

THE CURRENT DIGITAL TRANSFORMATION LANDSCAPE OF THE STATE INFORMATION TECHNOLOGY AGENCY, SOUTH AFRICA

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Abstract

This study analyses the digital transformation of the State Information Technology Agency (SITA) in South Africa, highlighting persistent public sector challenges such as poor service delivery and overlapping mandates. It explores how technology can enhance services while reducing costs despite obstacles like a lack of technical expertise and unequal access to devices. The primary aim is to assess SITA's digital transformation, evaluate its readiness to provide and maintain digital government services and offer strategic recommendations to enhance these efforts. The study employs a qualitative research design involving semi-structured interviews with a sample of selected participants from the target population of nearly three thousand SITA employees. A review of relevant documents, such as strategic plans and progress reports, was also employed for this study. Thematic analysis is used to interpret data patterns. Findings indicate that while SITA has made significant progress in adopting advanced technologies like AI, IoT, and cloud computing, it still faces challenges such as legislative barriers and skills gaps. Effective stakeholder engagement and strategic alignment of resources are critical to the success of digital transformation. This study aids the South African public sector by providing insights and strategic recommendations to improve digital service delivery and operational efficiency. It informs policy and strategic decisions for other public sector entities undergoing similar digital transformation journeys.

Keywords: Digital Transformation; Digital Services; Digital Infrastructure; Public Sector; Digital Government; SITA, Digital Skills.

1. INTRODUCTION

The perception that the public sector in South Africa is widely disfavoured due to inadequate service delivery is supported by various studies highlighting systemic issues and challenges (Shimbabu 2023). The inefficiency in service delivery is often attributed to poor coordination, competition, and overlapping constitutional mandates, which have led to public discontent and protests (Mkhize and Reddy, 2024). Despite efforts to extend basic services post-1994, many South Africans still lack essential services like water, sanitation, and housing, exacerbating socioeconomic disparities and contributing to the economy's decline (Racheku and Kgobe, 2024). The high unemployment rate further compounds the issue, as a significant portion of the population relies on government services, which are often inefficient and ineffective, thereby widening the gap between the rich and the poor (Thusi et al., 2023).

Digital transformation has been proposed as a solution to enhance service delivery by improving decision-making, cutting costs, and streamlining operations, although challenges such as the digital divide and lack of technical expertise persist (Hofisi and Chigova, 2023). As the custodian of government ICT, SITA has outlined a comprehensive digital transformation strategy in its 2020-2024 Strategic Plan. This strategy focuses on key areas such as

infrastructure modernization, adopting Fourth Industrial Revolution (4IR) technologies, enhancing cybersecurity, developing digital skills, improving service delivery, and engaging stakeholders (SITA, 2020).

Modernising infrastructure and adopting Fourth Industrial Revolution (4IR) technologies are crucial steps for enhancing public sector service delivery. The integration of 4IR technologies, such as the Internet of Things (IoT) and artificial intelligence (AI), can significantly transform government functions, presenting both opportunities and risks that need to be managed effectively (Nel and Masilela, 2020).

For instance, in Nigeria, the adoption of innovative technologies has shown potential to improve service delivery, but it requires substantial investment in human and financial capital to maximize these opportunities (Temitope and Qwabe, 2023). Similarly, in South Africa, the adoption of 4IR platforms has been linked to more responsive and effective local government service delivery, although there are gaps that need to be addressed to fully integrate these technologies (Layton-Matthews and Landsberg, 2022).

Moreover, improving service delivery also involves continuous stakeholder engagement, as demonstrated by the Western Cape Education Department's efforts to align diverse interests and build strong relationships between government departments and citizens (Twum-Darko et al., 2023). This engagement is vital for addressing non-service delivery issues and ensuring effective implementation of strategic plans.

Open governance and multi-stakeholder collaboration can further facilitate innovation, transparency, and accountability, ultimately enhancing public service delivery and citizen participation (Nel and Masilela, 2020). Therefore, a comprehensive approach that includes infrastructure modernization, technology adoption, cybersecurity enhancement, digital skills development, and stakeholder engagement is essential for advancing public sector service delivery in the era of the 4IR. Thus, the problem for this study is to examine the current state of digital transformation at SITA and assess SITA's readiness to provide and maintain digital government services.

2. LITERATURE REVIEW

2.1 The Conceptual Framework

Figure 1, the conceptual framework for this study, developed through the literature reviewed and identified theoretical Diffusion of Innovations Theory and Resource-Based View frameworks. It outlines the essential components for successful transformation in an organisation like SITA. The ultimate goal is to integrate digital technologies into all areas of the organization, changing operations and delivering value to stakeholders. Key components include modernized legacy systems, skill development, stakeholder collaboration, organizational culture, and enhanced service delivery through digital means.

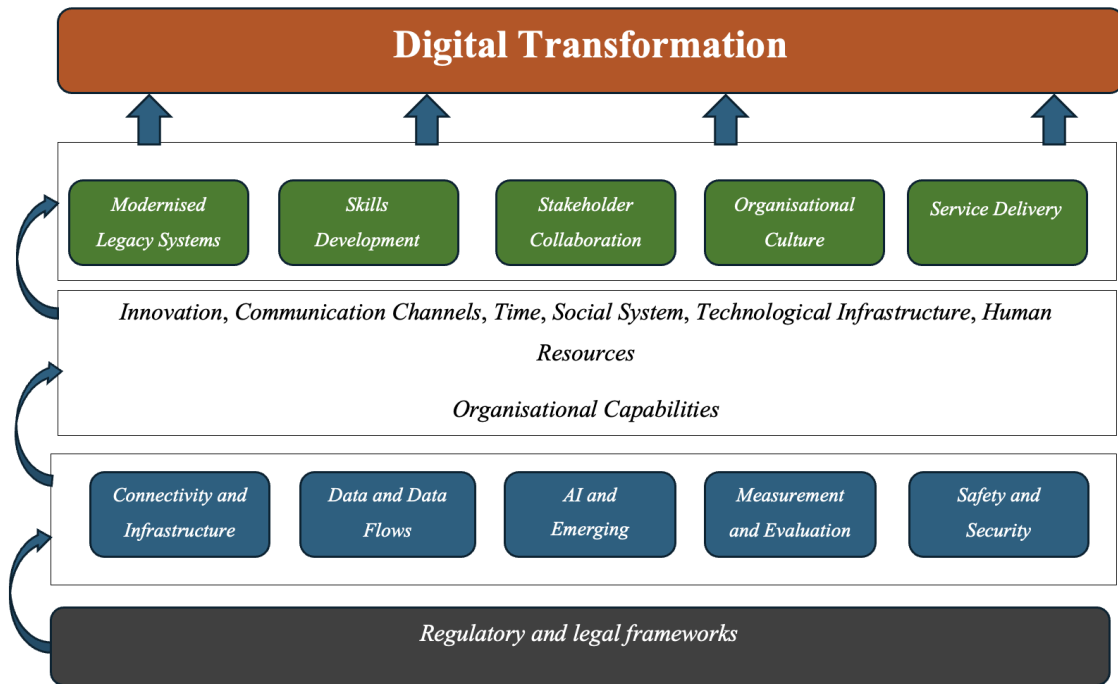


Figure 1: Conceptual frame for the study

Foundational elements include connectivity and infrastructure, effective data management, AI integration, continuous measurement and evaluation, and safety and security. Compliance with relevant laws and regulations is crucial for lawful, ethical, and aligned digital transformation efforts..

