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Digital Transformation and Change Management in the South African Public Sector

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Abstract: This study explores the intersection of digital transformation, change management, and governance within the South African public sector, assessing how organisational capabilities and institutional structures shape the success and sustainability of digital reforms. Guided by the African Union's Digital Transformation Strategy (2020–2030), the research systematically reviewed 28 studies published between 2020 and 2025 to identify the conditions enabling effective technology adoption, interoperability, and service improvement. Findings reveal that technological investments alone are insufficient without corresponding attention to leadership, communication, and capability building. Effective change management anchored in inclusive leadership, transparent communication, and continuous learning was found to enhance employee engagement and sustain adoption. Similarly, enterprise architecture emerged as a critical enabler of integration, interoperability, and end-to-end service reliability, while ethical governance and accountability frameworks ensured transparency, trust, and productivity gains. Conversely, fragmented systems, inadequate coordination, and digital inequality across rural and urban municipalities continue to undermine progress. The study concludes that digital transformation is a socio-technical process that requires the alignment of human, structural, and governance dimensions. It recommends institutionalising ethical leadership, national enterprise architecture, and ongoing capacity development to embed resilience and inclusion in digital service delivery. Overall, the research contributes a governance-centred model linking change management, enterprise architecture, and accountability mechanisms to sustainable public-sector productivity in South Africa.

Keywords: Digital transformation; change management; enterprise architecture; governance; interoperability; public sector; South Africa; service delivery; leadership; capability building.

Introduction

Background

Digitization continues to change how public sector organisations in the world, including South Africa, plan, implement and account for the provision of services. At the African Union level, the Digital Transformation Strategy for the African Union (2020 - 2030) has directed the Africa Union to move to inclusive digital economies and e-government services , which in turn compels national departments and municipalities to modernise their core business processes (African Union, 2020). In South Africa, the public sector transformation changes due to COVID 19 have digitised the front-office services and back-office workflows, but changes have been uneven across different spheres of the state (Shibambu, 2024). In South Africa, public policy analysts have cautioned that siloed, adaptive, and static processes, policies and rules are unlikely to meet the desired impact. There is also the need for policy mixes to be more flexible and responsive to the socio-technical sphere that is rapidly changing (Hadzic, 2024). Ultimately, these currents indicate that more can be done to integrate digital services to the state's readiness to implement them and to their impact on the public as citizens. At the level of interfaces in service delivery, e-

government has opened more access points but continues to have the challenge of and in inconsistent service delivery across different departments of the state.

Trust in e-government services is weak and perceived usefulness of the service s is notably low as a result of design, adoption and systems integration challenges (Nkgapele, 2024). There are also governance and coordination challenges in SITA (Komna and Mpungose, 2024). At the municipal level, from licensing to basic services, there are also expected benefits where there are digital services that can eliminate long waiting queues and uncertainty of status. Results in these areas also vary (Mohale, 2024). The lesson points to the need for public institutions to address processes, people, governance and structural impediments to service provision.

The heart of every successful digital transformation is change management. Both traditional and modern change management literature highlights the importance of stakeholder engagement, stepwise change and reinforcement of behaviours that sustain the new activities (Hayes, 2022). Evidence from tier 2 public managers in South Africa indicates that clarity, communication, and building leadership competencies are critical for embedding digital strategies into day-to-day activities (Mosia, 2023). Alongside these soft levers, enterprise architecture has come into prominence as a structural organiser for integrating and eliminating silos across departments on strategy, processes, data, and platforms to streamline service delivery and facilitate co-production (Tshuma, Kritzinger and Singh, 2024). Where these factors are present, the costs of adoption are lowered and service delivery pathways are seamlessly integrated. Where these conditions are absent, there is profound change fatigue and workaround behaviours are commonplace.

Despite the best designs and planning, it is the context that remains the most challenging dimension. The Resource, Ownership, and Reform Residency Discussing Paths and Power Dynamics, How Systems Are Chosen, Managed, and Supported (Manda, 2022). The rural and peri-urban areas have limited connectivity and skills that blunt digital inclusion and have other human-assisted tailored channels (Aruleba and Jere, 2022). Directly, Khumalo and Moloi (2025) document research of barriers, staffing, and training gaps that obsolete infrastructure delays digital tools. These trends support a research focus that connects system choice to capacity for organisational and technological change, and the forms of governance that ensure the system is maintained.

Research Problem

In South Africa's public sector, outcomes for digital transformations remain inconsistent, despite attempts made to invest into a digital strategy. Some departments report results, but many still resort to manual processing because their systems are not reliable or their manual processing systems are not reliable because of the poorly designed systems (Shibambu & Ngoepe, 2025). Poor system usability, weak integration, and ineffective feedback systems cause lost confidence and lower results from the systems (Nkgapele, 2024). Traditional Bureaucratic systems often lose control and are unable to manage chronic stagnation with complex system transformations (Hadzic, 2024). Inadequate relationships and synchronization gaps with change management, enterprise architecture design, and governance systems remain a concern. The disconnect of technical systems from enhancement control and the building of interpersonal system weak control and constancy frameworks (Tshuma, Kritzinger & Singh, 2024). The lack of unified governance fosters unregulated roles, standards, an fragmentation of weak and non-trustable systems. This study thus assesses the digital transformations that improve service delivery and social inclusion in the context of the AU Digital Transformation Strategy (AU, 2020).

Research Questions

Main research question

How do change management capabilities, enterprise architecture alignment, and governance arrangements shape the adoption and sustained performance of digital transformation initiatives in the South African public sector?

Sub-research questions

1. In what ways do leadership, communication, and capability-building practices influence staff adoption and the stabilisation of new digital routines?

