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DIGITAL GOVERNANCE FOR IMPROVING SERVICE DELIVERY AND MUNICIPALITIES' ACCOUNTABILITY: CONTEXT OF SOUTH AFRICA**Abongile Pindo***Human Science Research Council (HSRC), South Africa**E-mail: APindo@hsrc.ac.za**Received 15 February 2026; accepted 30 April 2026; published 30 June 2026*

Abstract. Despite the potential benefits of digital governance across South African municipalities, there is a need for an in-depth understanding of its efficacy, challenges, and gaps in improving service delivery and fostering accountability and transparency in this context. Therefore, this paper analysed secondary sources published between 2010 and 2024 on the efficiency of digital governance in improving public service delivery and fostering accountability across the South African local municipalities. The review paper has identified factors that can improve digital governance, as well as potential challenges and gaps that contribute to its ineffectiveness. The findings show that to ensure effective service delivery through the use of digital governance, it is important to invest in ICT infrastructure and to capacitate the municipal officials in the use of digital municipal governance tools to improve accountability and transparency.

Keywords: accountability; digital governance; local governance; service delivery

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1. Introduction

South African municipalities are facing challenges with service delivery and accountability. The introduction of innovative systems and methods of service delivery across municipalities can improve the status quo of service delivery and ensure the sustainable satisfaction of the public with public sector services (Thusi, Mahlatse & Matyana, 2023). South Africa gained its independence over 30 years ago; however, most South Africans still face issues such as poor service delivery. For example, millions of people and businesses are not satisfied with local governance, as their service-delivery promises are never realised by their municipalities, which they trusted with their votes. These service delivery issues include poor infrastructure, overcrowded schools, lack of water, sanitation, unemployment, and electricity (Moichela, 2025).

Every year, municipalities receive funding for service delivery, yet the public remains unhappy. The growing number of service delivery protests proves this. Since the advent of democracy, several communities across the country have embarked on service delivery protests, arguing that more than 70% of South African municipalities fail to provide services to their communities (Chilli et al., 2023). These service delivery protests show that citizens and voters are disillusioned with local governance and the municipality, as their promised services are never delivered. The poor service delivery and lack of municipal accountability also hinder the local government from successfully implementing policy interventions (Qobo, Soko & Ngwenya, 2022). This shows a lack of accountability and dishonesty on the part of the municipal officials. The accountability issues are a sign of

municipal failures to communicate and involve communities. The accountability issues on the municipal side challenge the ethical behaviour expected of municipal officials and politicians. Municipalities are tasked with providing efficient, high-quality, and accountable governance for their communities (Moichela, 2025). In pursuing effective municipalities, municipal accountability, and better service delivery worldwide, municipalities are turning to e-governance or digital services as solutions. The Fourth Industrial Revolution (4IR), in the form of digital governance, is also underway in some municipalities (Khoza et al., 2023). Digital governance services include innovative strategies and technologies to improve service delivery, promote community involvement, enable digitalised administration, provide e-recruitment services, and deploy data analytics tools to overcome service delivery obstacles and achieve efficient, accountable governance (Udovita, 2020).

Maleka and Moeti (2021) emphasise that the arrival and implementation of Information and Communication (ICT) methodologies and systems significantly improved the operations and administrative methods of the public sector. This is because the introduction of new technologies through the 4IR worldwide and in South Africa has enabled public administration processes to be conducted using ICT tools and online platforms, ensuring sustainable digital service delivery. The use of technology is imperative to ensuring that the public is effectively served and that municipalities are accountable for promised service delivery, including through performance management (Khoza et al., 2023). To guide the use of digital services, the Department of Public Service and Administration (DPSA) introduced the Digital Policy Framework. In South Africa, the use of digital methodologies has potential and provides opportunities for improved accountability (Layton-Matthews & Landsberg, 2022; Millan & Lagura, 2026).

Not all South African municipalities are ready for this digitalisation and to integrate e-governance into their Integrated Development Plans (IDPs). On the positive side, the use of advanced technology offers opportunities for municipalities' socio-economic growth and service delivery. However, to ensure its efficacy, this lies within the municipality's strategies and policy implementation, community engagement, and service delivery priority areas (Layton-Matthews & Landsberg, 2022). One advantage of digital governance is that it enables municipalities and public service officials to perform their duties through ICT systems. For example, the use of digital-engagement processes, e-services, public portals, e-city or smart services and goods, broadband fibre rollouts, Closed-circuit television (CCTV) networks, data centre infrastructure, and private cloud solutions is stated to be a few of the systems integrated into e-governance (Kenneth & Makganya, 2023). However, public participation in digital governance is deemed ineffective, and there is an urgent need to ensure comprehensive, open public participation, which means consultation is key.