2.2 The Core Underpinnings of Digital Transformation

According to the OECD (2024), the core underpinnings of digital transformation require dedicated policy attention to ensure a trusted, sustainable, and inclusive digital future. This involves focusing on the following key areas as identified by the OECD (2024):

Connectivity and Infrastructure: To benefit from digital transformation, it is essential to provide accessible, affordable, and high-quality connectivity for all. Enhancing the resilience of digital technology value chains is also crucial (OECD, 2024).

Data and Data Flows: Data drives economic and social activity in the digital age, especially cross-border data flows. Enhancing access and use of data while protecting privacy and minimising policy fragmentation is necessary (OECD, 2024).

AI and Emerging Technologies: AI is transforming various sectors and poses challenges and opportunities. It is important to harness its benefits while ensuring AI systems' safety, security, robustness, transparency, and accountability. Emerging technologies like quantum computing and immersive technologies also require attention (OECD, 2024).

Safety and Security: Managing the digital security of interconnected products, services, and infrastructure is vital to prevent cyberattacks. Additionally, addressing issues such as cyberbullying, illegal and harmful content, and false information is crucial for protecting mental health and social cohesion (OECD, 2024).

Measurement: Building a robust, comprehensive, and comparable evidence base is essential for informed digital policymaking. The OECD's Going Digital Measurement Roadmap provides metrics, indicators, and visualisations to help track digital performance, AI trends, and broadband connectivity (OECD, 2024).

2.3 Overview of digital transformation in the public sector

Digital transformation in the public sector involves leveraging digital technologies to improve service delivery, governance, and economic development as it aims to enhance efficiency, foster innovation, and improve the quality of life for citizens (Shibambu, 2024). For instance, various European countries have adopted unique approaches to digital transformation. Denmark focuses on modernizing legacy systems and change management, while Estonia is recognized for its advancements in IT development and serves as a model for best practices in public sector digitalization (Răzvan-Andrei et al., 2024). Similarly, the COVID-19 pandemic has underscored the necessity of digital transformation, compelling governments to ensure the continuous availability of public services through digital means and highlighting the importance of reliable information dissemination (Pang and Anshari, 2024). In the context of public administration, digital transformation involves addressing challenges such as the digital divide and the need for technological skill development among government employees. Innovation and cross-sector collaboration are pivotal in designing effective solutions that enhance public performance and services (Nurfadilah and Haliah, 2024). Furthermore, the transformation process includes overcoming obstacles like resistance to change and aligning technology with societal values and needs, as seen in the efforts of countries like Sweden and Latvia (Răzvan-Andrei et al., 2024). The practical significance of these efforts is evident in the development of universal models for effective digitalization, which can be applied to improve the efficiency of public administration systems and socio-economic activities (Storozhenko et al., 2024).

Digital transformation in the South African public sector is a multifaceted process aimed at enhancing efficiency, accountability, and service delivery through the adoption of digital technologies. Despite the potential benefits, several challenges impede this transformation. Key issues include low digital literacy, inadequate digital infrastructure, and unreliable power supply, which hinder the effective implementation of ICT projects (Shibambu, 2024). Additionally, the lack of trust in IT systems, insufficient ICT infrastructure, and concerns about system security further complicate the adoption of digital systems by government employees (Ngomane et al., 2024).

Local governments, in particular, face obstacles such as the digital divide, lack of technical expertise, and resource constraints, which must be addressed to leverage digital transformation for improved service delivery (Hofisi and Chigova, 2023). The role of efficiency and

innovation is crucial in this transformation, as they significantly impact public performance and services. However, the digital divide and lack of technological skills among bureaucrats remain significant challenges (Nurfadilah and Haliah, 2024). Internationally, successful digital transformation initiatives highlight the importance of factors such as technology adoption, skills development, innovation promotion, and cross-sector collaboration (Lips, 2024).

In South Africa, the integration of senior ICT managers into executive committees could facilitate more effective ICT project implementation, thereby supporting digital transformation efforts (Shibambu, 2024). To achieve the desired outcomes, it is essential for the South African public sector to address these challenges comprehensively, fostering an environment that supports digital literacy, robust infrastructure, and innovative practices. This holistic approach can enable the public sector to meet its constitutional obligations and policy goals, ultimately delivering efficient and equitable services to all citizens (Hofisi and Chigova, 2023; Nurfadilah and Haliah, 2024; Thusi et al., 2023).

2.4 Integration of digital technologies in service delivery

Integrating digital technologies into service delivery models is crucial for modernizing public sector operations, as it enhances efficiency, responsiveness, and overall service quality. The digital revolution has introduced various innovations, such as e-government systems, mobile applications, and online platforms, which streamline administrative processes and improve public access to services (Sopamena, 2024). In Ukraine, the adoption of digitalization in public administration communication has been pivotal in ensuring the accessibility and convenience of services, leveraging technologies like cloud computing, artificial intelligence, the Internet of Things, and big data analytics to modernize public services and enhance citizen experiences (Dorofyeyev and дубинка, 2024).

Citizens perceive significant public value from digital services, recognizing individual benefits and broader societal impacts, such as increased transparency, accountability, and equity (Luna et al., 2024). The experience of developed countries, including those in the European Union, demonstrates that digital platforms and services can systematise and optimise service delivery processes, reducing service provision times and improving quality (Yesimov, 2024).

However, challenges such as the digital divide and lack of technological skills among public servants persist, necessitating efforts in technology skills development and cross-sector collaboration to design effective solutions (Nurfadilah and Haliah, 2024). By addressing these challenges and leveraging digital technologies, the public sector can significantly enhance its performance and service delivery, creating substantial added value for society and positioning itself for long-term success in the digital economy (Sopamena, 2024; Dorofyeyev and дубинка, 2024, Yesimov, 2024; Nurfadilah and Haliah, 2024).

2.5 Challenges facing digital transformation initiatives

One significant challenge is the lag in digital innovation and low adoption rates compared to the private sector, often due to limited IT skills and outdated processes, which undermine public trust and the ability to meet citizens' needs effectively (Daßler et al., 2024). In South Africa,

for instance, the transformation is hampered by low digital literacy, poor digital infrastructure, and unreliable power supply, with executives often failing to drive ICT initiatives through a cohesive strategy (Shibambu, 2024).

European countries like Denmark and Romania also face challenges such as modernizing legacy systems and building trust in digital institutions, respectively, while ensuring compliance with regulations like GDPR (Corboş et al., 2024). In Egypt, employee behaviour significantly impacts the pace of digital transformation, where factors such as education, skills, work culture, and leadership play crucial roles. Negative employee attitudes can become obstacles, delaying plans and harming system integrity (Elsafty and Yehia, 2023).

Additionally, the digital divide and lack of technological skills among bureaucrats are prevalent issues, as seen in various government agencies (Shibambu, 2024). The need for innovation and cross-sector collaboration is critical to designing effective solutions, yet these efforts are often stymied by the existing digital divide and insufficient technological skills (Nurfadilah and Haliah, 2024). Collectively, these challenges highlight the complexity of digital transformation in the public sector, necessitating a multifaceted approach that includes skill development, infrastructure improvement, regulatory compliance, and fostering a culture of innovation and collaboration across sectors.

The public sector also struggles with retaining skilled employees due to competition with the private sector, leading to high turnover rates and vacant positions that hinder service delivery (Thusi and Chauke, 2023). The volatile, uncertain, complex, and ambiguous (VUCA) environment further complicates service delivery, necessitating strategic planning and project management proficiency among government employees (Lance, 2022). Information and Communication Technology (ICT) innovations offer potential improvements in e-government implementation and digital transformation, but issues like ICT skills shortages and inadequate infrastructure remain significant barriers (Maluleka et al., 2023).