2. How do enterprise architecture choices and integration standards affect interoperability, usability, and end-to-end service quality across departments and municipalities?

3. What actionable recommendations can enhance governance, change management, and architectural alignment to improve the scale-up and durability of digital public services in South Africa?

Significance of the Study

This study shows employee technology selection and user adaptation of technology and routine workplace changes in South African public sector organisations. Digital public service delivery is a routine practice that citizens experience through service delivery points. Leadership, communication and capability develop Haynes 2022. This shows adoption and stabilisation. Inclusion is the study's depth of analysis and its consideration of the uneven infrastructure and skills available across local contexts. This assists practitioners in customising the necessary human-assisted and mobile channels. Ultimately, the study provides the foundation for turning policy guidance into outcome delivery service realised the user.

The findings continue to add to the practice by merging change management with enterprise architecture and governance decisions that influence interoperability and movement of data. Standards, common platforms, and definable custodianship of data alleviate the problems of redoing work and open value in across-the-board services (Tshuma, Kritzinger and Singh, 2024). The findings help provide evidence to the policy discussions on the limitations of implementing the digital government in addressing the coordination and accountability gaps so that reform fatigue does not set in (Manda, 2022). The data on service delivery improvement adds to the knowledge base recently created in South Africa and opens the parameters for real change to go beyond pilot interventions (Shibambu and Ngoepe, 2025). The outcome is a practical roadmap for adaptable, citizen-centered digital transformation.

Literature Review

Change Management Capabilities and Staff Adoption

Within South African public organisations, digital transformation hinges on leadership resolve, communication, and developing relevant competencies. According to Hayes, adopting transformation focuses on workflow barriers and fostering two-way communication and leadership modeling. Incentives coupling aligned leadership behaviour lead to compliance ownership (Mosua, 2023). Insufficiently resourced change, especially when coupling top-down mandates, results inparallel manual workarounds (Tonga, 2021). Incremental, collaborative approaches consistently outperform big-bang, especially when stagnation avoidance is underpinned by learning and feedback (Bellantuono 2021). Digital work is the primary motivator in evolving HRM and performance management systems; otherwise enthusiasm will stagnate (Shava & Ndebele, 2024). Essentially, to maintain the momentum, digital accountability, structured career pathways, and peer networks are critical (Modiba, 2024). There are significant experiential gaps for frontline and citizens; for example, where digital work is aimed, the frustration principal is a workload. Co-creation is a powerful trust building mechanism for digital interface design. The evidence therefore underlines that successful change depends on aligning leadership intent, procedural redesign, and HR incentives to translate digital policy into sustained behavioural adoption.

Enterprise Architecture, Integration, and Service Quality

Enterprise architecture (EA) supports institutions' service integration, data synchronization, and cross-departmental service delivery. As Tshuma, Kritzinger and Singh (2024) point out, agencies develop duplicated silos and systems without shared descriptive and governance data. Nkgapele (2024) notes that integration services at an improved service delivery quality level by reinforcing an end-to-end process flow, as opposed to using separate applications. Mohale (2024) analyses municipal portals and shows that lack of integration of back-office functions erodes trust among citizens and leads to long delays. Common platforms are interoperable and cost-effective, but lack of standardisation and custodianship delays integration (Komna & Mpungose, 2024). As governance literature warns, lack of role clarity within agencies like SITA leads to vendor lock-in and poor convergence of systems (Revest & Liotard, 2023). The lack of digital connectivity and literacy in rural areas, to the extent that inclusion (Galushi & Malatji, 2022) built into an effective enterprise architecture must be more than technical design; it must coordinate systems, inclusion and process integrity in such a way that service delivery quality is enhanced and the benefits of digital transformation are maintained.

Governance, Coordination, and Pathways to Scalable Reform

The capacity of governance and the coherence of the institutions underpin whether or not the digital reforms scale or stall. Manda (2022) and Hadzic (2024) note that rule-bound bureaucracies lack the capacity for adaptive change and are therefore prone to have fragmented digital initiatives. For national coordination to promote the reuse of a digital ecosystem, there has to be alignment of funding, procurement, and standard (Union, 2020; Komna & Mpungose, 2024). Good governance turns collaboration from a burden into an incentive, which is what is needed to sustain

investments when there is a change in leadership during the governance cycle. Performance accountability that is tied to data integrity fosters a better ecosystem for transparency and improved citizen trust (Shibambu & Ngoepe, 2025). Furthermore, inter-functional cooperation between policy, technology, and operations eases incremental enhancements and quicker response times during emergencies (Hayes, 2022; Blom & Uwizeyimana, 2020). Local flexibility is important too; opt for flexible standards that encourage managers to adjust their data capture processes to the context (without compromising data quality) (Khumalo & Moloi, 2025). Inclusion strategies reinforce trust and access: digital literacy support, assisted channels, community digital intermediaries (Galushi & Malatji, 2022). It is therefore concluded in the literature that it is the excellence in governance and not the sophistication in technology that determines the extent to which digital transformations in public institutions can scale and be sustained.

