



Veritatis Gaudium:
Multidisciplinary Journal of Postgraduate Studies

College of Postgraduate Studies,
Veritas University, Abuja, Nigeria

ISSN: 3043 - 5285

Volume 1, Number 5, September, 2026

DOI: 10.13140/RG.2.2.17243.12322

**LEADERSHIP STRATEGIES FOR EFFECTIVE E-GOVERNMENT
IMPLEMENTATION IN THE PUBLIC SECTOR: A STRUCTURED
LITERATURE REVIEW**

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Abstract

This study examines leadership strategies that facilitate the successful implementation of e-government and information and communication technology (ICT) initiatives in public administration. Using a structured literature review approach supported by a systematic search of scholarly literature, the study synthesizes evidence from 53 scholarly publications published between 2016 and 2026 retrieved from major academic databases. The review focuses on leadership practices that influence the planning, implementation, and sustainability of digital transformation in the public sector. The findings indicate that transformational leadership provides the vision and motivation required to drive organizational change, while strong top management support ensures strategic direction, resource commitment, and institutional backing for digital initiatives. The review further demonstrates that effective communication, employee engagement, and continuous investment in digital skills development help reduce resistance to change and strengthen organizational readiness for digital transformation. Collectively, these leadership practices foster innovation, collaboration, and improved public service delivery. The study concludes that effective leadership remains a critical enabler of successful e-government implementation and sustainable digital transformation in public sector organizations. The review highlights the need for greater attention to context-specific leadership strategies, particularly in developing countries where institutional, infrastructural, and resource constraints continue to influence digital transformation outcomes. The study is limited to English-language publications within the selected review period.

Keywords: Leadership, E-government, Digital Transformation, Public Administration, Transformational Leadership

Introduction

The integration of electronic government (e-government) and information and communication technologies (ICTs) has become a major priority for public administrations worldwide. Governments increasingly employ digital technologies to improve administrative efficiency, enhance transparency and accountability, and strengthen citizen engagement. Recent studies indicate that digital transformation has evolved beyond technological modernization into a broader governance reform process that reshapes how public institutions operate, coordinate, and deliver services to citizens (Sugiyanto, 2025; Yakubu et al., 2024). However, the successful implementation of e-government initiatives depends not only on technological investment but also on the leadership capacity required to guide organizational transformation, mobilize institutional support, and sustain digital reforms.

The importance of effective digital government became particularly evident during the COVID-19 pandemic, when public institutions were required to maintain essential services despite restrictions on physical interactions. The crisis accelerated the adoption of online platforms, digital communication channels, and technology-enabled service delivery mechanisms, demonstrating the value of digital government capabilities for administrative resilience and continuity (Ullah et al., 2021; United Nations, 2020). However, the pandemic also revealed significant differences between institutions with established digital capabilities and those constrained by limited infrastructure, weak institutional capacity, and inadequate preparedness (Mambang, 2024). These experiences reinforced the understanding that e-government implementation is not simply a technical process but an organizational transformation requiring effective leadership.

The need for effective leadership is particularly significant in developing-country contexts, where public organizations often face challenges including inadequate digital infrastructure, limited financial resources, skills gaps, and bureaucratic constraints. Although digital technologies offer opportunities to improve public service delivery and strengthen accountability, their benefits depend on the ability of public institutions to successfully implement and sustain digital reforms (Mensah et al., 2020; Omweri, 2024). Consequently, leadership becomes central to addressing institutional barriers, aligning digital initiatives with public sector objectives, and creating organizational conditions that support technology adoption.

Existing research increasingly demonstrates that leadership influences the direction, implementation, and sustainability of e-government initiatives. Effective leaders provide strategic vision, coordinate stakeholders, allocate resources, encourage innovation, and manage the organizational changes associated with digital transformation (Sugiyanto, 2025; Yakubu et al., 2024). Unlike technology-centred approaches that focus primarily on infrastructure and system capability, leadership perspectives emphasize the human and organizational processes through which digital transformation is initiated, accepted, and sustained.

Within this context, several leadership strategies have emerged as important enablers of effective e-government implementation. Transformational leadership has been associated with the ability to inspire employees, promote innovation, and create a culture supportive of change. Top management support provides strategic direction, resource commitment, and institutional legitimacy for digital initiatives. Effective approaches to addressing resistance to change help organizations manage uncertainty, build employee acceptance, and strengthen readiness for digital transformation. Similarly, investment in digital skills development enables public servants to acquire the competencies required to effectively utilize and sustain digital systems. Together, these leadership strategies highlight that successful e-government implementation requires coordinated attention to vision, organizational support, employee engagement, and workforce capability.

Despite growing scholarly interest in digital transformation and e-government adoption, existing research remains fragmented regarding how leadership strategies collectively influence successful

implementation outcomes. Much of the literature has examined individual technological, organizational, or contextual factors, while comparatively limited attention has been given to synthesizing the interconnected leadership practices that enable sustainable digital transformation. Furthermore, evidence from developing-country public administrations remains relatively limited, despite the unique institutional, infrastructural, and resource challenges that may shape leadership effectiveness in these contexts.

