right strategy is needed so that digital transformation can provide an optimal positive impact on organizational performance.

Kurniawan, A., Rahayu, A., & Wibowo, LA (2021) in their study entitled "The Influence of Digital Transformation on the Performance of Regional Development Banks in Indonesia" found that the adoption of digital technology in the banking sector can improve operational efficiency and services provided to customers. Furthermore, Abdurrahman, L., Suhardi, L., & Armein, ZR (2013) in the study "Survey of the Influence of IT Governance on Digital Transformation and Bank Organizational Performance" revealed that good information technology governance plays an important role in the success of digital transformation, which has an impact on improving the performance of banking organizations. Meanwhile, Bahiroh, E., & Imron, A. (2024) in a study entitled "Innovative Human Resource Management Strategies in the Era of Digital Transformation" showed that innovative human resource management strategies in the digital era can improve employee and organizational performance as a whole.

In addition, Pradana, MRA, Parela, E., & Putra, NP (2024) in their study entitled "The Impact of Digital Transformation on MSME Performance in Indonesia" found that the use of digital technology helps MSMEs in increasing operational efficiency and competitiveness in the market. Finally, Winasis, S., Harlis, K., & Pradana, J. (2024) in the study "Information Technology Based Project Management: Critical Success Factors and Indicators of Success"

identified key success factors in information technology-based project management, which contribute to improving project performance and the organization as a whole. From these various studies, it can be concluded that digital transformation has a significant impact on organizational performance, both in terms of operational efficiency, technology governance, HR strategy, competitiveness, and project success.

On the other hand, digital transformation also brings significant changes in customer interactions. With digital platforms, customer service can be tailored to be more personal and responsive, increasing customer satisfaction and loyalty. Digital technology also opens up opportunities for organizations to develop new business models and create innovative products and services that are in line with evolving market needs. The ability to adapt to technological changes is a major factor in maintaining competitiveness in the increasingly competitive digital era. However, behind its various benefits, digital transformation also presents challenges that organizations must face. One of the biggest challenges is cybersecurity and data protection, where the threat of data leaks and cyber attacks is increasing. Therefore, organizations need to invest in a strong digital security system and ensure compliance with data protection regulations. In addition, changes in work culture are also an important aspect in the success of digital transformation. Employees need to be trained to master new technologies and adapt to more flexible work patterns, such as remote or hybrid work. With the right strategy, digital transformation can have a significant positive impact on organizations, both in terms of operational efficiency, increased productivity, and competitiveness in the global market. Organizations that are able to integrate technology effectively and overcome existing challenges will be better prepared to face the ever-evolving future. Therefore, digital transformation is not just an option, but a necessity for organizations that want to survive and thrive in the digital era.

Challenges and Obstacles in Implementing Digital Transformation

Digital transformation faces various challenges and obstacles that need to be overcome in order to run successfully and have a positive impact on the organization. One of the main challenges is the lack of awareness and digital culture within the organization. Many companies still maintain a traditional mindset and are reluctant to adapt to technological changes. This is often caused by a lack of understanding of the benefits of digital transformation and a lack of education about the importance of innovation in facing global competition. If organizations do not immediately change this mindset, they will be left behind by competitors who are quicker to adopt modern technology. In addition, resistance to change is also a significant obstacle. Many employees are comfortable with old work methods and are reluctant to switch to a more digital system (Ahyani, E., & Dhuhani, EM 2024). Fear of uncertainty, such as job losses due to automation and artificial intelligence, is often the main reason why the adoption of new technologies is rejected. Therefore, organizations need to ensure that there is an effective communication strategy and provide training to employees so that they understand the benefits of technology and can adapt to change.

On the other hand, infrastructure and technology limitations are also major obstacles in implementing digital transformation. Many organizations still use legacy systems that are difficult to integrate with new technologies. This causes operational inefficiencies because incompatible systems can hamper workflow and reduce productivity (Savitri, P. 2024). In addition, investing in modern technologies such as cloud computing, artificial intelligence (AI), big data, and the Internet of Things (IoT) requires a lot of money. Therefore, organizations must have a mature budget plan and choose technology that truly suits their business needs.

In addition to infrastructure, human resources (HR) are also a determining factor in the success of digital transformation. The lack of a workforce with digital skills is a major challenge for many companies. This limitation occurs not only at the operational level, but also at the managerial level, where many company leaders do not yet have a deep understanding of how to implement an effective digital strategy (Asmiati, A., et al. 2023). Therefore, companies need to invest in HR training and development programs so that their

workforce is ready to face the challenges of digitalization. Data security and privacy are also major concerns in digital transformation. As the adoption of digital technology increases, the risk of cyber threats such as hacking, data theft, and malware attacks is also increasing. Many organizations do not yet have a strong cybersecurity system, making them vulnerable to attacks that can harm their business. In addition, strict data protection regulations, such as the General Data Protection Regulation (GDPR) in Europe and Personal Data Protection Acts in various countries, require companies to be more careful in managing customer information. Therefore, companies must ensure that they implement sophisticated security systems and comply with applicable regulations in order to maintain customer trust and avoid legal sanctions.