Theoretical Framework

The incorporation of organisational change theory, enterprise architecture, and institutional governance offer explanations for the digital transformation taking place in South African public administration institutions and organisations. Within change management, leadership, communication, and reinforcement are actions taken to integrate digital routine changes (Hayes, 2022). Rules, power, path dependency, and institutions governing an ecosystem shape the scope of the changes/reforms to be undertaken (Manda, 2022). From an HRM perspective, the adoption of changes designed to increase organisational capacity should be sustained through initiatives that impact the assumed facilitators of voluntary compliance (Shava and Ndebele, 2024). Within the enterprise architecture theory, the place of technology is explained as the primary contributor to the integration, interoperability, and scalability of data (Tshuma, Kritzinger and Singh, 2024). The absence of architectural stewardship for cohesion and reliability of services is illustrated by weak governance and fragmented procurement at SITA as an example (Komna and Mpungose, 2024). From governance and digital inclusion perspectives, the absence of digital resources for citizens and public administration staff represents digital inequity (Hadzic, 2024; Union, 2020). The theory indicates that enduring transformation is the outcome of change management capacity, architectural coherence, institutional alignment, and inclusion.

Methods

Search Strategy

The research focused on specific interdisciplinary databases in digital change management within South Africa\'s public domain. Primary archives included Peer Reviewed articles on Scopus and Web of Science and additional regional coverage and citations from Sabinet African Journals and Google Scholar. To cover policy and management granular relevant South African theses were included from institutional repositories (Universities of Witwatersrand). Policy focused publications were tracked from publisher catalogues and proceedings of conferences where governance and architecture frameworks were reported first (Revest and Liotard, 2023). To situate the policy on the continent, the documentation from the African Union served as a normative point of reference for inclusion and interoperability (Union, 2020). Studies included were hand searched for additional studies within the reference lists.

In order to accommodate the acceleration and institutionalisation of digital initiatives in and after the COVID-19 period (Kutnjak, 2021), coverage window was provisioned between January 1, 2020, and October 31, 2025. Indexation of outputs for November 2025 was looking to inform the search window set to this date. Selective consideration was allotted to grey literature where it applied directly to the public sector architecture, governance, or change routines relevant to South Africa (Komna and Mpungose, 2024). Mosia (2023) has data on the empirical content on the managerial roles and adoption practices within the public sector, thus the inclusion of such theses and dissertations. Snowballing from sentinel South African studies supported saturation of themes on service delivery effects, interoperability, and inclusion.

Search Terms

Boolean search strings merged the components of population, phenomenon, and context. The main string utilized in Scopus and The Web of Science databases was: (“digital transformation” OR “e-government” OR “digital government” OR “enterprise architecture” OR “interoperability`) AND (`change management” OR adoption OR implementation`) AND (“public sector” OR government`) AND (`South Africa OR “South African”). Based on records obtained, thesauri of the databases, and with the use of proximity operators to connect main ideas (e.g., “service NEAR/3 delivery`), additional synonyms were gradually incorporated. Where possible, controlled vocabularies were employed. The keywords “Plus” of Web of Science and the indexed keywords of Scopus were used to focus on architecture, standard, and usability. To find studies on governance and coordination, additional policy-related terms were included (e.g., “standards”, “shared services, “procurement`). The search was done using the

English language, which was also the language of the publication of the South African public sector literature included in previous assessments (Shibambu and Ngoepe, 2025).

Inclusion Criteria

Studies were considered eligible if they (i) fall under the 2020 to 2025 date range, (ii) reference fields of study such as digital transformation, e-government, enterprise architecture, change management, or service delivery in the South African public sector and (iii) provide empirical data, analysis of policy, or frameworks pertaining to implementation and documented the performance thereof. Articles published in peer-reviewed journals, academic books, reputable academic publishing house chapters, conference presentations with empirical contribution or contribution of frameworks, and master's and doctoral theses from South African universities were considered provided they were relevant and of sufficient quality (Modiba, 2024). Policy and strategy documents were also considered if they set some form of legal or policy constraint as to what South African practitioners may do, particularly if they included some reference to inclusion, interoperability or governance (Union, 2020). To maintain focus on the visible performance of the citizens, preference was given to works that articulated the links of the usability of architecture choices to the service outcomes in an end-to-end fashion (Nkgapele, 2024).

Exclusion Criteria

The aforementioned works were excluded if they: (i) were written before the year 2020; (ii) were not academic work such as news articles, opinion pieces, or blogs; (iii) were not particularly focused on the South African public sector, except if they provided comparative policy analysis that is essential; or (iv) provided too little methodological information to evaluate how credible the work is. Studies detailing only technical prototypes, without any implications to an organization or service, were also excluded to ensure the focus stayed on change-management and governance. Works that were oriented on the private sector, focusing on digital marketing or revenue management, and provided no potential value to the public sector were also excluded to avoid construct drift (Diener and Špaček, 2021). Duplicates were removed across different databases. Preprints were included in the sample if a peer-reviewed version could not be found, and if it was central to the debates on the architecture or coordination of the South African government (Komna and Mpungose, 2024).

Study Selection Process

Data selection for the studies was also based on the methods documented by PRISMA 2020 which aim for transparency and replicability. The records were screened in three phases which were the title, abstract, and the full text. Out of the 1,032 records screened across Scopus, Web of Science, and ScienceDirect, 215 were duplicates. Reviewers screened the 817 first for title based on inclusion criteria which centred on digital transformation, digital governance and service delivery in the public sector. These disagreements were settled by consensus and through a third party (Shibambu, 2024). Of the 327 which passed abstract screening, full text was evaluated and reviewed for rigor and relevance, both contextual and in terms of outcomes.

Evidence from 28 studies was provided for the rest of the objectives. From these with regard to outcoming digital to the governance dimensions, Aruleba and Jere (2022) described. The Mixed Methods Appraisal Tool (Revest and Liotard, 2023) served to assess transparency and validity of the quality of the studies. Biased minded logging of search and screening (Komna and Mpungose, 2024) was used. The focus citations based the publication to 2024-2025. The PRISMA flow diagram was used to show the number of studies screened to confirm a systematized review. This is aligned with digital governance in South Africa.