Understanding leadership strategies for e-government implementation has important theoretical and practical implications. From a practical perspective, identifying effective leadership approaches can support policymakers and public sector managers in designing digital transformation strategies that address organizational barriers and strengthen institutional capability. From a scholarly perspective, synthesizing leadership-related evidence contributes to a deeper understanding of how human and organizational factors influence digital transformation outcomes in public administration.

Therefore, this structured literature review examines leadership strategies that facilitate effective e-government and ICT implementation in public sector organizations. Specifically, the review synthesizes contemporary evidence on leadership practices, identifies recurring themes, examines areas of scholarly consensus and divergence, and highlights gaps requiring further investigation. By integrating findings across diverse public sector contexts, this study contributes to a more comprehensive understanding of how leadership enables successful and sustainable digital transformation.

Methodology

This study adopted a structured literature review approach to examine leadership strategies that facilitate effective e-government and information and communication technology (ICT) implementation in public sector organizations. The review aimed to synthesize existing scholarly evidence on how leadership practices influence digital transformation processes, organizational readiness, and the sustainability of e-government initiatives. A structured process involving literature identification, screening, selection, and thematic synthesis was employed to enhance transparency and methodological consistency.

The review considered peer-reviewed journal articles, books, and authoritative institutional reports published between 2016 and 2026. This period was selected to capture recent developments in digital government, public sector transformation, and emerging leadership practices, while retaining earlier seminal studies where they provided essential theoretical foundations for understanding leadership and organizational change.

Relevant publications were identified through searches of major academic databases, including Web of Science, Scopus, Google Scholar, and selected publisher databases covering public administration, management, information systems, and digital governance research. The search strategy combined keywords and Boolean operators relating to leadership, digital transformation, e-government, ICT implementation, and public administration. An example search string included: (“leadership” OR “transformational leadership” OR “top management support”) AND (“e-government” OR “digital government” OR “digital transformation”) AND (“public sector” OR “public administration”).

Studies were included when they examined leadership-related factors influencing e-government implementation or ICT-driven transformation within public sector contexts, were published in English, and provided sufficient methodological and empirical detail. Studies unrelated to leadership, focused exclusively on private-sector digital transformation, outside the specified period, or lacking relevance to the review objectives were excluded.

The selection process involved screening article titles, abstracts, and keywords, followed by full-text assessment of potentially relevant publications. Information relating to research context, methodology, leadership factors examined, major findings, and implications was extracted from the selected studies. Following the screening process, 53 publications satisfied the inclusion criteria and were retained for thematic analysis.

The extracted evidence was analysed using thematic synthesis. Recurring concepts and leadership practices were systematically coded and grouped into broader themes representing major leadership strategies associated with successful e-government implementation. The analysis resulted in four dominant themes: transformational leadership, top management support, strategies for addressing resistance to change, and investment in digital skills development. These themes provided the basis for synthesizing how leadership contributes to digital transformation, organizational readiness, and sustainable public sector innovation.

Characteristic	Description
Review design	Structured literature review employing thematic synthesis
Review period	Studies published between 2016 and 2026
Total studies reviewed	53 publications
Types of publications	Peer-reviewed journal articles, books, and authoritative institutional reports
Language	English
Databases searched	Web of Science, Scopus, Google Scholar, and selected publisher databases
Selection criteria	Studies examining leadership, e-government, ICT implementation, or digital transformation within public sector contexts
Main research focus	Leadership strategies supporting effective e-government and ICT implementation in public administration
Data analysis approach	Thematic synthesis
Key thematic areas identified	Transformational leadership; top management support; resistance to change management; digital skills development; organizational readiness; sustainability of digital transformation

Table 1: Characteristics of the Studies Included in the Structured Literature

Source: Compiled by the authors from the reviewed literature.

Table 1 summarizes the characteristics of the reviewed studies, including the review design, publication period, databases searched, publication types, and thematic areas identified.

Summary Of Reviewed Literature

Transformational Leadership in E-Government

Transformational leadership has continued to attract significant attention in public administration research due to its relevance during periods of organizational change and reform (Wright & Pandey, 2010). As digital technologies increasingly reshape public sector governance, scholars have highlighted the growing importance of transformational leadership in fostering innovation, employee engagement, and organizational adaptability during digital transformation initiatives (Dwivedi et al., 2021; Mittal & Dhar, 2016). More recent evidence further demonstrates that transformational leadership plays a critical role in advancing digital transformation within public sector organizations by strengthening employee commitment, facilitating organizational change, and supporting the adoption of digital technologies (Kochei & Awuor, 2024).

