Enhancing service delivery through digital transformation in the public sector in South Africa

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Abstract

Purpose – This study aims to explore how service delivery can be enhanced through digital transformation in the public sector in South Africa.

Design/methodology/approach – This case study used a qualitative research approach to obtain data through semi-structured interviews. The units of analysis were made up of individual professionals limited to purposive sampling to select chief information officers, investigators and administrative officers from national government departments and state-owned enterprises. The collected data from 12 participants was thematically analysed. The findings revealed that the government lacks legislation and strategy for digital transformation, leading to inconsistent implementation of digital transformation that enhances service delivery in the public sector of South Africa.

Findings – The findings revealed that the government lacks legislation and strategy for digital transformation, leading to inconsistent implementation of digital transformation that enhances service delivery in the public sector of South Africa.

Research limitations/implications – The study was limited to the public sector of South Africa; however, its recommendations are applicable to all organisations that need to provide their services using digital transformation.

Practical implications – Practically, the implications of this study will serve as a resourceful benchmark for the public sector and other organisations.

Social implications – Socially, the implications of this study ensure proper implementation of its recommendations to enhance service delivery in the public sector and other organisations.

Originality/value – Regarding the value that this study brings, it proposes an amendment of the current legislative framework in favour of one that covers digital transformation, which has become dominant in today's enhanced provision of service delivery.

Keywords Digital transformation, Digital services, IT services, Information literacy, South Africa, Public sector

Paper type Research paper

Introduction and background

The emergence of digital transformation has reinvented how and where employees perform their work while also reshaping how citizens receive government services. Kitsios *et al.*

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(2023) allude that digital transformation in industries beyond the government has shifted citizens' expectations of public administration bodies' ability to provide quality digital services. Cognisant of the activities aligned to digital connectedness, the citizens, just like the public servants need convenience to interact with the government. According to Aminah and Saksono (2021), the aim of digital transformation is to enhance public services and government administration. The other purpose of digital transformation is to prepare the government to face changes prompted by the advent of Industry 4.0 and Society 5.0 (Aminah and Saksono, 2021). Despite many definitions of digital transformation, this study adopts one stating that digital transformation in the public sector means new ways of collaboration with stakeholders, building new frameworks for service delivery and creating new forms of relationships (European Commission, 2017). Bousdekis and Kardaras (2020) highlight that in many countries, government services depend on legacy information and communications technology (ICT), isolated storage silos and paper-based processes, delaying them from digital transformation and electronic government services. The provision of public services is a critical function that bridges the gap between government and citizens. Ismail *et al.* (2017) predict that the organisations that are unable to adapt to the digital world will fall victim to "digital Darwinism", where incumbents may disappear and only the most adaptable enterprises responsive to technological trends will survive to remain on the competitive landscape. van Dyk and van Belle (2019) aver that many industries have been facing a market shift over the past few years, driven by a better response to customer demand, which has forced enterprises to undertake digital transformation projects or be left behind. This is informed by the fact that citizens expect a public service identically responsive to the services provided by the private sector (Mittal, 2020). The government is not in competition with any other sector but rather provides services to its citizens. Fehér and Szabó (2018) contend that the government has dissimilar motivation to the private sector for the implementation of digital transformation, based on the demand for internal efficiency and the fulfilment of customer needs and expectations. Peters *et al.* (2018) suggest that the performance of government is measured in three blocks:

(1) financial indicators;

(2) customer satisfaction; and

(3) the level of innovation and competence of employees involved in the provision of services.

Continentally, Shahoodh *et al.* (2020) indicate that Iraq in Asia has successfully implemented digital government services, such as online car registration and passport applications, among others. Such services can be attained when the government is well-equipped with the necessary technology and is not subject to boundaries or time limits. Fehér and Szabó (2018) proffer that the increasing expectations of citizens for direct participation and transparency in public services influence the organisations concerned to innovate, change organisational planning and increase agility. More so, Mergel *et al.* (2019) posit that applying digital transformation approaches outside the public sector is changing citizens' expectations of governments' ability to deliver high-value and real-time digital services. Peretz-Andersson *et al.* (2021) postulate that the internet era of the past two decades has made information sharing between individuals and organisations across nations possible. According to Oxford Insights (2019), Singapore is considered more AI-affluent, while Canada, Australia and New Zealand fall within the top 20 nations. This can be attributed to the fact that these countries possess strong economies, innovative capabilities and good governance. Mittal (2020) argues that no country in Africa could place itself in the list of the

top 20 regarding digital services because many of them have inferior economies. This is exacerbated by the fact that African countries lag in the realm of digital or information literacies and digital transformation infrastructure due to the digital divide. However, Mimbi and Bankole (2016) suggest that ICT has efficiently transformed the public values of Africa. Digital services erode analogue public administration, supplanting it with more efficient and effective services of exceptional quality that are more customer-centric.