Additionally, the politicisation of public service delivery, where appointments are made based on political affiliations rather than merit, further undermines the efficiency and professionalism of the public sector (Mbandlwa, 2023). Collectively, these factors contribute to the extensive lines of citizens seeking services at government buildings, indicating the systemic difficulties in providing widespread and efficient public services in South Africa.

2.6 Impact of digital transformation initiatives

The adoption of digital technologies has enabled government agencies to enhance their efficiency, responsiveness, and innovation, significantly improving public performance and services (Nurfadilah and Haliah, 2024). For instance, in New Zealand, empirical studies have identified ten success factors that contribute to effective digital transformation, highlighting the importance of technology in these processes (Lips, 2024).

In South Africa, digital transformation has promoted effectiveness, efficiency, accountability, and transparency in public services, although challenges such as low digital literacy and poor digital infrastructure persist (Shibambu, 2024). Similarly, in Egypt, digital transformation

efforts have been supported by political leaders, focusing on digitizing government activities to deliver better customer experiences and optimize processes, though employee behaviour and organizational culture play crucial roles in the success of these initiatives (Nurfadilah and Haliah, 2024).

Furthermore, the Finnish water sector case study underscores the importance of inter-organisational collaboration in achieving collective ambidexterity, which is essential for realizing the full benefits of digital transformation initiatives (Hietala et al., 2023). Overall, while digital transformation in the public sector faces challenges such as the digital divide, technological skills gaps, and infrastructural limitations, the collaborative efforts across sectors and the strategic involvement of senior management can significantly enhance the outcomes of these initiatives, leading to long-term success and added value for society (Shibambu, 2023; Nurfadilah and Haliah, 2024;).

2.7 Emerging technologies and future directions

Emerging technologies such as AI, IoT, blockchain, and cloud computing are indeed pivotal in driving digital transformation in the public sector, fostering innovation, efficiency, and enhanced service delivery (Marwala, 2020). AI and machine learning, integrated within cloud frameworks, are unlocking new avenues of innovation and optimization, which are crucial for public sector applications that require data-driven decision-making and predictive analytics (Rehan, 2024).

The Internet of Things (IoT) is another transformative technology, particularly when combined with edge computing, which addresses latency concerns and enhances real-time data processing capabilities, thereby improving public sector responsiveness and service delivery (Rehan, 2024). Blockchain technology, with its inherent transparency and security features, is revolutionizing public sector operations by ensuring data integrity and reducing fraud, which is essential for maintaining public trust and efficient governance (Paul et al., 2024). Cloud computing, through its virtualization and containerization capabilities, offers scalable and flexible IT solutions that reduce administrative overhead and enable the seamless integration of various digital services, thus supporting the public sector's need for efficient resource management and deployment (Rehan, 2024).

Furthermore, the emergence of public-private digital ecosystems and platforms is fostering collaborative innovation, which is critical for addressing complex societal challenges and achieving sustainable development goals (Kaivo-oja et al., 2022). The public sector's adoption of these technologies is also driven by the need for context-awareness, flexibility, convenience, transparency, and speed in service delivery, as highlighted by various digital transformation projects (Boateng and Pephrah-Yeboah, 2022). As digital transformation continues to evolve, future research and policy directions will need to focus on enhancing security measures, addressing regulatory challenges, and leveraging these technologies to create inclusive, anticipatory, and experimental government frameworks that can adapt to the dynamic digital landscape (Kaivo-oja et al., 2022; Boateng and Pephrah-Yeboah, 2022).

2.8 Stakeholder awareness and engagement

Stakeholder engagement is indeed crucial for the success of digital transformation initiatives in the public sector, as it ensures that the diverse needs and perspectives of all involved parties are considered and addressed. Effective stakeholder engagement involves various forms of interaction, including informing, consulting, involving, collaborating, and supporting stakeholders, which helps in building credibility, relevance, and legitimacy of the transformation efforts (Bammer, 2024). The lack of a unified definition and process for stakeholder engagement can pose challenges, but recognizing its pivotal role beyond customer-centric approaches can help align disparate perspectives and contribute to organizational success (Fready, and Ferm, 2024). Generally, stakeholder engagement is essential for improving the authority of decisions and ensuring collective goal achievement, which is equally applicable to digital transformation initiatives in the public sector (Sourgens and Sempertegui, 2023). Furthermore, stakeholder engagement acts as a catalyst for sustainable development, emphasizing the importance of diverse participation, objective alignment, and an all-encompassing approach to sustainability, which includes environmental, social, and economic dimensions (Singha, 2024). Thus, by fostering partnerships, implementing effective policies, leveraging technological advancements, and ensuring ongoing monitoring, public sector digital transformation initiatives can navigate emerging challenges and capitalize on opportunities such as inclusive innovation and policy influence. Therefore, effective stakeholder management involves strategic framing and alignment mechanisms to harmonize differing interpretations of the digital transformation process (Hoblos et al., 2023)

2.9 Regulatory and legal frameworks

The digital transformation in the public sector necessitates robust regulatory and legal frameworks to ensure effective governance, data protection, cybersecurity, and the ethical use of emerging technologies. In the telecommunications industry, legal frameworks are crucial for assessing risk preparedness and ensuring the resilience of digital infrastructure, as evidenced by the case study of Safaricom in Kenya, which highlights the importance of aligning cybersecurity policies with regulatory requirements to mitigate compliance concerns (Kamau and Musya, 2024).

Furthermore, the implementation of digital technologies such as IoT, Blockchain, and Big Data Analytics in sustainable supply chains underscores the moderating role of legal frameworks in enhancing performance and ensuring compliance with regulatory standards (Shatta, 2024). Vietnam's accelerated digital transformation has also highlighted the critical need for regulatory reform in areas like data protection, e-commerce, and digital payments, emphasizing the necessity of a unified legal framework, enhanced enforcement mechanisms, and increased public awareness to foster economic development and innovation (Kim, 2023). Additionally, the transformation of the public sector towards increased efficiency and innovation is significantly impacted by the adoption of digital technology. This requires addressing challenges such as the digital divide and lack of technological skills among bureaucracy and promoting cross-sector collaboration to design effective solutions (Nurfadilah and Haliah, 2024). Therefore, establishing robust regulatory and legal frameworks is essential for the public

sector to navigate the digital transformation effectively, ensuring governance, data protection, cybersecurity, and ethical use of emerging technologies.

2.10 SITA's digital transformation journey and integration of digital technologies

SITA's transformation can be gleaned through the company's annual reports since its inception in 1999. The following journey has been compiled and summarised based on these annual reports:

2.10.1 Early Years (2001-2010)

During its early years, SITA focused on consolidating IT resources and establishing a stable infrastructure. From 2001 to 2003, key initiatives included the formation of the Government Information Technology Officers Council (GITOC) for standardized IT services across departments. Between 2004 and 2006, SITA launched the e-Government Portal to improve service accessibility. The period from 2007 to 2010 saw significant upgrades in network infrastructure, such as the Government Wide Area Network (GWAN), enhancing connectivity and cybersecurity (SITA 2001; SITA 2002, SITA 2003; SITA 2004; SITA, 2005; SITA, 2006; SITA, 2007; SITA, 2008; SITA, 2009; SITA, 2010).

