Gordon Institute of Business Science
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The Synegistic impact of organisational culture and digital transformation in Enhancing Organizational Performance and Efficiency in public sector institutions

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ABSTRACT

This study explored the synergy and relationship between organisational culture and digital transformation in enhancing performance and efficiency within public sector organisations. As governments increasingly adopt digital technologies to improve service delivery and operational effectiveness, many still struggle to achieve the intended performance outcomes. The research investigated how cultural factors, leadership behaviours, and employee attitudes influence the success or failure of digital transformation initiatives in the public sector context. The study adopted a qualitative research design using semi-structured interviews with senior and middle managers, Information Technology specialists, and transformation leads across selected public sector organisations. The data was thematically analysed to identify patterns and relationships between organisational culture, digital transformation practices, and performance outcomes. This approach allowed for an in-depth understanding of how cultural dynamics and leadership behaviours influence the implementation and effectiveness of digital initiatives in advancing organisational growth.

Keywords: Organisational culture, Digital Transformation (DT), performance, efficiency, public sector, change management, and digital transformation roadmap.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfillment of the requirements for the degree of Master of Philosophy Corporate Strategy at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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CHAPTER 1: INTRODUCTION

1.1 Introduction to research background and rationale

This chapter introduces the study's background and the motivation for focusing on the synergy between organisational culture and digital transformation to drive performance and efficiency improvements in the context of public sector organisations. It presents the background of the study, as well as theoretical grounding and business relevance before specifying the research problems, the objectives, the research questions, scope and the study's contribution.

Governments around the world, South Africa included, are increasingly leveraging digital solutions to enhance service delivery and operational efficiency. Yet, the investments in such interventions come with varying levels of success and are limited by organisational culture, leadership readiness and employee engagements. When the leadership, employees and the systems they use are culturally not prepared to embrace change then even the most well-funded digital strategies can stall or even fail.

The intersection between digital transformation and organisational culture therefore presents a critical lens through which to understand why some public sector digital initiatives are successful while others fail outright. Within the South African public sector context, where there are old legacy systems, bureaucratic hierarchies and persistence of constrained resources, the alignment between cultural readiness and digital strategy is not just advantageous, but it is an urgent necessity that needs to be executed. This study explored how these two dimensions interact to enable or to constrain an organisation's performance and efficiency within the south African public sector insights, with limited comparative reflections from similar African contexts.

The South African government has responded futuristically by rolling out a range of policy initiatives like The National Development Plan 2030 (NDP) and the Public Service Digitalisation Strategy that collectively advocate for the modernisation and the adoption of digital technologies; however, the pace and impact of implementation vary significantly across departments.

A major milestone in this journey is the introduction of the Digital Transformation Roadmap 2030, which encompasses a whole government strategy to overcome systematic barriers to digital reform. The roadmap focuses on the development of Digital Public Infrastructure (DPI), which is anchored by shared, multi-purpose technologies that enable secure, inclusive and scalable service delivery across departments. These

policies align with global frameworks such as the African Union's Digital Transformation Strategy and the UN Global Digital Compact.

Within this broader global landscape, developing economies which share similar developmental characteristics, such as Brazil, India, and Chile, have made substantial progress embracing and adopting technology to enhance service delivery (Galvez & Revinova, 2025). Similarly, South Africa is navigating its own digital transformation journey within this evolving global context. As a diverse and evolving economy, it is in the process of aligning with global trends in the digital era. The country is increasingly adopting technology as a strategic priority to enhance efficiency, transparency, accountability, and overall performance in delivering services to citizens and its employees.

Most of South Africa's public institutions are still stuck in manual, paper-based systems that slow down speed, accessibility and integration. However, policy ambition alone is insufficient without organisational culture that supports digital adoption and innovation.

From a business perspective a digitally aligned culture shapes how employees embrace change, engage with technology and collaborate to deliver efficient and citizen centred services (Ciampi, Faraoni, Ballerini & Meli, 2021; Angelopoulos et al., 2023). For these initiatives to be successful they depend not only on technological investment but also on the cultural adaptability on institutions, particularly its ability to adapt, openness to innovation, and develop a digital learning mindset (Verhoef et al., 2019).

This study therefore positions digital transformation as both a technological and socio organisational process that does not only involve the deployment of digital technologies and infrastructure, but one that also requires a fundamental shift in institutional culture, leadership mindset change, engagement of all employees. A sustainable transformation in public sector draws strength from aligning digital initiatives with values, transparency, collaboration and citizen centric service delivery focus. These dynamics provide the foundation for examining how organisational culture and digital transformation interact to influence performance and efficiency.

By focusing on how organisational culture and digital transformation work together, this research helped to explain why technology alone is not enough. Dependency on adapting culture and having a committed leadership can bring success when fully aligned. Building on this, the research aimed to examine how a synergistic alignment between organisational culture and digital transformation drives organisational performance and efficiency in South Africa's public sector institutions, demonstrating that technology and culture must evolve together to deliver sustainable transformation outcomes.

1.2 Background to the research

Digitalisation has fundamentally changed how organisations function, creating both opportunities and challenges in adapting to rapidly changing environments (Vial, 2019). In the public sector, digital transformation is increasingly recognised as a strategic necessity to improve efficiency, transparency and accountability (Mergel et al., 2019). For South Africa, this is more important particularly because, the country has persistent challenges in governance, inequality and public trust. Research indicates that the public sector continues to experience structural barriers, resource constraints and cultural resistance that hinder the realisation of digital transformation benefits (Warner & Wäger, 2018).

The connection between culture and digital transformation therefore remains a critical but often overlooked factor in achieving long-term performance and service delivery outcomes within public institutions (Hie, 2019; Pradana et al., 2022; Goncalves et al., 2020).

In a South African context, the study looked within the south Africa's public sector landscape where digital transformation is both a strategic imperative and a complex socio-political challenge. The research aimed to explore how institutional culture shapes adoption and impact of digital initiatives in a context marked by service delivery pressures, legacy systems and evolving citizen expectations.

1.3 Theoretical grounding of the Study

1.3.1 Organisational culture – Definitions and Key concepts

Hollister et al. (2021) and Leal-Rodriguez et al. (2023) describe organisational culture as shared values, beliefs and underlying assumptions that employees collectively hold, whether expressed explicitly or understood explicitly. Building on this view, Schein (2010), one of the leading voices on organisational culture points out that these shared assumptions and everyday behaviours shape how people think, make decisions and how they act within an organisation.

Overtime, when well developed, a strong organisational culture can bring people together, creating a sense of cooperation, unity and togetherness that helps the organisation operate as a cohesive whole. Culture and strategy do not just co-exist in an organisation, they move together in guiding each step of growth and transformation (Kotter, 2014). The shared way of thinking and behaving mentioned by Hollister et al. (2021) and Leal-Rodriguez et al. (2023) does not just influence day to day work, as it also guides the organisation's strategic decision, ensuring that culture and strategy move together

rather than in isolation. In every organisation, culture and strategy go hand in hand, constantly shaping each other as business grows and evolves.

Organisational culture is deeply tied to the beliefs, policies and ideologies that shape how things are done (Antony et al., 2022). Expanding on this perspective, Kotter (2014) argues that culture is not just one part of the business, it is the organisation itself. It reflects the everyday actions, expectations, decisions and the way people interact with one another in an organisation. Together with structure and strategy, it operates as a key sub-system that shapes how organisations function and evolve.

1.3.2 Culture as a bottleneck in digital transformation (change dynamics)

While a strong organisational culture can bring people together, a misaligned organisational culture that does not support digital transformation initiatives can become a barrier when organisations try to embrace digital transformation and can contribute to a high failure rate, especially if the employees' values, beliefs and ways of working do not support new digital initiatives, then projects are much more likely to fail (Grover et al., 2022**).**

As Westerman, Bonnet, and McAfee (2014) argue, technology changes at lightning speed, but organisations and their cultures often adapt much more slowly, making culture a critical bottleneck**.** Across both private and public sectors, digitalisation is transforming how work gets done and value is delivered to internal stakeholders and external citizens. As such, the research into digital transformation has been gaining traction among academics and industry specialists, which highlights its relevance across sectors. Technological developments are happening at a pace that is redefining the nature of work and how institutions are delivering value to its citizens. As a result, research into digital transformation is steadily gaining traction among both academics and industry specialists, reflecting its growing relevance across all types of organisations.

1.3.3 Digital Transformation Concepts

1.3.3.1 Digitisation

Digitisation suggests the conversion of analogue information into representations in the digital domain, making storage, retrieval, and transmission easier (Zourou & Oikonomou, 2022). Merlano (2024) also refers to digitisation as the transformation of analogue data into structured sets of digital data.

1.3.3.2 Digitalisation

Digitalisation evolves from digitisation through the implementation of advanced technologies like Artificial Inteligence, big data, and cloud computing to drive

organisational improvement, enhance operation efficiencies, and develop novel business models (Vial, 2021; Mishra, Mishra & Bansal, 2024).

1.3.3.3 Digital Transformation Foundations

According to Kocaoglu and Kirmizi (2024), in turn, digitalisation transforms corporate architecture, yielding new sources of revenue and new opportunities to produce value. The evolution of digital transformation could be tracked through different stages of technological progress, starting from the digitisation of analogue data in the beginning years of the computer advancing through the digitalisation of enterprise processes, and finally leading to end-to-end digital transformation (Vial, 2021). Li et al., (2020) identified the different dimensions of digital transformation into the technological (new digital developments in the form of artificial intelligence and blockchain), organisational (reorganisation and procedural modifications in the conduct of the enterprise), and societal (broader economic and social implications) dimensions.

This traction is leading governments to drive discussions at industry conferences such as Govtech on digital transformation (Hanelt et al., 2020).

1.3.4 Theoretical and Conceptual Frameworks for Digital Transformation

Digital transformation in the public sector requires both a robust understanding of technology adoption and a nuanced appreciation of organisational culture. To anchor this study, five interrelated frameworks were synthesised: the Unified Theory of Acceptance and Use of Technology (UTAUT), the Digital Maturity Model (DMM), the Digital Transformation Framework (DTF), the Digital Framework for Responsible Transformation Management (DFRTM), and the Competing Values Model (CVM). Together, these frameworks provided a comprehensive lens through which adoption, maturity, responsibility, and culture could be examined in relation to performance outcomes.