The acceleration of digital transformation for improved digital services in the public sector must be spearheaded by digitally literate public servants. This is because digital transformation and digitalisation cannot be the drivers of change on their own but require interaction with other factors such as work practices and organisational factors (Mushore and Kyobe, 2019). There should be a well-coordinated effort that includes government, employees, citizens and technology. The Organisation for Economic Cooperation and Development (OECD) Digital Economy Outlook (2017) states that the main drivers of digital transformation are digitalisation and universal connectivity, with these being supplemented by an expanding ecosystem of interconnected digital technologies and applications. This study argues that, despite pervasive access to ICT and the internet, citizens and civil servants in South Africa are not enjoying the benefits of digital transformation and digital government services. This study further argues that this can be attributed to minimal implementation or lack of digital transformation and policy framework which affect the provision of digital services in the public sector of South Africa.

Conceptual framework

A conceptual framework is a researcher's understanding of how the research problem will best be explored, the specific direction the researcher will have to take and the relationship between the different variables in the study (Grant and Osanloo, 2014). The current study relied on three of the six constructs of digital transformation developed by BCG:

(1) *Craft a clear, integrated strategy*: To improve the chances of success in a digital transformation, start with a strategy and a set of goals that define success for the organisation and outline how to get there.

(2) *Monitor and measure the transformation progress*: When it comes to increasing the odds of success in digital transformations, organisations that track progress against clear, quantifiable transformation goals from start to finish have the advantage.

(3) *Create a business-led tech and data platform*: In a digital transformation, technology upgrades should aim to create a modular, flexible and interoperable technology and data platform that is aligned with business needs.

Problem statement

Mobile infiltration throughout Africa – often thought of as the least digitally populated continent – has reached 70% of its one billion inhabitants (van Dyk and van Belle, 2019). However, amid various internet service providers, such as Telkom, Cell C, Vodacom, MTN and others specialising in fibre connection, the public sector of South Africa is holding onto the traditional public administration where the use of technology is in the back seat. Most public services require citizens to be present at a government building to be served. If such buildings are not accessible due to civil unrest, pandemics or other life-threatening situations, the citizens should wait for the day the government department reopens. The existence of the internet has not led government departments to fully adopt ways of providing services technologically. This has created a situation in which both the government and citizens have

been left behind with respect to efficiently accessing and providing digital services. This is evident when citizens visit government departments for services. Visiting government offices is not cost-effective, and, moreover, when employees cannot be at their desks due to mitigation of the spread of COVID-19, service delivery is further delayed. Additionally, the employees trying to help the visiting citizens go back and forth in search of information because they operate manually – hence the purpose of this study – and, as a result, the provision of services becomes slow. Therefore, this study is influenced by the fact that the public sector provides slow service to the public because it has not implemented digital transformation to provide digital government services to the benefit of civil servants and the public.

Purpose and objectives

The purpose of this study was to explore how service delivery can be enhanced through digital transformation in the public sector of South Africa. The specific objectives of this study are to:

- analyse policy and legislative framework on digital transformation in South Africa;
- determine services that have been digitally transformed in South Africa; and
- determine platforms used for digital transformation in South Africa.

Research questions

RQ1. What are the policy and legislative framework on digital transformation in South Africa?

RQ2. What are the services that have been digitally transformed in South Africa?

RQ3. Which platforms are used for digital transformation in South Africa?

