

**Behavioural risk considerations in
decisions to digitise services of a
South African provincial
government**

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for the degree *Master of Commerce in Applied Risk
Management* at the North-West University

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PREFACE

This mini-dissertation is the final deliverable for the Master of Commerce (MCom) in Applied Risk Management. The mini-dissertation was written in article format and consists of three sections: Research project overview; Article; and Reflection.

This mini-dissertation is the student's work. The student was responsible for the final concept, set up, execution of the research project and writing of the mini-dissertation. The members of the supervisory team contributed in an advisory and technical support capacity to the study's conception and design, analysis and interpretation of data, and critical revision of the manuscript. The mini-dissertation was language edited before submission for examination. However, the student is responsible for doing these edits and for the grammatical correctness of the final document.

The main study supervisor gave the student permission to submit this mini-dissertation for examination.

ABSTRACT

The digitisation of government services has emerged as a transformative trend in the public sector, promising enhanced efficiency, accessibility, and convenience for citizens and businesses. While this shift holds significant promise, there are behavioural risks associated with this transition. The objective of this study was to assess whether the South African provincial government considered behavioural risks in the decision to digitise its government services. This qualitative study employed both a literature review and a document analysis of three key e-government documents of one South African provincial government. The findings show that this provincial government partially considered behavioural risks in the decision to digitise its services. Nevertheless, it is recommended that the provincial government consider conducting a behavioural risk assessment on the digitisation of services to enable it to prepare adequate and effective mitigation plans to address such risks. This would assist with efficient and effective digitised service delivery and active citizen participation in the decision-making process. The study shows that, although there has been awareness of behavioural risks, these have not been fully addressed in the public sector. This research, conducted in a single province in the country, provides a foundation for further research extending to other provinces and considerations at the national level.

Keywords: E-Government, Behavioural risk, Citizen participation, Service delivery, Decision-making,

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I would like to take this opportunity to thank God and my ancestors for giving me the perseverance and strength to complete this study. I am immensely grateful for the support and motivation from my fellow students at North-West University's UARM Centre for Applied Risk Management throughout this journey.

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RESEARCH PROJECT OVERVIEW

Why this study?

Developing nations make significant investments in electronic government (e-government) systems intending to improve the delivery of services to their citizens, involve them in decision-making, promote transparency and accountability in institutional processes related to policy development, and reduce the likelihood of corruption. Despite the widespread enthusiasm and advancements in e-government initiatives in these countries, their implementation does not achieve the same level of success as seen in developed economies (Bakon et al., 2020).

Behavioural risks refer to potential adverse consequences caused by problems related to the adoption and use of digital services by individuals and groups (Grossi et al., 2023).

This observation led me to this study, from a risk management perspective, as to whether the South African provincial government selected for this research considered behavioural risks in the decision to digitise government services. The analysis is based on three key strategic e-government documents of this South African provincial government. The research has shown that there is partial but insufficient attention given to the topic, particularly in the public sector (Rana et al., 2013). Hence, there is an opportunity for further research.

This study provided me, as a researcher, with the opportunity to learn how to conduct an applied research project and to demonstrate mastery of research at the master's degree level in a research team context. The responsibilities of the different role players in this research project are described in Table 1

Table 1 Role players in this behavioural risk study

No.	Team member	Role
1	Researcher: Ms S. Modisha	Responsible for conceptualisation of the study, data collection and analysis, and presentation.
2	Supervisor: Dr E. Mulambya	Provided direction and guidance throughout this study.
3	Editor: Dr E. Lickindorf	Advised during article writing workshops and conducted a pre-final grammar-only edit of the mini-dissertation.

Intended audience of this manuscript

The intended audiences for this article are risk researchers, risk practitioners, government officials, and information technology practitioners.

Selected Journal

The *Government Information Quarterly* (GIQ) was selected for possible publication of this article. This journal was chosen because it is an international journal that examines the intersection of policy, information technology, government, and the public. It focuses on how policies affect government information flows and the availability of government information; the use of technology to create and provide innovative government services; the impact of information technology on the relationship between the governed and those governing; and the increasing significance of information policies and information technology in relation to democratic practices. As much as the journal is not risk-focused, publishing the article could influence other researchers to conduct further research on the topic.