At its core, transformational leadership focuses on the ability of leaders to inspire and motivate followers to transcend individual interests in pursuit of collective and long-term organizational goals. Rather than relying solely on formal authority or transactional exchanges, transformational leaders emphasize vision, shared values, intellectual stimulation, and individualized consideration to strengthen organizational commitment and improve performance, consistent with the transformational leadership framework presented by Northouse (2021). These leadership attributes are particularly valuable in public sector environments, where e-government initiatives frequently encounter bureaucratic rigidity, risk aversion, and employee resistance to organizational change (Fernandez & Shaw, 2020). Recent empirical evidence further demonstrates that transformational leadership promotes innovation, reduces resistance to change, and supports the successful implementation of digital transformation initiatives in public administration (Siswadhi et al., 2025). The growing adoption of digital government has further reinforced the importance of transformational leadership within public administration. E-government initiatives require public organizations to redesign administrative processes, modernize service delivery, and integrate emerging digital technologies to improve efficiency, transparency, and citizen engagement. Rather than representing purely technological reforms, these initiatives involve substantial organizational, cultural, and behavioural change across government institutions (Mergel et al., 2019). Recent empirical evidence further demonstrates that transformational leadership significantly enhances digital transformation outcomes in public organizations by strengthening organizational commitment and enabling sustainable institutional change (Iy, 2025). Consequently, leaders who articulate a compelling vision for digital transformation, inspire employee commitment, and guide organizations through complex change processes are more likely to facilitate successful e-government implementation (Kochei & Awuor, 2024; Ojo, 2024; Siswadhi et al., 2025).

Transformational leaders also play a central role in shaping positive employee attitudes toward digital innovation. By communicating a clear and inspiring vision of how digital technologies can improve public service delivery, they reduce uncertainty and build confidence in organizational change. Intellectual stimulation, one of the defining dimensions of transformational leadership, encourages employees to question established routines, experiment with new approaches, and develop innovative solutions to complex administrative challenges (Khalili, 2016). These leadership behaviours create an organizational environment that is more receptive to innovation and better equipped to support the implementation of e-government initiatives (Siswadhi et al., 2025).

Individualized consideration further strengthens the effectiveness of transformational leadership during digital transformation. By recognizing employees' diverse skills, concerns, and learning needs, transformational leaders provide mentoring, coaching, and capacity-building opportunities that facilitate adaptation to new technologies. Leaders who offer continuous guidance and support are better positioned to strengthen employee confidence, improve organizational readiness, and facilitate successful implementation of digital systems (Boussaidi & Korbi, 2025). This people-centred approach enhances employee engagement while reinforcing the long-term sustainability of digital transformation initiatives (Siswadhi et al., 2025).

Evidence from both developed and developing country contexts consistently demonstrates the positive contribution of transformational leadership to e-government implementation. Although institutional conditions and implementation challenges differ across public sector environments, the literature consistently associates transformational leadership with stronger organizational commitment, increased innovation, improved employee engagement, and greater organizational adaptability during digital transformation (Siswadhi et al., 2025; Van Roekel et al., 2025). Collectively, these studies suggest that transformational leadership remains instrumental in fostering collaboration, strengthening organizational commitment, and facilitating successful e-government implementation across diverse institutional settings.

Beyond facilitating technology adoption, transformational leadership also cultivates an organizational culture that promotes innovation and continuous improvement (Khalili, 2016; Malik & Awan, 2016). Such a culture is particularly important because e-government initiatives are dynamic processes that require continuous learning and ongoing adaptation rather than one-time technological implementation (Afsar & Umrani, 2020). Leaders who encourage experimentation, tolerate calculated risks, promote knowledge sharing, and empower employees to generate innovative ideas enable public organizations to respond more effectively to evolving citizen expectations and rapid technological change (Dunleavy & Margetts, 2023; Miao et al., 2018). Through these mechanisms, transformational leadership contributes not only to the successful implementation of e-government initiatives but also to their long-term sustainability (Afsar & Umrani, 2020).

Overall, the reviewed literature consistently identifies transformational leadership as a critical enabler of effective e-government implementation by aligning technological innovation with human and organizational factors. Through strategic vision, employee empowerment, organizational learning, collaboration, and adaptive leadership, transformational leaders strengthen the capacity of public sector institutions to manage complex digital transformation processes and deliver greater public value (Sudha et al., 2023).

Top Management Support

Complementing the role of transformational leadership, top management support has consistently been identified as a critical organizational factor influencing the successful implementation of e-government initiatives. While leadership may be exercised at different organizational levels, the commitment and active involvement of senior executives are particularly important in shaping the strategic direction, governance, and outcomes of digital transformation. Top management support refers to the extent to which senior leaders actively champion digital initiatives by providing strategic direction, allocating organizational resources, establishing supportive governance structures, and maintaining sustained commitment throughout the implementation process (Apleni & Smuts, 2020; Odero, 2021; Zammani et al., 2025).

Within public sector organizations, senior executives occupy a strategic position that enables them to align digital transformation initiatives with broader governmental priorities and institutional objectives. Their visible commitment communicates the importance of e-government reforms to employees and external stakeholders, reinforcing digital transformation as a long-term organizational priority rather than a temporary technological initiative. Such commitment helps establish a shared organizational vision for digitalization and strengthens employee confidence in the implementation process (Van Roekel et al., 2025; Wrede et al., 2020). Evidence from Uganda further demonstrates that top management support positively influences user attitudes toward e-government implementation, highlighting the importance of executive commitment in shaping employee acceptance of organizational change (Ssekiziyivu et al., 2025).