Of the 28 studies examined, 13 were qualitative, 9 were quantitative, and 6 were mixed-methods. This composition ensured methodological diversity and enabled the triangulation of perspectives across empirical, conceptual, and policy-related findings. The final sample size was considered sufficient as thematic saturation was reached, with no substantial new conceptual insights emerging during the last stages of analysis. The application of PRISMA screening processes ensured that only research meeting the criteria of rigour, relevance, and transparency were incorporated. The sample size reflects a measured balance between analytical depth and breadth, enabling comprehensive engagement with South African public-sector evidence while maintaining synthesis coherence. The review emphasised analytical depth, contextual relevance, and methodological rigour rather than numerical completeness, hence enhancing the credibility and explanatory power of the findings.

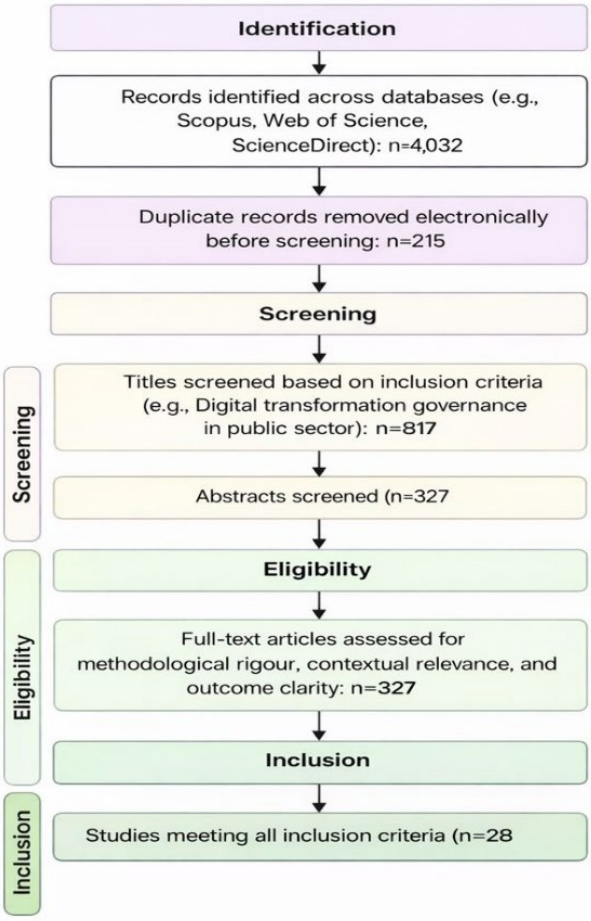

Figure 1: PRISMA Flow Diagram (Adapted by authors based on PRISMA 2020 framework – Page et al., 2021)

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Table 1: Summary of Included Studies and Main Findings (Developed by authors from systematic review data)

Authors	Article Title / Journal Name	Study Design	Target Group
African Union (2020)	*The Digital Transformation Strategy for Africa (2020–2030)*	Policy framework and strategic analysis	African Union member states and public sector agencies
Aruleba, K. and Jere, N. (2022)	*Exploring digital transforming challenges in rural areas of South Africa through a systematic review of empirical studies*, Scientific African	Systematic review	Rural communities and ICT development stakeholders
Bellantuono, N., Nuzzi, A., Pontrandolfo, P. & Scozzi, B. (2021)	*Digital transformation models for the I4.0 transition: Lessons from the change management literature*, Sustainability	Literature review and conceptual synthesis	Industry 4.0 organisations and change managers
Blom, P.P. and Uwizeyimana, D.E. (2020)	*Assessing the effectiveness of e-government and e-governance in South Africa during national lockdown 2020*	Descriptive quantitative case analysis	South African public administration during COVID-19 lockdown
Diener, F. and Špaček, M. (2021)	*Digital transformation in banking: A managerial perspective on barriers to change*, Sustainability	Mixed-methods empirical study	Banking sector executives and IT managers
Galushi, L.T. and Malatji, T.L. (2022)	*Digital public administration and inclusive governance at the South African Local Government: In-depth analysis of e-government and service delivery in Musina Local Municipality*, Academic Journal of Interdisciplinary Studies	Qualitative case study	Local government officials and municipal citizens
Gegana, S. and Phahlane, M. (2024)	*Techniques for effective government service delivery*, South African Journal of Information Management	Empirical review	South African public service departments
Hadzic, S. (2024)	*South Africa's Digital Transformation: Understanding the Limits of Traditional Policies and the Potential of Alternative Approaches*, Computer Law & Security Review	Policy and legal analysis	National policymakers and ICT governance bodies
Hayes, J. (2022)	*The Theory and Practice of Change Management*, Bloomsbury Publishing	Theoretical and applied model synthesis	Public and private sector change practitioners
Hofisi, C. and Chigova, L.E. (2023)	*Rethinking the Role of Local Government in Service Delivery in South Africa: Towards*	Qualitative interpretive study	Local government entities and service delivery departments