Literature review

Policy and legislative framework on digital transformation in South Africa

Legislative framework refers to the framework of legislation and policy guidelines prescribing the adoption and implementation of performance management systems (Schofield and Abrahams, 2015). Governments must create an enabling environment through policies and regulations that promote digital transformation (Union, 2020). For instance, South Africa has developed the Electronic Communication Transaction Act (ECTA) of 2002 to regulate the use of electronic communication and online transactions. Schofield and Abrahams (2015) suggest that this legislation has potential for applicable digital transformation; however, some provisions of this legislation are not specific to computing activities or other elements of digital transformation. ECTA 2002 is more aligned with the Third Industrial Revolution. To improve the ECTA 2002, Mohlameane and Ruxwana (2020) aver that this legislation requires some provisions aligned with international best practices. Technology and society are evolving at a faster rate than businesses can naturally adapt, and digital transformation is one facet of this evolution (Gulati and Reaiche, 2020). Union (2020) provides that policymakers and regulators must keep pace with technological advances, address new regulatory frontiers and establish the foundation for digital transformation to reach its full potential. This is where the government or its entities should use digital transformation as manifested by emerging technologies such as blockchain, cloud computing, artificial intelligence and the Internet of Things, among others.

The Union (2020) postulates that public policy, legal and regulatory frameworks must be current and adaptable to support digital transformation across sectors. However, as stated by Marwala (2020), South Africa lacks a legislative framework that supports digital transformation. Shibambu (2019) reveals that in the absence of legislation for digital transformation, one must read various pieces of legislation to form a reasonable foundation for a required IT project. The lack of supportive legislation is one of the major obstacles to adapting and responding to digital transformation. According to Marwala (2020), in 2019, South Africa developed a Presidential 4IR Commission to assist the government in taking advantage of the opportunities presented by the digital industrial revolution. To date, the Commission has yet to yield results that support digital transformation.

Digitally transformed services

Digital transformation is the use of modern digital technology to transform various sectors of the economy, business models, managerial paradigms, economic relations and social practices (Ershova *et al.*, 2018). It is the process of shifting to digital technologies to carry out business processes such as culture and customer experience to meet changing business and market demands. Modernisation of public service management that is successful ensures the conception of a positive attitude towards public policy, promotes the development of a culture of interaction and encourages government agencies to reduce expenditure (Mendybayev and Burbayeva, 2021). This is because public services are one of the most common forms of interaction between citizens and the state apparatus. According to ElMassah and Mohieldin (2020), the global evolution of ICT necessitates governments and their institutions maintaining detailed knowledge of their government systems to prioritise the accelerating impact of digital transformation across societies. According to these scholars, this would enhance the government's performance in providing user-friendly service delivery. Lee-Geiller and Lee (2019) suggest that digital transformation in the public sector is electronic-service (e-service), which provides services through electronically mediated devices. Mergel *et al.* (2019) accentuate that global governments are changing their mode of operation in response to changing expectations prompted by supranational agreements to improve public service delivery, be more efficient and effective in their designs and achieve objectives such as increased transparency, interoperability or citizen satisfaction. The South African Revenue Service (SARS) has responded to the digital transformation by launching e-services to ensure that taxpayers file their tax returns online. In addition, SARS can run an auto-filing system using artificial intelligence. The Department of Home Affairs is also on track to implement digital transformation in several services, including passport and identity document applications. To that end, the government has gradually implemented a variety of ICT platforms to provide public services in the 20-first century (Gebrihet and Pillay, 2021). Marwala (2020) argues that South Africa is playing a catch-up game in the aspect of implementing new technologies, as evidenced by the hesitant adoption of 4IR. This is evident on the long queues of public citizens waiting outside government buildings for government services. Furthermore, nearly 30 years after the advent of democracy, the digital divide persists in South Africa, with some people in rural areas struggling with connectivity. According to Chetty *et al.* (2018), the digital divide in low/middle-income communities is characterised by limited and costly infrastructure as well as limited digital literacy. The challenge of high prices is exacerbated by inconsistency in electricity supply and limited availability of ICT facilities. Significant investments will be required to target limited mobile broadband services, expand the use and allocation of mobile spectrum, costly devices and weakly secured service provider infrastructure to address the challenges of digital access in low/middle-income households (Chetty *et al.*, 2018).

