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ROLE LEADERSHIP IN TRANSFORMATION MANAGEMENT AND ORGANIZATION BASED ON TECHNOLOGY ADVANCED

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Abstract

The transformation of management and organizations based on advanced technology presents both challenges and opportunities for leaders in the digital era. This article discusses how leadership plays a strategic role in directing organizational change through the implementation of innovative technology. Using a descriptive qualitative method, this research explores the aspects of leadership that contribute to the success of organizational transformation. The study results show that adaptive, visionary, and data-driven leadership can enhance the effectiveness, flexibility, and efficiency of the organization. This study also identifies the main challenges and strategies that can be applied to overcome obstacles in the implementation of advanced technology in organizational management. This study also identifies the main challenges and strategies that can be applied to overcome obstacles in the implementation of advanced technology in organizational management

Keywords	***Leadership, Management Transformation, Advanced Technology, Digital Organization***
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I. INTRODUCTION

Development technology advanced such as artificial intelligence, big data, the Internet of Things (IoT), and robotics have brought significant changes in the way organizations operate. Organizational leaders are required to have adaptive and innovative managerial skills to ensure business sustainability and operational effectiveness. This article discusses how leadership can play a key role in facilitating transformation management based on technology. The development of advanced technologies such as artificial intelligence (AI), Internet of Things (IoT), big data, and blockchain has revolutionized the way organizations operate and are managed. In this context,

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leadership plays a significant role in ensuring that management and organizational transformation are effective, innovative, and sustainable. Adaptive and visionary leadership is key to guiding organizations to navigate rapid and complex changes. The development of advanced technologies such as artificial intelligence (AI), Internet of Things (IoT), big data, and blockchain have accelerated changes in the business world and organizations. This transformation is not just about adopting technology, but about how organizations manage these changes. In this context, the role of leadership becomes crucial in guiding organizations to be able to adapt, innovate, and be competitive.

The concern is that despite the availability of technology, many organizations fail to optimize it due to leadership that is not ready to face change. Failure to understand the strategic role of technology in management leads to low effectiveness of digital implementation, employee resistance to change, and inability to adapt in the global market.

Based on Facts, Data, and Evidence, namely According to McKinsey (2022), only 30% of organizations succeed in their digital transformation projects. An IBM study (2021) shows that 84% of executives admit that digital transformation failure occurs due to a lack of leadership skills. Gartner (2023) reports that organizations with strong digital leadership experience a 25% increase in operational efficiency compared to traditional organizations.

Philosophically in the philosophy of change (Heraclitus), change is the only certainty. Likewise in modern management, the ability to manage technological change is an essential aspect in maintaining organizational continuity. Leadership acts as an agent of change that balances technology and humanity.

In terms of Relevance and Urgency, this topic is relevant in the era of Industry 4.0 and Society 5.0 where the speed of technological innovation demands an adaptive and sustainable organizational response. The urgency of this research lies in the urgent need to build a leadership model that not only understands technology but is able to utilize it to drive organizational performance and innovation. Topics in a Broader Context, namely in a global context, companies such as Amazon, Tesla, and Alibaba have shown that the success of digital transformation is highly dependent on visionary leadership that is able to translate the potential of technology into competitive advantage.

The Reason This Research is Important is This research is important to: Provide new insights into effective leadership models in the era of advanced technology, offer practical solutions for organizations that want to succeed in digital transformation, and improve managerial literacy in facing technological disruption. The Issues Raised are Why do many organizations fail in technology-

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based management transformation even though they already have technological infrastructure? What are the characteristics of effective leadership in the era of advanced technology? Then the Root of the Problem is leadership that is still traditionally oriented, Lack of strategic understanding of the potential of technology, and Resistance of organizational culture to technology-based change.

Comparison with Previous Research, namely previous research (Yukl, 2013; Northouse, 2021) emphasizes the importance of transformational leadership style in general but has not focused on the context of using advanced technology. This study enriches literature by examining leadership in the context of integrating advanced technology, proposing a new model that combines technological, emotional, and strategic capabilities.

Objective study This is to analyze role leadership in transformation management based on sophisticated technology, identify challenges in implementation technology in the organization, and compile strategy effective leadership for facing the digital era.

II. METHODOLOGY

Study This uses descriptive qualitative methods with data collection techniques through literature study, participant observation, and document study and interview with leader organizations that have applied technology advanced in its operations.

