

Research Article

New Age Leadership Competencies in the Digital Era: A Review of Frameworks, Challenges, and HR Imperatives

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Abstract: The 21st century is transforming the way people work, by the introduction of AI, automation, big data and cloud-based systems that assist people in making decisions, engaging customers and generating new ideas. Leadership, in the case, does not only mean being efficient, in charge, but also flexible, open-minded, technologically minded, and capable of thinking about moral issues. Classical paradigm leadership (i.e., transactional or role-based) is only relevant in a stable environment, but not at all in the complexity and uncertainty of digital transformation (Cortellazzo et al., 2019). Other research goes further and provides leaders with the reminder that they should integrate algorithmic decision-making with compliance and the duality of customization and sustainability in business (Meyer et al., 2023). Recent essays are adding to the growing body of knowledge regarding digital leadership, but most studies concentrate on a single component, including digital fluency (Davenport and Redman, 2020), agility (Rialti et al. 2024), or emotional intelligence (Ertiö, et al., 2024) but without the provision of any unified framework. On the same note, competencies are structurally embedded as noted by international studies (Kart, M., Şimşek, H.2024), but there is a debate on the development of such competencies under the resource-poor conditions like India (Pradhan and Jena, 2019) such a discrepancy highlights the need for comparative analysis—on the one hand, international studies emphasize that digital leadership competencies are structurally embedded within formal organizational systems, while on the other, research in resource-constrained contexts like India suggests that these competencies often emerge through individual improvisation rather than systemic embedding. This gap is addressed by this paper, which is a systematic review of the studies on the leadership of the digital era in the world and in India. It pinpoints five capabilities — digital fluency, adaptive agility, emotional and cultural intelligence, ethical judgment, and an innovation mindset — and illustrates the HR practices that embed these capabilities. The paper brings together two perspectives on digital leadership: the structural view, emphasized in global studies, which sees competencies as embedded within organizational systems and formal processes; and the contextual view, highlighted in Indian research, which shows that such competencies often emerge through individual adaptation and improvisation in resource-constrained environments to advance leadership theory and offers practical implications for HR practitioners focused on preparing leaders for the future of work in a digital economy.

Keywords: Digital leadership, Adaptive agility, Emotional intelligence, Human resource practices, Commerce and management.

INTRODUCTION

Conceptual Foundations of Leadership in the Digital Era

Evolution of Leadership Theories

Leadership theory has evolved significantly over the last century, shaped by organizational contexts, workforce expectations, and technology. Transactional leadership, rooted in compliance and contingent rewards, emphasized control but limited adaptability (Burns, 1978). The emergence of transformational leadership shifted focus to vision, empowerment, and inspiration, highlighting charisma and intellectual stimulation as levers for creativity and change (Bass, 1990).

With globalization and digitization, traditional leadership models such as transactional and role-based approaches have revealed shortcomings in addressing the volatility of markets and the interdependence of global business ecosystems. Contemporary organizations face ecosystems

marked by ambiguity, digital platforms, and networked collaboration. Studies show that traditional approaches, while valuable, cannot alone address disruptions in commerce, IT, and financial services (George et al., 2016). This context paved the way for agile leadership, emphasizing adaptability, speed, and resilience (Rialti et al. 2024), and for digital leadership, which integrates technological literacy and human-centric decision-making (Jose Benitez, et al. [2022](#)); a style that focuses on implementing digital transformation within an organization ([Murat Sagbas et al., 2022](#)).

Defining New Age Leadership Competencies

Such qualities as being a good manager, of course, are only a part of what it takes to be a leader in the next generation. They consist of moral, emotional and technical aspects. Key skills are as follows:

- Digital fluency is being able to use AI, analytics, and digital platforms to your benefit (Davenport and Redman, 2020).
- Adaptive Agility – Making judgments over and over again when you don't know what's going to happen and encouraging resilience (Nguyen, T. et al., 2024).
- Emotional and Cultural Intelligence – Fostering trust and inclusivity in hybrid and multicultural teams (Ertiö, et al., 2024).
- Ethical Judgment ensures that data-driven situations are fair and open (Tursunbayeva et al. 2024).
- Innovation Mindset – An innovation mindset means encouraging people to try new things and feel safe doing so (Pradhan and Jena, 2019).