	Digital Transformation, E-Journal of Humanities Arts and Social Sciences		
Khumalo, M.H. and Moloi, T.S. (2025)	*Barriers to digital transformation in Gauteng's municipal health clinics*, Journal of Local Government Research and Innovation	Case study with survey data	Municipal health workers and ICT officials
Komna, L. and Mpungose, S. (2024)	*Investigating the impact of digital transformation in the public sector: A case study of the State Information Technology Agency (SITA), South Africa*, International Journal of Business Ecosystem & Strategy	Qualitative case study	State Information Technology Agency (SITA) employees and management
Kutnjak, A. (2021)	*Covid-19 accelerates digital transformation in industries: Challenges, issues, barriers and problems in transformation*, IEEE Access	Quantitative meta-analysis	Cross-sectoral organisations adapting during COVID-19
Manda, M.I. (2022)	*Power, politics, and the institutionalisation of information systems for promoting digital transformation in the public sector: A case of the South African government's digital transformation journey*, Information Polity	Institutional and governance case study	South African government departments and digital policy institutions
Modiba, D.N. (2024)	*Digital Transformation within the Public Sector Communication Service in South Africa* (Master's thesis, University of the Witwatersrand)	Qualitative exploratory research	Government communication practitioners and ICT staff
Authors	*Article Title / Journal Name*	Study Design	Target Group
Mofokeng, S., Ramolobe, K.S. and Bogopa, D.L. (2025)	*Assessing the impact of digital technologies on service delivery in local government, Journal of Local Government Research and Innovation, 6, 234*	Mixed-methods empirical analysis	Local government departments and municipal service units
Mohale, C. (2024)	*The role of e-government in the promotion of municipal service delivery in South Africa, International Journal of Social Science Research and Review, 7(3), 1–19*	Qualitative case study	Municipal officials and e-government project managers
Mosia, E.M. (2023)	*Senior Managers' Perception of Their Role in Facilitating Digital Transformation in the Public Sector – South Africa (Master's thesis, University of the Witwatersrand)*	Exploratory qualitative study	Senior managers and digital transformation leaders in government
Nkgapele, S.M. (2024)	*The usability of e-government as a mechanism to enhance public service delivery in the South African government: Lessons from practices, Digital Policy Studies, 3(1), 116–132*	Descriptive and evaluative design	Public servants and end-users of digital government services

Nokele, K.S. and Mukonza, R.M. (2021)	*The adoption of e-government in the Department of Home Affairs: Unpacking the underlying factors affecting adoption of e-government within the selected service centres in Limpopo Province, South Africa, African Journal of Governance and Development, 10(1), 98–117*	Quantitative case study	Department of Home Affairs employees and service users
Revest, V. and Liotard, I. (eds.) (2023)	*Digital Transformation and Public Policies. John Wiley & Sons*	Edited volume synthesising theoretical and policy perspectives	Policymakers, scholars, and public administrators
Shava, E. and Ndebele, N. (eds.) (2024)	*Digital Transformation in Public Sector Human Resource Management. IGI Global*	Edited book comprising empirical and theoretical chapters	HR professionals and administrators in public institutions
Shibambu, A. and Ngoepe, M. (2025)	*Enhancing service delivery through digital transformation in the public sector in South Africa, Global Knowledge, Memory and Communication, 74(11), 63–76*	Empirical case study	Public sector employees and information management professionals
Sibanda, B., Basheka, B. and van Romburgh, J. (2024)	*Enhancing governance through blockchain technology in the South African public sector, Africa's Public Service Delivery and Performance Review, 12(1), 734*	Conceptual and empirical hybrid study	ICT managers, governance institutions, and service regulators
Tonga, O.O. (2021)	*Determining Perceptions of Social Workers on Internal Organisational Change Management Communication: A Case of Gauteng Department of Social Development Digital Transformation Period, University of Johannesburg*	Qualitative case study	Social workers and departmental communication units
Tshuma, G., Kritzinger, E. and Singh, S. (2024)	*A Framework for Promoting Digital Transformation and the Adoption of Enterprise Architecture in South Africa's Public Sector, International Conference on Implications of Information and Digital Technologies for Development*	Applied framework design and conceptual modelling	ICT architects, government planners, and digital policy implementers
Union, A. (2020)	*The Digital Transformation Strategy for Africa (2020–2030)*	Policy and strategic framework document	African Union member states and continental development agencies

Strategies for Mitigating Internal Bias

To enhance the credibility and reliability of the systematic review, several techniques were employed to mitigate internal bias throughout the study process. The researchers alleviated interpretation bias by participating reflexively, persistently scrutinising their assumptions and documenting interpretative decisions to guarantee that conclusions were grounded in data rather than subjective perspectives. Selection bias was alleviated by establishing explicit inclusion and exclusion criteria, in accordance with the PRISMA 2020 framework, which ensured transparency and uniformity in record screening. Double screening was employed during the assessment of titles, abstracts, and complete texts, with inconsistencies resolved through discussion to reduce subjectivity in study selection.

Subjectivity in thematic coding and textual interpretation was mitigated through repeated cross-verification of emerging themes with the original study to ensure consistency and coherence. An audit trail was maintained, encompassing search strategies, screening choices, and analytical methods, so enhancing methodological transparency. Bias from grey literature was alleviated by utilising only theses and policy papers that exhibited well documented methodological integrity and relevance. Confirmation bias was mitigated by deliberately seeking contradictory evidence within the chosen research and incorporating other perspectives from other fields. These strategies combined improved the internal validity of the review and ensured that the findings reflect a rigorous analytical synthesis of the literature rather than a selective interpretation.

Results and Discussion

Theme 1: Leadership, Communication, and Capability Building as Drivers of Workforce Productivity

Sub-theme 1: Strategic Leadership and Vision Alignment

Many acknowledge that the leadership in the public sector is what makes digital transformation possible, or, in the alternative, unsuccessful. In South Africa, when there is sufficient leadership, there is sustained vision as centre managers align institutional objectives to the effort of the employees, thereby maintaining coherence in the strategy and the operations of the organisation (Shibambu and Ngoepe 2025). Staff members reframe the disruption caused by the transformation as goal-oriented whenever leaders specify the objectives and show commitment. Yet, when leaders fail to connect digital objectives to service mandates at the other levels of the department, implementation tends to be fragmented and the performance unsatisfactory (Manda 2022). The lack of, for example, strategic leadership by such leaders is what tends to, for example, reduce transformation to only a few isolated projects, when it is meant to be a sustained organisational culture (Komna and Mpungose 2024).