The journal has an impact score of 7.8 and is the leading journal in the field. *Government Information Quarterly* seeks to publish high-quality scholarly research, viewpoint articles and editorials that inform both researchers and practitioners regarding the relationship between policy, information technology, government, and the public. The journal seeks submissions drawn from a variety of disciplines, including but not limited to information science, public policy, public administration, political science, business, law, geography, information systems, communications, economics, sociology, computer science, and public health. The journal can be accessed by using the following link:

<https://www.sciencedirect.com/journal/government-information-quarterly>

Reference

Bakon, K. A., ELias, N. F., & Abusamhadana, G. A. O. (2020). Culture and Digital Divide Influence on e-government Success in Developing Countries. *Theoretical and Applied Information Technology*, 98.

ARTICLE

Behavioural risk considerations in decisions to digitise services of a South African provincial government

Introduction

The objective of this study was to explore behavioural risk considerations in decisions to digitise services of a South African provincial government, using a qualitative document analysis research method. Behavioural risks refer to potential adverse consequences caused by problems related to the adoption and use of digital services by individuals and groups (Grossi et al., 2023). The digitisation of government services, also known as eGovernment or digital government, is a crucial step in modernising administrative processes and improving service delivery to citizens (Bournaris, 2020). Globally, the use of information and communication technology (ICT) is viewed as a way to carry out organisational and corporate objectives effectively and efficiently. Governments use ICT to simplify procedures involved in providing services to citizens (Apleni & Smuts, 2020).

E-GovernmentE-government, defined as the delivery of government services using information and communication technologies, allows for more efficient government administration and better-quality service delivery to the public. It enables citizens to access administrative services more conveniently, ultimately increasing their confidence in the government (Yang et al., 2010). Furthermore, e-government provides unparalleled opportunities to streamline and improve internal governmental processes, enhance interactions between users and the government, and enable efficiencies in service delivery (Alhussain & Drew, 2009).

The adoption of e-government for service delivery has the potential to revolutionise the public sector by utilising ICT to improve efficiency and effectiveness in delivering services to the public (Wairiuko et al., 2018). The implementation of e-government requires the computerisation of both the back and front office using ICT tools, as well as the modification of organisational internal operational processes of government agencies. This transformation can lead to increased transparency and openness in government activities, as well as more effective and responsive public service delivery. In addition, e-government can provide

citizens with more convenient access to information and services while also improving the performance of government employees (Alhussain & Drew, 2009).

The implementation of e-government intends to facilitate and enhance service delivery, ongoing participation, and governance by using new forms of information technology. Implementing e-government requires significant investment in infrastructure, technology, and training. However, the evidence shows that the benefits of implementing e-government outweigh the costs (Weerakkody et al., 2015). The implementation of e-government is crucial in today's digital age, as it enables governments to leverage technology to improve the delivery of services and enhance their relationships with citizens and businesses. By adopting e-government, governments can improve the efficiency and effectiveness of their service delivery by harnessing the power of information and communication technologies. Furthermore, e-government implementation can lead to increased citizen satisfaction and trust in government, as it enables citizens to access services and information in a more convenient and efficient manner (Wairiuko et al., 2018).

However, the implementation of e-government initiatives in South Africa comes with several behavioural risk considerations. One risk consideration is the potential marginalisation and social isolation of individuals who do not have access to computers and the internet. This can disproportionately affect the poor and rural areas in South Africa, further deepening the digital divide (Galushi & Malatji, 2022).

Another risk consideration is the lack of leadership and institutional readiness for e-government implementation. This can result in difficulties in coordinating and managing the adoption of e-government initiatives, leading to inefficiencies and delays. In addition, the high cost of IT systems infrastructure and low literacy in the use of technological means for governance pose significant challenges. These challenges can hinder the successful implementation of e-government initiatives and limit their impact on improving service delivery and citizen engagement (Galushi & Malatji, 2022).

There is also a risk of resistance to change and a lack of citizen trust in e-government initiatives. Citizens may be hesitant to embrace digital government services due to concerns about privacy, security, and reliability. These risk considerations highlight the need for a comprehensive approach to e-government implementation in South Africa (Mawelaa et al., 2017).

Therefore, the implementation of e-government is a critical step towards digital transformation in the public sector, and digitisation could deliver real benefits to the South African provincial

government under study. The study is responding to the following research question: How is behavioural risk considered in decisions to digitise services of a South African provincial government?