Indian research supports these global findings, demonstrating that inclusive and entrepreneurial leadership promotes innovation in IT-BPO and startups (Kiran Yadav, et al. 2024).

Theoretical Models and Frameworks

Several frameworks explain digital-era leadership:

- Digital leadership frameworks emphasize vision, governance, and talent alignment over mere technology adoption (Kane et al., 2019; Hess et al. 2016).
- Agile leadership draws from organizational agility theory, stressing empowerment and feedback loops (Rialti et al. 2024).
- Distributed leadership highlights shared expertise in networks of managers, IT specialists, and data scientists (Bennett, N., 2008).
- Integrative competency models embed sensemaking, trust-building, and dynamic capabilities within leadership frameworks transformation (Cortellazzo et al., 2019; Teece 2021).

Together, these perspectives frame digital-era leadership as adaptive, ecosystem-oriented, and ethically grounded.

3. Core Competencies Required

Digital transformation redefines leadership across commerce, IT, FMCG, and finance, demanding digital fluency, agility, emotional intelligence, ethical AI judgment, and innovation capacity beyond traditional vision and task orientation.”

3.1 Digital Fluency

Digital fluency is leaders’ ability to interpret and apply digital technologies strategically, enabling them to bridge technologists and strategists, thereby driving superior transformation outcomes. (Davenport & Redman, 2020). Firms in FMCG leverage analytics dashboards to forecast demand and optimize supply chains (Hess et al., 2016), while banks rely on digital literacy to manage compliance with regulations around cybersecurity and payments (Al-Doghan, M. A, 2024; Kane et al. 2019). Digital maturity is less about investment in IT and more about leaders who articulate vision and motivate employees to embrace

platforms. Recent evidence from India, for example, Meesho, supports sellers to use the social media platform for marketing and ship nationwide, showing that startups with digitally oriented leaders scale faster due to their ability to integrate social media and e-commerce tools.

3.2 Adaptive Agility and Resilience

Agility is a defining leadership quality in uncertain contexts. Leaders must pivot strategies quickly, learn from feedback, and reconfigure resources. (Rialti et al. 2024); agile leaders employ participative rituals and rapid decision cycles to accelerate change without overburdening teams. Resilience complements agility by enabling leaders to sustain performance under crisis. Indian studies echo this: (Poonam Vij, 2025), show that adaptable leadership helped launch fintech services in India despite regulatory hurdles. Together, agility and resilience ensure that leaders maintain both speed and stamina during transformation.

3.3 Emotional and Cultural Intelligence

Technology adoption must be mediated through people. Leaders with high emotional intelligence (EI) manage hybrid teams, resolve conflicts, and sustain trust. EI reduces technostress by fostering empathy (Ertiö, et al., 2024). Cultural intelligence is equally vital: digital work is inherently cross-cultural (Cortellazzo et al., 2019). In India’s IT-BPO sector, inclusive leadership enhances psychological safety and innovation (Kiran Yadav, et al. 2024) while FMCG firms use cultural intelligence to turn diversity into a strategic asset.

3.4 Ethical Judgment and Responsible AI Use

As AI permeates business processes, fairness and transparency become leadership imperatives Kiran, P. K. (2025). Ethical leadership fosters innovation (Eisenbeiss, S. A et al., 2015). The TOP framework guides responsible AI in HR (Tursunbayeva et al. 2024) while concerns about bias in **finance and marketing** are documented (Davenport and Redman, 2020). In India, fintech leaders face dilemmas balancing innovation with consumer protection; the Reserve Bank of India (2022) emphasizes leadership accountability in digital payments.

3.5 Fostering Innovation in Hybrid/Remote Contexts

Hybrid work is now structural, requiring leaders to foster innovation in digital teams. Psychological safety is a prerequisite (George et al., 2016). In India, transformational leadership spurs innovative behaviour (Pradhan and Jena, 2019), while entrepreneurial leaders leverage digital tools for responsiveness (Ramadan, M., 2023). Globally, digital rituals and trust mechanisms enhance distributed coordination (Badrinarayanan, V., 2024). These competencies enable faster product cycles and globalized innovation pipelines.