Evans (2018) adds that ICT in the public sector is deployed to enhance organisational efficiency and effectiveness as well as to reduce bureaucracy. It is informed by the fact that manual operations have seen their services grow outdated amid nascent technologies. Marwala (2020) indicates that South Africa spends more time on conceptualisation and too little on implementation. South Africa should learn from developed countries and the private sector to adopt digital transformation on a full scale. Bousdekis and Kardaras (2020) lament that low digital maturity in the public sector contributes to the realisation of time-consuming, ineffective, and even unreliable processes within public institutions. However, Evans (2018) opines that ICT infrastructure is a prerequisite for digital government. This scholar adds that the efficiency of ICT in transforming public values in more than three-quarters of African countries was below 50%. Marwala (2020) points out that in the benchmarking framework of the World Economic Forum that is used to assess a country's readiness for digital transformation, South Africa is in the nascent quadrant, which indicates that it is in the infant stage of development. Digital transformation is associated with a few crucial structural changes, including organisational structure, organisational culture, leadership and employee roles and skills (Vial, 2019). Mergel *et al.* (2019) concur that ICT alone is not a means to support change but rather that ICT processes, people, policies and leadership need to be fundamentally changed to accomplish digital transformation in the public sector. Bousdekis and Kardaras (2020) agree that technology *per se* does not change organisations; rather, it is the way in which organisations work and how they use technologies that change work practices. Bughin *et al.* (2021) indicate that one other reason for not adopting a digital transformation strategy is that existing strategies and ways of conducting business have produced large returns thus far, and a change may be perceived as risky. Simply put, "do not fix what is not broken". Mergel *et al.* (2019) accentuate that public sector services struggle with changing their mode of operation to improve service delivery and operations' design, as well as to achieve increased candour, interoperability and citizen satisfaction. Bousdekis and Kardaras (2020) acknowledge that the role of technology differs and relies on the organisation and what the individuals within the organisation make of it. Digital transformation redesigns and reengineers government services from the ground up to fulfil changing user requirements (Mergel *et al.* (2019)). Ahveninen (2016) holds that one other hindrance of digital transformation in the public sector is to achieve integration in the various information systems that are in place and caused by the fragmentation of different departments and functions. Bousdekis and Kardaras (2020) suggest that the crucial aspect of digital transformation in the public sector is clear ownership of information systems. Kane *et al.* (2015) caution that digital transformation is not about implementing cutting-edge digital technologies but more about aligning enterprises' culture and people with digital strategy. If the government of South Africa is prepared to provide digital services efficiently, digital transformation infrastructure needs to be set up.

Research methodology

This study was guided by the interpretivist philosophy where a qualitative research approach was adopted to understand how service delivery can be enhanced through digital transformation in the public sector of South Africa. Creswell and Creswell (2018) posit that interpretivism is suitable where views of participants are investigated. On the other hand, Haradhan (2018) and Creswell and Creswell (2018) assert that qualitative research approach is a form of social interaction that emphasises the way people interpret and make sense of their experiences to comprehend the social reality of individual. The purpose of selecting this approach was to interact with the participants to have a thorough understanding of how service delivery can be enhanced through digital transformation in the public sector of South

Africa. The researchers gathered data through semi-structured interviews. In this study, the purposive sampling method was used to select the subjects that comprised highly experienced ICT officers, investigators and administrative officers from different government departments with over eight years of experience in their respective positions. Creswell and Creswell (2018) and Ngulube (2020) contend that non-probability (non-random or purposeful) sampling is predominantly associated with qualitative research, and the size of typical samples in qualitative research methods is between three and 60 participants. Komba and Ngulube (2012) highlight that a qualitative study does not necessarily use a larger population but still realises considerable data for use in the study. Furthermore, Baker and Edwards (2012) point out that a sample of 12–60 individuals is a guideline for the qualitative study because this number is well within a minimum informational redundancy to enable the researchers to draw inferences. According to Sandelowski (1986), the sample size of collecting data through interviews must not be predetermined as the nature of data and where the data dictate the number of participants. In line with Baker and Edwards (2012), the target sample was open-ended, and the informational redundancy was reached after interviewing 12 participants. In these interviews, the researcher paid attention to the voice of each participant. The semi-structured interviews were conducted on a suitable virtual meeting software of a participant; MS Teams and Zoom. The interviews lasted less than 45 min and were all recorded for transcription. The researcher coded the data which was the first step in the data analysis. According to Saldaña and Omasta (2018), coding and categorising data helped the researchers to create inventories of data to acquire comprehensive and thorough insights into the data. Furthermore, the data gathered were thematically analysed (Clarke and Braun, 2013). Considering that text and image data were dense and rich, not all the information in a qualitative study were used (Creswell and Creswell, 2018). Therefore, similar responses obtained from the interviews were merged to minimise duplication.