Background

Conceptualisation of e-government from an international perspective

The conceptualisation of e-government involves understanding and exploring its various aspects such as the concept itself, theories, history, structure, initiatives, policies, key principles, impact, challenges, and development and implementation (Lean et al., 2009). The concept of e-government involves the use of information, communication technology (ICT) and the internet to provide digital services to citizens, make existing traditional services more efficient, and encourage citizen participation (Abu-Shanab & Shehabat, 2018). It is multidimensional, encompassing the improvement of access and delivery of information and government services to the community, businesses, and other government departments. It also involves using technology to enhance the efficiency and effectiveness of government processes and services (Almourad et al., 2019).

E-Government traces its origins to the late 20th century when governments began to explore the use of ICT to improve efficiency and service delivery. During this time, they started implementing basic online services such as electronic tax filing and permit applications. The structures that emerged encompass organisational and institutional arrangements that support the implementation and operation of digital services. These structures may include dedicated e-government departments, the establishment of online platforms and portals, and the integration of technology within existing government agencies and processes. E-Government models can also be categorised according to the parties involved in the transactions conducted through e-government portals (Abu-Shanab & Shehabat, 2018).

Theories of e-government focus on understanding the principles and frameworks that guide its implementation and help to explain the underlying principles and approaches for developing and implementing e-government initiatives. Among the key theories are the transformational theory, which emphasises the role of technology in transforming government operations and service delivery; the diffusion of innovation theory, which examines the factors influencing the adoption and diffusion of e-government services; and the stakeholder theory, which emphasises the importance of involving all stakeholders in the e-government process and

considering their needs and expectations to ensure the success of e-government initiatives (Almourad et al., 2019).

To facilitate the implementation of e-government services, governments have developed initiatives and policies to address key areas such as the provision of infrastructure, the development of digital skills and literacy, data privacy and security, and the promotion of citizen engagement and participation. In addition, key principles guide the development and implementation of e-government initiatives. These principles include transparency, accountability, efficiency, and citizen-centricity (Apleni & Smuts, 2020). The impact of e-government can be seen in various areas, including its effects on the economy and society as a whole. For example, studies have shown that the adoption of e-government services can lead to cost savings for governments, as digital processes are often more efficient and effective than previous methods (Dwivedi et al., 2012)

Furthermore, e-government can also enhance citizen participation in governance by providing platforms for feedback, input, and collaboration. In addition to the benefits of e-government, however, there are also challenges that need to be addressed. These include the need for continuous updates and maintenance of e-government systems, data privacy and security, considerations related to the digital divide, and behavioural issues that include resistance to change (Sulanjari, 2019).

For successful implementation and evaluation of e-government services, governments must address, assess, and measure these services to ensure their effectiveness and beneficial impact on the economy and society and to address their associated challenges; they must also consider key factors that affect acceptance and usage intention (Lean et al., 2009).

To provide more intuitive and maintainable e-government services, governments must overcome challenges such as business reengineering required to upgrade workflow flexibility and resolve security issues, communication with back-end systems, code reusability, implicit knowledge, and user interaction (Tejedo-Romero et al., 2022). They must understand the compatibility, trustworthiness, and perceived ease of use of e-government services that direct citizens' intentions to use these services (Tejedo-Romero et al., 2022). In conclusion, the implementation of e-government initiatives is crucial for governments to achieve better-quality services, enhanced efficiency, reduced costs, transparency, and accountability to their citizens (Sulanjari, 2019). Governments need, however, to understand their public sufficiently to

reassure, encourage, and support them in accepting digitised services and to address and overcome behavioural risks that would undermine this crucial initiative.

Implementing e-government in South Africa

E-Government in South Africa involves the use of ICT to enhance the delivery of public services, improve government-citizen interactions, and promote citizen participation (Mawelaa et al., 2017). It encompasses the application of ICT and the internet to provide digital services to citizens, enhance existing traditional services, and empower citizens to participate more effectively in the democratic process (Singh & Travica, 2018). In seeking to fully leverage technological advancements to improve the efficiency, accessibility, and transparency of public services, e-government initiatives aim to address issues related to service delivery, procurement processes, working practice efficiency, and improved communication with citizens and businesses (Plantinga & Adams, 2020).

However, e-government has faced numerous challenges, notably high costs of internet access, low levels of digital literacy in many groups of the population, inadequate telecommunications infrastructure, limited broadband connectivity, the geographical dispersion of rural towns and villages, insufficient integration of marginalised citizens, privacy and security concerns, weak interagency information sharing, and insufficient empirical research to inform policy decisions (Mutula & Mostert, 2010).