Challenges in Developing Competencies

Developing new-age leadership competencies is complex, shaped by rapid technological change, demographic diversity, and ethical expectations. While digital tools enable efficiency, embedding competencies that balance organizational productivity with inclusivity and sustainability remains challenging, as leaders must align

growth goals with equity and environmental responsibility. Four interrelated areas illustrate these barriers: generational and cultural diversity, algorithmic decision-making, ethical dilemmas, and the paradox of innovation with sustainability.

4.1 Managing Multi-Generational and Diverse Teams

Today's workforce spans Baby Boomers to Generation Z, with divergent values and digital proficiency. If unmanaged, these differences can fuel conflict and reduce engagement (Nguyen, T et al., 2024). Younger staff expect agile, feedback-rich cultures, while older employees often prefer hierarchy and routine. Global findings show that inclusive leadership underpinned by emotional intelligence helps bridge these divides (Ertiö, et al., 2024).

In India, cultural diversity adds complexity in the IT and FMCG sectors. Competencies in empathy and adaptability thus remain central to harnessing generational and cultural synergies.

4.2 Algorithmic Decision-Making vs. Human Values

AI and predictive analytics shape decisions in banking and retail, yet algorithms often clash with fairness and transparency. For instance, biased credit scoring systems can create reputational risks. (Salami et al. 2025) Leaders must mediate between efficiency and accountability rather than abdicate oversight (Tursunbayeva et al. 2024).

In India, fintech adoption shows the importance of oversight. Leadership adaptability is critical for aligning digital tools with regulatory compliance and customer trust. Competencies blending fluency with ethical judgment are therefore indispensable.

4.3 Ethical Dilemmas in Technology Adoption

Digital transformation often raises ethical trade-offs around privacy, surveillance, and automation. Without ethical leadership, employees resist adoption, undermining change. (Eisenbeiss et al., 2015).

Indian research echoes this. Leadership attitudes toward IT adoption shape perceptions of fairness, which influence employee acceptance (Nath, R., 2013). Sectoral evidence in banking and FMCG shows that without ethical framing, trust among employees and customers erodes (S. Vinita, B. Megha, 2025).

4.4 Balancing Innovation with Sustainability

Organizations must innovate rapidly while addressing environmental and social responsibilities. Digital transformation can amplify sustainability risks, such as emissions from data centers, which consume massive electricity and contribute significantly to carbon footprints and climate challenges or FMCG packaging waste (George et al., 2016). Leaders must embed sustainability into innovation strategies.

Research also shows that resilient FMCG supply chains depend on reconciling speed with environmental goals (P. Anupama, 2023). Competencies in systems thinking and responsible innovation therefore become critical.

HR IMPERATIVES AND ORGANIZATIONAL PRACTICES

5.1 Role of HR in Leadership Development

Human Resource Management (HRM) has evolved into a strategic enabler of digital leadership by embedding digital skills in recruitment and offering AI-enabled coaching platforms that prepare leaders to navigate technological disruption. Evidence shows that HR systems aligned with digital strategies enhance transformation outcomes (AlNuaimi et al., 2022). Globally, HR integrates data-driven decisions and responsible AI into leadership pipelines. In India, IT majors like Infosys and Wipro run HR-driven academies that nurture digital and ethical leadership (NASSCOM, 2023).

5.2 Experiential and Cross-Functional Learning

Cross-functional exposure remains a powerful lever for leadership growth. Global firms like Unilever and Google embed leaders in diverse projects to build adaptability (Rialti et al., 2024). Indian IT and FMCG companies adopt project-based assignments with hybrid teams to strengthen resilience. Such practices foster innovative work behaviour (Pradhan and Jena, 2019) and authentic leadership in startups (S. [Sengupta et al. 2023](#)).

