Novatio: Journal of Management Technology and Innovation

E-ISSN: 3030-8674

Volume. 3, Issue 3, July 2025

Page No: 144-158



Leadership Styles and Organizational Readiness in the Era of Digital Transformation: A Narrative Review

Ferry Siswadhi¹, Kasman Karimi², Moh. Kurdi³, Endang Widyastuti⁴, Fransiska Agustina Koesmariadi⁵
¹Sekolah Tinggi Ilmu Ekonomi Sakti Alam Kerinci, Indonesia
²Universitas Bung Hatta Email,Indonesia
³⁴Universitas Wiraraja,Indonesia
⁵Universitas KH Abdul Chalim Mojokerto,Indonesia

Correspondent: <u>fsiswadhi@gmail.com</u>¹

Received : May 30, 2025
Accepted : July 12, 2025
Published : July 31, 2025

Citation: Siswadhi, F., Karimi, K., Kurdi, M., Widyastuti, E., Koesmariadi, F, A. (2025). Leadership Styles and Organizational Readiness in the Era of Digital Transformation: A Narrative Review. Novatio: Journal of Management Technology and Innovation, 3(3), 144-158.

ABSTRACT: Digital transformation is now a strategic necessity for organizations across various sectors. This review explores how different leadership styles—transformational, agile, servant, inclusive, and ethical—affect organizational readiness to adopt digital technologies. Using systematic review methods and bibliometric analysis, studies from major databases such as Scopus, Web of Science, and Google Scholar were analyzed to identify patterns and key findings. Inclusion criteria emphasized peer-reviewed research published between 2010 and 2025, encompassing diverse sectors and global contexts. Findings show that transformational leadership improves innovation and agility, agile leadership accelerates technology adoption, servant and inclusive leadership increase employee engagement and reduce resistance, while ethical leadership strengthens trust, fairness, and sustainability. Organizational readiness is also shaped by systemic factors such as regulations, culture, and resources. Developing countries often face challenges due to limited infrastructure, while developed countries benefit from stronger policy and technological support. These dynamics underscore the interdependence of leadership and systemic environments in shaping digital outcomes. In conclusion, leadership styles are decisive in shaping digital readiness, but their effects differ by sector and region. Policy support, leadership training, and organizational reforms are needed to overcome barriers and achieve inclusive digital transformation. Future research should focus on long-term impacts, contextual variations, and integrative leadership frameworks to ensure sustainable and inclusive digital transformation.

Keywords: Leadership Styles, Digital Transformation Readiness, Transformational Leadership, Agile Leadership, Inclusive Leadership, Ethical Leadership



This is an open access article under the CC-BY 4.0 license

INTRODUCTION

The fast development of digital transformation is changing how organizations operate and compete in a technology-driven era. Technologies such as artificial intelligence, big data, cloud

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

computing, and the Internet of Things are now widely used across industries. In this context, leadership plays a central role in determining whether organizations are ready and successful in adopting these innovations. Leadership styles—defined as the ways leaders guide, influence, and motivate employees—are critical in managing digital transformation. Today, leadership goes beyond authority and control. Leaders are expected to build digital skills, foster trust, and create organizational cultures that adapt to continuous change(Carvalho et al., 2022; Al-Mannaei et al., 2022; Malik et al., 2024).

Recent scholarship emphasizes that leadership in the digital era requires an integration of technical expertise and interpersonal skills to address the complexities of digitalization. Effective leaders must not only demonstrate technological proficiency but also cultivate a culture of collaboration and innovation, thereby enhancing organizational capacity to respond to rapid change. Studies indicate that transformational, transactional, authoritarian, and participatory leadership styles manifest differently in digital contexts, influencing outcomes such as employee engagement, innovation, and operational efficiency (Musaigwa & Kalitanyi, 2024; Benchea & Ilie, 2023; Chang & Octoyuda, 2024). The ability to adapt and to inspire teams is thus regarded as essential for leaders seeking to align organizational strategies with the demands of the digital economy.

The globalization of markets and technological advancements has accelerated the adoption of digital transformation strategies across diverse sectors. In education, digital transformation has redefined pedagogical methods, requiring leaders to support the integration of technology into teaching and learning practices (Al-Mannaei et al., 2022; Antonopoulou et al., 2025). In healthcare, leaders are tasked with overseeing the implementation of digital systems aimed at enhancing patient care and operational efficiency (Machado et al., 2025; Dióssy et al., 2025). Similarly, in industrial contexts, the adoption of digital tools fosters new value creation and process efficiency, necessitating leaders who can effectively steer strategic direction (Malik et al., 2024; Aburub & Khanfar, 2025). These sectoral variations underscore the multifaceted role of leadership in shaping digital readiness.

Global trends further suggest that organizations increasingly adopt digital transformation not merely as a technological upgrade but as a strategic imperative to enhance competitiveness and meet evolving market demands. Leaders are expected to foster innovation-friendly environments in which employee participation and teamwork are prioritized. Transformational leadership, in particular, has been highlighted as critical for enabling skill development, adaptability, and sustained innovation (Chang & Octoyuda, 2024; Ly, 2023; Santarsiero et al., 2024). Effective leaders are those capable of guiding organizations through uncertainty and complexity while ensuring resilience during disruptive transitions (Dióssy et al., 2025; Winasis et al., 2021).