The introduction of digital governance was beneficial in South African municipalities. However, a significant gap remains in the effectiveness of digital governance across all South African municipalities. There is a need to bring in-depth knowledge of the effectiveness and sustainability of e-government tools, systems, and methods across South African municipalities, and to also review the success level of e-government in municipal service delivery and accountability in both rural and urban municipalities. This paper's objective is to review the efficacy and issues of digital governance in improving service delivery and fostering accountability across South African municipalities, and to propose strategic recommendations to enhance governance services for municipalities and service users.

This systematic review will also offer recommendations for improving digital governance in local municipalities and for how digital governance services may enhance service delivery. Thus, this paper analyses empirical papers, including grey literature (theses, dissertations, and conference papers), that speak about digital governance and accountability across South African municipalities. Using the municipalities' digital governance strategies and accountability is an imperative research area that can develop solutions for the ongoing service delivery protests and dissatisfaction. Some evidence indicates that digital governance improves service delivery; however, implementing it in some communities remains a challenge (Indama, 2023). Based on this, developing solutions to digital governance challenges is important so that communities can learn to trust their governance and municipal systems. This review contributes to the body of knowledge on digital and e-governance for service delivery, as well as to the current status of service delivery and digital governance in South African municipalities.

2. Methods and data collection strategy

This is a desktop study where empirical research articles, including theses, dissertations, and conference papers, were reviewed and analysed. The review was conducted on papers published from 2010 to 2024 that relate to digital or e-governance in improving public service delivery and fostering accountability across South African local municipalities. To ensure the rigour of the review, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework or methodology was used and adapted to meet the paper's inclusion and exclusion criteria. The systematic review of papers for inclusion was conducted across two major databases and a scientific social media platform: ProQuest, Google Scholar, and ResearchGate. The keywords and terms were used to find the relevant papers. These terms or words include: 'e-governance and digital governance in South Africa, service delivery, accountability, and transparency of municipalities in South Africa. After getting the search results from each database and the scientific social media platform, the screening and downloading of the papers began.

The papers were scanned first by title, abstract, and body. Only papers that spoke to the aim of this paper were interpreted. The inclusion criteria were: papers published between 2010 and 2024; peer-reviewed papers; empirical papers; papers on digital and e-governance for improving service delivery; papers written in English; and PhD theses or dissertations. The excluded papers were those published before 2010, not focusing on South African municipalities' digital governance, non-empirical papers, non-peer-reviewed papers, papers not written in English, and theses and dissertations not for PhD purposes. The data extraction phase involved scrutinising the documents against the developed inclusion and exclusion criteria and their alignment with the paper's objective. The majority of the papers were excluded because they did not address e-governance service delivery, were published in the year of publication, used secondary sources for data collection, or did not focus on the South African municipal context. After collecting and reviewing the papers for inclusion and exclusion, the paper was analysed through thematic analysis. Based on the reviewed papers, four key themes emerged. The following is PRISMA Figure 1 showing the papers reviewed.