1.3.5 Technology adoption Theory (ATAUT)

UTAUT is often referred to as a technology adoption theory and it is widely applied in public sectors to explain how employees and institutions adopt new digital systems.To bridge the gap, the study integrated UTAUT which explained the individuals' technology adoption behaviours. UTAUT complemented these by addressing the individual level of analysis, explaining how employee perceptions, motivation and behavioural intent influence technology adoption and how it is used.

According to UTAUT, the individuals' behavioural intention to use technology is primarily shaped by four core factors: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003. UTAUT proved especially insightful in

explaining micro-level behaviour dynamics facilitating or inhibiting digital transformation, and those involving employee acceptance, leader and follower influence, and institutional preparedness (Furr et al., 2022). The UTAUT framework is widely recognised as a more rigorous and comprehensive model of technology acceptance, offering a detailed set of determinants namely performance expectancy, effort expectancy, social influence, and facilitating conditions that enhance its predictive strength and accuracy compared to many models currently in use (Addy et al., 2023). These constructs are moderated by demographic and contextual factors, making UTAUT particularly relevant for diverse public sector environments (Venkatesh, Thong, & Xu, 2012). Yet, as Shatta and Mabina (2024) caution, a persistent limitation of such theoretical models, including UTAUT, is their predominant testing within Western contexts, which raises questions about their relevance and applicability in diverse environments such as South Africa, highlights the importance of organisational culture, leadership endorsement, and infrastructure readiness in shaping adoption outcomes.

Even so, the UTAUT model remains more encompassing and demonstrates stronger predictive capacity than the traditional theories (Jama et al., 2024).

1.3.6 Digital Maturity Model (DMM

DMM provides a diagnostic tool for assessing an organisation's readiness and progress in digital transformation. It evaluates dimensions such as customer focus, strategy, technology, operations, culture, and data (TM Forum, 2018; Deloitte, 2020). In the public sector, DMM enables benchmarking against global standards while identifying local gaps in infrastructure and skills (CMMI Institute, 2014; DPSA, 2022). This diagnostic clarity is essential for aligning transformation initiatives with realistic capabilities and for ensuring that digital ambitions are grounded in organisational maturity (Deloitte, 2020)

Competing Values Frameworks (CVF) and cultural types

The Competing Values Framework (CVF) helps to classify organisational culture types and links them to transformation outcomes. It interprets how leadership and culture influence organisational behaviour, collaboration, and the adoption of digital initiatives.

Integrated theoretical lens (UTAUT, DMM,CVF and DCT)

Digital transformation extends beyond the deployment of technology. It is about re-imagining how organisations operate and how individuals interact with them. The Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT) highlight how firms achieve competitive advantage by leveraging valuable, rare and in-imitable resources and by reconfiguring these resources in response to external change (Teece, 2017; Hossain et al., 2021; Bogers et al., 2018; Angelopoulos et al., 2023). However,

theories focus primarily on strategy and structure, often overlooking the human and behavioural factors critical to transformation success. Together these frameworks supported the study's central argument that technology alone is not sufficient, rather, the synergy between organisational culture and digital capability determines the success of transformational initiatives. By integrating strategic organisational and behavioural lenses, this research provided a holistic understanding of how organisational culture and digital transformation interact to drive performance and efficiency within South Africa's public sector.

Together these theories provided a multi-dimensional perspective, capturing how organisational readiness, leadership and culture collectively shape digital transformation outcomes. In the context of South Africa's public sector, this integrated framework provided a lens to analyse how institutional culture and digital capabilities interact to influence performance and service delivery outcomes. In the context of this study, these theoretical perspectives collectively explained the multi layered nature of digital transformation within public institutions. RBV and DCT provided a strategic foundation for understanding how public organisations leverage and reconfigure their resources from a technological, human, and structural view to enhance performance and efficiency in a changing environment.

1.4 Research Problem Statement

1.4.1 Research Questions and purpose

The objective of this chapter was guided by one central question and sub questions based on the literature review which was formulated as follows: -

To what extent do organisational culture and digital transformation contribute to organisational efficiency and performance in South African public sector Institutions?

To address the central question, four research sub-questions were formulated as:

1. RQ1 - How does digital transformation drive improvements in operational efficiency within organisations?
2. RQ2 - How does digital transformation impact transparency and decision-making processes in organisations?
3. RQ3 - How does organisational culture shape the effectiveness of digital transformation initiatives and influence the overall organisational performance?
4. RQ4- What are the most important facilitators and inhibitors of the success of digital transformation programs?

1.5 Research Aims

The overarching aim of this study was to understand how organisational culture and digital transformation interact to influence efficiency and performance in South African public sector institutions. Specifically, the study sought:

1. To identify the types of digital transformation initiatives adopted in public sector firms to enable an understanding of the patterns of technological adoption and areas where implementation may face challenges.
2. To explore the cultural attributes that enable or hinder digital transformation success, providing insights into the human and behavioural factors that influence adoption outcomes.
3. To examine how culture and digital transformation jointly influence organisational efficiency and performance, highlighting the synergy required for sustainable transformation.
4. To offer strategic insights to help firms align culture with digital transformation goals, ensuring that recommendations are actionable for leaders and policymakers in complex government environment.

1.6 Research Contribution

1.6.1 Theoretical contribution

This study extends the literature on digital transformation by integrating UTAUT, RBV, DCT, and CVF into a single conceptual lens. This integrated approach bridges the micro-level insights on individual technology adoption with macro-level understanding of organisational capabilities and culture. This approach provided a more holistic explanation of the performance outcomes in digitally transforming public institutions.

1.6.2 Practical contribution

The findings offer public-sector leaders and policymakers actionable insights and guidance into how organisational culture and leadership readiness influence the effectiveness of digital transformation. By highlighting key enablers such as change leadership, communication, and the alignment between digital and organisational strategies the study provides guidance for managing transformation more effectively in complex government environments.

1.6.3 Contextual contribution

Situated within the South African public sector, the research contributes context-specific knowledge to the broader African digital-transformation discourse. It addressed a critical gap in empirical evidence from developing economies and demonstrated how

institutional culture and systemic challenges shape digital outcomes in resource-constrained environments, offering lessons for similar contexts across the continent.

Together, these contributions enhance the understanding of how organisational culture and digital transformation interact to influence performance and efficiency in the public sector, offering both theoretical depth and practical relevance.

1.7 Research Scope

The research analysis sought to understand the relationship between organisational culture and digital transformation and how their synergy influences organisational performance and efficiency within the South African public sector. For the purpose of the study, public sector consists of the general government which comprises of the national government, provincial government and the local government scheduled under the Public Finance Management Act (Black et al., 2015). The research primarily focused on national departments and state owned entities in the Gauteng Province where digital transformation initiatives are actively been implemented, though digital transformation maturity and cultural dynamics may vary significantly across institutions.

Participants were drawn from the insights of diverse professional roles including senior managers, digital transformation champions, and IT staff. Their insights were used to explore organisational dynamics, structural shifts, and the cultural transition involved in digital initiatives. Lower level employee roles and perspectives were intentionally excluded, as the focus of this study was on internal organisational processes and leadership perspectives.

1.8 Study structure

The study is structured into seven chapters, each building on the last to guide the reader through the research journey.

Chapter 1 reviewed the literature on the cultural aspect of an organisation and digital transformation with a particular focus on these constructs, organisational culture, digital transformation, performance, efficiency, and change management. The theoretical frameworks that guide culture and digital transformation such as UTAUT, RBV, DCT, and CVF were also explored. This literature contextualised the research questions and the propositions defined in Chapter 3.

The chapter then conceptualised the research questions and propositions defined in Chapter 3. Building on the Chapter 3 flow, chapter 4 outlines the research narrative enquiry and methodology that the qualitative, exploratory approach adopted to capture the lived experiences of the participants. The timeline was from 2018 when south Africa

experienced the start of technological change up until 2025 which reflects a period of accelerated digital transformation in the public sector. The findings from the collected data are organised around the major themes that emerged from the participant narratives and analysis shared in Chapter 5. Chapter 6 discusses the findings in alignment with the literature and frameworks which interpret how organisational culture, leadership commitment and change readiness influence digital transformation outcomes. Recommendations and conclusions for practice, policy, and future research are summarised in Chapter 7.

1.9 Conclusion

Chapter 1 established the foundation for this study by outlining the central concepts of organisational culture, digital transformation, performance, and efficiency within the South African public sector. It introduced the theoretical frameworks that guided the study such as UTAUT, RBV, DCT, and CVF. and the chapter also demonstrated how these perspectives collectively provide a multi-layered understanding of how digital transformation unfolds in public institutions. The chapter further articulated the research problem, questions, aims, contributions, and scope, clarifying the rationale and direction of the study.

Together, these components framed the need to examine the interaction between organisational culture and digital transformation as drivers of organisational performance and efficiency. The chapter also highlighted the significance of understanding behavioural, organisational, and strategic dynamics to explain transformation outcomes in complex government environments.

Having established this conceptual and theoretical foundation, the next chapter presents the research context by outlining the structure of the South African public sector, the policy environment influencing digital transformation, and the broader developmental challenges shaping institutional capability and readiness.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The onset of the Fourth Industrial Revolution (4IR), as Schwab (2025) observes, is driving significant disruptions that are reshaping how public institutions and organisations function. The idea of digital transformation is still not clearly understood, and the current implementation outcomes reveal worrying trends, highlighting the need for deeper scholarly investigation (Singun, 2025).

Building on the foundational concept introduced in Chapter 1, this chapter reviews the key literature on digital transformation and its intersection with organisational culture. Leadership is introduced herein as a critical lens for interpreting transformation outcomes. In doing so, the chapter identifies key concepts, enablers, outcomes, theoretical foundation and gaps in the literature, providing a basis for understanding how an organisation can successfully navigate digital transformation with culture as the driver.

Digital transformation has moved beyond being a mere “buzzword”, as it now represents a central driver of organisational growth. Rather than serving as a passing trend, it has become embedded in the way organisations innovate, compete, and deliver value, shaping both strategic direction and everyday operations.