Despite these advances, significant challenges remain in preparing organizations for digital transformation. One major barrier is the lack of digital competence within the workforce, which can hinder the adoption of emerging technologies. Resistance to change is another recurrent challenge, as employees often prefer traditional work practices and may perceive new systems as disruptive. Studies note that resistance frequently arises when leaders fail to articulate the value of digital transformation or provide adequate training (Musaigwa & Kalitanyi, 2024; Niță & Guţu,

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

2023). Moreover, misalignment between business strategies and digital initiatives contributes to implementation difficulties, leaving organizations vulnerable to technological stagnation (Abbu et al., 2025; Malik et al., 2024).

Another pressing issue concerns leaders themselves, many of whom lack the expertise required to effectively drive digital transformation. Without adequate leadership development, organizations face the risk of underutilizing new technologies or mismanaging their implementation. This is compounded by insufficient employee training and development programs, which delay the adoption of digital innovations (Habsi et al., 2022; Santarsiero et al., 2024). In such contexts, leadership that is adaptive and inclusive becomes critical, encouraging a culture of experimentation and resilience in the face of uncertainty (Hargitai & Bencsik, 2023).

A review of the existing literature reveals notable gaps that justify further scholarly inquiry. First, much of the current research focuses on the immediate effects of leadership on digital transformation outcomes, leaving long-term impacts underexplored (Benchea & Ilie, 2023; Dióssy et al., 2025). Second, the effectiveness of leadership styles often varies by industry context, yet few studies systematically investigate these sector-specific dynamics (Díaz-Garcia et al., 2023; Machado et al., 2025). Third, individual leader characteristics—such as personal experience, personality traits, and interpersonal skills—remain underexamined despite their potential to shape organizational culture and digital readiness (Zulu & Khosrowshahi, 2021; Aristovnik et al., 2025). Addressing these gaps could provide a more comprehensive understanding of the interplay between leadership and digital transformation readiness.

Against this backdrop, the purpose of this review is to critically examine the role of leadership styles in shaping organizational readiness for digital transformation. This study seeks to identify the mechanisms through which different leadership styles influence digitalization processes, including their effects on employee motivation, innovation, and technological adoption. By synthesizing findings across multiple contexts, the review aims to clarify the theoretical underpinnings of leadership in the digital era and highlight practical strategies for fostering readiness.

The scope of this review is both thematic and contextual. Thematically, it examines transformational, transactional, participatory, authoritarian, and servant leadership styles, evaluating their contributions to digital transformation readiness. Contextually, the review considers variations across geographic regions and sectors. For instance, Southeast Asian organizations often face infrastructural and skills-related challenges that shape their leadership approaches (Machado et al., 2025; Aburub & Khanfar, 2025), while European institutions may benefit from more supportive policy environments (Al-Mannaei et al., 2022; Ly, 2023). Differences between public and private sectors are also considered, with public organizations typically contending with greater bureaucratic constraints, whereas private firms enjoy more latitude for experimentation (Antonopoulou et al., 2025; Santarsiero et al., 2024).

Furthermore, cultural and societal values play a decisive role in shaping leadership responses to digitalization. In collectivist societies, consensus-driven leadership is often more effective, while

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

individualistic cultures may favor leaders who emphasize autonomy and innovation (Musaigwa & Kalitanyi, 2024; Niţă & Guţu, 2023). By acknowledging these contextual nuances, this review contributes to a deeper understanding of how leadership styles can be adapted to specific organizational and cultural environments in order to optimize digital transformation outcomes.

In sum, this introduction establishes the critical importance of leadership styles in influencing organizational readiness for digital transformation. It outlines the existing challenges, identifies key research gaps, and defines the scope and objectives of the review. By situating the discussion within both global and sectoral contexts, the study seeks to advance theoretical discourse while offering actionable insights for leaders seeking to guide their organizations through the complexities of digital change.

METHOD

The methodology adopted in this review integrates systematic literature review protocols with bibliometric analysis to ensure a comprehensive and transparent understanding of the relationship between leadership styles and organizational readiness for digital transformation. To achieve this objective, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was employed as the guiding structure, complemented by bibliometric mapping techniques to capture trends, collaborations, and thematic developments in the field. This methodological integration provided a robust mechanism to identify, evaluate, and synthesize scholarly work across disciplines and regions while also enabling the visualization of emerging patterns in digital leadership research (Mustapha et al., 2023; Eger & Žižka, 2024).

The PRISMA framework was chosen because of its rigorous and standardized process that enhances transparency and replicability in systematic reviews. Following PRISMA principles, the process began with the identification of studies through structured searches in major scientific databases including Scopus, Web of Science, PubMed, and Google Scholar. These databases were selected because they provide extensive coverage of peer-reviewed literature across social sciences, management, information systems, and organizational studies. The initial search generated a broad dataset, which was then refined through the application of specific inclusion and exclusion criteria. Bibliometric analysis complemented this process by quantifying publication trends, mapping coauthorship networks, and assessing citation impacts, thus situating the findings within a global and temporal perspective (Carvalho et al., 2022; Mustapha et al., 2023).