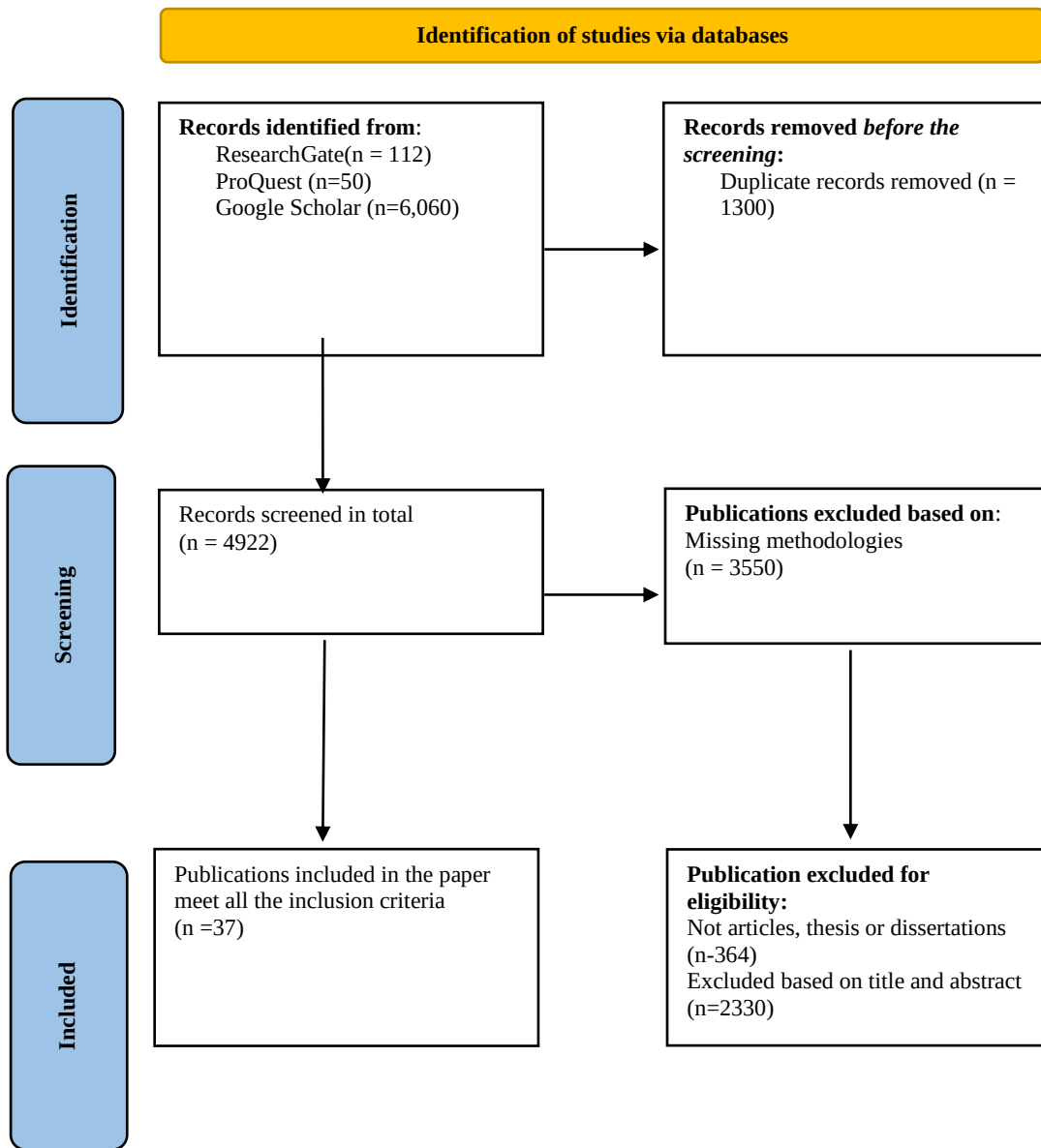


Figure 1. PRISMA 2020 flow diagram for data extraction

Figure 1 represents the screening process for inclusion and exclusion criteria for papers used in the review. The PRISMA diagram in Figure 1 shows how the researcher searched for papers across two databases and a scientific social media platform, resulting in screening 4922 papers after removing duplicates and those that did not meet the inclusion criteria. The paper reviewed and analysed 37 papers that met the inclusion criteria and spoke to the study objective. The diagram also shows the reason for excluding most of the papers. The 37 papers included in the review paper were analysed through thematic analysis. The themes that emerged are discussed in relation to digital governance for improving service delivery and municipalities' accountability.

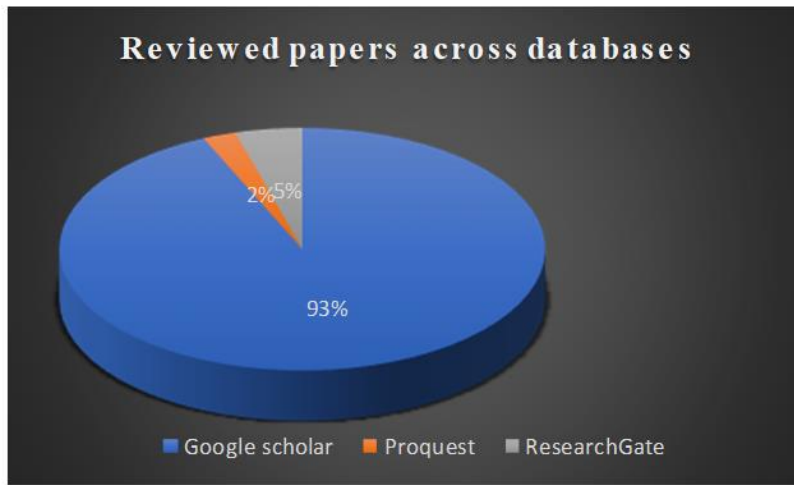


Figure 2. Reviewed papers across databases and scientific social media platforms
Source: by the researcher