The framing of digital transformation is still unsettled as a concept, and the way it is framed differs depending across literature. Herbert (2017) views it as a managerial responsibility, urging that organisations need to embed transformation into their strategic planning if they want to remain relevant. Nadkarni and Prügl (2020), however, point out that this framing that Herbert (2017) uses, is obscure and it hides the messiness of implementation, where barriers often emerge, hence further study is needed. Vial (2021) adds another layer to this debate, positioning digital transformation within information systems research, linking it to questions of performance and competitiveness. Taken together, these accounts do not resolve the debate; instead, they highlight the tension between urgency in practice and ambiguity in theory. For organisations, the challenge is not only to act but to make sense of what digital transformation really means in their own context and what impacts its success and failures.

Organisational culture can be understood as the collection of ideas, values, and practices that shape behaviour within an administrative community (Herbert, 2020). Its application is closely tied to the role of the organisation as a core management function across different sectors. The importance of organisational culture lies in its ability to provide a framework that guides and directs the behaviour of employees. It shapes how employees

act and influence the patterns of conduct expected in their workplace. More broadly, organisational culture forms a central part of the internal environment of any institution, sustaining unity and integrity by embedding shared norms and values. In this way, culture not only structures behaviour but also reinforces cohesion across an organisation.

Herbert (2020) further describes organisational culture as the defining characteristics of the work environment, expressed through systems and norms that provide stability and direction. When these elements are in place, culture contributes to positive outcomes such as employee growth, professional development, and the achievement of organisational goals through coherent planning.

Digital transformation often demands a shift in organisational culture. This is because technology alone cannot deliver meaningful changes unless the values, norms, and behaviours within the organisation adapt to support new ways of working. Culture influences how employees respond to innovation, how leaders frame transformation, and whether digital initiatives become embedded in everyday practice. Without cultural alignment, transformation efforts risk remaining superficial, failing to achieve the intended impact on performance and service delivery.

As public institutions undergo digital transformation, they are required to adapt not only to new technologies but also to revised processes and different ways of working. This adaptation extends beyond technical upgrades, demanding changes in organisational routines, decision-making structures, and the cultural norms that shape everyday practice. Without such adjustments, digital initiatives risk being implemented in isolation, rather than becoming embedded as part of a broader transformation strategy.

Since this study examined the relationship between organisational culture and digital transformation in public sector institutions, the following sections define how transformation was understood before considering culture as the factor that shapes its success or failure.

2.2 Conceptualising Digital Transformation: History of digital transformation

There is currently no commonly accepted definition for the term “digital transformation”. Digitalisation and the digitisation are often used interchangeably. Digital transformation has unfolded gradually as organisations and industries have taken on new technologies over time. From the early adoption of the internet and mobile tools to the growing use of data-driven systems and, more recently, artificial intelligence, this progression reflects how deeply digital technologies have become embedded in organisational life (Fitzgerald et al., 2013).

More recently, the term “digital transformation” has come to describe broader organisational change, often linked to digital maturity and 4IR.

This was followed by digitalisation which emphasised the integration of digital tools into organisational workflows. Defining these terms as they are applied in this study helps to avoid ambiguity and situates culture and leadership as critical enablers of transformation success.

2.2.1 Overview of Related Digital Concepts

The section explores the various concepts explored in the study, ranging from digital transformation, digitisation, culture and leadership. The history of digital transformation reflects a gradual shift in how organisations engage with technology. Early discussions centred on digitisation, the conversion of analogue processes into digital formats. More recently, the term “digital transformation” has come to describe broader organisational change, often linked to digital maturity and 4IR. Defining these terms as they are applied in this study helps to avoid ambiguity and situates culture and leadership as critical enablers of transformation success.

4IR is a major driver of technological change, characterised by the rise of hyperphysical systems (Schwab & Davis, 2018). It signifies a profound shift in how people live, work as well as interact, and it is reshaping the operational and social landscape in ways that affect business, society and the economy (Schwab & Davis, 2018).

Digital transformation has unfolded over time as organisations and industries steadily adopted new technologies. Starting with the rise of the internet and mobile tools and now extending to data-driven systems and artificial intelligence, this shift reflects how deeply technology has become part of everyday organisational practice (Fitzgerald et al., 2013). Hund et al. (2021) explain that in the early stages, most research focused on how organisations were introducing and setting up these technologies. Much of this work sat firmly within the IT departments, where digital tools were primarily examined as technical systems rather than as broader organisational enablers.

In this study, the term “digital” is used in a broader sense to include core computing technologies such as AI and IoT, as well as any emerging technologies that significantly shapes business, societal or economic activity (Armstrong & Lee, 2021).

2.2.2 Definition Digital Transformation

Digital transformation is a relatively recent concept which originally emerged in the private sector as organisations began adopting new technologies to enhance competitiveness (Mergel et al., 2019). It has become central to governance in

organisations; however, it has also remained a “buzzword” in recent years, with no widely accepted definition of the term. One can understand it as the use of the latest digital tools, or as effective use of data, and organisational restructuring to create new operational capabilities. In this regard, digital transformation is often viewed as a process rather than a fixed outcome and the definitions presented in literature resonate strongly with this understanding.

Zourou and Oikonomou (2022) associate digital transformation with smart technologies, automation, and the integration of the physical and the digital tools, effective use of data, and organisational restructuring to create new operational capabilities. This new way of changing operations pushes organisations to make strategic choices and over time adjust their structures so they can stay effective and competitive (Hitt et al., 2021). Scholars point out that there is still not a full understanding of how the big organisational changes caused by digital transformation affect organisations. Verhoef et al. (2021) also note that this area has not been studied enough.

Gong and Ribiere (2021) note that digital transformation is more than adding new technologies to existing processes. They describe it as a fundamental shift in how an organisation operates in using digital tools to meaningfully improve outcomes for all stakeholders. This kind of transformation calls for new ways of working and thinking, supported by modern platforms, updated practices and new cultural norms, revised strategies and resigned organisational structures. They further define digital transformation as the employment of digital technologies to build new or to alter existing business processes, organisational culture, and customer experience to explore new ways of business and meet the ultimate aim of achieving a level of digital maturity.

Hund et al. (2021) argue that the central aim of digital transformation is to improve operational performance by embracing the disruptive effects of digital technologies across society, industries, and organisations. These disruptions, however, are not merely technical, as they reshape processes, structures, and expectations within institutions. For public institutions in particular, the ability to absorb disruption depends heavily on organisational culture. As Schein (2010) explains, culture represents the shared assumptions and values that guide behaviour, and it can either enable or constrain adaptation. A culture that values adaptability, collaboration, and innovation enables employees to interpret disruption as an opportunity for growth rather than as a threat (Kane et al., 2015; Vial, 2019). Conversely, rigid or hierarchical cultures may resist change, limiting the effectiveness of digital initiatives. In this way, organisational culture becomes the critical lens through which the disruptive potential of digital technologies is

either harnessed for performance gains or constrained by institutional inertia (Jones & Gatrell, 2014).

In public sector institutions, the term ‘e-government’ has traditionally referred to the use of ICT to deliver services to citizens. However, this has often been limited to moving services online, without accompanying organisational transformation. This highlights the need for digital transformation in the public sector, aimed at reshaping organisational structures, culture, and the government’s interactions with citizens (Mergel et al., 2019).

This flexibility is important in the context of organisational initiatives, where sustainable growth and responsiveness to emerging trends are essential for improving service delivery and organisational performance. Strategic digital transformation improves coordination and fosters scalability (Berman & Marshall, 2014).

The evolution of digital transformation could be tracked through different stages of technological progress, starting from the digitisation of analogue data in the beginning years of the computer advancing through the digitalisation of enterprise processes, and finally leading to end-to-end digital transformation (Vial, 2021). Li et al. (2020) identify three dimensions of digital transformation; technological (new digital developments in the form of artificial intelligence and blockchain), organisational (reorganisation and procedural modifications in the conduct of the enterprise), and societal (broader economic and social implications) dimensions.

2.2.3 Dimensions of Digital transformation

In the literature, digital transformation is often confused or used interchangeably alongside digitisation and digitalisation (Mergel et al., 2019). It is important to clarify and distinguish these concepts.

Given that the dimensions of digital transformation are frequently misunderstood, it becomes essential to disentangle the related but distinct concepts of digitisation and digitalisation. While these terms are often used interchangeably in the literature (Mergel et al., 2019), they capture different levels of technological change. The next subsection therefore clarifies how digitisation, digitalisation, and digital transformation differ, and explains why distinguishing them is critical for understanding the strategic and cultural implications of transformation in organisations.

2.2.3.1 Digitisation Digitalisation and Digital Transformation

Digitisation refers to converting analogue information into computer readable data (Koch, (2017), which is enabled by technologies such as computers, cloud systems and AI to drive organisational improvement, enhance operational efficiencies, and develop novel business models (Vial, 2021; Mishra, Mishra & Bansal, 2024).

Digitalisation, as Autio (2017) explains, involves applying these technologies across business, the economy and society to automate and optimise processes (Mahraz et al., 2019). Digital disruption describes the effects of these applications.

Digital transformation, however, represents a more profound shift. It is not limited to process automation or data conversion but entails a fundamental reconfiguration of organisational strategies, structures, and cultures. Vial (2019) emphasises that transformation involves leveraging digital technologies to create new forms of value, to redefine competitive positioning, and to accelerate the scope and scale of change. Similarly, Warner and Wäger (2019) highlight that digital transformation requires building dynamic capabilities to continuously adapt to technological disruption, making it an ongoing process of strategic renewal.

On the other hand, Verhoef et al. (2021) take a different view, seeing digitisation, digitalisation and digital transformation as interconnected phases of one transformation process, rather than as separate ideas.

Mergel, Edelmann and Haug (2019) illustrate the distinction clearly: digitisation is converting analogue processes like paper forms into online versions, digitalisation reflects the use of these digital tools to improve how work is conducted (for example, filling out those forms), and digital transformation represents a full shift to online service delivery accompanied by structural change.

In contrast, Kocaoglu and Kirmizi (2024) focus on applying digital tools across various dimensions of the enterprise to sustain competitive advantage and enhance operational efficiency. Integrating digital tools can enhance transparency, optimise service delivery and reduce operational costs (Yang, Gu, & Albitar, 2022).