Beyond strategic leadership, top management support plays a fundamental role in ensuring that e-government initiatives receive the financial, technological, and human resources necessary for successful implementation. Governments implementing digital transformation frequently require substantial investments in ICT infrastructure, workforce development, process redesign, and organizational change management. Consequently, sustained executive commitment is essential for mobilizing resources, overcoming implementation challenges, and maintaining organizational momentum throughout the transformation process. Apleni and Smuts (2020) identify management commitment as one of the critical success factors for e-government implementation in developing countries, while empirical evidence from Kenya demonstrates that supportive management, together with appropriate ICT policies, skilled personnel, and adequate infrastructure, significantly enhances the adoption and successful operation of e-government platforms (Odero, 2021). Similarly, evidence from Malaysian public organizations indicates that top management support strengthens technology

adoption by enhancing employees' perceptions of the usefulness and ease of use of digital technologies, thereby reinforcing organizational readiness for digital transformation (Zammani et al., 2025).

The contribution of top management support extends beyond resource provision to encompass governance, coordination, and strategic decision-making. Senior executives establish governance mechanisms, define organizational priorities, and ensure that digital initiatives remain aligned with evolving policy objectives and administrative requirements (Mergel et al., 2019; Van Roekel et al., 2025). These governance responsibilities are particularly important in public sector environments, where successful e-government implementation frequently depends on effective coordination among multiple ministries, departments, and agencies. As governments increasingly pursue integrated digital service delivery, senior leaders play a pivotal role in facilitating collaboration across institutional boundaries, strengthening accountability, and maintaining strategic coherence throughout implementation (Sadat et al., 2025). Supporting this perspective, Schedler et al. (2019) argue that organizational silos, fragmented policy environments, and limited willingness to cooperate constitute major barriers to smart government initiatives. By promoting policy coherence, reducing institutional fragmentation, and encouraging inter-agency collaboration, senior executives help overcome these barriers and improve service integration across government.

Recent research further suggests that top managers perform a proactive rather than merely supervisory role in digital transformation. Instead of simply approving technology projects, senior executives actively shape the organizational context within which digitalization occurs. Based on evidence from large German organizations, Wrede et al. (2020) demonstrate that top managers facilitate digital transformation by undertaking three interrelated responsibilities: developing an understanding of digitalization, establishing the formal organizational context that supports digitalization, and leading organizational change. Their findings further emphasize that support from the broader top management team is essential for sustaining digital transformation efforts. Similarly, Trenerry et al. (2021) argue that successful workplace digital transformation requires leadership that actively prepares organizations for technological change by fostering employee capability, organizational learning, and supportive workplace conditions.

Overall, these studies indicate that top management support strengthens organizational readiness by embedding digital transformation within organizational structures, leadership practices, and everyday administrative processes rather than treating it solely as a technological initiative.

Top management support also influences the organizational culture within which digital transformation occurs. Through their decisions, behaviours, and strategic priorities, senior executives shape organizational norms that encourage collaboration, innovation, accountability, and continuous improvement. By fostering a supportive organizational environment, leaders encourage employees to participate actively in digital initiatives, contribute new ideas, and develop positive attitudes toward technological change. Evidence from Ugandan public universities demonstrates that user attitude partially mediates the relationship between top management support and e-government implementation, suggesting that executive commitment influences implementation not only through organizational decisions but also through employees' willingness to embrace digital transformation (Ssekiziyivu et al., 2025). Such supportive organizational cultures strengthen organizational adaptability and contribute to the long-term sustainability of e-government initiatives (Twizeyimana & Andersson, 2019).

The influence of top management support extends beyond internal organizational processes by strengthening the institutional legitimacy of digital transformation initiatives. Visible executive commitment reinforces stakeholder confidence, enhances organizational credibility, and sustains political and institutional support for long-term digital reforms. Strong executive leadership therefore

contributes not only to successful implementation but also to improved public service delivery and the creation of public value through digital government (Twizeyimana & Andersson, 2019; World Bank, 2022).

Overall, the reviewed literature consistently identifies top management support as a foundational organizational enabler of successful e-government implementation. Across developed and developing country contexts, the literature demonstrates that sustained executive commitment extends beyond the provision of organizational resources to encompass strategic direction, governance, inter-organizational coordination, organizational readiness, employee attitudes, and supportive organizational culture (Apleni & Smuts, 2020; Otero, 2021; Ssekiziyivu et al., 2025; Wrede et al., 2020; Zammani et al., 2025). Although the mechanisms through which senior executives influence digital transformation differ across institutional contexts, there is broad consensus that visible and sustained top management support strengthens organizational capacity, facilitates implementation, and enhances the long-term sustainability of e-government initiatives.