Figure 2 illustrates that Google Scholar had the most papers on digital government in South African municipalities; for example, 89% of the papers presented in the review come from Google Scholar, followed by ResearchGate, which accounts for 9% of the papers. The database with the very fewest papers is ProQuest at 02%.

3. Results and discussions

In Table 1 below methods used and findings of reviewed papers are presented.

Table 1. Papers reviewed

Title	Author(s) and year of publication	Methods	Findings
An examination of the Fourth Industrial Revolution in the context of the South African local government	Mhlongo & Thomas, 2024	Qualitative design and purposive sampling	Municipalities use digital governance to improve service delivery through 4IR technologies.
Records management for the administration of the Traditional Council at Ga-Mphahlele in Limpopo, South Africa	Kgomoeswana, Makgahlela & Molaudzi, 2024	Qualitative approach, Case study design	Officials lacked understanding of records management for administration due to resource constraints, and therefore continued using traditional methods.
The role of information and communication technology (ICT) in the transformation of municipalities into smart cities for improved service delivery	Ncamphalala & Doorgapersad, 2022	Qualitative approach	There is a need to improve ICT infrastructure and resources for effective e-governance.
Mediating Factors Of Municipal Service Excellence	Worku, 2021	Quantitative	Respondents are happy with the City of Tswane's service delivery, and there is an effective service help desk.
Exploring Factors Delaying Public Service Delivery in South African Local Government	Thabang, Makhanya & Nel, 2022	Quantitative	There is a lack of resources, personnel, and the ability to use digital service delivery, as well as accountability and transparency challenges.
Realising E-government Access for Socio-economic Development in Rural Areas	Maramura, Dambuza & Jaka, 2017	Mixed methods	A significant number of people have access to ICT, but issues such as accessibility and use of e-governance persist.
Enhancing service delivery through digital transformation in the public sector in South Africa	Shibambu & Ngoepe, 2024	Qualitative	There are no policy frameworks that support the effective implementation of digital governance in service delivery.

Effectiveness of governance towards digitalisation at eThekweni Metropolitan Municipality in KwaZulu-Natal province, South Africa	Govender & Reddy, 2019	Qualitative	There are constraints on using digital systems and a lack of government support.
E-audit to monitor e-government progress to address better service delivery and the digital divide	Moloto & Muchie, 2023	Quantitative	The use of e-auditing services can fast-track service delivery and reduce human error and manipulation.
Devising a strategy for IT governance implementation in municipalities. A case study of South Africa	Sibanda & von Solms, 2019	Quantitative	Lack of IT skills, municipal support, and resources challenges digital governance.
E-Government Implementation: A Reflection on South African Municipalities	Mawela, Ochara & Twinomurinzi, 2017	Qualitative	Limited ICT skills and resources hinder digital governance.
Digital Public Administration and Inclusive Governance at the South African Local Government, Depth Analysis of E-Government and Service Delivery in Musina Local Municipality	Galushi & Malatji, 2022	Qualitative	E-governance may get rid of corruption and poor service delivery
Citizen perceptions of digital transformation in local municipalities: The case of South Africa	Netshirando, Munyoka & Kadyamatimba, 2024	Quantitative research design	Facilitating issues, affordability, perceived privacy, and trust positively affect public intent to accept e-government.
Challenges and Opportunities: The Role of Artificial Intelligence in Reinventing Public Administration in South Africa	Motadi, 2024	Qualitative	Lack of skills, resources, and infrastructure gaps hinder e-government
ICT Adoption and Improving Service Delivery within the Municipalities of the North-West Province, South Africa	Lobelo & Tshidzumba, 2024	Qualitative	The Internet provides effective and efficient communication
Factors That Affect the Effective Use of E-Government Procedures in Limpopo	Moloto & Muchie, 2023	Quantitative	Allocating sufficient budget and resources would facilitate effective e-governance services.
e-Government Innovation for Improved Service Delivery	Kanyemba & Hofisi, 2019	Mixed methods	E-services are essential as they reduce delays and queuing
Challenges of Innovations in Participatory Governance in uMshwathi Local Municipality in KwaZulu-Natal	Mthuli, 2019	Qualitative	There is a digital innovation divide between rural and urban innovation infrastructure.
Towards a Smart City Model for Local Government: The Case of South African Metropolitan Municipalities	Maphangwa & van der Walddt, 2023	Qualitative	Investment in infrastructure and resources is the key to the effectiveness of e-governance.
E-Government Implementation: A Reflection on South African Municipalities	Mawelaa, Ocharab & Twinomurinzi, 2017	Qualitative	Resources, leadership, ICT skills and funding are the main barriers to e-governance.
Mapping and auditing digital literacy of civil servants in selected South African government departments	Mbata, 2022	Quantitative	The public needs a digitally skilled official for effective e-governance
Development of e-government diffusion assessment tool for service delivery in South Africa's municipalities: task-technology-fit approach	Mkhonto, 2020	Quantitative	There is a need for collaboration and ICT infrastructure
Utilisation of the digital central supplier database in enabling electronic procurement in the Limpopo provincial departments.	Mpehle & Mudogwa, 2020	Qualitative	Improves government transparency and accountability
A comparative study on the utilisation of e-government by selected municipalities in South Africa and Rwanda: development of a model for effective and efficient online service delivery	Murenzi, 2016	Quantitative	Slow awareness and participation in e-governance by the public
Readiness factors affecting e-procurement in South African government departments'	Maepa, Mpanyanya & Phume, 2023	Quantitative	Factors such as technology and finance affect South Africa's e-procurement readiness.
Assessing the impact of e-government projects: The case of Limpopo province in South Africa	Manyoka & Manzira, 2013	Quantitative	Citizens' satisfaction and reduction of waiting in queues and corruption