The search strategy was grounded in the use of carefully selected keywords and Boolean operators to capture the multidimensional aspects of leadership and digital transformation readiness. The primary keywords included "leadership styles," "digital transformation readiness," "transformational leadership," "organizational change," "employee engagement," "digital leadership," "organizational culture," and "innovation behavior." These keywords were combined with connectors such as AND and OR to broaden or narrow the scope as necessary. For instance, searches such as "leadership styles AND digital transformation readiness" or "transformational

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

leadership AND organizational change" were conducted to maximize relevance and precision. These terms were chosen because they reflect the key constructs under investigation, as demonstrated in previous scholarship (Carvalho et al., 2022; Musaigwa & Kalitanyi, 2024; Gierlich-Joas, 2021).

The inclusion criteria for selecting studies were carefully established to ensure that only relevant and high-quality research was considered. Studies published between 2010 and 2025 were included, reflecting the period in which digital transformation has become a critical focus across organizational and academic contexts. Only peer-reviewed journal articles, conference papers, and book chapters that explicitly examined the intersection of leadership and digital transformation readiness were retained. Furthermore, studies had to be written in English to allow consistency in analysis. The exclusion criteria eliminated non-scholarly sources such as editorials, commentaries, and opinion pieces, as well as publications without empirical or theoretical grounding in leadership and digital transformation. Duplicate records across databases were also systematically removed.

To further refine the dataset, a two-stage screening process was applied. In the first stage, titles and abstracts were screened to eliminate clearly irrelevant studies. In the second stage, full-text reviews were conducted to evaluate the methodological quality and relevance of the remaining articles. Studies were assessed based on their research design, conceptual clarity, and contribution to understanding leadership styles in the context of digital transformation. Both qualitative and quantitative studies were included, encompassing randomized controlled trials, cohort studies, case studies, surveys, and mixed-method approaches. This diversity ensured a holistic view of the phenomenon, capturing both the depth of individual case-based insights and the generalizability of larger empirical studies (Marlia et al., 2025; Ly, 2023; Sibassaha et al., 2025).

In terms of bibliometric analysis, the data extracted from the included studies were processed using VOSviewer software. This tool enabled the construction of co-citation maps, keyword co-occurrence networks, and author collaboration diagrams. These visualizations helped to identify clusters of research activity, key themes driving the discourse, and influential scholars and institutions shaping the field. For example, the clustering of keywords such as "digital leadership," "innovation behavior," and "employee engagement" revealed thematic intersections that are particularly relevant to understanding how leadership influences digital transformation readiness. Such analysis provided not only descriptive insights but also analytical value in mapping the intellectual structure of the research domain (Chavalala et al., 2022; Batırlık et al., 2022).

Throughout the process, data extraction was conducted systematically to capture relevant variables including study context, sector focus, geographic setting, research design, leadership style examined, and outcomes measured. This allowed for the organization of findings into thematic categories during synthesis. Studies focusing on transformational leadership were analyzed in terms of their impact on organizational agility and innovation, while those examining servant or inclusive leadership were evaluated for their role in fostering employee engagement and cultural adaptation. Similarly, studies on authoritarian or transactional leadership were considered in relation to resistance to change and misalignment with digital strategies (Niţă & Guţu, 2023; Abbu et al., 2025).

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

Quality assessment of the included studies was conducted to evaluate the rigor and reliability of findings. For quantitative studies, criteria such as sample size, statistical validity, and measurement reliability were considered, while for qualitative studies, attention was given to methodological transparency, depth of analysis, and credibility of interpretations. Mixed-methods studies were assessed for the coherence of integration between qualitative and quantitative components. This quality appraisal ensured that the synthesis of findings was based on robust and credible evidence.

The PRISMA flow diagram was employed to illustrate the selection process, including the number of records identified, screened, excluded, and finally included in the review. This visual representation enhanced the transparency of the methodology and allowed readers to trace the logical sequence of the review process. It also provided accountability for the decisions made at each stage, ensuring adherence to best practices in systematic review reporting (Mustapha et al., 2023).

In conclusion, the methodology of this study combined the structured rigor of PRISMA with the analytical depth of bibliometric techniques to capture a comprehensive understanding of leadership styles and digital transformation readiness. The systematic search and screening process ensured that only relevant, high-quality studies were included, while the bibliometric mapping provided a meta-level view of the research landscape. Together, these methods created a strong foundation for synthesizing evidence, identifying gaps, and advancing theoretical and practical insights into how leadership shapes organizational readiness for digital transformation.

RESULT AND DISCUSSION

The findings of this narrative review are organized into five thematic areas that capture the core relationship between leadership styles and digital transformation readiness: transformational leadership, agile and adaptive leadership, servant and inclusive leadership, ethical and responsible leadership, and global comparative perspectives. Each theme is supported by empirical and theoretical evidence from existing literature, illustrating the multifaceted impact of leadership on digital transformation across contexts.