2.10.2 Mid-Transformation Phase (2011-2015)

From 2011 to 2013, SITA integrated advanced technologies, exemplified by the development of the Integrated Financial Management System (IFMS) to streamline government financial processes. In 2014 and 2015, SITA introduced Cloud Services, providing scalable solutions for government departments. This phase focused on optimizing internal efficiencies and improving the customer experience through innovative digital services (SITA 2011; SITA 2012, SITA 2013; SITA 2014, 2015).

2.10.3 Accelerated Digital Transformation (2016-2020)

Between 2016 and 2018, SITA adopted cutting-edge technologies, launching the Government Private Cloud Ecosystem (GPCE) to support digital transformation. The period from 2019 to 2020 marked intensified efforts with the establishment of the Security Operations Centre (SOC) to protect government information systems. These years were characterized by significant advancements in cloud computing, AI, and IoT, driving comprehensive digital transformation across government operations (SITA 2016; SITA 2017, SITA 2018; SITA 2019, 2020).

2.10.4 Recent Developments (2021-2023)

In 2021 and 2022, SITA enhanced its digital capabilities with the deployment of the Software Defined Network (SDN) and expansion of e-services. SITA accelerated its transformation efforts, establishing innovation centres with partners like SoftwareAG, Huawei and Microsoft. These centres aimed to foster innovation and support SMMEs, focusing on cybersecurity, cloud infrastructure, and expanding digital services to improve public sector efficiency and service delivery (SITA, 2022; SITA, 2021; SITA, 2023).

2.10.5 Key Achievements

SITA achieved significant milestones in infrastructure modernization, including network upgrades and data centre enhancements. The establishment of the SOC strengthened cybersecurity. Numerous e-government initiatives were launched to improve citizen access to services. Strategic partnerships with industry leaders facilitated the establishment of innovation centres, driving technological advancements and supporting small and medium enterprises.

2.10.6 Future Outlook

According to SITA (2023), the agency aims to continue fostering innovation by investing in new technologies and solutions. Strengthening cybersecurity remains a priority to protect government data and systems. The agency also plans to expand digital services to increase availability and accessibility, collaborating with industry and academic partners to drive further digital transformation and develop cutting-edge solutions, ensuring efficient and effective service delivery to the South African government and its citizens.

Thus, this journey illustrates a strategic and progressive embrace of technology to transform public sector services, making them more efficient, accessible, and responsive to citizens' needs. SITA's efforts reflect a broader trend towards digitalization, which has become increasingly crucial in modern governance.

2.11 Challenges faced by SITA and their impact on digital transformation

2.11.1 Early Years (2001-2010)

During the early years, SITA faced numerous challenges primarily due to the consolidation of IT resources from various government departments. This period was marked by efforts to establish a unified IT infrastructure and manage the diverse needs of different departments. Key issues included procurement inefficiencies and the need for restructuring to eliminate unnecessary duplications and improve interoperability among government IT systems.

From 2005 to 2008, SITA encountered several operational challenges, including slow procurement processes and cumbersome decision-making. The introduction of the Information Technology Acquisition Centre (ITAC) was intended to streamline procurement, but it initially led to dissatisfaction due to inefficiencies. Additionally, leadership instability impacted employee morale and overall organizational stability.

2.11.2 Mid-Transformation Phase (2011-2015)

From 2011 to 2015, SITA grappled with modernizing legacy systems and implementing new technologies. Challenges included maintaining financial sustainability while investing in necessary infrastructure upgrades. SITA also faced difficulties in managing project delivery and addressing the skills gap within the organization.

The introduction of large-scale projects, such as the Integrated Financial Management System (IFMS), highlighted the need for better alignment of business strategies and resource allocation. Efforts to enhance service delivery through digital platforms were often hampered by outdated infrastructure and the slow pace of technology adoption. SITA's attempts to

implement open-source standards and other innovative solutions were met with mixed success, highlighting the need for a more strategic approach to digital transformation.

2.11.3 Accelerated Digital Transformation Phase (2016-2020)

The late 2010s saw significant efforts to accelerate digital transformation, yet SITA faced persistent issues such as cybersecurity threats, inadequate funding for infrastructure projects, and resistance to change among employees. Establishing the Security Operations Centre (SOC) and other cybersecurity measures were crucial steps, but the organization struggled with maintaining momentum and achieving desired outcomes due to internal and external barriers. During this phase, adopting cloud computing, AI, and IoT technologies became a priority, yet the challenges of integrating these technologies into existing systems remained significant.

2.11.4 Recent Years (2021-2023)

In recent years, SITA has focused on enhancing its digital capabilities and improving service delivery. However, it continues to face challenges related to project delivery, pricing, and effectively fulfilling its mandate. Issues such as suboptimal processes, resource gaps, and corporate governance deficiencies have been major obstacles. Leadership changes and the ongoing need for a robust strategic plan underscore the complexity of navigating the digital transformation landscape. Despite these challenges, SITA has made strides in deploying the Software Defined Network (SDN) and establishing innovation centres in partnership with industry leaders, aiming to foster innovation and support SMEs.

2.12 Immerging technologies implemented at SITA

SITA has embarked on integrating various emerging technologies to enhance its digital transformation efforts and improve service delivery across government departments. These technologies have been crucial in modernizing SITA's infrastructure and aligning with global ICT trends.

2.12.1 Cloud Computing

SITA has adopted cloud computing to provide scalable and flexible solutions for government departments. The Government Private Cloud Ecosystem (GPCE) was established to support digital transformation initiatives, offering a secure and efficient platform for hosting and managing government applications and data. This move has enabled better resource utilization, cost savings, and improved service delivery (SITA, 2021; SITA, 2020).

2.12.2 Artificial Intelligence

Artificial Intelligence (AI) has been integrated into various aspects of SITA's operations to enhance decision-making, automate routine tasks, and provide advanced data analytics. AI technologies have been employed to improve the efficiency of government services, streamline processes, and provide insights that drive better policy and operational decisions (SITA, 2022).

2.12.3 Internet of Things

The adoption of Internet of Things (IoT) technologies at SITA has enabled real-time data

collection and monitoring across different government sectors. IoT devices have been deployed to gather data on infrastructure, environmental conditions, and public services, providing actionable insights that help improve operational efficiency and service delivery (SITA, 2020)

2.12.4 Cybersecurity

Enhancing cybersecurity measures has been a critical focus for SITA. The establishment of the Security Operations Centre (SOC) has bolstered the agency's capability to monitor, detect, and respond to cyber threats in real-time. Advanced cybersecurity protocols and technologies have been implemented to protect government information systems from increasing cyber threats and vulnerabilities (SITA, 2020).

2.12.5 Software Defined Networking (SDN)

SITA has implemented Software Defined Networking (SDN) to automate and optimize its network infrastructure. SDN allows for more flexible and efficient network management, reducing the time and effort required for network configuration and maintenance. This technology has improved the reliability and performance of SITA's network services (SITA, 2020).

2.12.6 Blockchain

Blockchain technology is being explored for its potential to enhance transparency, security, and efficiency in government processes. SITA is investigating the use of blockchain for secure and immutable record-keeping, digital identity management, and secure transactions, which can significantly improve the integrity and trustworthiness of government operations (SITA, 2022)

2.12.7 Data Analytics and Big Data

The implementation of advanced data analytics and big data technologies has enabled SITA to harness the power of vast amounts of data generated by government activities. These technologies provide deep insights into operational performance, citizen needs, and policy impacts, facilitating data-driven decision-making and strategic planning (SITA, 2021).