Availability and utilisation of information and communication technologies for service delivery: a South African case study	Ntetha & Mostert, 2011	Qualitative	ICT systems are solely used by the officials, not for service delivery
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	Nokele & Mukonza, 2021	Qualitative	Factors such as age, poor infrastructure, language barrier and motivation impact the implementation of e-governance.
E-government Challenges Faced by Selected District Municipalities in South Africa and Rwanda	Murenzi & Olivier, 2017	Mixed Methods	Infrastructure issues and a lack of ICT devices
Urban Governance in Africa – A Perspective of E-Governance in South African Urban Municipalities	Muridz, Meyer & Masengu, 2021	Mixed method	Development of an e-governance framework
Technology as a driving force of service delivery in the King Sabata Dalindyebo Local Municipality	Ntando & Mofolo, 2024	Mixed method	Training is important for the integration of technology
Digital Transformation Framework for Smart Municipalities.	van der Hoogen, Fashoro, Calitz & Luke, 2024	Quantitative	Improved service delivery and transparency
Smart city readiness in South African municipalities: A qualitative study	Enwereji & Uwizeyimana, 2022	Qualitative	Finance, resources, leadership, and infrastructure are among the issues hindering e-governance.
Information Communication Technology (ICT) and smart service delivery in the Fourth Industrial Revolution: A case of the City of Johannesburg	Shava & Vyas-Doogapersad, 2021	Qualitative	Poverty, inequality, and socio-economic issues hinder the use of e-government services.
The Role of E-Government in Promoting Transparency during Service Delivery in South African Municipalities	Butana & Niyitunga, 2012	Qualitative	A lack of capacity among municipal officials hinders transparency in e-government services.
Urban Governance in Africa – A Perspective of E-Governance in South African Municipalities	Muridzi, Meyer & Masengu, 2021	Qualitative	Municipalities are adopting e-governance full force, and to the IDPs.
Framework for e-governance to improve service delivery for local authorities in South Africa	Muridzi, 2019	Quantitative	Various technological systems are being developed to allow citizens to access municipal information.

The main questions that this paper sought to address were how digital governance can improve service delivery and municipalities' accountability. And what are the challenges and successes that can be experienced due to digital governance in South African municipalities? The following are the emerging themes from the papers included in this literature review paper.