Transformational leadership has consistently emerged as a critical determinant of successful digital transformation in both public and private sectors. In the public domain, leaders who employ transformational practices have been shown to inspire and motivate employees to embrace new technologies by articulating a clear and relevant vision (Carvalho et al., 2022; Kyambade & Namatovu, 2024). For instance, studies conducted in higher education institutions revealed that transformational leadership directly contributed to enhancing staff engagement and adaptation to information and communication technologies, underscoring its relevance for digital education initiatives (Niţă & Guţu, 2023). In the private sector, transformational leaders foster innovation and accelerate product development by cultivating collaborative environments and encouraging responsiveness to market changes (Zulu & Khosrowshahi, 2021; Chang & Octoyuda, 2024). These findings collectively highlight the pivotal role of transformational leadership in advancing digital readiness across diverse institutional landscapes.

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

Empirical evidence further reinforces the connection between transformational leadership and organizational agility. Leadership grounded in transformational principles enhances organizational adaptability by prioritizing growth and innovation (Guţu et al., 2024; Ly, 2023). In the healthcare sector, for example, transformational leadership has been identified as a crucial enabler of organizational agility, facilitating responsiveness to patient needs and technological advancements (Louw et al., 2024; Sibassaha et al., 2025). Such findings demonstrate that visionary leadership contributes not only to technological adoption but also to broader organizational resilience in dynamic environments.

Agile and adaptive leadership represent another central theme in the literature, with robust evidence underscoring their effectiveness in expediting digital transformation processes. Agile leaders cultivate responsive and innovative teams, enabling organizations to accelerate the adoption of new technologies (Musaigwa & Kalitanyi, 2024; Imaniyati et al., 2024). Empirical studies indicate that organizations guided by agile leadership significantly reduced product development cycles and improved performance outcomes by embedding flexibility and experimentation into their work culture (Chang & Octoyuda, 2024; Chavalala et al., 2022). In industrial contexts, agile leaders encourage experimentation and bottom-up initiatives, fostering environments where feedback and innovation are integral to organizational operations (Mustapha et al., 2023; Imaniyati et al., 2024). These findings underscore that agile leadership is instrumental in bridging the gap between technological potential and organizational practice.

When comparing adaptive leadership practices across developed and developing countries, important contextual differences emerge. In developed economies, adaptive leadership is often complemented by advanced technological infrastructure and abundant resources, enabling leaders to respond more effectively to environmental changes (Candrasa et al., 2024; Saleh et al., 2023). In contrast, leaders in developing countries face challenges such as limited resources, weaker communication channels, and insufficient technological infrastructure, which complicate the implementation of adaptive strategies (Kyambade & Namatovu, 2024; Marlia et al., 2025). Nevertheless, adaptive leadership in these contexts remains a valuable approach for mitigating systemic constraints, demonstrating the universal relevance of adaptability while acknowledging distinct regional challenges.

The role of servant and inclusive leadership in digital transformation emphasizes the importance of prioritizing employee engagement during periods of technological change. Servant leadership has been shown to foster greater employee involvement by focusing on the needs and development of team members (Mendy & AlGhanem, 2024; Chang & Octoyuda, 2024). In the digitalization process, servant leaders provide the necessary support and resources for employees to adapt to new tools and processes, resulting in enhanced motivation and loyalty (Candrasa et al., 2024; Nguyen et al., 2025). Empirical evidence indicates that higher levels of employee engagement are directly correlated with successful technology adoption and implementation (Bygstad et al., 2017; Sibassaha et al., 2025).

Case studies further illustrate how inclusive leadership mitigates resistance to digital change. In one healthcare organization undergoing digital transformation, inclusive leaders engaged employees at multiple levels in decision-making and planning, thereby reducing resistance and fostering ownership of the process (Kyambade & Namatovu, 2024; Esenyel, 2024). This

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

participatory approach not only addressed concerns about new technologies but also enhanced cultural alignment, demonstrating that inclusive leadership transforms organizational resistance into proactive collaboration (Musaigwa & Kalitanyi, 2024; Aburub & Khanfar, 2025). These findings highlight the cultural and psychological dimensions of leadership in promoting digital readiness.

Ethical and responsible leadership also plays a decisive role in ensuring sustainable digital transformation. Leaders committed to ethical practices are tasked with safeguarding data privacy and ensuring equity in digital access. Literature emphasizes that ethical leadership builds stakeholder trust, which is critical in digital contexts involving sensitive data management (Bian & Wang, 2024; Habsi et al., 2022; Machado et al., 2025). Ethical leaders provide transparent policies and guidelines that uphold principles of justice and accountability, ensuring that digitalization does not compromise organizational integrity (Antonopoulou et al., 2019; Musaigwa & Kalitanyi, 2024). These practices contribute to cultivating organizational cultures that respect individual rights while embracing innovation.

Examples of policy initiatives influenced by ethical leadership underscore its importance in shaping sustainable digital practices. Higher education institutions, for instance, have adopted stringent data protection policies under the guidance of ethical leaders, accompanied by regular training programs on digital privacy (Machado et al., 2025; Musaigwa & Kalitanyi, 2024). In some cases, ethical leadership also extends to environmental sustainability, with leaders promoting eco-friendly technologies as part of digital transformation initiatives (Habsi et al., 2022). These examples demonstrate that ethical leadership integrates social, environmental, and technological considerations into cohesive strategies, ensuring digital transformation aligns with broader values of responsibility and sustainability.