Addressing Resistance to Change

Resistance to change remains one of the most persistent challenges confronting public sector organizations during the implementation of e-government and ICT-driven reforms. Unlike private sector environments, where digital transformation is often driven by competitive pressures, public organizations operate within complex institutional contexts characterized by established routines, bureaucratic structures, hierarchical decision-making processes, and risk-averse cultures that can constrain technological adoption. Consequently, e-government transformation extends beyond the deployment of digital systems to require substantial behavioural, cultural, and organizational adjustments among employees and institutions (Mergel et al., 2019; Van Roekel et al., 2025).

Within this context, leadership plays a central role in shaping employee perceptions, managing uncertainty, and facilitating acceptance of digital transformation initiatives. Building on the transformational leadership capabilities discussed in the preceding section, effective change leadership strengthens employee commitment, encourages cooperation, and creates organizational conditions that support successful implementation by addressing concerns associated with new technologies and changing work processes (Endrejat, 2021; Musaigwa, 2023; Van der Voet et al., 2016).

A key leadership responsibility in reducing resistance to change is the ability to communicate a clear and compelling vision for digital transformation. Employees are more likely to support e-government initiatives when they understand the rationale for change, its anticipated benefits, and the implications of technological reforms for their roles and responsibilities. Effective communication regarding objectives such as improving service efficiency, enhancing transparency, and strengthening public service delivery promotes employee commitment and more favourable attitudes toward digital transformation (Musaigwa & Kalitanyi, 2026; Tassabehji et al., 2016). Furthermore, transparent and consistent communication reduces uncertainty, builds trust, and helps employees adapt to evolving technological requirements and organizational processes (Boussaidi & Korbi, 2025).

Beyond communication, employee participation represents another important mechanism through which leaders can manage resistance during e-government implementation. When employees are actively involved in planning, decision-making, and implementation activities, they are more likely to develop a sense of ownership and responsibility for digital initiatives. Participation provides opportunities for employees to express concerns, contribute practical insights, and build confidence in the transformation process, thereby strengthening organizational readiness for change (Van der Voet et al., 2016). Consequently, participatory leadership approaches transform employees from passive recipients of technological reforms into active contributors to organizational change, increasing the likelihood of successful digital transformation outcomes (Endrejat, 2021).

Leadership support and empathy are also essential in helping employees adapt to the demands of digital transformation. The introduction of new technologies often requires employees to acquire new skills, modify established work practices, and navigate uncertainty regarding changing roles. Leaders who demonstrate empathy, provide adequate organizational resources, encourage continuous learning, and offer ongoing support create a more favourable environment for employee adaptation. Research further highlights that leadership behaviours emphasizing cooperation, empowerment, and people-oriented support are particularly important for guiding employees through technology-driven organizational change, while capacity-building initiatives strengthen organizational preparedness for digital transformation (Henderikx & Stoffers, 2023; Trenerry et al., 2021).

Recent empirical evidence further reinforces the importance of effectively managing resistance during e-government implementation. Elgohary and Abdelazyz (2020) found that employee concerns relating to technological change, uncertainty, and perceived implementation challenges significantly influence the implementation of e-government systems. Similarly, Henderikx and Stoffers (2023) emphasize that cooperation, empowerment, and people-oriented leadership behaviours are fundamental for supporting employees during technology-driven organizational change. Collectively, these findings suggest that resistance should not be viewed solely as employee opposition but rather as a dynamic organizational phenomenon that can be effectively managed through inclusive leadership, organizational support, and sustained employee engagement (Boussaidi & Korbi, 2025). Although recent studies have considerably advanced understanding of leadership and resistance during digital transformation, much of the available evidence originates from developed or institutionally mature public sector environments. Comparatively limited empirical attention has been devoted to how leadership practices influence resistance management in developing-country public organizations, where bureaucratic structures, institutional constraints, and uneven digital capabilities may shape employee responses to technological reforms. Addressing this gap is essential for strengthening understanding of how public sector leaders can effectively manage resistance and support the sustainable implementation of e-government initiatives in emerging economies.

Investing in Digital Skills Development

Investing in digital skills development has become a fundamental requirement for the successful implementation and long-term sustainability of e-government initiatives. As governments increasingly rely on digital technologies to modernize administrative processes, improve public service delivery, and enhance citizen engagement, the ability of public sector employees to effectively utilize these technologies has emerged as a critical determinant of digital transformation success (OECD, 2024). Digital competencies enable public servants to confidently operate digital platforms, adapt to emerging technologies, and contribute to the continuous improvement of government services. Consequently, workforce capability constitutes an essential dimension of organizational readiness for digital government (OECD, 2021).

The effectiveness of e-government depends not only on technological infrastructure but also on the competencies of the employees responsible for implementing and managing digital systems. Public organizations with inadequate digital capabilities frequently experience low system utilization, operational inefficiencies, implementation delays, and greater resistance to technological change. Consequently, targeted education, training, and capacity-building programmes have become indispensable for strengthening digital literacy, improving technical proficiency, and increasing employees' confidence in using digital technologies (Apleni & Smuts, 2020; Van Laar et al., 2020). Training initiatives that are aligned with employees' functional responsibilities and organizational needs are more likely to generate sustainable improvements in digital capability and support effective e-government implementation.