2.13 SITA's stakeholder engagements on digital transformation.

SITA has recognized the importance of stakeholder engagement as a crucial element in driving its digital transformation initiatives. The agency has employed various strategies and platforms to ensure that the diverse needs and perspectives of all involved parties are considered and addressed.

2.13.1 Engaging Government Departments

SITA has prioritized the engagement of government departments through various forums and platforms. By understanding the specific needs and challenges of these departments, SITA has been able to tailor its digital solutions more effectively. Regular consultations and collaborative efforts have been essential in aligning digital transformation projects with the broader objectives of the South African government (SITA, 2020).

2.13.2 Collaborative Platforms and Forums

The agency has leveraged platforms such as GovTech to foster collaboration and innovation among stakeholders. GovTech serves as a strategic platform to strengthen partnerships with both public and private sector entities, encouraging the sharing of knowledge and expertise. This initiative has been instrumental in promoting ICT growth as a strategic resource for local economic development and bridging the digital divide (SITA, 2020)..

2.13.3 Customer-Centric Approaches

To improve service delivery and customer satisfaction, SITA has revised its customer centricity program. This initiative aims to eliminate internal inefficiencies and address critical areas of customer service challenges. By offering strategic and tactical consulting services, SITA has guided the deployment of appropriate business and digital solutions that meet the specific needs of its clients (Grossman, 2020).

2.13.4 Corporate Social Responsibility (CSR)

SITA's corporate social responsibility programs have also played a role in stakeholder engagement. These programs focus on empowering communities through ICT and contributing to socioeconomic development. Initiatives such as the ICT schools project and the National School of Software Engineering aim to bridge the digital divide and enhance digital literacy among young learners, thereby creating a skilled future workforce (ALT Advisory, 2019).

2.13.5 Engagement with the ICT Industry

SITA has maintained ongoing organized public engagements with the ICT industry to drive digital transformation through innovative technologies. These engagements are focused on integrating cutting-edge technologies into government operations, thus enhancing service delivery and operational efficiency. The agency's collaboration with industry stakeholders has facilitated the adoption of new technologies and the development of innovative solutions (Grossman, 2020).

2.13.6 Addressing Procurement and Transformation

SITA has worked towards digitizing part of its procurement processes to eliminate long turnaround times and enhance compliance. By focusing on economic transformation through ICT, the agency has implemented preferential procurement practices that support the development of small, medium, and micro enterprises (SMMEs). These efforts are aimed at fostering economic empowerment and promoting inclusive growth within the ICT sector (ALT Advisory, 2019).

2.14 Regulatory and legal frameworks affecting SITA's digital transformation

The digital transformation of the State Information Technology Agency (SITA) in South Africa is significantly influenced by various policy and legislative frameworks. These regulations and policies establish the operational parameters, strategic aims, and compliance requirements that shape SITA's efforts to improve public service delivery through information technology. Understanding the impact of these frameworks is essential for analysing SITA's digital

transformation initiatives and their effectiveness. Table 1 summarizes key policies and legislations and their respective impacts on the study, providing a comprehensive overview of the regulatory environment within which SITA operates.

Table 1: Regulatory and legal frameworks affecting SITA’s digital transformation

Policy/Legislation	Impact on the Study
SITA Act	Establishes SITA's mandate, focusing its role on improving public service delivery through IT. This act directly informs the study by defining SITA's operational and strategic aims in digital transformation.
Electronic Communications Act (ECA) 2005	Sets the regulatory backdrop for electronic communications, crucial for SITA's efforts in enhancing interoperability and security of digital services. This impacts the study by emphasising the legal framework within which SITA operates for digital initiatives.
Protection of Personal Information Act (POPIA) 2013	Regulates personal data processing, essential for digital projects involving data management. This affects the study by highlighting data privacy and protection as key considerations in SITA's digital transformation efforts.
Cybercrimes Act 2020	Addresses offenses against data and systems, underscoring the importance of cybersecurity. This legislation impacts the study by illustrating the need for secure digital government services, a priority for SITA.
Digital Economy Master Plan	Outlines aims for digital infrastructure and skills enhancement, showing government's commitment to digital transformation. It impacts the study by contextualizing SITA's role and efforts within the national agenda for digital development.
Data and Cloud Policy (2021)	Aims to improve data and cloud services management, promoting data sovereignty and cloud use in public sector entities, including SITA. This policy impacts the study by outlining how data management and cloud computing are pivotal to SITA's digital transformation strategies.
National Integrated ICT Policy White Paper 2016	Offers a comprehensive strategy for ICT integration into national development, guiding SITA's strategic direction. This policy impacts the study by providing a broad vision for digital transformation in which SITA is a key player.
National e-Government Strategy and Roadmap	Guides the digitisation of government services, directly influencing SITA's objectives for digital public services. This strategy impacts the study by detailing the roadmap SITA follows to achieve a digitally transformed government.
South Africa Connect	National broadband policy aimed at achieving widespread internet access, crucial for the success of digital initiatives. This policy impacts the study by highlighting the infrastructure groundwork necessary for SITA's digital transformation efforts.
PC4IR Strategic Implementation Plan (SIP)	Framework for engaging with the Fourth Industrial Revolution, directing SITA and other entities in embracing digital technologies. This plan impacts the study by outlining strategic approaches to incorporating advanced technologies in public services.

2.15 Theoretical framework for the study

2.15.1 Diffusion of Innovations Theory

The Diffusion of Innovations Theory is useful for understanding how digital transformation initiatives spread within SITA and among its stakeholders. It examines the adoption process, including how innovations are communicated over time among the members of a social system, which is crucial for assessing the impact of digital transformation (Rogers, 2003). This theory focuses on several key elements:

Innovation: The digital transformation technologies and practices are being introduced.

Communication Channels: The methods and media used to disseminate information about these innovations.

Time: The period over which the innovations are adopted.

Social System: The organizational and external context within which the adoption takes place.

Understanding these elements helps to identify how effectively digital transformation initiatives are being integrated and accepted within SITA, providing insights into potential barriers and facilitators of successful implementation (Rogers, 2003).

2.15.2 Resource-Based View (RBV)

The Resource-Based View (RBV) emphasizes the importance of an organization's resources and capabilities in achieving competitive advantage (Barney, 1991). This theory can be applied to study how SITA's technological infrastructure, human resources, and other capabilities influence the effectiveness and impact of its digital transformation efforts. Key components of RBV include:

Technological Infrastructure: The hardware, software, and network systems that support digital initiatives.

Human Resources: The skills, expertise, and training of SITA employees.

Organizational Capabilities: The processes, practices, and routines that enable effective use of resources.

By focusing on these resources and capabilities, RBV provides a framework for analysing how SITA can leverage its strengths to enhance its digital transformation efforts and address any gaps that may hinder progress (Barney, 1991).

2.16 Linking the theory to the research objectives

Table 2 study links the research objectives to a comprehensive framework that addresses the complexities of digital transformation within SITA. This approach enables the identification of effective strategies for enhancing organizational performance and achieving the desired outcomes of digital initiatives.