Policy frameworks for digital governance for service delivery

Studies reviewed suggest that the South African public sector lacks a robust policy framework and strategies to implement and monitor the use of the e-governance system for service delivery. This shows that to achieve effective and reliable digital governance, it is necessary to invest in robust digital frameworks and systems, and South Africa is still lagging in this regard. The literature also shows limitations in the policy frameworks that guide the implementation of digital governance. Therefore, without proper digital systems, accountability issues will remain prevalent (Shibambu & Ngoepe, 2024). Proper policy frameworks may play a critical role in addressing the digital divide in rural areas to ensure accessibility. This is also critical to achieving Sustainable Development Goal 09, which focuses on innovation and infrastructure. Arguably, with proper investment in digital infrastructure and public policies, the digital governance of service delivery can be improved to ensure access and success of the municipalities. However, previous research suggests that the digitalisation of service delivery began with the Public Service Act No. 103 of 1994, which allows the Minister of Public Service and Administration (MPSA) to implement standards for information sharing and management within municipalities and the public sector. 40% of the reviewed papers agreed that the DPSA is one of the policy frameworks implemented to monitor the use of e-government for service delivery, followed by the Electronic

Communications and Transactions Act 89 of 2002, which provides directions for innovation and technology usage in both private and public sectors (Republic of South Africa (RSA), 2000). However, several studies have found that e-governance policies for service delivery are flawed. For example, it is arguable that the policies are well-written on paper. Still, there is no evidence of success in implementing them, and such issues lead to further service delivery problems and public frustration with municipalities. However, one of the main gaps in the literature this paper identified was that previous sources fail to qualitatively reveal the main causes of poor policy implementation in e-governance, the extent to which poor policy implementation is a main hindrance to digital service delivery, and the ways poor policies lead to accountability issues for municipal officials. Only a few studies noted that many municipal officials often fail to adhere to the rules and regulations prescribed by the DPSA and the Municipal Financial Management Act (MFMA). The paper also found that, apart from policy implementation, for digital governance to work, it must be a collaborative effort to implement 4IR tools (Govender & Redd, 2019). The paper argues that accountability issues and poor service delivery across municipalities can be minimised through the use of digital platforms, such as ICT strategies, which can foster accountability and transparency (Maepa, Mpwanya & Phume, 2023; Lobelo & Tshidzumba, 2024).

Efficacy of digital tools in service delivery

Studies such as Worku (2021) show that e-government service users are satisfied with ICT systems and e-governance tools, as they facilitate effective communication, prompt responses to queries, and efficient customer service. Mobile devices are key for e-governance systems, as they allow applications to be downloaded and connect people with municipalities (Ncamphalala & Doorgapersad, 2022; Noruwana, 2022). Additionally, e-governance municipal services are welcomed by both the public and officials, as transactions are now more effective and secure, unlike before the introduction of technology, when people had to visit the municipality to conduct transactions. More people in local municipalities are becoming aware of e-services and online payment methods, and their enquiries are resolved effectively without having to visit the municipality or queue, saving time and money on transportation. However, a small number of people and government officials are afraid to use e-governance services; the majority, however, are embracing the systems. Both the municipal employees and the residents were sceptical about the success of e-government. Scholars believe that the public must be included in these e-governance services, which eliminate queue issues for those with Internet access (Galushi & Malatji, 2022). Digital services improve communication within communities and municipalities. However, these e-governments must prioritise citizens' participation, which aligns with the Batho Pele principles (Lobelo & Tshidzumba, 2024). There are several e-service benefits mentioned by different scholars, such as reducing long queues, convenience in applying for jobs and making transactions, and a timely turnaround time in processing by government officials (Kanyemba & Hofisi, 2019). This is because the new technology enables easy access and remote access to information through the use of technology devices and Artificial Intelligence (AI), for example, the use of AI in public service reduces risks of losing data and allows service users to ask clarifications when not sure of the data received (Muridzi, 2019; Motadi, 2024; Mhlongo & Thomas, 2024). This enables the public to stop having to go to municipalities to pay for services, as they can do that from the comfort of their homes or locations (Mhlongo & Thomas, 2024). However, public participation in implementing the e-governance services is important. However, to ensure that no one is excluded, both the public and government officials, it is important to train and educate the public in using technologies such as social media analytics, mobile platforms, intelligent chatbots, and self-service kiosks (Netshirando, Munyoka & Kadyamatimba, 2024). These systems are effective because they reduce administrative errors and corruption (Manyoka & Manzira, 2013; Moloto & Muchie, 2023a,b). However, these systems need funding to be effective, and therefore allocating sufficient budget and ICT-skilled personnel, such as telecommunications engineers and project managers, can lead to more effective, efficient, and improved service delivery (Moloto & Muchie, 2023a,b).