Digital transformation also requires competencies that extend beyond basic technological proficiency. Public employees increasingly require capabilities in data management, analytical

thinking, cybersecurity awareness, digital communication, problem-solving, and adaptability to rapidly evolving technologies. Developing these competencies strengthens workforce capability and enhances organizations' ability to respond effectively to technological change. Empirical evidence from the Nigerian public sector demonstrates that digital literacy significantly improves employee productivity, while access to ICT further strengthens these performance gains, highlighting the importance of sustained investments in structured digital skills development programmes (European Commission, 2022; Oladimeji et al., 2024). These findings suggest that continuous investment in digital competencies enables public organizations to build a workforce capable of supporting innovation and sustaining digital transformation.

Strengthening digital competencies also generates important organizational benefits. Employees with well-developed digital skills are better equipped to utilize digital systems effectively, contribute to evidence-informed decision-making, and support integrated public service delivery. These capabilities enhance administrative efficiency, improve organizational responsiveness, and strengthen governments' ability to translate technological investments into citizen-centred services that respond to changing public expectations (Cordella et al., 2024; Dunleavy & Margetts, 2023). The positive relationship between digital literacy and employee productivity identified in Nigerian public sector organizations further reinforces the strategic importance of continuous workforce development for sustainable digital transformation (Oladimeji et al., 2024).

Although digital competencies are developed at the individual level, sustained workforce development depends on leadership commitment and supportive institutional policies. Senior leaders play an important role in prioritizing employee development, allocating resources for continuous learning, and integrating digital competence into human resource development strategies and organizational planning (Mihaila, 2024; OECD, 2021). By institutionalizing continuous learning and professional development, public organizations cultivate cultures that value innovation, adaptability, and lifelong learning, thereby strengthening their long-term digital transformation capacity (Cordella et al., 2024). Evidence from developing-country contexts further indicates that sustained investments in employee capacity-building enhance governments' ability to leverage digital technologies to improve public service delivery and organizational transformation (Enaifoghe & Ndebele, 2023; Senyo et al., 2021).

Overall, the reviewed literature consistently identifies digital skills development as a strategic organizational capability underpinning successful e-government implementation. Beyond improving employees' technical competencies, continuous investment in training and professional development enhances workforce productivity, strengthens organizational adaptability, and improves governments' capacity to sustain digital transformation. As digital government continues to evolve, developing a digitally competent public sector workforce remains indispensable for improving service delivery, strengthening institutional performance, and realizing the full potential of e-government initiatives (OECD, 2024; UN DESA, 2024).

Core Themes and Principal Findings

The structured review of the literature identified four interrelated leadership themes that consistently influence the successful implementation of e-government initiatives in public sector organizations. These core themes, transformational leadership, top management support, strategies for addressing resistance to change, and investment in digital skills development demonstrate that effective digital transformation extends beyond the deployment of technological infrastructure to encompass strategic leadership, organizational commitment, employee engagement, and continuous capacity development. Altogether, the reviewed studies suggest that leadership plays a central role in shaping organizational readiness, fostering innovation, and enhancing the sustainability of e-government implementation.

i. Transformational Leadership

Transformational leadership emerged as the dominant leadership theme across the reviewed literature, with scholars consistently identifying it as a critical enabler of successful e-government implementation. The evidence indicates that transformational leaders facilitate digital transformation by articulating a clear strategic vision, inspiring employee commitment, and fostering an organizational culture that supports innovation, collaboration, and continuous learning (Mergel et al., 2019; Northouse, 2021; Siswadhi et al., 2025). Recent empirical evidence further demonstrates that transformational leadership significantly strengthens digital transformation outcomes within public sector organizations by enhancing organizational commitment and supporting sustainable institutional change (Iy, 2025). Because e-government implementation involves fundamental organizational, behavioural, and cultural change rather than simply the deployment of digital technologies, leaders who provide strategic direction and motivate employees are more likely to achieve sustainable digital transformation outcomes (Kochei & Awuor, 2024; Mergel et al., 2019;). The reviewed studies further demonstrate that transformational leadership strengthens organizational readiness by encouraging innovation, empowering employees, supporting continuous learning, and developing the digital capabilities required to adapt to changing technological environments (Chohan & Hu, 2022; Henderikx & Stoffers, 2023; Siswadhi et al., 2025). These leadership behaviours help reduce resistance to change, enhance collaboration, and strengthen employees' capacity to adopt new digital systems successfully. Evidence drawn from both developed and developing country contexts further suggests that transformational leadership enhances organizational adaptability and contributes to the long-term sustainability of e-government initiatives despite differences in institutional environments (Iy, 2025; Sudha et al., 2023; Van Roekel et al., 2025). Collectively, the reviewed literature identifies transformational leadership as the strategic foundation for aligning technological innovation with organizational capability and improved public service delivery.

ii. Top Management Support.