Table 2: Linking the theory to the research objectives

Research Objective	Diffusion of Innovations Theory	Resource-Based View
Evaluate Awareness and Understanding	This theory helps assess how innovations are communicated and adopted within SITA, it emphasizes the role of communication in reducing uncertainty and increasing the rate of adoption among employees.	The Resource-Based View examines how SITA's internal resources, it looks at how leveraging these resources can enhance employee readiness and competence in adopting new technologies.
Assess Stakeholder Engagement Measures	Diffusion of Innovations Theory underscores the importance of involving early adopters, it highlights strategies for encouraging participation and feedback from diverse stakeholder groups, which is crucial for successful digital transformation.	The Resource-Based View focuses on how SITA can utilize its existing resources and capabilities to foster stakeholder engagement. This includes leveraging expertise, technological infrastructure, and relational assets to build strong, collaborative relationships with stakeholders.
Analyse Organizational Changes and Technological Innovations	This theory provides insights into the processes through which technological innovations are adopted and integrated within the organization. It identifies the stages of adoption and the factors influencing the successful implementation of new technologies and organizational changes.	The Resource-Based View analyses how SITA's internal capabilities and resources support the implementation of organizational changes and technological innovations. It assesses the alignment between resource allocation and strategic goals, ensuring that the organization is well-equipped to manage and sustain these changes.
Examine Service Delivery Integration and Barriers	Diffusion of Innovations Theory helps identify the barriers to the adoption of new technologies that impact service delivery. It provides strategies for overcoming resistance and facilitating the smooth integration of digital solutions into existing service delivery frameworks.	The Resource-Based View evaluates how SITA's resources and capabilities can be optimized to enhance service delivery. It examines the internal and external barriers to resource utilization and proposes solutions for overcoming these challenges to improve service integration and effectiveness.

3. PROBLEM STATEMENT

South Africa's State Information Technology Agency (SITA) is currently at a crucial point in its efforts to achieve digital transformation. Although SITA plays a crucial role in advancing digital initiatives across various government sectors, it encounters several obstacles that impede its advancement.

The challenges encompass a dearth of comprehensive awareness and comprehension of the digital transformation strategy among stakeholders, inadequate measures to involve and acquaint both internal and external stakeholders, and the requirement for significant organisational changes and technological advancements.

SITA's current service delivery model relies heavily on human resources while other processes,

such as procurement, can be automated. SITA has been struggling; outdated infrastructure has plagued the agency, relying heavily on manual processes. For example, the agency has been struggling over the years to introduce a software-defined network, which automates some processes for infrastructure provisioning. To tackle these difficulties, it is essential to assess the level of awareness and comprehension of SITA's digital transformation strategy among stakeholders—specifically, its employees, who implement this strategy—evaluate the effectiveness of engagement measures, analyse the consequences of organisational changes and technological innovations, and examine the incorporation of digital technologies within the service delivery model. By identifying and overcoming these obstacles, SITA can enhance its digital transformation efforts and improve public service delivery in South Africa.

4. AIM AND OBJECTIVES OF THE STUDY

The primary aim of this study is to analyse the digital transformation landscape of the State Information Technology Agency (SITA) in South Africa. It seeks to assess SITA's readiness to provide and maintain digital government services and identify strategic recommendations to enhance these digital transformation efforts. The specific objectives of the study are:

- To evaluate the awareness and understanding of SITA's digital transformation strategy among its employees.
- To identify and assess the effectiveness of measures implemented by SITA to familiarise both internal and external stakeholders with its digital transformation strategy.
- To analyse the organisational changes and technological innovations adopted by SITA and their impact on roles, responsibilities, workflows, and service delivery.
- To recommend strategies to enhance SITA's digital transformation efforts, thereby improving service delivery and operational efficiency.

5. RESEARCH METHODOLOGY

5.1 Research Design

This study adopted a qualitative research design to explore the digital transformation process within the State Information Technology Agency (SITA). A qualitative approach allowed for an in-depth understanding of the experiences, perspectives, and contextual factors that influenced digital transformation efforts (Almendingen et al., 2021; Younis et al., 2021). The case study method was particularly suitable for this research as it comprehensively examined SITA's specific challenges, strategies, and outcomes related to digital transformation (Piva et al., 2018).

5.2 Target Population

The target population for this study included nearly 3000 SITA employees, drawn from various departments. The target population was selected to provide diverse perspectives within SITA on the digital transformation process and its impact on the agency's operations and service

delivery (Barrot et al., 2021).

5.3 Sampling strategy

A purposive sampling strategy was employed to select participants who had extensive knowledge and experience in digital transformation projects at SITA. Purposive sampling allowed for the intentional selection of individuals who could provide rich, relevant, and insightful data related to the research objectives (Bork-Hüffer et al., 2021). Ten participants from SITA from different levels and departments were selected to ensure a diverse and comprehensive understanding of the digital transformation process.

5.4 Data collection method

Data were collected through semi-structured interviews, allowing for flexibility in exploring specific topics while ensuring consistency across interviews. Semi-structured interviews provided a balance between guided questions and open-ended responses, enabling participants to share their experiences and insights in depth (Mant et al., 2021). Additionally, relevant documents such as strategic plans, progress reports, and internal memos related to digital transformation were reviewed to complement and triangulate the interview data (Depaoli et al., 2020).

5.5 Data analysis

Data analysis followed a thematic analysis approach, which involved identifying, analysing, and reporting patterns (themes) within the data. Thematic analysis was suitable for qualitative research as it allowed for a detailed and nuanced understanding of the data (Neirotti et al., 2019). The process involved coding the data, identifying significant themes, and interpreting the findings in relation to the research objectives and theoretical framework (Caliskan et al., 2021).

5.6 Trustworthiness

To ensure the trustworthiness of the study, several strategies were employed:

Credibility: Although there were no prolonged engagements or observations, credibility was ensured by providing participants with the interview guide in advance. This allowed them to prepare thoroughly and reflect on their experiences, thereby offering rich and in-depth responses during the virtual interviews (Karchmer-Klein and Konishi, 2021).

Transferability: Detailed descriptions of the research context, participants, and processes were provided to allow readers to determine the applicability of the findings to other settings. This included comprehensive background information about SITA, the roles of the participants, and the specific digital transformation initiatives being studied (McKenna-Plumley et al., 2021).

Dependability: An audit trail was maintained, documenting the research process, decisions, and reflections to ensure the study's findings were consistent and replicable. This involved keeping detailed records of all research activities, including data collection methods, coding processes, and analytical decisions (Gelles et al., 2020).

Confirmability: Data sources and methods were triangulated to minimize researcher bias and enhance the objectivity of the findings. This included using multiple data sources, such as interviews and documents, and applying various data collection and analysis methods to ensure comprehensive and unbiased results (Lovrić et al., 2020).

6. RESULTS AND DISCUSSION (5 pages)

6.1 Results

Table 3 outlines research objectives along with their corresponding main themes and sub-themes. This approach enables a thorough examination of SITA's digital transformation landscape through the understanding of its employees, providing insights into the agency's readiness, stakeholder engagement, and the effectiveness of the implemented strategies.

Table 3: Thematic presentation of results

Objective	Main theme
To evaluate the awareness and understanding of SITA's digital transformation strategy among its employees.	Theme 1: Awareness of strategy Theme 2: Internal communication
To identify and assess the effectiveness of measures implemented by SITA to familiarise both internal and external stakeholders with its digital transformation strategy.	Theme 3: Stakeholder engagement
To analyse the organisational changes and technological innovations adopted by SITA and their impact on roles, responsibilities, workflows, and service delivery.	Theme 4: Organisational changes and challenges. Theme 5: Technological integration and adoption.
To recommend strategies to enhance SITA's digital transformation efforts, thereby improving service delivery and operational efficiency.	Service delivery model Operational and implementation challenges

6.2 Discussion

6.2.1 Awareness of Strategy

Participants displayed varying levels of familiarity with SITA's digital transformation strategy. Participant 1 stated, "I have never read or familiarized myself with the strategy," highlighting a significant lack of awareness. Participant 3 mentioned, "Understand it to some extent. Support achieving government private cloud infrastructure and improve service delivery," indicating partial understanding. Participant 8 stated, "I am well-versed with SITA's digital transformation strategy," showing a high level of familiarity. According to Rogers (2003), awareness is the first stage in the adoption of innovations, and without sufficient awareness, employees cannot progress to understanding and implementing digital transformation strategies effectively. The literature supports the primary study's finding that there is a need for more consistent internal communication and training to ensure all employees are well-informed about the strategy.