Clarifying these distinctions is essential, as conflating digitisation, digitalisation, and digital transformation risks obscuring the strategic and cultural dimensions that underpin successful transformation initiatives. For public organisations in particular, recognising these differences ensures that digital efforts are not reduced to technical upgrades but are understood as part of a broader cultural and structural shift necessary for long-term impact.

Having distinguished between digitisation, digitalisation, and digital transformation, it is important to consider what enables organisations to adopt and integrate transformation initiatives successfully. While technology provides the tools, success depends on a wider set of organisational, cultural, and strategic factors that shape how digital initiatives are absorbed and sustained. The next section looks into this.

2.2.4 Enablers of Successful Adoption and Integration of Digital Transformation Initiatives

The enablers of successful digital transformation go beyond technical infrastructure. Scholars emphasise that leadership commitment, organisational culture, employee skills, and clear strategic alignment are critical for ensuring that digital initiatives deliver long-term value (Warner & Wäger, 2018). Strong governance structures and supportive policies also play a role, particularly in public organisations where accountability and service delivery are central (Verhoef et al., 2021). In this way, enablers act as the foundation that allows digital technologies to be integrated into everyday practices, rather than remaining isolated projects.

In the study, the findings revealed a complex system of facilitators and obstacles that shape the pattern of digital transformation. In this perspective, some of the most effective enablers, as highlighted by the participants, include but are not limited to dedicated leadership, strategic focus, sound digital governance frameworks, and proper resource allocation.

Flexibility and adaptability are critical, enabling organisations to respond to emerging technological trends while aligning with long term objectives (Yang, Gu, & Albitar, 2022). Gong, Yang and Shi (2022) emphasise flexibility as a critical role of digital transformation, arguing that an adaptable approach enables organisations to react to changing technological needs and while strategically aligning with long-term objectives. Together, these studies underscore the need for adaptability and continuous assessment in successful digital transformation efforts.

Keifer et al. (2021) identify the cultural attributes that support digital innovation within organisations, including digital awareness, digital skills, and an orientation towards ecosystems and collaboration. They further highlight the importance of agility, risk-taking, internal knowledge sharing and openness to learning. These features create a cultural environment that encourages innovation, enabling organisations to better adapt to and benefit from digital transformation efforts. Digital initiatives not only streamline processes but also improve engagement. This is supported by Gong, Yang and Shi (2022), who

stress the importance of flexible adaptability and long-term success. Together these studies illustrate the multifaceted benefits and challenges of digital transformation.

Cultural attributes such as digital awareness, agility, openness to learning and collaboration support innovation and help organisations reap the benefits of digital transformation (Keifer et al., 2021).

The success of digital transformation initiative adoption and integration depends on various strategic enablers capable of overcoming obstacles and optimizing the returns from digital innovation. Strong leadership emerges as a main facilitator in this respect, catalysing change owing to vision, commitment, and the capacity for mobilizing organisational backing through various departments and hierarchies (Li et al., 2020). Leaders actively promote a digital culture, align strategies according to innovation targets and overcome resistance usually present in traditional set-ups. Also, a well-designed regulatory framework having flexibility and clarity may also serve as a catalyst for change rather than a restriction.

Efficient data governance policies, for example, facilitate organisations to innovate responsibly and remain compliant and trusted (Zourou & Oikonomou, 2022). Equally critical is the advancement of digital expertise and capabilities throughout the workforce. Equipping employees with productivity-relevant training and continuous learning opportunities builds their confidence and preparedness in leveraging digital tools efficiently and hence drives system take-up and innovation output (Haidar, 2024). In addition, the integration of data analytics and automation allows for better and timely decision-making, enhancing productivity service quality (de Vos, Ishmaev & Pouwelse, 2022).

The application of big data and evidence-driven decision-making not only improves internal performance but also increases responsiveness to citizens and customers (Widodo et al., 2024). Last but not least, digital platforms supporting open communication and timely feedback between the organisation and stakeholders establish trust, active engagement and ongoing improvement (Di Tullio et al.,2021). Collectively, the above enablers offer the basis for a successful and sustainable digital transformation experience

2.2.5 Outcomes of Digital Transformation

Digital transformation fosters a cultural environment that encourages innovation, enabling organisations to better adapt to and benefit from change. Digital initiatives not only streamline processes but also improve engagement. This is supported by Gong, Yang and Shi (2022), who emphasise the importance of flexible adaptability and long-

term success. Together these studies illustrate the multifaceted benefits and challenges of digital transformation. Likewise, Mihailidis and Dezuanni (2021) describe digital transformation as the deployment of new digital tools to gain considerable enhancements in enterprise performance, service, and customer experience. Digital transformation allows organisations to expand into new markets, to win more and fundamentally change how they provide service and engage customers (Mergel et al., 2019). This aligns with Goldschmidt and Matthews (2022), who highlight the necessity of regular evaluations to assess the impact of digital initiates on customer satisfaction and organisational performance.

This paper examined the different facets of digital transformation, starting from the conceptualisation, the historicity, and the synthesis of the various definitions. The review continued to look at the enablers of digital transformation, the effect of the transformation in terms of organisational performance, and the theoretical foundations underpinning the transformation. Also, the review identified gaps in the existing body of knowledge and suggested research directions.

2.3 Organisational Culture

Organisational culture matters because it shapes how people behave at work and does more than just providing a structure, as it sets expectations and guides daily practices. Herbert (2017) argues that culture offers managers a way to organise behaviour, but this view risks oversimplifying how employees actually experience those norms.

2.3.1 Conceptualisations of Organisational Culture (definitions)

2.3.1.1 Definition of Culture

In social anthropology, culture is recognised as a foundational lens for understanding society. Its meaning has continually shifted across historical contexts, reflecting the dynamic and lived realities of communities. Culture is described as the knowledge and behaviour passed down through generations, helping groups preserve identity and continuity (Sewell, 2004, pp.35-40). This broad view highlights culture as something shared across time and society.

African scholars, however, add that culture is lived through values such as the philosophy of *ubuntu*, highlighting interconnectedness of the community, mutual care, and shared humanity (Metz, 2011). This perspective situates culture not only as inherited practice but as a living force that sustains heritage and guides transformation in today's society. Kroeber and Kluckhohn (1952) describe it as the values, ideas, and behaviours learned and shared within communities, while Geertz (1973) emphasised culture as a system of

inherited conceptions expressed through symbolic forms that shape meaning and social life.

Later theorists, such as Harris (1968), highlighted culture's role in structuring human action and collective identity. This juxtaposition illustrates how Western definitions often stress symbolic or structural dimensions, whereas African perspectives emphasise relationality and communal belonging as the essence of cultural life. Culture evolves as a living and complex force that continually shapes the character of human societies. It is expressed both in the outward patterns of social behaviour and in the deeper, less visible currents of shared consciousness that bind communities together.

In organisations, this means culture is not only about rules and assumptions, as Schein (2010) suggests, but also about how people connect, lead, and work together in ways that reflect local traditions. Adding to this, culture reflects people's actions, expectations, decisions, and the way they interact within an organisation (Schein, 2010; Hofstede et al., 2010; Alvesson, 2013; Hartnell et al., 2011; Chatman & O'Reilly, 2016).

2.3.1.2 Organisational culture

Definition of Organisational culture

Organisational culture has been defined in different ways by different scholars, with no single universally accepted definition that everyone agrees on (Szydło & Grześ-Bukłaho, 2020). A meaningful grasp of organisational culture requires looking at how its definition has shifted and developed across different periods of literature. Organisational culture is critical to day-to-day functioning and remains a complex, multifaceted construct in organisational theory (Denison & Mishra, 1995; Hartnell, Ou & Kinicki, 2011; Chatman & O'Reilly, 2016; Sorensen, 2002).

The study of organisational culture has long drawn significant interest within academic research, resulting in the development of a range of theoretical models and frameworks aimed at deepening our understanding of organisations and the cultures that shape them (Fey & Denison, 2003; Schein, 1990). Culture is shaped over time by an institution's history, its long-standing practices, and the structures that guide daily work. As a result, each organisation develops its own way of doing things. This cultural character gives an organisation a sense of identity and makes it recognisable in its own right. It also sets one organisation apart from another, even when they operate in the same sector. Scholars have long argued that a strong and well-aligned culture can become a strategic asset, particularly in competitive environments where culture influences performance, behaviour, and internal cohesion. In essence, no two organisations function exactly the same because each carries unique cultural patterns that reflect their background and

ways of working. Organisational culture is shaped over time by an institution's history, its long-standing practices, and the structures that guide daily work (Aryani & Widodo, 2020). As a result, each organisation develops its own way of doing things. This cultural character gives an organisation a sense of identity and makes it recognisable in its own right (Obiekwe, 2018). It also sets one organisation apart from another, even when they operate in the same sector. Scholars have long argued that a strong and well-aligned culture can become a strategic asset, particularly in competitive environments where culture influences performance, behaviour, and internal cohesion (Obiekwe, 2018; Odor, 2018). In essence, no two organisations function exactly the same because each carries unique cultural patterns that reflect their background and ways of working (Odor, 2018). Organisational culture provides the guidance for behaviour and actions shaping how individuals think and act within the organisation (Odor, 2018). It also includes the shared norms, values, and beliefs that guide employees' decisions and interactions (Schein, 2010; Hartnell et al., 2011; Chatman & O'Reilly, 2016).This is affirmed by Schein (1984) who highlights that shared assumption builds over time as groups figure out what works. These assumptions eventually become the "way we do things around here" and are passed on to new members and guide day to day operations.

Hatch (1993) was among the early scholars to caution against reducing organisational culture to overly simple terms. Through her "cultural dynamics" model, the author highlighted the importance of recognising the interplay between cultural elements and processes. As years went by, definitions became more refined. Schein (2010), for example, emphasises that organisational culture embodies the shared beliefs and expectations of members, a perspective that has since shaped much of the research in this area. Extending Schein (2010) theoretical foundation, Cui and Hu (2012) underscore the central role that shared values play in shaping organisational culture, highlighting them as a key dimension through which collective meaning and cohesion are sustained. These values are advanced as foundational principles intended to guide organisations in sustaining cohesion and securing a competitive edge.