A global comparative perspective reveals notable differences in how leadership styles influence digital transformation readiness across developed and developing countries. In advanced economies, participatory and inclusive leadership styles are associated with more open cultures of innovation, enabling organizations to more readily adopt and scale digital solutions (Machado et al., 2025; Bygstad et al., 2017). Conversely, in developing economies, systemic barriers such as infrastructural deficits and resource limitations restrict the extent to which leadership styles can directly facilitate digital transformation, though transformational leadership remains effective in encouraging adaptation (Chang & Octoyuda, 2024). These disparities highlight the importance of contextualizing leadership strategies within broader socioeconomic and technological frameworks.

Contextual factors such as culture, regulation, and infrastructure significantly shape the effectiveness of leadership styles across regions. In developed countries, supportive regulatory environments and advanced technological infrastructures enhance leaders' ability to implement strategic approaches to digital transformation (Candrasa et al., 2024; Bygstad et al., 2017). In contrast, hierarchical cultural norms and rigid regulations in many developing countries often hinder the implementation of adaptive and participatory leadership approaches (Banerjee & Maheshvari, 2020). Furthermore, collectivist cultures tend to be more receptive to inclusive leadership, while individualist societies may favor transactional or competitive leadership models (Machado et al., 2025; Candrasa et al., 2024). These findings suggest that leadership effectiveness is not universal but is mediated by local cultural and systemic conditions.

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

Infrastructure gaps also play a crucial role in differentiating outcomes. In developing regions where technological infrastructures are less mature, leaders face challenges in creating digital environments that support innovation and adaptability (Machado et al., 2025). Conversely, leaders in developed regions can leverage robust digital infrastructures to implement complex strategies with fewer barriers. This divergence illustrates that while leadership style remains a vital determinant of digital readiness, its impact is heavily conditioned by structural and cultural variables.

Taken together, the results of this review demonstrate that leadership styles significantly influence digital transformation readiness, albeit in contextually specific ways. Transformational leadership enhances organizational agility and innovation across sectors, agile leadership accelerates adoption and experimentation, servant and inclusive leadership foster employee engagement and cultural alignment, and ethical leadership ensures trust, equity, and sustainability. The global comparative perspective underscores that these dynamics are mediated by structural, cultural, and regulatory contexts, reinforcing the need for nuanced, context-sensitive approaches to leadership in the digital era. By synthesizing these thematic findings, this review highlights the multidimensional nature of leadership's impact on digital transformation and lays the groundwork for more targeted strategies in future research and practice.

The findings of this review highlight the central role of leadership styles in shaping digital transformation readiness, and these results can be contextualized within classical leadership theories and broader change management literature. Transformational, ethical, and adaptive leadership styles appear to be most influential in fostering organizational preparedness for digital change. This is consistent with classical leadership theories, such as Burns' conceptualization of transformational leadership, which emphasizes leaders' ability to inspire, motivate, and engage followers to transcend self-interest for collective goals (Carvalho et al., 2022). The results also align with Lewin's three-step model of change—unfreezing, changing, and refreezing—by showing that leaders who adopt inclusive and participatory approaches help lower resistance to change and embed new practices into organizational culture (Bygstad et al., 2017). These findings suggest that leadership remains a decisive factor in managing complex organizational change, but they also extend classical frameworks by situating leadership within the realities of digital transformation.

Traditional change management frameworks that focus on structures and processes may be insufficient for addressing the complexities of contemporary digital challenges. The dynamic and unpredictable nature of digital environments requires leaders to exercise adaptive capacities that allow them to respond to rapidly evolving technological landscapes (Gierlich-Joas, 2021). Adaptive leadership, which emphasizes flexibility and responsiveness, complements transformational and ethical approaches by equipping leaders with the ability to pivot strategies, manage uncertainty, and sustain innovation. This indicates that leadership in the digital age must evolve beyond prescriptive models toward approaches that are context-sensitive, iterative, and reflexive.

Systemic factors also significantly shape the success or failure of digital transformation readiness. Regulatory environments can either accelerate or obstruct digital adoption. Supportive policies that incentivize technological innovation enable organizations to invest more effectively in digital infrastructure and training, as seen in many European contexts (Machado et al., 2025). Conversely, rigid or outdated regulatory frameworks act as barriers, constraining organizational flexibility and

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

limiting leaders' ability to implement necessary digital initiatives (Niță & Guţu, 2023). Leadership must therefore be analyzed in relation to governance systems that either enable or hinder innovation.

Organizational culture emerges as another critical systemic factor. Cultures that encourage collaboration, experimentation, and continuous learning enhance the likelihood of successful digital transformation (Kyambade & Namatovu, 2024). By contrast, hierarchical and rigid cultures exacerbate resistance to change and slow down the adoption of new technologies (Sibassaha et al., 2025). Leaders play a pivotal role in shaping these cultural orientations. Transformational leaders, for instance, foster innovation-friendly environments by rewarding experimentation and tolerating failure, while servant and inclusive leaders build trust and ownership among employees, thereby reducing resistance to digital initiatives.