The South African government has recognised the potential of e-government in addressing resistant issues related to service delivery, procurement, efficient working, and communication with citizens and businesses (Galushi & Malatji, 2022), in an effort to transform the way public services are delivered through digitisation so as to streamline administrative processes, reduce bureaucratic inefficiencies, and provide citizens with convenient access to government services.

By promoting transparency and accountability in governance using online platforms and digital tools, the government aims to make information more accessible to citizens, facilitate efficient service delivery, and foster greater participation in decision-making processes (Abdulla & McArthur, 2018). It also aims to bridge the digital divide so that all citizens, regardless of their socioeconomic status or geographical location, have access to, and can benefit from e-government services (Almourad et al., 2019). In conclusion, e-government in South Africa involves leveraging ICT to improve service delivery, government efficiency and transparency,

promote citizen engagement and participation, and bridge the digital divide (Galushi & Malatji, 2022).

Behavioural risk considerations when digitising government services

Digitisation of government services brings numerous benefits, including increased transparency, improved efficiency, and better communication with users. However, it also poses challenges, particularly in terms of behavioural risks.

One of the major behavioural risks is the exclusion of people or individuals who have difficulties in accessing and using digital services. Barriers include low literacy and income levels, locations where there is poor connectivity, and lack of physical access to technology, which create the digital divide that excludes many individuals from being able to use and benefit from digitised government services (Grossi et al., 2023).

This issue is prevalent in low-income countries across Africa and elsewhere, where infrastructure and resources are limited. Amongst other things, governments can invest in improving infrastructure and expanding access to technology, particularly in underserved areas (Kind & Lee, 2021). To counter exclusion due to low levels of literacy, governments could also, for example, prioritise digital literacy programmes to assist individuals who do not have the necessary skills and knowledge to use available digitised public services effectively.

Another behavioural risk is the potential misuse or abuse of personal data. The digitisation of government services requires that individuals provide personal information and data to be able to access and utilise digitised services. These data may be vulnerable to breaches and unauthorised access, leading to privacy concerns and potential harm to individuals. Governments need to take a proactive approach to addressing and mitigating this risk. They could prioritise data protection and privacy measures to safeguard individuals' personal information (Runde et al., 2021), such as establishing clear policies and regulations surrounding the collection, storage, and use of personal data to prevent misuse or abuse (Igumbor et al., 2022).

A South African overview of behavioural risk considerations

The digitisation of government services in South Africa ushers in numerous potential benefits, such as increased efficiency, accessibility, and convenience for citizens. However, the transition to e-government services required that behavioural risks be carefully assessed and managed. One major behavioural risk in South African digital government services is the high cost of the internet. Access to affordable and reliable internet is crucial for the successful implementation of these online services as, without it, a significant portion of the population

will be unable to benefit from them, and this, in turn, will lead to the marginalisation of the poor, especially those in rural areas who cannot access the necessary infrastructure (Blom & Uwizeyimana, 2020).

Another behavioural risk relates to low levels of digital literacy in the country. Digital literacy refers to the ability of individuals to use computers effectively and to navigate the internet (Sulistyawati et al., 2022). In South Africa, a significant part of the population lacks the digital literacy skills needed to engage with government services online. This digital divide poses a significant risk as it limits the accessibility and effectiveness of digital government services for entire segments of the population.

Overall, the lack of infrastructure and functional literacy for many people in Africa, including in South Africa, contributes to the challenges of digital government implementation (Gebeyehua & Twinomurinzia, 2022).

The national e-government mandate and its implementation in South Africa

The South African government initiated the digitisation of government services in the mid-1990s. Eight key documents track the national progress from the initial concept to the point of implementation.

- Electronic Government, The Digital Future, A Public Service Framework, 2001: this document discusses the importance of e-government in modernising government operations.
- State Information Technology Agency (SITA) (Act No. 88 of 1995): this Act establishes the State Information Technology Agency (Pty) Ltd as a company that provides information technology, information systems, and related services to participating departments.
- SITA Amendment Act (No. 38 of 2002): this legislation made changes to the SITA Act that included altering definitions, redefining the Agency's objects and functions, and amending provisions relating to staff, asset transfers and regulatory powers.
- SITA Regulations (No. 904 of 2005): these regulations for the State Information Technology Agency cover definitions, functions, certification of IT goods and services, research, dispute

resolution, procurement, and consultation with relevant departments when conducting research.