Beyond these deeper values, culture also becomes visible in the everyday behaviours that people come to expect from one another, shaping how work is done and how colleagues interact (Kotter, 1995). Van der Post, de Coning, and Smit (1998) compare an organisation's culture to an individual's personality, shaping how it behaves and is perceived. Within the ongoing debate, Serpa (2016) offers a concise definition of organisational culture, framing it as the collective beliefs, practices, and expectations shared among members of an organisation.

As Bagraim (2001) notes, this lack of consensus reflects the broad and layered nature of the concept. At its core, organisational culture is about the shared values that hold a group together, and these often remain in place even when individuals move in and out of the organisation. When examining the culture of a group or organisation, it is useful to distinguish three levels at which culture is expressed: observable artefacts, values, and basic underlying assumptions (Grover et al., 2022; Schein, 1990).

Culture is recognised as a subsystem that shapes organisations (Leal-Rodríguez et al., 2023. In considering culture as a subsystem, Schein (1990) warns that in large organisations, different parts may develop their own cultures, which can sometimes conflict with one another.

This suggests that a uniform approach to cultural change may result in misalignment with the strategic objectives of the organisation (Denison & Mishra, 1995; Hartnell et al., 2011; Chatman & O'Reilly, 2016; Sørensen, 2002). This point suggests that a one size fits all approach to cultural change may result in a misfit with the strategic objectives of the organisation.

Culture emerges as a response to the problems faced by a group. It can therefore be understood as the collective solutions developed to address challenges encountered over time. Schein (1984) identifies two categories of problems that groups must resolve. The first relates to basic survival, encompassing issues tied to the primary task, core functions, and the overarching mission of the group. The second concerns the group's internal functioning, specifically how members organise themselves and interact as a collective.

Van der Post (1997) extends this perspective by emphasising that organisational culture is not only shaped by survival and functioning, but also by the values and behaviours that sustain cohesion and long-term effectiveness. In other words, organisational culture refers to "the way people behave and work within an organisation" (Farrell, 2018, p.863). Put differently, it is "the glue that holds the organisation together" (Van den Berg & Wilderom, 2004, p.571). Cichosz et al. (2020) add that "organisational culture defines how a company operates and how it introduces changes" (p.223). It can also be conceptualised as "the shared values and assumptions that bind individuals who share a workplace" (Watling et al., 2019, p.294).

Organisational culture within the public sector carries distinctive features that merit attention. O'Riordan (2015) explains organisational culture as the coming together of employee actions and values rooted in the organisation, shown through shared beliefs, practices, and behaviours that emphasise fairness and objectivity.

In the South African context, this understanding is often enriched by the philosophy of *ubuntu*, which highlights interconnectedness, compassion, and collective responsibility as guiding values within organisations (Mangaliso, 2001). Building on Schein (2010) earlier work, this perspective incorporates both conscious and unconscious dimensions of culture, drawing attention to the crucial role of group interactions across organisational hierarchies (Schein, 1990).

Organisational culture is often established by the founders, who set the initial ways of working and of solving problems within an institution. When challenges arise, members collectively decide on solutions, and over time these approaches become standard practice. As the organisation expands and new employees join, they are socialised in these established methods, learning to adopt the routines that have already been tested and proven effective. Eventually, these practices become so embedded in the daily functioning of the organisation that when similar problems occur, members instinctively know which approach to apply without the need for further deliberation.

For an organisation to grow and work well, its culture needs to be balanced across three levels: what people see and do (artefacts), what the organisation says it believes in (espoused values), and the deep beliefs that guide how people think and act (assumptions). Leaders must teach and remind staff about these values often, but they only become real when people believe in and use them in their daily work.

Taken together, these perspectives demonstrate that organisational culture is not a static construct but a dynamic system of values, beliefs, and practices that both shape and is shaped by organisational life. In sum, organisational culture can be understood as the shared system of values, beliefs, and practices that shape behaviour within organisations. Foundational perspectives, such as Schein's (1990) emphasis on conscious and unconscious dimensions, highlight the depth at which culture operates. O'Riordan (2015) extends this view to the public sector, underscoring fairness and objectivity, while South African scholarship enriches the discussion through ubuntu, which foregrounds interconnectedness and collective responsibility (Mangaliso, 2001). Together, these perspectives illustrate that organisational culture is not a static construct but a dynamic framework that both reflects and influences organisational objectives, particularly in contexts of transformation and reform.

Having established a working definition of organisational culture, it is important to consider the theoretical perspectives that have shaped its study. Cultural theories provide frameworks for understanding how values, beliefs, and practices are formed, sustained, and transformed within organisations.

2.3.2 Theoretical Perspectives on Organisational Culture

Having established the varied definitions of organisational culture, it is important to consider the theoretical frameworks that explain how culture operates within organisations. Organisational culture theories provide structured ways of understanding how values and practices are formed, sustained, and transformed, and how they influence both behaviour and performance. Three perspectives are particularly influential in contemporary scholarship: Schein's (1990) layered model, which distinguishes between artefacts, espoused values, and basic assumptions; Kotter's (2014) view of culture as either a driver or barrier to organisational change; and Cameron and Competing Values Framework (CVF), which offers a typology for understanding cultural orientations. Together, these frameworks move beyond definitional debates to explain the mechanisms through which culture shapes organisational outcomes

2.3.2.1 Schein (2010 Three Levels of organisational Culture

Schein (2010 organisational culture model, developed in the 1980s, distinguishes three interconnected levels of culture: Artefacts and behaviours, espoused Values, and underlying assumptions. Each level carries a different degree of visibility and depth, ranging from the observable practices of an organisation **artefacts and behaviours** (outer, visible layer) and to the hidden beliefs that shape its actions and **espoused values** (middle, stated layer) **to basic underlying assumptions** (deep, invisible core).

- Artefacts represent the visible aspects of culture, such as symbols, rituals, and organisational practices (Schein, 1990). Within the South African perspective, artefacts include visible practices such as the *Batho Pele* service charters, departmental logos, official languages used in communication, and rituals like public commemorations (Republic of South Africa, 1997). These artefacts symbolise the government's commitment to transparency, accountability, and service delivery (Ingle, 2011).
- Espoused values reflect the stated principles and strategies that guide behaviour (Schein, 1990). Espoused values are reflected in policy frameworks and strategic documents, such as the Constitution (Republic of South Africa, 1996) and the *Batho Pele* principles (Republic of South Africa, 1997). Values like equity, fairness, and inclusivity are explicitly articulated, guiding how institutions are expected to serve diverse communities
- Basic assumptions are the unconscious beliefs that underpin organisational life. At the deepest level, assumptions in South African public institutions often reflect *ubuntu*, the belief in interconnectedness and collective responsibility (Mangaliso, 2001; Chetty & Price, 2024). These assumptions shape how employees perceive

their role, not just as bureaucrats, but as custodians of democratic transformation and social (Chetty & Price, 2024).

This layered model (Figure 1) highlights the depth at which culture operates, showing that visible practices are sustained by deeper, often unspoken assumptions.

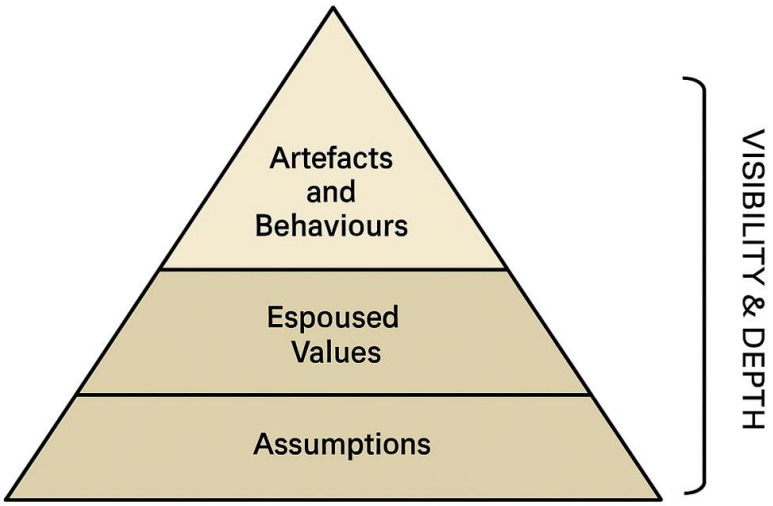


Figure 1: Schein's organisational culture model (three interconnected layers)

Cacciattolo (2014) maintains that these levels provide a useful framework for defining culture, as they illustrate how cultural patterns emerge and how they influence organisational behaviour.

For public sector institutions in South Africa, Schein's model highlights the **tension between visible artefacts (policies, charters), stated values (equity, fairness), and deeper assumptions (Ubuntu, service ethos)**. It shows that successful transformation depends not only on adopting new policies but on aligning them with the underlying cultural assumptions of collective responsibility and fairness.

2.3.2.2 The Competing Values Framework (CVF)

The Competing Values Framework (CVF), developed by Cameron and Quinn (2011), is widely used to analyse organisational culture. It rests on two dimensions, whether an organisation leans towards flexibility or stability, and whether its focus is more internal or external (Caliskan & Zhu, 2019). These dimensions capture the competing pressures that shape institutions with the need to adapt and innovate, while also maintaining order and accountability.

From this, four cultural types emerge, clan, adhocracy, market, and hierarchy. Each reflects a different way of organising work and relating to people. CVF has been applied

across sectors to show how culture influences performance, effectiveness, and innovation (Zeb et al., 2021).

South African Public Sector Context

- Clan culture resonates with ubuntu, emphasising collaboration, fairness, and collective responsibility (Mangaliso, 2001; Chetty & Price, 2024).
- Adhocracy culture is increasingly relevant in the drive for digital transformation, where innovation and adaptability are essential (Westerman, Bonnet & McAfee, 2014).
- Market culture reflects the pressure on institutions to deliver measurable outcomes, as seen in the *Batho Pele* principles (Republic of South Africa, 1997).
- Hierarchy culture aligns with the bureaucratic traditions of the state, where rules and procedures dominate (Cameron & Quinn, 2011).

2.3.2.3 Kotter's View of Culture and Change theory

Kotter (1996) argues that organisational culture can act as both a driver and a barrier to transformation. Culture shapes how employees interpret change, whether they embrace it or resist it. In contexts where values and assumptions are aligned with reform goals, culture becomes a powerful enabler. Where they are misaligned, culture can entrench resistance and slow transformation.