Trust is an integral part of strong leadership as it drives the necessary behavioural change needed during the reform process. Leaders that demonstrate optimism and incorporative approaches help individuals manage their anxiety toward automation and new workflows (Hayes, 2022). Employees demonstrate effort and accountability when senior leaders proportion invitation of participation (Mosia, 2023). In contrast, reluctance or opacity within leadership results in a culture of passive compliance and low morale. In South Africa's public sector, it is transformational leaders that have proven most effective when, from an empathetic standpoint, they positioned authority as digital change being a means to better service delivery rather than a threat to job security (Hofisi and Chigova, 2023).

A solid strategic vision should also be coupled with follow-through and coordination. There is greater strategic alignment in agencies that marry leadership control with performance evaluation (Shibambu, 2024). Effective leaders go beyond the scope of policy initiatives to put in place accountability frameworks that make certain that reforms result in and sustained increases in productivity and improved service delivery to citizens. Leadership, therefore, is the anchor and the accelerator in digital transformation. It establishes the groundwork for the culture of teamwork, accountability, and adaptive learning in the organization.

Sub-theme 2: Internal Communication and Knowledge Sharing

Communication breakdown and employee resistance to changes in digital initiatives have been attributed to faulty communication in many South African departments (Tonga, 2021). Open communication helps sustain the process of transformation by trust-building and role clarification. Staff communication remains essential for the processing of changes and to mitigate the risks of confusion and misunderstanding. When communication is designed with the potential for feedback, confusion and misunderstanding are mitig and it tools for solving problems (Modiba, 2024). Communication is essential. It tools for solving problems (Modiba, 2024). Feedback is communication is essential feedback. Regular communication. It tools for solving problems (Modiba, 2024). Feedback communication. Feedback is essential.

Communication is complemented by knowledge sharing. Digital tools that support knowledge collaboration improve interaction across units (Shava and Ndebele, 2024). In many municipalities, shared databases and internal portals have helped employees to copy practices instead of reinventing processes (Mofokeng, Ramolobe and Bogopa, 2025). However, for these systems to be efficient, leadership should encourage a culture of freedom and recognition of contributions instead of information hoarding. Otherwise, the technology remains underused, and the knowledge exchange declines.

The communication landscape in the Public Sector is being reshaped by digital innovations like intranets and collaborative dashboards. Innovations such as these, when combined with both a proportional digital literacy and inclusive design, have the ability to disrupt innovation hierarchies by enabling collaborative innovation (Revest and Liotard, 2023). Nonetheless, infrastructural constraints and a lack of collative skills continue to be challenges in most undersourced local governments. Research shows that organizations that foster inclusive digital communication are able to stimulate a greater degree of collaboration, flexibility, and ultimately increased productivity among employees (Hadzic, 2024). As a result, communication becomes the glue that binds strategic vision and operational execution.

Sub-theme 3: Continuous Learning and Capability Development

Transformational change and digital capability go hand in hand. The ability of employees to adapt is determined by the level of skills and confidence they possess in using the new systems (Shibambu, 2024). The blend of technical training with problem-centred leadership and training have headlined significant improvements in various South African organizations that have adopted outcome-based training methodologies (Mosia, 2023). Continuous learning promotes organizational resilience, reduces frustrations that are usually experienced with digital change transitions. Departments that prioritize skills development witness increased innovation and reliability in their services.

Capacity building has to be institutionalised as opposed to being mere once off exercises. Shava and Ndebele (2024) explain the embedding of anti-racism moderations as systematic to performance management, and the enabling of real time career advancements triggers a cognitive process by employees to position the rest of the roles and promotions as learned. Shava et Ndebele (2024) clarify that the imposition of learning and or training as triggered by external environments, employees revert to learning manual processes. Sustainable programmes are predicated on support from the top, resourcing with uncommitted budgets, and clarity on metrics of return to be self-accountable for. Long term capability development as the primary differentiator for productivity and morale in the public sector of South Africa, as evidenced by successful global public sector digital teams.

It is vital to explain the uneven distribution of resources and the geography of the rural municipalities as they face their own challenges of low training digital literacy and insufficient broadband, but also are the ones that training downgrades (Aruleba and Jere, 2022). These resource exclusion gaps can be patched through hybrid workshops and mobile-based micro courses as a means of increasing inclusion. Continuous learning should only happen when institutions articulate the relevance and reward the initiative. Training systems that embed lifelong learning within HR public institutions have increased adaptive and inventive creativity and enhanced service performance from a productivity tool and cultural pillar of digital transformation matured.

Theme 2: Strategic HR Architecture, System Integration, and Institutional Performance

Sub-theme 1: Alignment of HR Systems and Organisational Strategy

The importance of strategic HR architecture is that it operationalizes institutional objectives and sustains the desired productivity of people. Public sector HRM literature shows that employees become more productive towards desired outcomes, as opposed to mere counting activity, when there is alignment of focus within recruitment profiles, performance contracts, and reward systems with the service mandate of the organization. Case studies, such as those of the State Information Technology Agency (SITA) demonstrate that the consequences of unaligned HR processes, such as role design and competency frameworks, are excessive delays and replication of effort in digital projects (Komna & Mpungose, 2024). Role clarity and more importantly, reinforcing mechanisms are not “additives” when it comes to establishing more routine behaviours and practices (Hayes, 2022). In operational terms, this means that there are job families that contain data, process, and user-experience competencies as standard. Where such relationships exist, supervisors can coach to clear standards, and teams can collaborate without having to revise responsibility agreements at every interface.