5.3 Digital Training Platforms and AI Coaching

AI-driven platforms personalize leadership learning, simulate crisis scenarios, and reinforce ethical decision-making (Tursunbayeva et al. 2024). Global firms like Google employ AI-based coaching to assess inclusivity, while Infosys's Lex platform reskills leaders at scale (Davenport and Redman, 2020; NASSCOM, 2023).

5.4 Best Practices from Firms

Best practices highlight systemic embedding. Google integrates the competency of an innovation mindset into performance systems, encouraging experimentation and continuous learning (Kane et al., 2019), while Unilever ties sustainability to its "Future Leaders Programme." In India, Infosys and TCS use peer-learning and mentoring ecosystems (NASSCOM, 2023).

Together, these examples affirm that leadership development in the digital era must be continuous, technology-enabled, and embedded into culture. That's how leaders can sail through any situation and vital for survival and strength for the company (Faiza Adil Gonaim, 2021).

RESEARCH METHODOLOGY

The current study examines research papers that show scholarly contributions. It identifies significant studies that would enable scholars to align their research with prevailing leanings. The data has been extracted primarily from the Google Scholar database and peer-reviewed articles from 2013-2025. The process of data identification and collection was carried out with data gathered in 2025. The data presentation is done through the reporting or narrative descriptions of the results after conducting Thematic Analysis.

REVIEW OF LITERATURE

7.1 Leadership Frameworks in Digital Contexts

López-Figueroa et al. (2025) reviewed two decades of digital leadership studies, highlighting communication, trust, and cohesion, and proposed a four-phase framework emphasizing leadership styles, outcomes, practices, and relational behaviors.

Hariyani (2025) shows leadership frameworks emphasizing strategy, change, stakeholder engagement, and ethics drive sustainable digital transformation by embedding environmental and social priorities beyond agility in manufacturing and service industries

Tigre et al. (2025) identify visioning, adaptability, digital dexterity, ethical orientation, and relational skills as vital for digital leaders, correcting technology–human imbalance.

Adie (2024), reviewing public sector leadership, highlights accountability, transparency, stakeholder trust, and governance, noting stricter regulation requires stronger compliance alongside technological adaptation.

7.2 Competency Models

AlNuaimi, Singh, Ren, Budhwar, and Vorobyev (2022) test a model where transformational digital leadership drives digital strategy, mediated by organizational agility, highlighting vision and adaptability as key enablers of strategy execution.

Patil (2024) emphasizes HR data analytics, showing that leaders integrating evidence-based decision-making and data literacy into competency models better predict performance outcomes.

Muduli (2023) finds digital HR transformation in India requires extending competencies beyond technical skills to include change orientation and strategic thinking.

Hamzah, Radzi, and Omar (2025) identify digital communication, trust building, and adaptive learning as essential leadership competencies across sector.

7.3 HRD Strategies and Case Evidence

Marnewick (2021) introduces “digital intelligence” as a leadership competency, showing through project management case studies that leaders with data literacy, platform fluency, and ethical reasoning deliver stronger project outcomes. He argues HRD must embed digital literacy into everyday practices, not just training modules. Similarly, Rialti et al. (2024) analyze Italian firms implementing agile HRD programs. This indicates that HRD strategies should be more experiential than didactic, as evidence shows that immersive approaches—short sprints, reflective feedback, and rituals in which people participate as individuals—help leaders internalize agility. NASSCOM (2023) describes examples of approaches used in the Indian IT industry such as cross-functional rotations, AI-driven coaching, and gamified simulations. In the case of companies with stronger Leadership Pipelines, HRD equipped with Digital tools Performed Better. Aligned with the assumption of HR mediating the effect of leadership

sustainability, demonstrate that transformational leadership fosters job engagement and. the positive influence of transformational leadership on job engagement is stronger with presence of HR practices like feedback and recognition. Digital learning platforms and AI-enabled feedback are treated as significant HRD levers in global reviews too (Davenport and Redman, 2020).