South African Public Sector Context

Resistance: Public institutions often struggle with entrenched bureaucratic cultures that emphasise hierarchy and compliance. This can undermine reform efforts, even when new policies such as *batho pele* are introduced (Ingle, 2011).

Alignment: Where reform initiatives are framed through *ubuntu* values emphasising fairness, collaboration, and collective responsibility, they resonate more strongly with employees and communities. This alignment can turn culture into a driver of transformation, supporting the *batho pele* principles of transparency, accountability, and service delivery (Republic of South Africa, 1997; Mangaliso, 2001).

2.3.3 Different Organisational Culture Types (Clan, Adhocracy, Market, Hierarchy)

Kotter's perspective highlights how organisational culture can either enable or obstruct transformation, depending on whether values and assumptions align with reform goals. This tension is particularly evident in the South African public sector where the *batho pele* principles and the *ubuntu* values often clash with entrenched bureaucratic traditions.

To deepen this analysis, it is useful to consider CVF, which categorises organisational cultures into four types, clan, adhocracy, market, and hierarchy. Examining these culture types provides a more detailed lens for understanding how different orientations shape behaviour, performance, and reform outcomes within public institutions.

The culture of an organisation is crucial in in shaping the success of digital DT initiatives (Furr et al., 2022). While much of the literature focuses on technological readiness or strategic alignments, culture provides the underlying contact which transformation efforts are ither embraced or resisted.

Culture reflects shared values, norms and behaviours that influence how individuals and teams respond to change (Cameron & Quinn, 2011).

2.3.3.1 Adhocracy culture

An adhocracy culture emphasises innovation, risk taking and flexibility and it is more likely to foster experimentation with digital tools and support transformation processes (Butt et al., 2024). This cultural orientation is characterised by a strong emphasis on experimentation, agility, risk-taking, and individual initiative (Gonçalves et al., 2020). Chen (2018) explains that public organisations need to change their structures, and that flatter hierarchies can help them become more innovative. In these settings, employees are encouraged to take risks, try new things, and use creative ways to solve problems (Harada, 2020). In an adhocracy, senior leaders set the overall direction, but teams have the freedom to decide on smaller goals and the steps needed to reach them. This freedom often creates examples that can guide the whole organisation. Organisations with an adhocracy culture usually choose leaders who are not only willing to take risks and innovate, but who also have a clear vision for the future (Njagi et al., 2020). The main idea behind this culture is that long-term success depends on leading innovation by creating new services and products.

In South Africa, this approach is especially important for digital transformation in the public sector. Projects like the Department of Home Affairs' modernisation programme and the rollout of e-government services show how flatter structures and empowered teams can improve service delivery (Department of Home Affairs, 2025). By supporting creativity and visionary leadership, these initiatives connect with the *batho pele* principles of accessibility and responsiveness, while also reflecting Ubuntu values of inclusion and community. This shows how an adhocracy culture can help South African institutions to use technology to deliver better, more citizen-focused services.

Adhocracy culture fosters innovation and agility, making them the most supportive for digital transformation. It is particularly relevant in the context of digital transformation, where public institutions must innovate to improve service delivery (Westerman, Bonnet & McAfee, 2014).

2.3.3.2 Hierarchy Culture

In contrast to adhocracy, hierarchical cultures favour order, provide structure, stability and formalised procedures and policies Cameron & Quinn, 2011). They may resist disruptive changes even when they are technically viable (Grover et al., 2022). This aligns with the bureaucratic traditions of the South African state, where compliance and accountability mechanisms dominate (Cameron & Quinn, 2011). While hierarchy ensures order and predictability, it can also slow reform efforts when rigid structures resist change. This culture values consistency and uniformity, often prioritising efficiency and risk avoidance over flexibility or innovation (Felipe et al., 2017).

2.3.3.3 Clan Culture

Clan cultures value and promote collaboration and learning and employee involvements. This can help build the trust and engagement needed for transformation. members share their values and beliefs in an interactive way (Cameron & Quinn, 2011). Clan culture is built on teamwork, employee involvement, and mutual commitment. It creates a workplace that feels friendly and supportive, where leaders act more like mentors than bosses. In this environment, there is a high level of trust in leadership, and unity is maintained through loyalty and shared traditions. As a result, employees show strong commitment, working together with concern for people and a focus on consensus (Cameron & Quinn, 2011).

In the South African public sector, clan culture connects closely with *ubuntu* values and the *batho pele* principles, which emphasise caring for people, respect, and collective responsibility. When organisations adopt this culture, they build healthier environments where employees feel valued and citizens experience more people-centred service delivery. In contrast Ubuntu and Batho Pele emphasise people-centered service, but corruption, siloed departments, and lack of trust can undermine the intended clan-like cohesion. While it promotes teamwork, loyalty, and trust, in practice it can also lead to favoritism, slow decision-making, and resistance to change, especially in bureaucratic public sector settings where ubuntu and *batho pele* principles are challenged by structural inefficiencies (Cameron & Quinn, 2011).

2.3.3.4 Market culture

Market culture is performance driven and aligns technology with results. Market cultures emphasise competitiveness and goal achievement and may align digital strategies with performance outcomes (Cameron & Quinn, 2011). Market culture is linked to external focus, competition, and results orientation, where organisations emphasise achieving measurable goals, outperforming rivals, and driving productivity (Caliskan & Zhu, 2019; Liao, 2018).

Together, these four culture types highlight the competing pressures within public institutions, the need to maintain accountability and bureaucratic order, while also fostering innovation, collaboration, and measurable service delivery. Successful transformation requires balancing these values, ensuring that the *batho pele* principles and *ubuntu* assumptions are embedded across all cultural orientations. This emphasises that digital transformation is a sociotechnical process and not just technological where culture acts as an invisible scaffolding influencing whether transformation efforts success or stall. Thus, incorporating culture into digital transformation research offers deeper insights into why some organisations achieve more successful transformation while others fall short even with similar technological capabilities.

2.3.4 Culture as an enabler in Digital Transformation

The findings in Chapter 5 show that culture is not a background factor but an active force that either enables or obstructs digital transformation in the South African public sector. When culture aligns with organisational goals, it facilitates change and innovation. However, in the context of digital transformation, culture can also act as a barrier, beliefs or behaviours resist new approaches, even the most advanced technology initiatives may fail (Grover et al., 2022; Westerman, Bonnet & McAfee, 2014). For organisations seeking to transform successfully, understanding how culture and digitalisation interact is essential.

Cultural agility : Adaptability and openness to experimentation make digital adoption easier. Research shows that agile cultures accelerate digital transformation by fostering resilience and responsiveness to change (Nugraha et al., 2025; Vial, 2019). In South Africa, the Department of Public Service and Administration (2024) digital policy framework stresses agility as a critical success factor for transformation.

Culture as a foundation : Without a supportive culture, digital initiatives fail regardless of technology investment. Studies confirm that organisational culture is the bedrock of transformation success, shaping values and behaviours that determine adoption outcomes (Nugraha et al., 2025; Grover et al., 2022).

Culture of innovation : Innovation-oriented mindsets encourage employees to test new tools and adapt processes. Local government research highlights that the innovative cultures in South African municipalities enable faster adoption of digital technologies and improve service delivery (Nzimakwe, 2023).

Collaboration : Cross-functional teamwork eliminates silos and supports integrated adoption. Evidence shows that collaboration across IT, HR, finance, and operations is essential for aligning digital projects with organisational goals.

Leadership engagement : Leaders who champion digital initiatives reduce resistance and create accountability. South African studies emphasise that digital leadership skills are critical for transformation success, with engaged leaders shaping culture and embedding accountability (Tiekam, 2019; Musaigwa, 2025).

Culture as a Barrier

As a driver, culture provides shared values and norms that support change initiatives. When employees believe in the purpose of transformation, they are more likely to commit to new behaviours. It can reinforce old ways of working, creating resistance to reform. Deeply held assumptions about hierarchy, control, or bureaucratic traditions often make change difficult.

Resistance to change : Fear of job loss, entrenched habits, and middle management inertia slows adoption. Westerman, Bonnet and McAfee (2014) note that while technology changes rapidly, organisational cultures often adapt slowly, creating bottlenecks.

Bureaucratic culture : Hierarchical, compliance-driven structures create bottlenecks and delay digital projects. Grover et al. (2022) argue that misaligned cultures undermine digitalisation efforts regardless of investment.

Implementation barriers : Legislative restrictions, fragmented processes, and procurement complexity hinder smooth deployment.

Low digital literacy : Even when systems are available, employees and citizens struggle to use them effectively this reflects findings by Mergel et al. (2019) that skills gaps remain a barrier in public sector transformation.

Fear and mistrust : Employees expressed anxiety about automation and lack of psychological safety, undermining adoption anxiety about automation and lack of psychological safety undermined adoption. Hanelt et al. (2021) highlight that cultural resistance rooted in fear can derail transformation initiatives.

2.3.5 Intersections between organisational culture, digital transformation on efficiency and performance

The findings confirm that culture mediates the relationship between digital transformation and performance. Agile and innovative cultures amplify efficiency gains, while hierarchical cultures dilute them (Mergel et al., 2019; Zeb et al., 2021). Culture shapes how digital technologies are adopted and digital transformation in turn reinforces or challenges existing cultural norms. Performance outcomes emerge from this intersection, reflecting whether culture and technology are aligned or in tension.

Within the South African public institutions, this dynamic is particularly visible. Departments that cultivate agility and openness to change have been able to translate digital investments into measurable efficiency gains. For example, SARS's eFiling system succeeded because of a performance driven culture aligned with digital efficiency goals, enabling faster compliance and improved service delivery. This is consistent with SARS's own strategic vision of becoming a "smart, modern revenue service" through digital platforms (SARS, 2025). National Treasury (2017) and Auditor-General South Africa (2020) confirm that delays, cost overruns, and fragmented governance structures undermined implementation. Vial (2019) demonstrates that agile cultures amplify the benefits of digital transformation by enabling responsiveness and adaptability. Warner and Wäger (2018) highlight that leadership enabled dynamic capabilities are essential for linking digital initiatives to performance. Grover et al. (2022) caution that misaligned cultures undermine digitalisation efforts regardless of investment, while Hanelt et al. (2021) show that culture mediates the relationship between digital transformation and organisational performance across diverse contexts. Collaboration also emerges as a critical intersection. Mergel, Edelmann and Haug (2019) argue that cross-functional collaboration is central to public sector digitalisation, where teamwork across IT, HR, and finance eliminated silos and strengthened performance outcomes. Similarly, Zeb, Akbar, and Hussain (2021) confirm that innovation-oriented cultures encourage experimentation and learning, which accelerate adoption and improve service delivery. Taken together, these insights demonstrate that culture is not a passive backdrop but an active mediator.