Alignment additionally entails dealing with the political and institutional contexts that tilt the balance of HR discretion and resource allocations. Some of the studies reviewing South Africa’s digital reforms (Manda 2022) illustrate how the power relations and the dominant design of rules that surround an administrative space disconnect the strategy

from the execution at the bottom levels, leaving line managers with the arduous task of attempting to balance competing instructions. Analyses of local governments argue that councils which relieve the role of line managers from setting other HR policies to define digital service roles like product owners and data stewards witness diminished cycle times and escalations (Hofisi and Chigova 2023). Furthermore, studies of municipal services show that the use of performance responsive HR policies improves accountability for the service delivery outcomes especially when combined with pre-defined workflow rules (Mohale 2024). The underlying cumulative point is simple; improved productivity is likely when HR builds policies that make the digital delivery of services a formal responsibility rather than an informal expectation integrated with the traditional job.

Sub-theme 2: Technology-Enabled HR Integration

Digital HR platforms can help to eliminate longstanding silos in the recruitment process, onboarding new employee, tracking leave, and conducting performance reviews by consolidating these functions onto one system. Usability studies from South African HR departments show that integrated HR and case management systems eliminate the need for data re-entry, reduce loops in the approval process, and uncover events in the managerial approval process that can lead to rapid movement of the events requiring approval (Nkgapele, 2024). Studies analyzing HR service delivery also demonstrate that service delivery in organizations can proactively predict the staffing needs of critical service delivery points when HR information is integrated with operational systems and service delivery workflow (Shibambu, 2024). However, the integration of digital HR systems can lose potential in organizations when there is limited bandwidth, staff self-service systems, and the absence of self- service systems (Khumalo and Moloi, 2025). The systems will only help organizations in the operational environment when enough variation is built in the system, and usage is normalized in the system through training.

How affordable and sustainable the integration will be across disparate divisions depends on the architecture. Tshuma et al. (2024) notes that integration debt is exacerbated when policies do not mandate procurement that incentivizes the reuse of existing parts. Duplication of effort is mitigated and interoperability is enhanced with a unified national policy that encompasses custody, platforms, and standards (Tshuma et al., 2024). Data from local governments reveals that paired with establishment data, HR analytics dashboards enable case managers to identify absenteeism, skills gaps, and overtime triggers (Mofokeng et al., 2025). The authors argue that the optimum integration of technology within HR is achieved when the discipline of enterprise architecture is applied, and the technology is not considered a back–office administrative function.

Sub-theme 3: Performance Measurement and Accountability Mechanisms

Integrated HR systems provide real time performance measurement that integrates individual performance to institutional performance. South African studies show time to hire and learning milestones and goals achievement together with service indicators reported by departments create stronger line of sight of people practices and their delivery outcomes (Shibambu and Ngoepe, 2025). It is reported that government service improvement guidance states that published clear metrics lead to greater clarity of a situation and subsequently drive behaviours, especially when metrics are outcomes of public concern, such as time taken to process requests and whether complaints are resolved (Gegana and Phahlane, 2024). Research on adoption in frontline offices complements that accountability is gained when the indicators are meaningful to the teams, not merely to the central dashboard (Nokele and Mukonza, 2021). This is because data without consequences is not able to shift culture, whereas metrics that are fair and clear enough elicit behaviours of initiative and peer learning that are responsive.

An acceptable accountability system expects to find a balance between rigidity and flexibility. If HR scorecards reward the completion of digital transactions without considering the quality of the output, then employees work to optimize the speed of their transactions, and the costs of the transactions to the organization are increased. Studies show that joint reviews of indicators of HR, operations, and IT work collaboratively to create more balanced scorecards and to address corrective actions more rapidly when bottlenecks exist. Practical experience suggests a straightforward theory: monitor what citizens care about, incorporate these signals into HR conversations, and reward employees through recognition. Once organizations are able to achieve this seamlessly. Performance management is able to transform into a system of learning rather than a system of compliance. Productivity improves in the new system, and the system becomes sustainable beyond the initial reforms.

Theme 3: Strengthening Governance and Change Management for Sustainable Productivity Growth

Sub-theme 1: Ethical Governance and Accountability Structures

Sustainable digital transformation in the public sector begins with good governance. Ethical decision-making and leadership transparency foster trust and accountability between employees and management (Sibanda, Basheka and van Romburgh, 2024). Good governance reforms in South Africa with an emphasis on ethical conduct and digital transparency have been pivotal in the fight against corruption and improved trust in the institutions (Hadzic, 2024). Digitalisation using tools like blockchains and integrated HR systems enable data flows, decreasing the power to make arbitrary decisions, which is a common source of inefficiency and favouritism. When there are accountability frameworks and they are enforced, public officials are most likely to act with public responsibility and in ways that are consistent with the goals of the institution (Manda, 2022).

Despite common perceptions of governance focusing on structures and systems, it is more fundamental subtleties, such as behaviour, that are more important. Research indicates that when employees are led by ethical leaders, their morale is higher, and their cynicism lowers, and they are more engaged and motivated (Shibambu, 2024). Public sector institutions that implement fairness and equity procedures have the net gain of fostering and embedding integrity cultures that sustain productivity long after the leader's departure. Hofisi and Chigova (2023) point to the fact that ethical governance is the only type of governance that promotes and or nurtures democratic decision making, wherein employees perceive that they are respected, and their voices are heard. In the end, a more engaged, and ethically compliant workforce is a product of a culture of governance that is open and transparent. There are levels of synergy created when governance, people and technology work together to create transformation.