The availability of resources also exerts a decisive influence on readiness. Digital transformation is capital-intensive, requiring investments in both technological infrastructure and human capital. Organizations with limited resources often struggle to implement new technologies effectively, which can lead to fragmented or incomplete transformations (Habsi et al., 2022). Leaders in such contexts must adopt strategic resource allocation practices, ensuring that investments are targeted toward initiatives with the highest impact, such as employee training or scalable technological solutions. Visionary and adaptive leaders are particularly critical in resource-constrained environments, as they can align limited resources with long-term strategic priorities (Ly, 2023).

Several solutions have been proposed in the literature to address the barriers identified. One strategy is the enhancement of leadership skills and competencies through continuous training and development. Leadership development programs tailored to digital contexts can equip leaders with inclusive and adaptive capacities that facilitate engagement and reduce employee resistance (Frota et al., 2024; Abbu et al., 2025). Such initiatives emphasize not only technical literacy but also interpersonal competencies, such as empathy, communication, and ethical awareness, which are essential for managing digital transitions effectively.

Another solution lies in cultivating organizational cultures that are open and innovative. Leaders are encouraged to establish environments where feedback is welcomed, and new initiatives are valued, thereby strengthening organizational adaptability (Marlia et al., 2025). This cultural shift helps organizations to overcome entrenched resistance to change and promotes a mindset of continuous learning, which is critical in rapidly evolving technological contexts. Leaders who exemplify servant and inclusive leadership styles are particularly effective in this regard, as they encourage employee involvement and foster collective responsibility for digital initiatives.

Clear and robust policies concerning data use and protection also represent a crucial avenue for addressing barriers. Ethical leadership is particularly significant in ensuring that digital transformation does not compromise privacy or equity. Policies guided by ethical leadership help organizations build trust among employees and stakeholders by committing to transparency, accountability, and fairness in the deployment of digital technologies (Batırlık et al., 2022). The establishment of data governance frameworks that balance innovation with responsibility underscores the role of leadership in aligning digital transformation with broader social values.

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

Despite these insights, the current body of literature has notable limitations. Many studies focus on short-term outcomes of leadership in digital transformation without examining long-term sustainability. This narrow focus limits understanding of how leadership styles influence organizational resilience and adaptability over extended periods (Benchea & Ilie, 2023; Dióssy et al., 2025). Furthermore, existing research often overlooks sector-specific dynamics, despite evidence that leadership effectiveness varies significantly across industries such as healthcare, education, and manufacturing (Díaz-Garcia et al., 2023; Machado et al., 2025). There is also a lack of attention to individual leader characteristics, including personal experiences, personality traits, and interpersonal skills, which may substantially shape digital transformation outcomes (Zulu & Khosrowshahi, 2021; Aristovnik et al., 2025).

Future research should therefore prioritize longitudinal studies that assess the enduring impacts of leadership styles on digital transformation readiness. Comparative analyses across industries and regions would also be valuable, shedding light on how contextual variables influence leadership effectiveness. Additionally, more attention should be devoted to exploring the interplay between leadership and systemic factors such as policy, culture, and resources, thereby producing a more integrated understanding of digital readiness. By addressing these gaps, future scholarship can provide richer insights into the ways leadership contributes to sustainable and equitable digital transformation.

CONCLUSION

This narrative review highlights the central role of leadership styles in shaping organizational readiness for digital transformation. Transformational leadership consistently emerged as a driver of agility, innovation, and adaptability across both public and private sectors. Agile and adaptive leadership further accelerated adoption by fostering flexible and experimental cultures, while servant and inclusive leadership improved employee engagement and reduced resistance to change. Ethical and responsible leadership provided essential safeguards for trust, equity, and sustainability, ensuring that digital initiatives aligned with broader organizational and societal values. Together, these leadership approaches illustrate that digital transformation is not solely a technological endeavor but one that depends heavily on human-centered leadership practices.

Systemic factors such as regulatory frameworks, organizational culture, and resource availability significantly mediate the effectiveness of leadership styles. Supportive policies and innovative cultures enhance digital readiness, whereas rigid regulations and hierarchical structures hinder progress. Addressing these barriers requires a dual strategy: developing leaders equipped with digital, adaptive, and ethical competencies, and embedding organizational practices that prioritize collaboration, transparency, and continuous learning. Policy interventions focused on digital skills training, ethical data governance, and equitable access to technology are also essential to sustain long-term transformation.

Future research should expand beyond short-term outcomes to investigate the long-term impacts of leadership on organizational resilience and digital maturity. Comparative studies across industries and geographic contexts are needed to clarify how leadership styles interact with

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

systemic variables. By advancing these lines of inquiry, scholars and practitioners can better understand how leadership strategies contribute to sustainable and inclusive digital transformation, while organizations can adopt more targeted approaches to overcome challenges and capitalize on opportunities in the digital age.