In South Africa, values such as *batho pele* and *ubuntu* provide a normative foundation for citizen-centric digital reforms. When these cultural values are embedded into digital strategies, performance outcomes are strengthened; when ignored, digital reforms struggle to achieve impact. The intersection of culture, digital transformation, and performance therefore represents the decisive space where technology either translates into efficiency and accountability or stalls in bureaucratic inertia.

2.3.6 Digital first Organisational Culture

A digital first organisational culture refers to a set of values, beliefs, and practices where digital technologies are prioritised as the primary means of achieving organisational objectives. Unlike cultures that treat digitalisation as supplementary, digital-first cultures embed technology into everyday processes, decision-making, and service delivery. A digital-first culture is basically a way of thinking where digital tools and systems are not treated as add-ons but are put at the centre of how the organisation works. It means that technology is prioritised in everyday processes, strategies, and communication flows. The success of digital projects often depends on whether organisations are willing to challenge their old norms and values, because existing organisational culture can slow things down or block adoption (Pradana et al., 2022). This kind of culture pushes companies to use digital platforms to make operations smoother, improve communication, and create a more agile environment. It is not just about giving staff access to digital tools; it is about embedding digital thinking into the way decisions are made and how work is organised. Studies show that when organisations adopt a digital-first mindset, they are better able to innovate and respond to change (Liere-Netheler et al., 2018).

In the South African public sector, this orientation is increasingly emphasised in policy frameworks such as DPSA's Draft Digital Government Policy Framework (2024), which calls for agility, collaboration, and citizen-centricity as cultural enablers of digital transformation. The growing expectations of digital-savvy customers or consumers are pushing organisations to rethink how they work. Organisatiions needs to build a digital mindset and offer digital products if they want to serve people better and stay competitive (Liere-Netheler et al., 2018).

Towards a Digital-First Culture

The discussion of enablers and barriers highlights that culture is not static; rather, it evolves in response to technological change. This evolution is captured in the concept of digital organisational culture, where digital thinking becomes embedded in everyday practices.

Agility and adaptability: Openness to experimentation and responsiveness to change was emphasised by participants. This aligns with Vial (2019), who shows that agile cultures accelerate digital transformation by enabling organisations to adapt quickly.

Innovation orientation: Innovation-driven cultures encouraged employees to test new tools and processes. Zeb et al. (2021) confirm that innovation-oriented cultures enhance digital adoption and performance.

Collaboration and trust: Cross-functional teamwork (IT, HR, Finance) as critical for eliminating silos and supporting adoption. Mergel, Edelmann and Haug (2019) argue that collaboration is a key enabler in public sector digitalisation.

Leadership engagement: Leaders who champion digital initiatives reduced resistance and created accountability. Warner and Wäger (2018) demonstrate that leadership-enabled dynamic capabilities are essential for digital transformation success.

Digital literacy and skills: Low digital literacy slowed adoption. This reflects Mergel et al. (2019), who note that skills gaps remain a barrier in public sector transformation.

Citizen-centric values (*ubuntu & batho pele*) : South African values to digital reforms, shows that embedding *ubuntu* and *batho pele* into digital strategies strengthens performance outcomes.

2.4 Theoretical Framework Underpinning Digital Transformation and Organisational Culture

Although these frameworks provide a robust foundation, existing research remains limited in several respects. Most studies put emphasise on the implementation phases, with little attention to long-term governance, accountability, and sustainability. Moreover, the role of organisational culture and change management in digital transformation is often sidelined, particularly in developing economies such as South Africa. Addressing these gaps positioned this study to contribute both theoretically and practically.

This study combined Unified Theory of Acceptance and Use of Technology (UTAUT), Competing Value model (CVM) and Digital Maturity Model (DMM) to help provide a multi-dimensional lens on digital transformation. UTAUT provided an individual technology adoption view, then DMM assessed organisational readiness and maturity while CVF accounted for the role of culture.

This integrated approach enabled a holistic investigation into how both the human and organisational factors affect digital transformation outcomes. Digital transformation goes beyond technological expansion, it involves a profound agility of operations models, institutional culture, and the manner in which services is delivered.

To expand the behaviour-centric focus of UTAUT to organisational and strategic levels, it was supplemented by DTF, DMM, and the Digital Future Readiness Transformation Model (DFRTM).

The digital transformation framework, launched in response to the organisations' imperative of going digital at a rapid pace, focuses on aligning digital strategies with

organisational form, leadership agendas, and institutional culture (Noori, de Jong & Hoppe, 2020). It supports the performance expectancy construct of UTAUT by promoting goal-pursuing technology adoption and strategic integration of the same. Additionally, it promotes cultural and structural readiness as a key area of focus, complementing the facilitating conditions construct (Gökalp & Martinez, 2021; Govindan & Arampatzis, 2023).

DMM provides a staged framework for the evaluation of digital integration levels in organisations. It considers several aspects, digital infrastructure, innovation capacity, leadership commitment, and readiness at the work level, to measure the level of digital maturity in an organisation (Kane et al., 2021; Majumdar, Garg & Jain, 2021). It improves upon the UTAUT framework by conceptualising the facilitating conditions and effort expectancy constructs as actionable organisational anchors so institutions can spot strategic gaps and apply corresponding interventions (Gökalp & Martinez, 2021; Kocaoglu & Kirmizi, 2024).

DMM thus offers a path for moving from entry-level digital adoption through advanced digital maturity and continuous performance improvement. Ismail et al.'s (2017) DFRTM introduces a future-forward approach focusing on adaptability, innovation, and resiliency in anticipation of accelerated change through technology. It presumes agility, ongoing learning, and thinking creatively as essential for continuing to exist and thrive in turbulent digital environments.

DFRTM aligns UTAUT's social influence and behaviour intention constructs by promoting a spirit of experimentations, innovation-friendly leadership, and institutional processes supporting lifetime learning (Gökalp & Martinez, 2021; Omol, Mburu & Abuonji, 2024). It applies, especially when determining the way organisations prepare for long-term, digital sustainability as opposed to short-run efficiency (Ismail et al., 2017). In addition to UTAUT and the dynamic capabilities theory, CVM by Cameron and Quinn (2011) is integrated to conceptualise how organisational culture type interact and shapes digital transformation capability and outcomes. CVM highlights four dominant culture types (clan, adhocracy, market, hierarchy, and links these to organisational responses to change and innovation (Cameron & Quinn, 2011). This complements the behaviour focused UTAUT by embedding a macro level lens on institutional readiness and value alignment. The study expanded its theoretical lens to capture how culture interacts with both individual technology acceptance (UTAUT) and organisational adaptability (DCT).

The level approach acknowledges that DT is not only a technological or strategic challenge but also a cultural one. Recognising and aligning cultural traits with transformation goals may be essential to realising improvements in organisational

performance. By situating UTAUT as part of larger organisational change models, the research encompassed the multifaceted relationship between human action, institutional readiness, and strategic digital aspiration. The combined framework was necessary for diagnosing the facilitators and barriers of effective digital transformation and comprehending the ways digital transformation can advance organisational performance and strength in a digitally changing world.

2.5 Literature and Knowledge Gaps

While there is much research in digital transformation, some gaps in the research are apparent. The first significant research gap is the lack of empirical research on the long-term effects of the transformation in governance and accountability (Kocaoglu & Kirmizi, 2024). Where most research aims at the period of implementation, few research was found in the domain of the long-term efficacy and sustainability of the digital initiatives (Govindan & Arampatzis, 2023). In addition, researchers must assess the impact of regulation in driving transformation, particularly in developing economies whose policymaking regimes are in transition and are incoherent (Govindan & Arampatzis, 2023; Haidar, 2024). Therefore, addressing the gaps above will increase the appreciation of the nuances in the transformation and guide the formulation of effective strategies to achieve the objectives of the transformation in governance.

In addition, there also lacks considerable research into the impact of organisational culture and change management in the effective deployment of digital transformation (Haidar, 2024; Widodo et al., 2024). It is necessary to consider how employee engagement, leadership, and organisational culture impact the uptake and long-term continuance of digital practices. This research could provide considerable lessons in building a culture of adaptability and innovation and in making the effort at digital transformation effective and long-term. This integrated study can enrich theoretical models and provide organisational leaders with useful advice in navigating complexities involved with implementing DT in a world that’s transitioning constantly. This research will make meaningful additions to the DT literature by foregrounding the role of organisational culture, a factor often sidelined in strategy and technology driven models. It also adds context specific insights from African firms, an underrepresented setting on most digital transformation research. The findings aim to offer practical recommendations for aligning digital initiatives with cultural realities to enhance performance and sustainability.

2.6 Conclusion

Gong and Ribiere (2021) argue that transformation is not simply about technology adoption, but a holistic alignment across multiple organisational dimension that involves synergy alignment of strategy, people, culture, talent development, mindset shift and leadership involvement. Digital transformation greatly impacts organisational performance by promoting efficiency in operation, transparency, and innovation (Li et al., 2020). The use of digital tools and technologies simplifies internal processes, minimises redundancy, and promotes the real-time exchange of data among government ministries, resulting in effective coordination and quicker decision-making (Ziaie, Zanjani & Manian, 2021). Transparencies are also improved through the use of digital governance mechanisms such as the use of open data platforms and blockchain-based records, enhancing accountability and minimizing the incidence of corruption (Reisberger et al., 2024). Additionally, digital transformation promotes a culture of ongoing innovation by promoting the use of emerging technologies by organisations to enhance the delivery of services and responsiveness to customer needs.