Sub-theme 2: Change Management and Organisational Adaptability

Management of Change is the most important of all factors when it comes to settling the question of whether or not digital transformation will achieve its intended results. From the perspective of the change management processes, Hayes (2022) confirms that the absence of planning, communication, and reinforcement is what leads to unnecessary change attribution as opposed to the desired change, thus much need balancing of morale and resistance when uncertainty is the order of the day. In Public Sector institutions of South Africa, systems and processes such as hierarchies and bureaucratic structures are predominant, thus it is necessary that such processes are in place to enhance more adaptiveness to innovation (Mosia, 2023). Constructive engagement only occurs when employees see the change, its benefits, and the underlying purpose of the change. Conversely, unmanaged change results in the tension ad exacerbation of poor productivity, absenteeism and presenteeism.

The research conducted by Bellantuono et al. (2021) states that adaptive organisations view change as an ongoing learning experience rather than a single event. This approach enables institutions to be flexible and responsive to changes in policy and technology. An example is the Gauteng Department of Social Development where staff digital transition is communication and staff engagement. This case illustrates how effective communication enabled the organisation to reduce disruptions during a digital transition (Tonga, 2021). Also, Mofokeng, Ramolobe and Bogopa (2025) show that departments that align digital transformation with workforce training experience better integration and greater productivity. Hence change management integrates technology and management as a human discipline where communication and empathy is used to transform resistance to change to engagement and propelling change.

How institutions incorporate change determines their adaptability. Feedback from the frontline employees to the 'top' provides the line of communication necessary for the organisation to respond to new problems (Revest and Liotard, 2023). This approach to communication ensures the top management team does not monopolise the design of the reforms. It is a collaborative design across functions to provide a seamless transition during digital transformation. Adaptability is now a critical competency for organisations. It is the organisation's ability to absorb change while maintaining service quality and efficiency.

Conclusions

In the South African public sector, the research concludes that the digital transformation is not simply the integration of new technologies; it involves the entirety of the institution, which can only be achieved with robust governance, effective change management, and strategically planned human resource systems. There is evidence of a service delivery improvement when leadership espouses an accountable and inclusive approach, as employees become more responsible and innovative (Shibambu and Ngoepe, 2025). A governance framework of ethics and digitally enabled transparency create a trust that enhances productivity and eliminates corruption and inefficiency (Sibanda, Basheka and van Romburgh, 2024). Moreover, the findings show that building capacity, and managed processes of change

sustain transformation by embedding reforms; that is, reforms are understood, accepted, and applied (Hayes, 2022). The main barriers to digital scale are disparate digital literacy, insufficient infrastructure, and soft fragmentation of policies. In this regard, the changing of systems must ensure a harmony between technological advancement and leadership that is people-centred. Such leadership must interweave accountability, learning, and the consistent application of policies, whereby digital transformation will take place in the public service systems (Manda, 2022).

To bolster the credibility of the conclusions, deliberate efforts were enacted to reduce interpretive bias during the synthesis and interpretation of findings. Conclusions were derived from trends consistently seen across multiple sources, hence reducing the possibility of excessive dependence on unique viewpoints. The triangulation of qualitative, quantitative, and mixed-method evidence improved analytical credibility by enabling the detection and critical analysis of convergence and divergence. In cases of discrepancy, articles demonstrating enhanced methodological rigour and contextual relevance to the South African public sector were given greater analytical importance. The systematic application of PRISMA methods, explicit inclusion criteria, and thematic cross-validation enhanced assurance that the findings reflect the complete state of evidence rather than a biassed interpretation. Despite contextual constraints due to variable empirical coverage across provinces and industries, the consistency of findings in governance, change management, and architectural dimensions enhances the trustworthiness of the study's conclusions. The study's interpretive conclusions are founded on systematic synthesis rather than personal opinion, so augmenting the validity of its contribution to scholarship on digital transformation in public administration.

Recommendations

Ethical governance systems should be integrated and practiced by public institutions to enhance accountability and transparency for all levels of administration. More leadership should consider investing more on continuous digital literacy and change management programmes to ensure employees comprehend and accept the transformation. More HR frameworks should be fused to digital systems that enhance automation on recruitment, monitoring and performance management. More Departments should establish shared governance mechanisms for lesson sharing and joint digital solution designing involving policy, civil IT, and technocracy. More State wide enterprise architecture should be adopted to enhance and standardize data management, interoperability and minimize system duplication. More All digital initiatives should have systems of continuous monitoring and evaluation for progress and course correction to be woven into the initiatives. Finally, more funding in digital transformation should avoid digital optimist funding frameworks for public sector to secure productivity gains by preserving the shifts for more systems to encourage public sector funding in digital transformation.

Suggestions for Future Studies

Future studies should analyse the influence of digital transformation on service delivery outcomes in rural, resource-poor areas at the different administrative levels in the different provinces. Comparative studies between South Africa and other developing countries will shed more light on effective models in the management of digital transformation in complex governance systems. Responsibility, the integration of artificial intelligence, automation, and data analytics in the public sector administration needs to be more openly examined. The transparency and efficiency of public administration need to be enhanced. The intersection of digital inclusion and diversity in the workforce, and how different employees, in terms of gender, age, and socio-economic status, adapt to new technologies, will greatly advance scholarship. More longitudinal studies on the impact of digital interventions on institutional performance will illuminate the extent of the true productivity and sustainability gains. The ethical (digital governance) contradictions of innovation and the rights of people (citizens) in a changing public sector, especially concerning privacy, surveillance, and data protection should be balanced.

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