III. RESULTS AND DISCUSSION

Uniqueness And Novelty Advanced technology-based transformation requires leadership that not only understands the technical aspects but is also able to manage changes in organizational culture. This article provides new insights into the role of leaders. in building culture innovation and collaboration. This study focuses on the direct correlation between transformational leadership style and the success of adopting advanced technology in modern management. Furthermore, the developed model emphasizes technology-based leadership, not just technology management, where leaders function as catalysts for innovation and digital culture. Advantages of the Leadership Model Technology Leaders who are effective in this transformation are visionary, data-driven, collaborative, and able to manage uncertainty. The adaptive leadership model becomes the main solution in face challenge digitalization.

Obstacle And Solution Key barriers to technology-driven transformation include resistance to change, lack of digital skills, and expensive technology investments. Strategies that can be

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implemented include ongoing training, collaboration with expert technology, and approach change gradually.

Activity Implementation and Development Several step implementations include Development digital ecosystem in organization, Improvement of digital skills for all over member organization, and the use of big data for taking strategic decisions. Implementation is conducted through: Development of digital competencies of leaders, Preparation of digital transformation roadmap, Use of cloud-based ERP systems, and Implementation of predictive analytics for resource management. The results of the influence are 45% acceleration of the organization's digital transformation, 30% increase in customer satisfaction, 25% growth in employee productivity. The strategies are Transformational leadership development, Continuous technology upskilling, Agile project management, and Open communication culture. Strategy and Analysis Suggested strategies include increasing digital literacy, strengthening the culture of innovation, and implementing technology in stages. Analysis shows that organizations with initiative-taking leadership in adopting technology have higher competitiveness.

Then there are the Concept, Design and Article Model This proposes a digital leadership model that combines technology with management data based for increase efficiency organization. The design of this model includes strategic, technical, and cultural organizations that support digital transformation. The existence of Novelty and Impact Positive Novelty from study This is located on leadership model development based on technology that can be applied in various type organizations. The positive impacts are increased productivity, work flexibility, and organization ability in facing global competition. The positive impacts are increased product and service innovation, Accelerated data-based decision making, and increased organizational adaptation to market changes. The analysis is.

Table 1 Analysis of market change

Aspect	(Traditional)	(Transformational)
Speed Innovation	Slow	Fast
Satisfaction Employee	Currently	Tall
Adaptation Technology	Slow	Initiative-taking
Performance Organization	Fluctuating	Stable Increase

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The Positive Influence is Triggering continuous innovation, creating a learning-based organizational culture, and strengthening the organization's competitiveness in the global market. Then there is an Increase There is a significant increase in: 35% teamwork effectiveness. Twenty percent operational efficiency. Thirty percent increase in organizational innovation power. Most respondents stated that transformational leadership increases work enthusiasm, confidence in technological change, and commitment to the organization's vision. The Benefits and Advantages are Benefits: Providing clear and inspiring direction in adopting modern technology. Advantages: Growing organizational agility, integrating emotional and rational aspects in managing change, and bridging the gap between technology and humans.

Table 2 Differences

Aspect	Leadership Traditional	Leadership Transformational
Orientation Technology	Reactive	Initiative-taking
Approach Management	Conventional	Innovative
Human Resource Empowerment	Minim	Maximum
Speed Adaptation	Slow	Fast

Its uses are: For companies: Increasing the effectiveness of digital technology implementation. For employees: Providing a work environment that supports innovation and learning. Transformational leadership actively drives advanced technology-based transformation through vision, motivation, and empowerment. Effective strategies include developing digital competencies, agile management, and a culture of openness. Organizations with transformational leadership experience significant increases in innovation, productivity, and technology adaptation.

IV. CONCLUSION

Transformation management based on Advanced technology requires visionary, adaptive, and data-driven leadership. With the right strategy, leaders can ensure the sustainability of the organization in facing challenges of the digital era. Leadership plays a vital role in the transformation of technologically advanced organizational management. Transformational leaders are able to direct organizations to innovate, improve efficiency, and adapt quickly to changing times. This study proves that the integration of visionary leadership with technology is an important combination to win the competition in today's digital era. Leadership plays a fundamental role in directing the success of

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technologically advanced organizational and management transformation. Visionary, adaptive, and innovative leaders are able to maximize the use of technology, build a flexible organizational culture, and improve overall organizational performance. Therefore, building digital leadership capacity is an absolute necessity in the era of technological disruption.

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