REFERENCE

- Abbu, H., Khan, S., Mugge, P., & Gudergan, G. (2025). Building digital-ready leaders: development and validation of the human-centric digital leadership scale. *Digital*, *5*(1), 7. https://doi.org/10.3390/digital5010007
- Aburub, A., & Khanfar, F. (2025). The impact of job security factors on sustainable competitive advantage: the mediating role of employee retention an empirical study of private hospitals in Riyadh, Saudi Arabia. *International Journal of Innovative Research and Scientific Studies*, 8(2), 2065-2078. https://doi.org/10.53894/ijirss.v8i2.5635
- Al-Mannaei, M., AlSaffar, G., & A'ali, E. (2022). Leadership styles during the digital transformation era., 26-40. https://doi.org/10.4018/978-1-6684-5864-8.ch002
- Antonopoulou, H., Halkiopoulos, C., Barlou, O., & Beligiannis, G. (2019). Transition from educational leadership to e-leadership: a data analysis report from TEI of Western Greece. *International Journal of Learning Teaching and Educational Research*, 18(9), 238-255. https://doi.org/10.26803/ijlter.18.9.13
- Antonopoulou, H., Matzavinou, P., Γιαννούκου, I., & Halkiopoulos, C. (2025). Teachers' digital leadership and competencies in primary education: a cross-sectional behavioral study. *Education Sciences*, 15(2), 215. https://doi.org/10.3390/educsci15020215
- Aristovnik, A., Murko, E., Kristl, N., & Ravšelj, D. (2025). Disruptive technology capabilities in local governments: an empirical study. *Information Polity*. https://doi.org/10.1177/15701255251321682
- Banerjee, K., & S., U. (2020). Creating the catapult effect for the talent in the era of digital abundance., 155-173. https://doi.org/10.4018/978-1-7998-4861-5.ch007
- Batırlık, S., Gençer, Y., & Akküçük, U. (2022). Global virtual team leadership scale (GVTLS) development in multinational companies. *Sustainability*, 14(2), 1038. https://doi.org/10.3390/su14021038
- Benchea, L., & Ilie, A. (2023). Preparing for a new world of work: leadership styles reconfigured in the digital age. *European Journal of Interdisciplinary Studies*, 15(1), 135-143. https://doi.org/10.24818/ejis.2023.10

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

- Bian, X., & Wang, B. (2024). Enabling innovative governance: ethical leadership and dynamic capabilities in government digital transformation. *Business Ethics and Leadership*, 8(4), 186-200. https://doi.org/10.61093/bel.8(4).186-200.2024
- Bygstad, B., Aanby, H., & Iden, J. (2017). Leading digital transformation: the Scandinavian way., 1-14. https://doi.org/10.1007/978-3-319-64695-4_1
- Candrasa, L., Cahyadi, L., Cahyadi, W., & Cen, C. (2024). Change management strategies: building organizational resilience in the digital era. *Journal of Ecohumanism*, *3*(7), 4125-4135. https://doi.org/10.62754/joe.v3i7.4534
- Carvalho, A., Alves, H., & Leitão, J. (2022). What research tells us about leadership styles, digital transformation and performance in state higher education? *International Journal of Educational Management*, *36*(2), 218-232. https://doi.org/10.1108/ijem-11-2020-0514
- Chang, C., & Octoyuda, E. (2024). Driving digital transformation: how transformational leadership bridges learning agility and digital technology adoption in MSMEs. *Emerging Science Journal,* 8(4), 1583-1601. https://doi.org/10.28991/esj-2024-08-04-020
- Chavalala, M., Bag, S., Pretorius, J., & Rahman, M. (2022). A multi-method study on the barriers of the blockchain technology application in the cold supply chains. *Journal of Enterprise Information Management*, 37(2), 745-776. https://doi.org/10.1108/jeim-06-2022-0209
- Díaz-Garcia, V., Montero, A., Rodríguez-Sánchez, J., & Gallego-Losada, R. (2023). Managing digital transformation: a case study in a higher education institution. *Electronics*, 12(11), 2522. https://doi.org/10.3390/electronics12112522
- Dióssy, K., Losonci, D., Aranyossy, M., & Demeter, K. (2025). The role of leadership in digital transformation a paradox way to improve operational performance. *Journal of Manufacturing Technology Management*, 36(9), 88-113. https://doi.org/10.1108/jmtm-07-2024-0386
- Donaldson, L. (2020). Safer care: shaping the future., 53-66. https://doi.org/10.1007/978-3-030-59403-9 5
- Eger, L., & Žižka, M. (2024). Industry 4.0, digital transformation and human resource management: emerging themes and research trends in the context of the Visegrad countries. *Oeconomia Copernicana*, 15(3), 1021-1065. https://doi.org/10.24136/oc.3034
- Esenyel, V. (2024). Evolving leadership theories: integrating contemporary theories for VUCA realities. *Administrative Sciences*, 14(11), 270. https://doi.org/10.3390/admsci14110270
- Frota, L., Chitiga, M., & Mazenda, A. (2024). Revealing factors influencing digital transformation in South Africa's social security organisations. *Journal of Public Affairs*, 25(1). https://doi.org/10.1002/pa.70006