7.4 Ethical, Cultural, and Generational Dimensions

Ethics, culture, and intergenerational dynamics are equally important. (Eisenbeiss, Van Knippenberg, and Fahrbach 2015) emphasize that ethical leadership fosters innovation at multiple organizational levels. In addition, the authors show that ethical leadership enhance innovation through infusing fairness and integrity into decision-making. Leaders in addressing grand challenges such as AI ethics and climate change can foster sustainable digital transformation (George et al., 2016).

Indian evidence reinforces these findings. (Kiran Yadav et al., 2024) posits that inclusive leadership in IT-BPO industries creates psychological safety, mitigates burnout and fosters collaboration. Also, consumer goods companies cannot afford the luxury of letting sustainability declines in e-commerce, since it would create reputational risks. In various studies, emphasis on the importance of psychological empowerment in multi-generational teams associating inclusive HR practices to team innovation is also mentioned. When taken in context with other studies these papers help underline that responsible, connected and business-like leadership is not a good-to-have but a necessary if the long-term social legitimacy of the organization is to be maintained.

7.5 Sector-Specific Insights

It is intuitive that ‘digital’ leadership capabilities are less transferable per se and, across different industries, studies demonstrate situational character. Others argue that many executives don’t have an enterprise risk management framework, so must have governance-oriented skills. Nath, et al., 2013 also established that leadership behaviour plays a significant role on the perception of the employee with regard to IT usefulness, confirming the role played by regulation structure on adoption.

Hamzah et al., 2025 address responsible reflection and trust in management -education -being the reflection of corporate HR strategies. The results highlight how leadership needs to invest in a technical and people capability due to the changing nature of digitalization of core processes.

It is cross-functional agility and resilience in the consumer goods and FMCG industry, which (P. [Anupama, 2023](#)) identify as well, which helped Indian firms to effectively overcome the impacts of disruption caused by the pandemic. They observe that the digital-leadership practice depends on the contextual supply chain dynamics in order to be effective.

And as new fintech ecosystems have come into being, it becomes even more obvious that the name of the game to

be successful is flexibility. Leaders who act as sponsors of digital rollouts can overcome organizational inertia, accelerate adoption, and guide teams through disruptive change. Lastly, Mukherjee, Sharma and Saha, 2023, uncover that design thinking leadership in Indian product companies improves the rate of innovation, hence finding industrial sector-specific drivers of maximizing the effect of leadership.

Taken together, they indicate that while the base of digital leadership capabilities is universal, the sector context matters in terms of how it will be enacted and which capabilities will take on increasing importance.

DISCUSSION

Drawing from various global and Indian studies, it is concluded that there are similarities as well differences between the theorization and practice of digital-era leadership competencies. This section consolidates key contributions through cross comparison of the literature, juxtaposition of global and Indian views and gaps identified for future research.

Cross-Analysis of Competency Clusters

Digital Fluency, Adaptive Agility, Emotional Intelligence, Ethical Judgment, and Innovation Mindset are five common competence domains consistently identified from the literature. The global studies stress that embedding these capabilities in systemic responses such as, talent pipeline development, cross-functional working and AI governance (Kart, M., Şimşek, H.2024; Kane et al., 2019; Tursunbayeva et al. 2024). In contrast, Indian studies on the subject have often focused on individual leadership behaviors (i.e., meaningful work design, psychological empowerment and inclusiveness) as compensators in resource-scarce contexts (Pradhan and Jena, 2019).

Such duality points out that competencies are by nature universal at the same time as contexted in manifestation. For instance, global FMCG analyses showcase ambidexterity and agile rituals to deal with volatility (Rialti et al., 2024), while Indian SMEs focus on resilience through entrepreneurial leadership. Similarly, internationally emotional intelligence is positioned as a barrier to hybrid team conflict. (Ertiö, 2024) but in India it's not just the basic necessity to generate psychological safety in IT-BPO environments (Kiran Yadav, et al., 2024).