6.2.2 Internal Communication

Internal communication efforts at SITA include presenting sections of the strategy on Digital Fridays, as noted by Participant 1, "They have presented some sections of it on Digital Fridays."

Participant 2 mentioned, "Accessibility and availability of the SITA Strategy document," indicating that the strategy document is accessible. Participant 6 highlighted, "Digital newsletters and presentations," suggesting the use of various internal communication channels. Despite these efforts, the varying levels of awareness among employees suggest that these communication measures may not be effectively engaging all staff members. Effective internal communication is crucial for the successful adoption of digital transformation strategies. Daßler et al. (2024) highlight that clear communication helps reduce uncertainty and resistance among employees, fostering a supportive environment for innovation. This literature supports the primary study's findings, indicating that enhancing the effectiveness of internal communications could involve more interactive sessions and targeted communications to different departments.

6.2.3 Stakeholder Engagement

Measures to familiarize external stakeholders with SITA's digital transformation strategy include digital information sharing forums. Participant 4 stated, "Through various digital information sharing forums," indicating some level of engagement. However, Participant 1 mentioned, "I am not aware of any measures for external stakeholders," suggesting that stakeholder engagement strategies need to be more robust and inclusive. Participant 10 added, "Regular updates and engagement sessions with stakeholders," highlighting ongoing efforts. Stakeholder engagement is essential for aligning diverse interests and ensuring the successful implementation of digital transformation strategies. Twum-Darko et al. (2023) emphasize the importance of involving stakeholders early and continuously to build strong relationships and support for digital initiatives. The literature supports the primary study's findings by highlighting the need for more comprehensive stakeholder engagement strategies.

6.2.4 Organizational Changes and Challenges

Organizational changes, such as the adoption of customer relationship management (CRM) systems, were appreciated by employees. Participant 3 highlighted "Resistance" as a significant challenge. Participant 7 indicated "Cultural resistance to change." as an organizational barrier to digital transformation. Organizational changes often encounter resistance, which can hinder the adoption of new technologies. Nurfadilah and Haliah (2024) highlight that managing resistance through effective change management strategies is crucial for the success of digital transformation efforts. The literature supports the primary study's findings that addressing resistance to change is essential for successful digital transformation.

6.2.5 Technological Integration and Adoption

Participants highlighted that SITA's service delivery model integrates digital technologies to some extent but is still at a preliminary stage. Participant 2 mentioned, "The current service delivery model is still at a preliminary stage," while Participant 4 stated, "SITA doesn't have systems or the latest technology in place." Participant 10 added, "Basic technology in place but needs advancement," indicating the need for further technological improvements. Successful digital transformation requires the integration and adoption of advanced technologies. Shibambu (2024) notes that technological integration is essential for enhancing public sector

efficiency and service delivery. The literature supports the primary study's findings, indicating a need for more advanced and widespread adoption of digital technologies to fully meet the demands of digital transformation.

6.2.6 Service Delivery Model

The current service delivery model at SITA is noted to be reactive rather than proactive. Participant 2 observed, "The Service Delivery Model on its own is sound but requires modernization," and Participant 4 commented, "SITA is more reactive in meeting the clients' demands." Participant 3 added, "Culture change is needed for a proactive approach." A proactive service delivery model is critical for meeting the evolving demands of digital transformation. Lips (2024) discusses the importance of adapting service delivery models to leverage digital technologies and improve responsiveness and efficiency. The literature supports the primary study's findings, highlighting the need to enhance the service delivery model to be more proactive and technology-driven.

6.2.7 Operational and Implementation Challenges

Several operational and implementation challenges were identified. Participant 2 emphasized the need for technical skills development, stating, "Since SITA is an ICT organ of the state, it should prioritize technical skills development." Participant 4 highlighted the issue of working in silos, noting, "Working in silos obstructs the implementation of digital initiatives," and also mentioned financial constraints, saying, "Financial constraints hinder the implementation of new technologies." Participant 3 added, "Resistance and outdated infrastructure are significant barriers." Addressing these challenges is crucial for digital transformation. Hofisi and Chigova (2023) emphasize the need for skills development, cross-departmental collaboration, and adequate funding to overcome these barriers and achieve successful digital transformation in the public sector. The literature supports the primary study's findings, emphasizing the importance of addressing skills gaps, siloed working practices, and financial limitations.

7. CONCLUSIONS

7.1 Awareness of Strategy

Primary research revealed that participants had varying levels of familiarity with SITA's digital transformation strategy. Some employees were well-versed in the strategy, while others had little to no awareness. This indicates inconsistent dissemination and understanding of the strategy across the organization. The need for improved communication and targeted training to ensure comprehensive awareness among all employees is evident. Secondary research supports this finding by emphasizing that awareness is crucial for the successful adoption of innovations. A lack of awareness can hinder the implementation and effectiveness of digital transformation initiatives. Therefore, SITA must enhance its efforts to ensure all employees are fully aware and understand the digital transformation strategy.

7.2 Internal Communication

Primary research showed that SITA uses various internal communication methods, including

Digital Fridays, newsletters, and presentations. However, the effectiveness of these measures varies, with some employees feeling adequately informed while others do not. Secondary research highlights the importance of clear and effective internal communication in reducing uncertainty and resistance among employees. It suggests that more interactive and targeted communication efforts could improve engagement and understanding. Therefore, SITA should refine its internal communication strategies to ensure all employees are effectively informed and engaged with the digital transformation initiatives.

7.3 Stakeholder Engagement

Primary research indicated that measures to engage external stakeholders include information sharing forums and regular updates. However, awareness of these measures among employees was inconsistent, suggesting that stakeholder engagement strategies might not be robust or inclusive enough. Secondary research underscores the importance of continuous and comprehensive stakeholder engagement to build support and align interests. Therefore, SITA needs to develop and implement more robust and inclusive stakeholder engagement strategies to ensure all external stakeholders are well-informed and involved in the digital transformation process.

7.4 Organizational Changes and Challenges

Primary research highlighted that organizational changes such as the adoption of CRM systems were generally appreciated. However, resistance to change remains a significant barrier. Cultural resistance and outdated processes were identified as key challenges. Secondary research indicates that effective change management strategies are essential to overcome resistance and facilitate successful organizational transformation. Therefore, SITA should focus on implementing comprehensive change management strategies to address resistance and ensure smooth adoption of new technologies and processes.

7.5 Technological Integration and Adoption

Primary research found that while SITA has made some progress in integrating digital technologies, the service delivery model is still at a preliminary stage, and more advanced technology integration is needed. Secondary research confirms that advanced technological integration is crucial for enhancing efficiency and service delivery in the public sector. Therefore, SITA should prioritize the adoption of advanced technologies and ensure their effective integration into the service delivery model to fully realize the benefits of digital transformation.