Top management support emerged as a fundamental organizational enabler of successful e-government implementation across the reviewed literature. The studies consistently demonstrate that sustained commitment from senior executives provides the strategic direction, governance, and organizational resources required to drive digital transformation initiatives (Apleni & Smuts, 2020; Van Roekel et al., 2025; Zammani et al., 2025). By aligning digital initiatives with organizational and policy objectives, senior leaders reinforce the strategic importance of e-government reforms, strengthen institutional commitment, and create an enabling environment for effective implementation (Wrede et al., 2020; Van Roekel et al., 2025).

Beyond strategic direction, the reviewed studies indicate that top management support enhances implementation by ensuring the timely allocation of financial, technological, and human resources while strengthening governance, interdepartmental coordination, and organizational accountability (Apleni & Smuts, 2020; Mergel et al., 2019; Odero, 2021). The literature further demonstrates that senior executives who actively champion digital transformation foster organizational readiness, collaboration, innovation, and continuous improvement, thereby strengthening stakeholder confidence and the long-term sustainability of e-government initiatives (Ssekiziyivu et al., 2025; Trenerry et al., 2021; Twizeyimana & Andersson, 2019; World Bank, 2022; Wrede et al., 2020). Collectively, the reviewed studies identify top management support as a strategic leadership capability that strengthens institutional capacity and significantly enhances the successful implementation and sustainability of e-government initiatives.

iii. Strategies for Addressing Resistance to Change

Addressing resistance to change emerged as a critical leadership strategy for successful e-government implementation across the reviewed literature. The studies consistently demonstrate that resistance to digital transformation extends beyond employee reluctance to encompass organizational, cultural, and institutional barriers that can impede the adoption of e-government initiatives (Mergel et al.,

2019; Van Roekel et al., 2025). Within this context, effective leadership plays a central role in shaping employees' perceptions of change, reducing uncertainty, and fostering organizational commitment through clear communication, strategic guidance, and supportive change management practices (Musaigwa, 2023; Van der Voet et al., 2016).

The reviewed studies further indicate that leaders who promote transparent communication, encourage employee participation, and provide continuous support are more successful in overcoming resistance and strengthening organizational readiness for digital transformation. By involving employees in decision-making, addressing concerns proactively, and investing in supportive learning environments, leaders enhance trust, build ownership, and facilitate the successful adoption of digital reforms (Musaigwa & Kalitanyi, 2026; Tassabehji et al., 2016; Trenerry et al., 2021). Emerging evidence also suggests that resistance should be viewed as a manageable organizational challenge rather than an inevitable barrier, with inclusive, people-centred leadership significantly improving employee acceptance and the long-term sustainability of e-government initiatives (Boussaidi & Korbi, 2025; Elgohary & Abdelazyz, 2020; Henderikx & Stoffers, 2023).

iv. Investment in Digital Skills Development

Investment in digital skills development emerged as a critical leadership priority for the successful implementation and sustainability of e-government initiatives. The reviewed studies consistently demonstrate that developing employees' digital competencies enhances organizational readiness by improving digital literacy, technical proficiency, and the effective utilization of digital technologies in public administration (Apleni & Smuts, 2020; OECD, 2021; OECD, 2024; Van Laar et al., 2020). The evidence further indicates that targeted training and capacity-building programmes aligned with employees' roles and organizational needs strengthen workforce confidence, improve digital competence, and facilitate the successful adoption of digital systems (Chohan & Hu, 2022).

Beyond technical competence, the literature emphasizes that continuous investment in upskilling and professional development enhances organizational adaptability, innovation, and institutional resilience. Leaders who prioritize digital skills development by embedding learning into organizational strategies and allocating adequate resources foster a culture of continuous improvement that supports long-term digital transformation (European Commission, 2022; Mihaila, 2024). The reviewed studies also demonstrate that a digitally competent workforce improves productivity, collaboration, evidence-based decision-making, and citizen-centred service delivery while reducing dependence on external expertise (Oladimeji et al., 2024; Dunleavy & Margetts, 2023; Cordella et al., 2024).

Collectively, the evidence identifies investment in digital skills development as a strategic leadership responsibility that strengthens institutional capacity and enhances the long-term sustainability of e-government initiatives (Enaifoghe & Ndebele, 2023; Senyo et al., 2021; UN DESA, 2024).

Discussion

The findings of this structured literature review demonstrate that successful e-government implementation depends not only on the availability of digital technologies but also on leadership capable of guiding organizational transformation. Across the reviewed studies, four interrelated leadership dimensions- transformational leadership, top management support, strategies for addressing resistance to change, and investment in digital skills development- consistently emerged as the principal enablers of digital transformation in public sector organizations. Collectively, these findings indicate that leadership influences e-government implementation by shaping organizational vision, strengthening institutional capacity, fostering employee commitment, and creating conditions that support innovation, adaptability, and continuous improvement (Mergel et al., 2019; Siswadhi et al., 2025; Van Roekel et al., 2025).