Following the ethical guidelines when conducting a study, all the participants were anonymised as Participant A to Z as indicated in Table 1. This study upholds ethical clearance from the Science Research Ethics Review Committee of the Department of Information Science at the University of South Africa (UNISA) (UNISA, 2012). Ethics Clearance was granted under reference number 90401123_CREC_CHS_2022.

Table 1. Coded participants and roles

Name of participant	Role
Participant A	CIO
Participant B	CIO
Participant C	CIO
Participant D	CIO
Participant E	Administrative officer
Participant F	CIO
Participant G	CIO
Participant H	Investigator/analyst
Participant I	CIO
Participant J	CIO
Participant K	CIO
Participant L	CIO

Source: Table by authors

Discussion of interview findings

The findings were presented according to the themes that emanated from the objectives of this study.

Policy and legislative framework for digital transformation

The first objective discussed the policy and legislative framework for digital transformation to identify the policy development made since the emerging technologies. A policy framework should contain the guiding principles upon which the government departments and public enterprises should depend on. The researchers asked the participants about the existing policy and legislative framework for digital transformation in the public sector. According to the findings, there is no existing policy or strategy for digital transformation in the public sector. This was confirmed by the majority of participants. Participant C went further explain that without policy, it is impossible to implement simple digital transformation services such as cloud computing. This finding agrees with Marwala's (2020) explanation that South Africa lacks a supporting legislative framework for digital transformation. Guided by the conceptual framework, it is significant to craft a clear, integrated strategy to improve the chances of success in a digital transformation. Participant A added that they are reviewing the current policy to the point where a virtual private network connection has been added to help employees work remotely. However, this policy will only be used in their specific department as a response to post-COVID disruptions. According to this participant, the policy has been reviewed to allow other officials to use digital signatures. This finding is in line with the Union's (2020) view that the public policy, legal and regulatory framework must be current and adaptable to support digital transformation across sectors. Following the existing ECTA, which has potential but could not satisfy digital transformation (Schofield and Abrahams, 2015), Marwala (2020) points out that the government has developed a presidential commission to help address the opportunities presented by the emerging digital industrial revolution. It emerged that the lack of policy influences reliance on analogue practices, which exacerbates fear of using emerging technology without regulatory support. Some technological transformations are merely in compliance with government programmes. Participant I concurred that there is no policy and that they are working on government initiatives, Vision 2030 and 4IR for compliance purposes. In the absence of a policy, some government departments have developed digital transformation roadmap. This was confirmed by Participant L, who confirmed that, "we might not have a digital transformation policy per se, but a digital transformation roadmap that guides us towards digital transformation". Participant K argued that the implementation of digital transformation should not be prioritised over policy; instead, the government should develop a five-year digital transformation plan as the foundation, which will force policies to be developed. It will be up to the right individuals to decide when to begin policy development and provide progress.

Digitally transformed services

The second objective focused on digitally transformed services in the public sector. The researcher asked the participants if they were aware of digital transformations and which ones had been implemented in the public sector. In line with the conceptual framework, the government should create a business-led technology and data platform. This assists to implement digital transformation, and technology upgrades for the benefit of flexible and interoperable technology and data platforms that are aligned with business needs. The study revealed that the participants were aware of digital transformation services and went on to explain that they were on social media platforms such as Facebook and X, to name a few, to

interact with the public. The participants also stated that social media personnel have been hired to respond to enquiries received via these channels. This finding is supported by Lee-Geiller and Lee's (2019) explanation that digital transformation is viewed through e-services, which necessitate services via electronically mediated devices (Lee-Geiller and Lee, 2019). The majority of participants admitted to using video conference software tools such as MS Teams, Zoom and Skype, among others, to improve remote working and communication. This response concurs with the view of Mergel *et al*. (2019), which posits that in response to the changing expectations prompted by supranational agreements, governments are changing their mode of operation to improve public service delivery, be more efficient and effective in their designs and achieve objectives such as increased transparency, interoperability or citizen satisfaction. However, Participant I stated that, even though few emerging technologies have been implemented, it is difficult to become fully digital because the old officials have a mindset that prevents transformation. For instance, Participant L explained that even at Home Affairs, not everything is digital; there are still many processes that are manually performed. Despite the indication that smaller are being steps taken towards enhancing digital transformation, this finding is supported by Gebrihet and Pillay's (2021) observation that the government has gradually implemented various ICT platforms to provide public services in the 20-first century.