- Electronic Communications Act (No. 36 of 2005): this Act aims to promote convergence in broadcasting, signal distribution, and telecommunications. It regulates electronic communications services, licences, spectrum control, and consumer issues.
- Policies and Policy Directions (No. 617 of 2010): this policy was drafted in terms of section 3(1) of the Electronic Communications Act of 2005, and places emphasis on the benefits of broadband, such as economic development, improved education and healthcare, and reduced carbon emissions. It also focuses on universal access, affordability, and usage as key priority areas.
- South Africa Connect, South Africa's Broadband Policy, 2013: the implementation of this national broadband policy aims to provide affordable broadband access to all citizens, including improving broadband infrastructure, addressing regulatory challenges, and promoting the development of digital skills and content.
- National Integrated ICT Policy White Paper, 2016: this ICT policy aims to create an inclusive and innovative digital society and covers areas such as fair competition, protection of the open internet, digital transformation, and infrastructure development.

These documents outline the policy direction for the nation as a whole. South African provincial governments, however, in support of the national e-government strategy initiatives, are expected to develop their structures to align with the national mandate on implementation. Hence, the provincial government under study established and proclaimed a new provincial e-government Department in 2015, specifically to deal with the implementation of e-government in its jurisdiction. This department developed its own key documents to guide the e-government strategy implementation in the province. These documents will be discussed in more detail under the method section.

Method

Research approach

This study followed a qualitative research approach using a literature review and document analysis. Qualitative research can be defined as the study of the nature of phenomena, answering questions about why something is (or is not) being observed, or evaluating complex interventions involving multiple components particularly suitable for focusing on improving interventions (Busetto et al., 2020). Document analysis refers to the systematic process of

reviewing or evaluating documents, both printed and electronic, to elicit meaning from them (Bowen, 2009).

The literature review was conducted on academic articles relating to the study to obtain the views of different authors on behavioural risk considerations when decisions are made to digitise government services. Documents, not human subjects, were used as data sources, so no demographic data were required. Document analysis was conducted on available key e-government-government strategic documents of the department established in the selected South African provincial government. A salient limitation of this study was that the documents of the South African provincial government department establishment responsible for e-government implementation were not accessible for analysis.

A thematic coding process was followed and conducted on both the articles from the literature review and the strategic documents analysed. Thematic codes and examples of quotations are summarised in the results and discussion section.

Data collection

Academic articles relating to the study were searched using the North-West University Google Scholar. Table 2 lists the key articles employed in this study.

Table 2 Key academic articles employed in this study

No.	Article title	Author	Year
1	E-Government Implementation: A reflection on South African Municipalities	Mawelaa et al.	2017
2	E-Government systems in South Africa	Singh, S & Travica, B	2018
3	Rethinking open government as innovation for inclusive development: Open access data and ICT in South Africa	Plantinga & Adams	2020
4	E-Government mechanisms to enhance the participation of citizens and society	Tejedo-Romero et al.	2022
5	Changing the boundaries of public sector auditing	Grossi et al.	2023

In addition, document analysis was conducted on the key e-government documents from the South African provincial government under study that were publicly available. The documents are publicly accessible and listed in Table 3

Table 3 Key e-government documents of the South African provincial government under study

No.	Source	Year	Summary
1	E-Government Strategy	2015	The strategy aims to create connectedness and make it easier for citizens and businesses to interact with government.
2	Provincial Development Plan	2020	The plan guides the development of the province towards a socially cohesive, sustainable, and economically inclusive future.
3	E-Government Strategic Plan	2020	The plan focuses on modernising government services by using technology and promoting digital innovation. The department aims to improve connectivity and infrastructure, digitise public services, ensure good governance and oversight of ICT, and stimulate the ICT industry and skills development.

A thematic coding process was followed by identifying codes from articles and documents. Quotations relevant to and supporting codes identified from the literature were also identified. The identified codes and example quotations are discussed in detail in the results and discussion section. These codes were evaluated using the evaluation criteria provided in Table 4. The outcome of this evaluation is provided in Table 5.