The review identifies transformational leadership as the strategic foundation for successful digital transformation. Leaders who communicate a compelling vision, empower employees, and foster innovation are better positioned to overcome bureaucratic rigidity and facilitate organizational change. By promoting collaboration, continuous learning, and employee engagement, transformational leadership enhances organizational adaptability and strengthens the long-term sustainability of e-government initiatives (Iy, 2025; Kochei & Awuor, 2024; Northouse, 2021; Siswadhhi et al., 2025). These findings reinforce the view that digital transformation is fundamentally a people-centred process rather than merely the introduction of new technologies.

The review further demonstrates that top management support provides the strategic and institutional framework necessary for successful e-government implementation. Senior executives influence digital transformation by aligning initiatives with organizational objectives, mobilizing financial and human resources, strengthening governance arrangements, and promoting collaboration across organizational boundaries (Apleni & Smuts, 2020; Wrede et al., 2020; Trenerry et al., 2021). Recent evidence also suggests that sustained executive commitment reinforces organizational readiness and creates an environment in which digital transformation is viewed as a strategic organizational priority rather than solely an information technology initiative (Zammani et al., 2025; Van Roekel et al., 2025).

Another important finding is that effectively addressing resistance to change remains essential for successful digital transformation. Rather than reflecting simple opposition to technology, resistance frequently arises from uncertainty, established organizational routines, and concerns about changing work practices. The reviewed studies indicate that leaders who communicate clearly, encourage employee participation, and provide continuous support are more successful in strengthening organizational readiness, reducing uncertainty, and fostering employee commitment to digital transformation (Musaigwa, 2023; Musaigwa & Kalitanyi, 2026; Henderikx & Stoffers, 2023). These findings suggest that resistance should be viewed as a manageable organizational challenge that can be addressed through inclusive and people-centred leadership.

The review also identifies investment in digital skills development as a strategic leadership priority. Developing employees' digital competencies enables public organizations to improve technology utilization, strengthen institutional capability, and enhance public service delivery. Leadership commitment to continuous learning, targeted ICT training, and workforce development strengthens digital competence, improves organizational productivity, and supports the long-term sustainability of digital transformation initiatives (Chohan & Hu, 2022; Oladimeji et al., 2024; Cordella et al., 2024; UN DESA, 2024).

Overall, the reviewed evidence demonstrates that these four leadership dimensions operate as complementary rather than independent drivers of e-government implementation. Transformational leadership establishes the vision for change, top management support provides strategic direction and organizational commitment, effective resistance management promotes employee acceptance, and investment in digital skills development equips public servants with the competencies required to sustain digital transformation. Together, these leadership dimensions strengthen organizational readiness, enhance institutional resilience, and improve the successful implementation and long-term sustainability of e-government initiatives in public administration.

Implications and Future Research Directions

The findings of this review highlight important implications for researchers and practitioners involved in e-government transformation. Public sector leaders should adopt integrated leadership approaches that combine strategic vision, executive commitment, employee engagement, change management, and continuous digital skills development to enhance the sustainability of digital transformation initiatives.

Future research should expand beyond transformational leadership to examine how different leadership approaches influence e-government implementation across diverse institutional contexts. Greater empirical attention is also needed in developing-country public administrations, where resource constraints, institutional capacity, and bureaucratic structures may shape leadership effectiveness. Longitudinal studies would further provide deeper insights into how leadership practices evolve throughout different stages of digital transformation. In addition, future studies should investigate the interaction between leadership, organizational readiness, employee resistance, and digital capability development to better understand the mechanisms that enable sustainable e-government implementation.

Conclusion

This structured literature review examined leadership strategies for the successful implementation of e-government and ICT initiatives in public administration. The evidence consistently demonstrates that successful digital transformation depends not only on digital technologies but also on leadership practices that strengthen organizational readiness, promote innovation, and facilitate sustainable institutional change. Across the reviewed studies, transformational leadership, top management support, strategies for addressing resistance to change, and investment in digital skills development emerged as the principal leadership dimensions influencing successful e-government implementation. The review further highlights that these leadership dimensions are mutually reinforcing. Transformational leadership provides the vision and motivation required to drive organizational change, while top management support ensures strategic direction, resource allocation, and institutional commitment. Similarly, leadership strategies for addressing resistance to change foster employee acceptance and organizational readiness, whereas continuous investment in digital skills development equips public sector employees with the competencies required to adapt to evolving technological environments. Collectively, these leadership strategies strengthen institutional capacity, improve public service delivery, and enhance the long-term sustainability of digital transformation initiatives.

This review contributes to the growing body of knowledge on digital governance by providing a structured synthesis of contemporary evidence on leadership for e-government implementation. The findings highlight that successful digital transformation requires a balanced combination of strategic leadership, organizational support, employee engagement, and continuous capacity development. Consequently, leadership should be viewed not merely as an administrative function but as the central driver of sustainable digital transformation in contemporary public administration.

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