7.6 Service Delivery Model

Primary research revealed that SITA's current service delivery model is reactive rather than proactive, which limits its ability to meet the demands of digital transformation. Secondary research highlights the need for a proactive service delivery model that leverages digital technologies to improve responsiveness and efficiency. Therefore, SITA should work towards modernizing its service delivery model to be more proactive and technology-driven.

7.7 Operational and Implementation Challenges

Primary research identified several operational and implementation challenges, including the need for technical skills development, issues with working in silos, and financial constraints. Secondary research emphasizes the importance of addressing these challenges through skills development, fostering cross-departmental collaboration, and securing adequate funding. Therefore, SITA should focus on these areas to overcome operational barriers and achieve successful digital transformation.

8. IMPLICATIONS

8.1 Awareness of Strategy

The inconsistent awareness of SITA's digital transformation strategy among employees highlights the need for enhanced internal communication and training. Ensuring that all employees understand the strategy's goals, objectives, and expected outcomes will align the organization towards common goals. This can lead to a more cohesive effort in implementing the strategy and achieving the desired outcomes. Improved strategic alignment will help unify all employees, leading to better implementation of digital initiatives. Additionally, employees who are aware of and understand the strategy are more likely to be engaged and motivated, contributing positively to the overall transformation process.

8.2 Internal Communication

The varying effectiveness of current internal communication methods indicates the need for more robust and interactive communication strategies. Improved internal communication can reduce uncertainty and resistance, fostering a supportive environment for digital transformation. Effective dissemination of information ensures that all employees are kept up to date and understand the digital transformation process, which can reduce resistance to change. Furthermore, interactive communication methods can increase employee engagement and participation in digital initiatives, leading to a smoother implementation of the strategy.

8.3 Stakeholder Engagement

The mixed awareness of stakeholder engagement initiatives suggests that SITA's current strategies may not be inclusive or comprehensive enough. Robust stakeholder engagement strategies are essential for building strong relationships and garnering support for digital transformation initiatives. By enhancing engagement with stakeholders through regular updates and interactive forums, SITA can build stronger relationships and ensure their continuous support. Increased stakeholder buy-in will lead to better collaboration and more effective feedback, which is crucial for refining and successfully implementing digital initiatives.

8.4 Organizational Changes and Challenges

Resistance to change and cultural barriers within the organization are significant challenges

highlighted by the primary research. Addressing these challenges requires effective change management strategies that promote a culture of innovation and adaptability. Implementing such strategies can help mitigate resistance and facilitate the adoption of new technologies and processes. By fostering a culture that embraces change, SITA can enhance the overall effectiveness of its digital transformation efforts, ensuring that organizational changes are smoothly integrated and widely accepted.

8.5 Technological Integration and Adoption

While SITA has made some progress in integrating digital technologies, the service delivery model remains at a preliminary stage. The primary research indicates a need for more advanced and widespread adoption of digital technologies to fully meet the demands of digital transformation. Prioritizing the integration of advanced technologies will enhance SITA's service delivery and operational efficiency. This advancement will not only improve public sector efficiency but also position SITA as a leader in digital transformation, setting a benchmark for other public sector entities.

8.6 Service Delivery Model

The current reactive service delivery model at SITA limits its ability to meet the evolving demands of digital transformation. The primary research highlights the need for a proactive, technology-driven service delivery model. Modernizing the service delivery approach will enable SITA to respond more effectively to stakeholder needs and improve overall service quality. A proactive service delivery model will also support the seamless implementation of digital initiatives, ensuring that SITA can leverage new technologies to enhance public sector services.

8.7 Operational and Implementation Challenges

Several operational and implementation challenges, such as the need for technical skills development, working in silos, and financial constraints, were identified. Addressing these challenges is crucial for the successful implementation of digital transformation initiatives. By focusing on continuous skills development, fostering cross-departmental collaboration, and securing adequate funding, SITA can overcome these operational barriers. Ensuring that the workforce is skilled and departments collaborate effectively will facilitate smoother implementation of digital initiatives, while adequate funding will provide the necessary resources for sustained digital transformation.

9. RECOMMENDATIONS

9.1 Objective 1: To evaluate the awareness and understanding of SITA's digital transformation strategy among its employees.

To enhance employees' awareness and understanding of SITA's digital transformation strategy, comprehensive training programs should be implemented. These programs should include regular training sessions and workshops that educate employees about the strategy, its goals, and its expected outcomes. Utilizing a variety of formats, such as in-person, virtual, and e-

learning modules, can cater to different learning preferences. Effective communication channels are also essential; thus, SITA should develop and utilize multiple channels, such as newsletters, intranet updates, and interactive sessions, to ensure consistent and clear information dissemination. Establishing feedback mechanisms, where employees can ask questions and provide input about the strategy, will further support this objective. Regular Q&A sessions, suggestion boxes, and online forums can be used to facilitate this feedback.

9.2 Objective 2: To identify and assess the effectiveness of measures implemented by SITA to familiarize both internal and external stakeholders with its digital transformation strategy.

To better familiarize internal and external stakeholders with the digital transformation strategy, SITA should develop a comprehensive stakeholder engagement plan. This plan should include regular updates, interactive forums, and collaborative platforms to engage stakeholders effectively. Ensuring transparent communication by sharing progress reports, milestones achieved, and future plans through multiple channels, such as social media, official websites, and public meetings, is crucial. Additionally, creating inclusive strategies that involve all relevant stakeholders early in the decision-making process will help gain their support and address their concerns effectively.

9.3 Objective 3: To analyse the organizational changes and technological innovations adopted by SITA and their impact on roles, responsibilities, workflows, and service delivery.

To analyze and enhance the impact of organizational changes and technological innovations, SITA should implement robust change management programs. These programs should include training, support, and clear communication to help employees adapt to new roles, responsibilities, and workflows. Developing a detailed technology integration roadmap that outlines timelines, responsible parties, and expected impacts on service delivery is essential. Furthermore, establishing a system for continuous improvement, where feedback from employees and stakeholders is regularly collected and used to refine and enhance organizational changes and technological implementations, will ensure ongoing effectiveness and adaptability.

9.4 Objective 4: To recommend strategies to enhance SITA's digital transformation efforts, thereby improving service delivery and operational efficiency.

To enhance SITA's digital transformation efforts, a transition from a reactive to a proactive service delivery model is recommended. Leveraging data analytics and advanced technologies to anticipate and address stakeholder needs more effectively will improve service delivery. Fostering a culture of cross-departmental collaboration is also crucial to break down silos and improve the integration and implementation of digital initiatives. Prioritizing investment in advanced technologies, such as AI, cloud computing, and IoT, will enhance operational efficiency and service delivery. Ensuring that the necessary infrastructure and support systems are in place for these technologies to be effective is vital. Additionally, investing in continuous skills development programs will ensure that employees have the necessary skills and

knowledge to effectively use new technologies and processes, including both technical skills and soft skills such as adaptability and problem-solving.

10. CONCLUSION

The findings from both primary and secondary research highlight critical areas for improvement in SITA's digital transformation strategy. Enhancing awareness, communication, stakeholder engagement, and addressing organizational and operational challenges are essential steps for SITA to fully realize the benefits of digital transformation. These efforts will not only improve service delivery and operational efficiency but also ensure that SITA can effectively navigate and lead the digital transformation journey within the South African public sector. By addressing the recommendations, SITA can address the challenges identified in the primary and secondary research and enhance its digital transformation efforts. This will not only improve service delivery and operational efficiency but also ensure that SITA is well-positioned to lead the digital transformation journey within the South African public sector.

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