Table 4 Evaluation criteria

Criteria	Evaluation	Legend
The information provided in the provincial government documents shows evidence of behavioural risk considerations and can be directly linked to the key codes.	Comprehensively covered	CC
The information provided in the provincial government documents shows evidence of behavioural risk considerations and can be partially linked to the key codes.	Partially covered	PC
The information provided in the provincial government documents shows no evidence of behavioural risk considerations and cannot be linked to the key codes.	Not covered	NC

Ethical considerations

Permission to conduct the study was obtained from the North-West University (NWU) Optentia Scientific Committee and the Faculty of Economic and Management Sciences Research Ethics Committee. Academic articles were obtained from various electronic databases through the NWU Google Scholar. Key e-government documents were obtained from one South African provincial government under study. These documents are publicly accessible, hence no permission was required to utilise them for the purpose of this research.

Results and discussion

The results are based on the comparison of the three key e-government provincial documents selected using the thematic codes identified.

Table 5 Outcome of evaluation of thematic codes

No.	Codes	Document 1	Document 2	Document 3
1	E-Government	CC	CC	CC
2	Citizen participation	CC	CC	CC
3	Behavioural risk	PC	PC	PC
4	Service delivery	CC	CC	CC
5	Decision-making	PC	PC	PC

In summary, the provincial government documents comprehensively covered the implementation of e-government and considerations of citizen participation and service delivery. However, they only partially covered the considerations of citizen behavioural risks and citizen involvement in decision-making. Findings from e-government documents relate mainly to what the provincial government has to offer to its citizens when governments decide to digitise their services. Furthermore, the government must take into account the behavioural risks associated with this transition by addressing issues related to exclusion, privacy, changing citizen–government interactions, and resistance to change; by doing so, governments can foster a smooth and successful transition to digital services while ensuring that government continue to serve all citizens effectively and equitably.

Table 6 provides a codebook derived from the literature on behavioural risk considerations in decisions to digitise government services. Table 7 maps codes derived from the literature to codes on behavioural risk considerations to digitise government services of the provincial government under study as derived from documents of this provincial government.

Table 6 Codebook on behavioural risk considerations in decisions to digitise government services, derived from the literature

No	Code	Code description	Example quotations	Sources
1	E-Government	The use of information and communication technologies (ICT) to improve and enhance the efficiency, transparency, accessibility, and delivery of government services, information, and communication to citizens, businesses, and other government entities.	“e-government projects are a reality for the African continent as seen with the numerous governments that have expressed strategies outlining plans for the implementation of a variety of e-government initiatives.”	(Lean et al., 2009); (Mawelaa et al., 2017); (Kind & Lee, 2021)
2	Citizen participation	The active involvement of individuals in the decision-making processes and activities of their community, city, region, or country.	“e-government requires facilitating, broadening, and deepening openness and citizen participation.”	(Mawelaa et al., 2017); (Plantinga & Adams, 2020); Galushi & Malatji (2022)
3	Behavioural risk	The potential for an individual's or a group's actions, decisions, or conduct to result in adverse outcomes or negative consequences.	“peer influence did not significantly influence the stakeholders' behavioural intention to use the platform.”	(Sulistyawati et al., 2022); Gebeyehua & Twinomurinzia (2022); (Grossi et al., 2023)
4	Service delivery	The process of providing a service to customers or clients. It encompasses all the activities and interactions involved in delivering a service to meet the needs and expectations of the recipients.	“Similarly, results from the mobile-phone-based rating and survey application are 'aggregated and used to influence and monitor service delivery.’”	Mawelaa et al.(2017); (Plantinga & Adams, 2020); Galushi & Malatji (2022)
5	Decision-making	The process of selecting a choice or course of action from several available options or alternatives.	“The culture of the organisation may affect stakeholders especially where decisions are made at top level without user involvement.”	Mutula and Mostert (2010); Abdulla & McArthur (2018); Galushi & Malatji (2022)

Table 7 Codebook on behavioural risk considerations in decisions to digitise government services, derived from provincial government documents