The high cost of implementing digital transformation is also a barrier for many organizations, especially for small and medium-sized companies. The use of digital technology requires large investments in hardware, software, and employee training. In addition, the return on investment (ROI) from digital transformation is not always immediately visible in the short term, so many companies hesitate to allocate their funds to digitalization projects (Lisdawati, L., et al. 2024). Therefore, it is important for organizations to design the right investment strategy, focusing on technologies that have the greatest impact on business efficiency and productivity. Another challenge is regulation and compliance with applicable laws. Governments in various countries continue to update policies related to digital technology, such as data protection, cybersecurity, and digital tax. Companies must always follow the development of these regulations so as not to face legal obstacles that can hinder their operations. In addition, integration with the wider business ecosystem is also a challenge, because each company has different technology standards. Poor coordination in implementing digitalization can cause disruptions in the supply chain and reduce operational efficiency (Putri, EOW 2024).

Lack of a clear strategy and strong digital leadership can also lead to failure in implementing digital transformation. Many companies start digitalization without a mature vision and plan, so the process becomes unfocused and difficult to implement comprehensively. Leadership that does not have digital insight can also hinder innovation and adoption of new technologies (Zebua, RSY, et al. 2023). Therefore, companies need to have leaders who not only understand the business but also have a clear digital vision in order to guide the organization towards a successful transformation. In addition to technical and strategic aspects, user experience is also an important factor in digital transformation. Many companies focus too much on implementing technology without considering the needs of customers and employees. If the technology implemented is not user-friendly or does not provide real benefits to users, then the digital transformation can fail (Ifadhila, I., et al. 2024). Therefore, a user-oriented approach must be a priority, by ensuring that every innovation implemented can improve customer experience and employee work efficiency.

Overall, digital transformation is not just about adopting technology, but also includes changes in culture, strategy, and business processes within an organization. To overcome these obstacles, companies need to have a clear vision, strong leadership, and readiness in terms of human resources, infrastructure, and security. With a planned and targeted approach, digital transformation can bring great benefits, such as increased efficiency, innovation, and competitiveness in an increasingly competitive digital era (Juninda, NA, et al. 2024).

Strategies and Recommendations to Improve Organizational Performance

Digital transformation faces various challenges and obstacles that need to be overcome in order to be successful. One of the main challenges is the lack of awareness and digital culture within the organization. Many companies still maintain a traditional mindset and are reluctant to adapt to technological changes. In addition, resistance to change is also an obstacle, where employees and management are comfortable with old work methods and are worried about the impact of automation, such as job losses. On the other hand, limited infrastructure and technology are also major obstacles. Many organizations still use legacy systems that are difficult to integrate with new technologies, while investment in modern

technologies such as cloud computing and artificial intelligence is still limited. In addition, the lack of a workforce with digital skills is also a challenge, because not all employees are ready to face the changes brought by digitalization (Panjaitan, WJ, & Lupiana, F. 2023).

Data security and privacy are crucial aspects of digital transformation. Cyber threats such as hacker attacks and data breaches are increasing, so organizations must implement strong security systems and comply with data protection regulations. Another obstacle is the high cost of implementation, which makes many companies hesitate to invest because the results are not always immediately visible. In addition, changing government regulations can also affect the smoothness of digital transformation. Integration with the wider business ecosystem is a challenge, especially in connecting internal systems with business partners, suppliers, and customers who use different technology standards. The lack of a clear strategy and strong digital leadership can also lead to failure in implementation. Often, companies focus more on technology adoption than on user experience, which ultimately hinders the effectiveness of the digital transformation itself. Overall, digital transformation is not just about technology, but also includes changes in culture, strategy, and business processes. To overcome these obstacles, organizations need to have a clear vision, strong leadership, and readiness in terms of human resources, infrastructure, and security to be able to compete in the digital era.

Conclusions

Based on the results of this study, it can be concluded that digital transformation has a significant impact on the strategic role of HR in organizations. Technology not only automates administrative processes but also enables HR to play a more strategic role in organizational performance. With technology, HR can manage talent more effectively, improve employee performance, and create an organizational culture that is more responsive to change. However, the success of digital transformation depends not only on the implementation of the technology itself, but also on employee readiness and management support. Organizations need to ensure that they have adequate policies and training to facilitate this transition, so that technology can provide maximum benefits and improve overall organizational performance.

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