Global vs. Indian Perspectives

Digital leadership Western literature predominantly views digital leadership as a systemic capability Leaders orchestrate strategy, structure, and organisational culture amidst mature environments (Hanelt et al., 2021). In India, competencies are frequently framed as adaptive responses to institutional constraints—such as legacy systems, regulatory flux, and limited resources (Nath et al. 2013; Poonam Vij 2025). Here, leadership often means compensating for systemic gaps through motivation, inclusion, and improvisation (Sengupta et al. 2023). The research interests has increased wrt digital leadership between 2008 and 2021(Karakose et. al., 2022)

Ethics and governance reflect another divide. Globally, leadership research foregrounds responsible AI and risk management (Tursunbayeva et al., 2024; Eisenbeiss, et al. 2015). Indian policy and academic studies emphasize regulator-led imperatives, most notably the Reserve Bank of India's oversight of digital payments and NASSCOM's digital reskilling initiatives (NASSCOM, 2023). Both converge on the indispensability of governance but diverge in whether it is driven by corporate self-regulation or policy mandates.

Gaps for Future Research

Despite advancements, notable gaps persist. First, **longitudinal evidence** is scarce, limiting understanding of how competencies evolve across transformation stages. Second, **sectoral imbalances** remain: IT and FMCG dominate the literature, while leadership in consumer goods, retail, and logistics is underexplored. Third, **comparative cross-cultural studies** are limited, yet essential for examining how institutional contexts shape competencies in emerging vs. developed economies. Finally, the **integration of sustainability with digital leadership** is insufficiently studied. Scholars note that leaders must balance innovation with responsibility, but empirical work on simultaneous pursuit of environmental, social, and digital imperatives is sparse.

CONCLUSION AND IMPLICATIONS

The digital era has transformed organizational leadership, expanding its scope from traditional decision-making to a constellation of competencies that blend technological fluency with human-centered values. Leaders today must demonstrate digital literacy, agility, emotional and cultural intelligence, ethical judgment, and an innovation mindset to navigate turbulence in digital transformation (Kart, M., Şimşek, H.2024; Rialti et. al., 2024). These competencies, while distinct, are interdependent and thrive when embedded in organizational systems, talent pipelines, and governance structures (Kane et al., 2019; Hess et. al., 2016).

9.1 Summary of Leadership Imperatives

Five imperatives define digital-era leadership. Digital fluency enables leaders to integrate data-driven insights into strategic choices (Davenport and Redman, 2020). Agility supports rapid pivots amid market and regulatory shifts (Nguyen, T et al., 2024). Emotional and cultural intelligence ensures effectiveness in hybrid, diverse teams (Ertiö, et al., 2024). Ethical judgment has become central as AI-driven decisions influence consumer trust (Tursunbayeva et al. 2024). Finally, an innovation mindset fosters collaboration and psychological safety (George et al., 2016; Pradhan & Jena, 2019)

9.2 Theoretical Implications

Classical theories remain relevant but insufficient. Transformational and authentic leadership must evolve into hybrid models that integrate dynamic capabilities (Teece, 2023), agile frameworks (Rialti et al. 2024) and distributed leadership (Cortellazzo et al., 2019). Leadership effectiveness now arises from interactions among individuals, technology, and ecosystems.

9.3 Practical Implications

For HR managers in IT, FMCG, and financial services, embedding digital skills in recruitment and evaluation is essential. AI-enabled coaching and gamified training enhance adaptability (Davenport and Redman, 2020). Reward systems must emphasize inclusivity and sustainability (Eisenbeiss, et al, 2015) In India, HR bridges policy and practice amid legacy challenges (NASSCOM, 2023; FICCI- KPMG, 2022)

9.4 Limitations and Future Directions

Most studies use cross-sectional designs, limiting longitudinal insights (AlNuaimi et al., 2022). Global research highlights embedding leadership competencies in formal systems, while Indian studies reveal leaders improvising skills amid resource and structural constraints. Future research should track leadership development over time, assess the role of generative AI, and extend to SMEs, rural enterprises, and microfinance (George et al., 2016).

Concluding Note

New age leadership is about balance—between agility and sustainability, empathy and analytics, governance and innovation. Leaders who internalize these competencies, supported by HR systems that embed them, will advance digital transformation while fostering resilience and inclusivity. Also the key to for fair digital transformation can only be achieved through joint efforts of state, business and people (Döhring B. et al., 2021)

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