No.	Code	Code description	Document example quotations		
			Document 1	Document 2	Document 3
1	E-Government	The use of information and communication technologies (ICT) to improve and enhance the efficiency, transparency, accessibility, and delivery of government services, information, and communication to citizens, businesses, and other government entities.	“to modernise the delivery of public services, the next five years will see greater efforts in harnessing ICT to deliver initiatives in the context of e-government and modernisation of the delivery of public services.”	“Smart and efficient digital public services established, supporting improved delivery.”	“lead the region in modernisation and improving citizen experience; as well as focus on public sector digitalisation and innovation agenda.”
2	Citizen participation	The active involvement of individuals in the decision-making processes and activities of their community, city, region, or country.	“Key to the establishment and maintenance of a responsible, ethical state is an engaged, active citizen base through which the state can be held accountable.”	“Key to the establishment and maintenance of a responsible, ethical state is an engaged, active citizen base through which the state can be held accountable.”	“The government services are provided to citizens and business through traditional channels like face to face; telephone; and mail; which are costly, time consuming, sometimes offline resulting in the inconvenience of citizens and business.”
3	Behavioural risk	The potential for an individual's or a group's actions, decisions, or conduct to result in adverse outcomes or negative consequences.	“Increase citizen trust in government to ensure that users are able to trust that e-government services are safe, secure and effective and that they will continue to enjoy their rights as citizens.”	“These issues tragically result in youth suffering unprecedented levels of unemployment, which heightens the risk of them being drawn into a life of crime or drug abuse.”	“Inconsistent customer experience/services caused by uncommunicated or unknown ICT services offerings across government.”
4	Service delivery	The process of providing a service to customers or clients. It encompasses all the activities and interactions involved in delivering a service to meet the needs and expectations of the recipients.	“Government has a clear vision of putting in enabling measures to eradicate their challenges, modernise service delivery and to ensure that becomes an integrated city-region.”	“the loudest protests outside government offices were those demanding better service delivery.”	“silo mentality between municipalities and provincial departments inhibit the GCRs ability to improve service delivery and enhance customer experience through the development of e-services.”
5	Decision-making	The process of selecting a choice or course of action from several available options or alternatives.	“The benefits of utilising e-government services have to be clearly articulated and understood by citizens and businesses to increase e-Participation”	“Any successful administration must invest in research & development as part of embracing evidence-based decision making.”	“empower citizens of the province to better participate in the decision-making processes that affect their experience of government.”

Conclusion

This research explored behavioural risk considerations in decisions to digitise the services of a selected South African provincial government. This study was based on the importance of considering behavioural risks in decisions to digitise government services. The transition to digital platforms has the possibility of bringing about beneficial changes in the way citizens interact with governments. However, these changes also have the potential to impact behaviour in various adverse ways. One key aspect of behavioural risk is user adoption and acceptance – in this case, of digitised government services.

Most importantly, as government services move online, there is the risk of exclusion and marginalisation of those who lack access to digital resources, who are not technologically proficient and who are disadvantaged through a digital divide. This digital divide can disproportionately affect vulnerable and marginalised populations and exacerbate social inequalities. Therefore, governments must ensure that alternative means of access are available and that digital literacy programmes are in place to bridge this digital gap.

The South African provincial government under study, to some extent, took behavioural risk into account. However, the findings reveal that it may need to consider conducting a behavioural risk assessment to inform the development of adequate and effective mitigation plans. This could enable citizenry inclusivity in the decision-making process and the government's quest for efficient service delivery.

The study provides direction, as well as a starting point, for further research in behavioural risk consideration when decisions are made to digitise government services. A salient limitation of this study was that the documents of the South African provincial government department establishment responsible for e-government implementation were not accessible for analysis.

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The aim of the study was to explore behavioural risk considerations in decisions to digitise government services. However, academic articles are yet to demonstrate the interpretation of behavioural risk, particularly on digitisation in the public sector. Consultation of documents of the South African provincial government under study showed that behavioural risks are partially addressed in decisions to digitise government services.

I started my Master of Commerce in Applied Risk Management journey in the year 2022 with limited knowledge of conducting academic research. This study provided the opportunity to learn how to do research and to demonstrate mastery of research at the master's degree level.

Conducting this study came with challenges, as there were limited academic articles relating to behavioural risks, particularly in the public sector and in the South African context. Developing a thematic codebook was challenging, but interesting. The process of developing a codebook took me out of my comfort zone and forced me to think outside of the box. Analysing academic articles and consulting houses' documents provided me with knowledge that I am confident that I will be able to use in my working environment as a risk manager.

I have personally grown in this two-year journey and will really send my appreciation to my Supervisor, Dr Emmanuel Mulambya, for his support and guidance throughout; without him, I do not think I would have managed to complete this study.