According to the participants, digital transformation is new in government, and many officials possess limited knowledge of the involved technologies, which makes them unable to understand digital transformation properly. Marwala (2020) supports that the benchmarking framework of the World Economic Forum that is used to assess a country's readiness for digital transformation, South Africa, is in the nascent quadrant, which indicates that it is in the infant stage of development. The study established that the following constraints against digital transformation were mentioned: experience to implement, lack of budget, comfort with old practices, poor leadership, mindset, fear of letting go of the past, critics of digital transformation by the old people, downtime (power and network) and unwillingness to learn and decentralised ICT departments with different visions within one department. According to the findings of this study, crucial officials from ICT are not included in the strategic meetings of the departments. This was confirmed by Participant K, who expressed dissatisfaction in this regard, stating that:

> The expectation is that I develop policies for the systems implemented without my knowledge. Some of the systems are realised when there are queries from the auditors regarding expired licences.

This shows that ICT is not given attention like other units within the government departments. Regarding the budget, Participant L argued that:

> It is difficult to demonstrate that the budget is a constraint until we can show that we have obtained adequate value for money and have used taxpayer money efficiently. I do not see why I am struggling to have enough budget, while on the other hand, there is enough budget to pay exorbitantly for technology, some of which we should not be paying for because there are more cost-effective alternatives.

Conclusions and recommendations

The purpose of this study was to explore how service delivery can be enhanced through digital transformation in the public sector of South Africa. Even though some government departments and state-owned entities, such as SARS and Home Affairs, outperformed their counterparts, the public sector's progress was too slow. Their performance raised the question to figure out the progressive policies that these government institutions used. On the

other hand, it showed that each government institution is developing reactionary policies to the situation they faced. That is the reason there are inconsistencies in government departments where others are digitally progressive while others are not. This argument emanated from the inconsistencies caused by the government departments that have developed digital transformation roadmap to enhance to the digital transformation, for example, digital signature while other organisations use manual signature. Digital transformation roadmap is associated to the conceptual framework. More so, others seem compliant, but to appease the government's Vision 2030. In the presence of a legislative framework, inconsistencies towards responding to digital transformation would be minimal. The findings showed that the government does not have legislative or policy support that enhances digital transformation, however, it is aware of digital transformation services. The Chief Information Officers, administrative officers and investigators are positive that if the policy can be developed, it will give the users the courage to implement digital transformation and use it within the prescribed framework. The challenges associated with the lack of a regulatory framework discourage the full implementation and utilisation of digital transformation. Moreover, there is a plethora of hindrances in addition to the lack of a policy framework, such as poor leadership, negative mindset, fear of letting go of the past, criticism of digital transformation by the old people, downtime (power and network), unwillingness to learn and decentralised ICT departments with different visions within one department. Benchmarking from the SARS model, the government departments may find it appealing to invest in ICT. The Department of Home Affairs is on its way to becoming a modern government department, having begun to offer some services, such as passport and identity application services, online.

The government should deploy technology that enhances digital transformation in accordance with the services provided by each department. The use of video conferencing tools and other emerging technologies demonstrates that the government is heading in the right direction. However, rather than reacting to the situation, it is critical to plan ahead of time. Planning ahead of time helps the government mitigate challenges such as lack of experience, budget, comfort with old practices, poor leadership, mindset, fear of letting go of the past, unwillingness to learn and decentralised ICT departments with different visions within one department. It should also be noted that, while digital transformation has existed for some time, it is still relatively new in South Africa's public sector. As a result, training employees to embrace digital transformation is critical. In this case, it is also important to centralise digital transformation technologies so that those in charge can be held accountable. The following recommendations are based on the findings of this study:

- The government must develop a legislative policy framework to reduce inconsistencies of digital transformation technologies that are reflecting in various government departments.
- To address emerging technologies, the government must accelerate the development and completion of the presidential commission for 4IR.
- To learn about the quick wins of digital transformation, the government should consider benchmarking with organisations that have already implemented it, such as SARS.
- Given that some employees are resistant to change, the government must improve training, which is coordinated by the ICT and training and development departments.
- Adequate funding for digital transformation technologies (hardware and software) projects should be made available to the ICT department.

Finally, because this was an interpretivist study, it added value by allowing individuals to share their perspectives on enhancing digital transformation and improved services. To improve digital services, the government must consider enhancing the available digital transformation technologies. In theory, further research should be conducted to create a framework for digital transformation based on data collected through mixed-method research.

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