The reviewed literature agrees that the use of digital government tools supports democracy and improves governability and service delivery in a transparent and accountable way (Mthuli, 2021; van der Hoogen et al., 2024). For example, advanced 4IR technology tools for the central supplier database (CSD) have improved transparency and accountability when selecting suppliers that fully qualify to conduct business with municipalities

or government departments. This is because this system reduces human error, favouritism, and corruption (Manyoka & Manzira, 2013; Mpehle & Mudogwa, 2020). However, a study by Ntetha and Mostert (2011) revealed that in some municipalities, ICT systems are used only by officials and not for service delivery.

Challenges in accessing and using ICT for e-governance

Inequalities and exclusion persist in accessing and using e-government services. There is a need for improvement, as having access to technology devices does not equate to the ability to use technology or make online payments, submit applications, or make submissions. This is because the majority of people, especially those residing in rural communities, have no access to the Internet or wireless fidelity (Wi-Fi) to use e-government services (Maramura, Dambuza & Jaka, 2017). Apart from this, various scholarly papers alluded to the fact that ethical issues, limited government resources, limited training, accountability, and transparency issues contribute to ineffectiveness of the e-services and service delivery (Mawela, Ochara & Twinomurinzi, 2017; Mawelaa, Ocharab & Twinomurinzic, 2017; Sibanda & von Solms, 2019; Mkhonto, 2020; Thabang, Makhanya & Nel, 2022; Ncamphalala & Doorgapersad, 2022; Motadi, 2024; Ntando & Mofolo, 2024). Additionally, age, infrastructure, language barriers, and motivation affect the use of e-governance services (Nokele & Mukonza, 2021; Enwereji & Uwizeyimana, 2022). Technology innovation systems, such as AI systems, require trained personnel and advanced infrastructure to be effective, and the South African government lacks the budget for that (Murenzi & Olivier, 2017; Motadi, 2024). 80% of the papers agreed that South African municipalities lack essential skills and technology in using ICT; therefore, skills development investment is essential as limited skills contribute to limitations in implementing the e-government system (Mkhonto, 2020; Mkhonto, 2020; Galushi & Malatji, 2022). For example, rural infrastructure is deplorable, and there is an imbalance in infrastructure between rural and urban municipalities (Butana & Niyitunga, 2012; Mthuli, 2021). The provision of technology infrastructure and budgeting might improve e-government systems (Maepa et al., 2023). The municipalities must invest in infrastructure, which includes both soft and hard skills and expertise in technology and innovation (Maphangwa & van der Waldt, 2023).

Despite the infrastructure issues, a few papers reported that socio-economic factors such as unemployment, poverty, illiteracy, and inequalities are barriers to the effective use of governance systems (Shava & Vyas-Doogapersad, 2021). For example, the levels of awareness and utilisation of available online services among citizens were very low. The main constraints were related to a lack of education and low income (Murenzi, 2016). A digitally skilled workforce is imperative and critical for improved service delivery and productivity in governance (Mbatha, 2015). For example, there are situations in which officials do not understand record management through e-services, which hinders productivity (Kgomoewana, Makgahlela & Molaudzi, 2024). Such issues lead officials to rely on traditional methods, which slow productivity and are prone to human error.

Conclusions and recommendations

Arguably, the use of e-governance systems for service delivery has both challenges and benefits. The most cited benefits include the effectiveness of information sharing and prompt communication, without having to visit municipalities. However, the rural communities experience internet connection issues, which serve as a barrier to e-governance services. It is important to ensure inclusivity and full access to e-services without excluding some people. This paper shows that to ensure effective service delivery through digital governance, it is important to invest in ICT infrastructure and to capacitate municipal officials in the use of digital municipal governance tools to improve accountability and transparency. One limitation this paper identified is the scarcity of papers that qualitatively and quantitatively assess the effectiveness of DPSA and other municipal policies in digital municipal governance. A robust policy framework to direct and facilitate the use of e-government services is important to ensure transparency and accountability, and it must also ensure public participation.

There is still a lot for the government to do to improve its e-government services and enhance service delivery. More empirical studies are needed in rural areas to examine the use of e-government services and systems, with attention to both citizens and government officials. Moreover, preliminary research on policy frameworks for the effectiveness of ICT tools for digital governance across rural municipalities in South Africa is still needed.

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