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

- Gierlich-Joas, M. (2021). Identifying and overcoming future challenges in leadership: the role of IS in facilitating empowerment., 537-553. https://doi.org/10.1007/978-3-030-86800-0_38
- Guţu, I., Medeleanu, C., & Asiminei, R. (2024). The limits of learning engagement and academic leadership within the higher education digitalization process analysis by using PLS SEM. *Plos One*, 19(11), e0306079. https://doi.org/10.1371/journal.pone.0306079
- Habsi, N., Luo, M., & Zighan, S. (2022). A systematic literature review exploring the impact of digitalisation on leadership towards a new style of leadership. *International Journal of Business Innovation and Research*, 29(2), 169. https://doi.org/10.1504/ijbir.2022.126031
- Hargitai, D., & Bencsik, A. (2023). The role of leadership in digital learning organizations. *Emerging Science Journal*, 7, 111-124. https://doi.org/10.28991/esj-2023-sied2-09
- Henderikx, M., & Stoffers, J. (2022). An exploratory literature study into digital transformation and leadership: toward future-proof middle managers. *Sustainability*, 14(2), 687. https://doi.org/10.3390/su14020687
- Imaniyati, N., Ramdhany, M., Rasto, R., Nurjanah, S., Solihah, P., & Susilawati, A. (2024). Neuroscience intervention for implementing digital transformation and organizational health completed with literature review, bibliometrics, and experiments. *Indonesian Journal of Science and Technology*, 9(2), 287-336. https://doi.org/10.17509/ijost.v9i2.67763
- Kyambade, M., & Namatovu, A. (2024). Transforming the public service via digital leadership in Uganda. *International Journal of Public Leadership, 21*(1), 37-53. https://doi.org/10.1108/ijpl-07-2024-0080
- Lamrhary, M., & Slaoui, S. (2025). Leadership in the AI era., 305-330. https://doi.org/10.4018/979-8-3373-1005-3.ch012
- Louw, H., Mynhardt, R., & Lubbe, S. (2024). A self-determined learning approach: enhancing workplace adaptability for overcoming inequality. *Business Ethics and Leadership, 8*(3), 290-304. https://doi.org/10.61093/bel.8(3).290-304.2024
- Ly, B. (2023). The interplay of digital transformational leadership, organizational agility, and digital transformation. *Journal of the Knowledge Economy*, 15(1), 4408-4427. https://doi.org/10.1007/s13132-023-01377-8
- Machado, A., Sacavém, A., Santos, J., & Sousa, M. (2025). Leadership approaches to digital transformation., 39-56. https://doi.org/10.4018/979-8-3693-7630-0.ch002
- Malik, M., Raziq, M., Sarwar, N., & Tariq, A. (2024). Digital leadership, business model innovation and organizational change: role of leader in steering digital transformation. *Benchmarking an International Journal*, 32(5), 1632-1662. https://doi.org/10.1108/bij-04-2023-0283

Siswadhi, Karimi, Kurdi, Widyastuti, and Koesmariadi

- Marlia, M., Fahmy, R., Lukito, H., & Games, D. (2025). An exploratory study on effective leadership and change management in the transformation of Indonesian public universities towards world-class university status. *Sustainability*, 17(3), 1300. https://doi.org/10.3390/su17031300
- Mendy, J., & AlGhanem, N. (2024). Financialisation strategy of digital transformation: towards a people-centric, sustaining network leadership framework in an Arabic energy context. *Journal of Strategy and Management*. https://doi.org/10.1108/jsma-06-2023-0146
- Mustapha, I., Ali, M., Khan, N., & Sikandar, H. (2023). The impact of industry 4.0 on innovative organisations, a thematic review using the PRISMA statement 2020. *International Journal of Interactive Mobile Technologies (iJIM), 17*(09), 88-105. https://doi.org/10.3991/ijim.v17i09.39465
- Nguyen, H., Tran, Q., Nguyen, T., Bui, D., Nguyễn, C., To, X., ... & Vu, T. (2025). From work motivation to innovative behavior of employees in enterprises. *Edelweiss Applied Science and Technology*, 9(4), 907-920. https://doi.org/10.55214/25768484.v9i4.6129
- Niță, V., & Guţu, I. (2023). The role of leadership and digital transformation in higher education students' work engagement. *International Journal of Environmental Research and Public Health,* 20(6), 5124. https://doi.org/10.3390/ijerph20065124
- Saleh, R., Durugbo, C., & Almahamid, S. (2023). What makes innovation ambidexterity manageable: a systematic review, multi-level model and future challenges. *Review of Managerial Science*, 17(8), 3013-3056. https://doi.org/10.1007/s11846-023-00659-4
- Santarsiero, F., Carlucci, D., Lerro, A., & Schiuma, G. (2024). Navigating digital transformation and business model innovation in the tourism sector: challenges opportunities, and leadership styles. *Measuring Business Excellence*, 28(3/4), 426-438. https://doi.org/10.1108/mbe-09-2023-0137
- Sibassaha, J., Pea-Assounga, J., & Bambi, P. (2025). Influence of digital transformation on employee innovative behavior: roles of challenging appraisal, organizational culture support, and transformational leadership style. *Frontiers in Psychology, 16*. https://doi.org/10.3389/fpsyg.2025.1532977
- Winasis, S., Djumarno, D., Riyanto, S., & Ariyanto, E. (2021). The effect of transformational leadership climate on employee engagement during digital transformation in Indonesian banking industry. *International Journal of Data and Network Science*, 91-96. https://doi.org/10.5267/j.ijdns.2021.3.001
- Zulu, S., & Khosrowshahi, F. (2021). A taxonomy of digital leadership in the construction industry. *Construction Management and Economics*, 39(7), 565-578. https://doi.org/10.1080/01446193.2021.1930080