CHAPTER 3: RESEARCH QUESTIONS

3.1 Introduction

Building on the literature review in Chapter 2, this chapter sets the research questions that guided the study. These questions were informed by the identified gaps in existing literature, particularly the limited evidence on how organisational culture and digital transformation interact within the public sector. As Chapter 2 highlighted, an organisational culture often determines whether digital initiatives succeed or stall. This chapter translates the research problem into the specific questions that directed the study's methodology and analysis. Hanelt et al. (2021) note that scholars widely agree that digital transformation opens new ways for organisations to create value (Vial, 2019). At the same time, researchers emphasise the importance of understanding how digital transformation reshapes organisational structures and how cross-functional arrangements support the process of digitalisation. The research questions formed the foundation for the study's propositions and conceptual framework.

3.2 Derivation of the Research Questions

While existing literature acknowledges the importance of digital transformation in improving efficiency and transparency, limited attention has been given to how organisational culture mediates these outcomes. Studies often emphasise technological adoption frameworks but overlook the behavioural and cultural dynamics that determine success or failure. This gap informed the central question of this study with regard to the extent to which organisational culture and digital transformation interact to shape performance outcomes in public sector organisations.

3.2.1 Primary Research Question

To what extent do organisational culture and digital transformation contribute to organisational efficiency and performance in public sector Institutions?

3.2.2 Secondary Research Questions

To address the central question, the following four research sub-questions unpacked the specific dimensions of organisational culture and digital transformation:

1. RQ1 - How does digital transformation drive the improvements in operational efficiency within organisations?
2. RQ2 - How does digital transformation impact the transparency and decision-making processes in organisations?
3. RQ3 - How does organisational culture shape the effectiveness of digital transformation initiatives and influence the overall organisational performance?

4. RQ4- What are the most important facilitators and inhibitors of the success of digital transformation programs?

3.3 Restatement of the Research Aim and Objectives

The aim of this study was to understand how organisational culture and digital transformation interact to influence efficiency and performance in public sector institutions.

Specifically, the study sought to:

- **Identify** the types of digital transformation initiatives adopted in public organisations.
- **Explore** the cultural attributes that enable or hinder digital transformation success.
- **Examine** how culture and digital transformation jointly influence organisational efficiency and performance.
- **Provide** strategic insights to help align culture with digital transformation goals for sustainable outcomes.

These objectives directly informed the research questions and ensured alignment between the problem statement, the literature review, and the methodology.

3.4 Research Proposition

Based on the literature and conceptual framing, the study proposed the following testable propositions to guide the analysis.

Table 1: Propositions to guide the analysis.

Proposition 1	Digitalisation improves efficiency in operations by eliminating internal bottlenecks, cutting down on the cost of transactions, and enhancing organisational unit service delivery.
Proposition 2	Strong leadership backing, a good digital infrastructure base, the digital literacy of employees, and a nimble organisational culture enhance the success matrix of digital transformation efforts while bureaucratic resistance, regulatory challenges, and the digital divides hamper it.
Proposition 3	Digital transformation also promotes increased transparency and better decision-making at the organisational level through better data availability as well as real-time information access and it facilitates policy and strategic planning based on evidence.
Proposition 4	A supportive culture characterised by innovation, collaboration, competitiveness or structure moderates the effect of DT on organisational culture

3.5 Conceptual Framework

The conceptual framework integrates multiple theoretical lenses to capture the interplay between organisational culture, digital transformation, and performance outcomes.

- The Unified Theory of Acceptance and Use of Technology (UTAUT) explains individual adoption behaviours and employee readiness.
- The Competing Values Framework (CVF) categorises organisational culture types and their influence on transformation.
- Resource-Based View (RBV) and the Dynamic Capabilities Theory (DCT) highlight how organisations leverage and reconfigure resources to adapt to change.
- The Digital Maturity Models (DMM/DTF) provide a lens for assessing organisational readiness and transformation stages.

Together, these frameworks illustrate that digital transformation is not only a technological process but also a socio-organisational one.

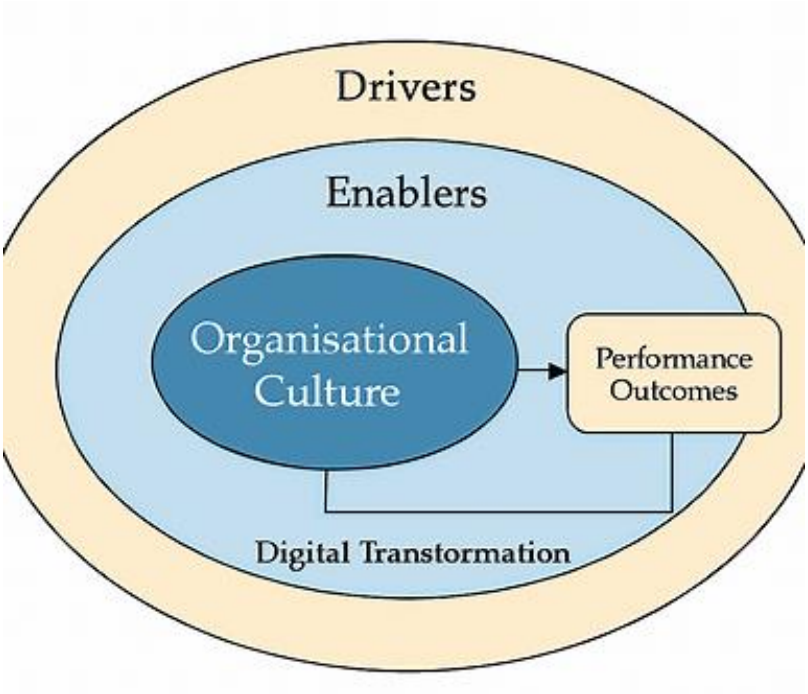


Figure 2:Conceptual framework linking organisational culture, digital transformation, and performance outcome

The conceptual framework positions organisational culture as both an enabler and a potential barrier, shaping how digital initiatives translate into efficiency, transparency, and performance outcomes.

3.5.1 Explanation of Framework Components (Figure 2)

- **Drivers** – These are the external and internal pressures that compel organisations to pursue digital transformation. These include but are not limited to policy mandates, citizen expectations, technological advances, and strategic imperatives. The drivers set the context for change but do not guarantee success.
- **Enablers** - Organisational conditions that facilitate transformation such as leadership commitment, digital infrastructure, governance structures, and employee readiness. The enablers determine whether the organisation is equipped to respond effectively to the drivers.
- **Organisational culture** - The shared values, beliefs, and behaviours that shape how individuals within the organisation respond to change. Culture acts as both a filter and a force, as it can enable innovation or resist it. CVF is used to classify culture types and to assess their influence on transformation.
- **Digital transformation** - The process of integrating digital technologies to improve service delivery, operational efficiency, and strategic agility. Guided by UTAUT and DMM, this component reflects both technological adoption and organisational adaptation.
- **Performance outcomes** - The measurable results of transformation, including improved efficiency, transparency, responsiveness, and citizen satisfaction. These outcomes are shaped by the synergy between culture and digital capability, as explained through RBV and the dynamic capabilities theory.

3.6 Conclusion

This chapter outlined the derivation of the research questions, and it restated the research aim and objectives, as well as presented the conceptual framework that underpinned the study. Collectively, these elements provided a coherent foundation for the research methodology described in Chapter 4.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The objective of the study was to examine the impact of DT on organisational performance, while also identifying the key challenges and opportunities that arise from this process. This section outlines the essential elements of the research design, including the selected methodological approach, the underlying research paradigm, sampling methods, data collection procedures and the analysis techniques, all of which were grounded in established literature and methodological frameworks.

4.2 Research Philosophy and Paradigm

A research philosophy is the study of the nature of reality (ontology) and its assumptions and how the knowledge is acquired (epistemology) (Saunders et al., 2019). The research philosophy employed significantly influenced all the components involved in the research, from the research design to the methodology and the findings' interpretation (Creswell, 2021). This study utilised an interpretivist research paradigm. Interpretivism holds the stance that reality is socially constructed and, as such, people's experience, perception, and the circumstances in the world around them shapes the world to them (Creswell, 2021). The interpretivist paradigm assigns strong emphasis on the meanings the participants attribute to an event, what they experienced and offers the tools to see the multifaceted complexities in DT from the eyes and experience of the people who are working in organisational establishments.

4.3 Research Methodology

The research strategy prescribes the research methodology to conduct the research, based on the research questions and the nature of the studied phenomenon (Creswell, 2021). The most significant research strategies are qualitative and quantitative research, the first dealing with the unique meaning, perspective, and experience, and the latter dealing with measurement and the testing of the hypothesis (Parker, Boughton, Lawrence & Bero, 2022). This study employed a qualitative research methodology, founded in inductive reasoning. Qualitative research is well-suited for the examination of a subjective experience and for gaining in-depth insight into measurement-resistant phenomena. Based on the intent to gain an appreciation of how organisational performance is affected by digital transformation, a qualitative research methodology offered the tools to undertake an in-depth inquiry into the professionals' experience and perception, uncovering issues and problems possibly less readily available through measurement (Parker, Boughton, Lawrence & Bero, 2022). Moreover, qualitative research excels at studying new and complex phenomena, such as digital transformation,

in which conventional theoretical frameworks are incapable of fully encapsulating the real-life deployment nuances.

4.4 Unit of analysis

This research focused its analysis at the organisational level, specifically examining a firm currently engaged in a DT process. The organisation as a whole was in focus, and attention was given to how the organisation adapts, incorporates, and benefits from digital technologies aimed at enhancing operation efficiency, transparency, and decision-making processes. The insight came from a diversity of professionals from the organisation, senior managers, digital transformation champions, and IT staff, whose perceptions and experiences revealed the organisational dynamics, structural shifts, and cultural transition involved in digital transformation. The organisation-level analysis permitted the study to determine the collective performance effects of digital initiatives and those promoting or constraining beneficial digital change (Cash et al., 2022).

4.5 Sampling method, sampling frame, and sample size

This research utilised snowball sampling, a non-probability purposive sampling method, as it was the most viable option for accessing knowledgeable respondents from a professional and hard-to-reach group. The digital transformation practitioners engaged in organisational change were not easily accessible via random or traditional sampling methods given their specialised function and scattered locations in the organisation. The snowball sampling initiated from a small number of key informants who qualified through the entry criteria and in turn referred subsequent respondents from the same organisational situation (Saunders, Lewis & Thornhill, 2019). The method granted access to a network of related professionals, guaranteeing that the sample comprised of those who had intimate experience and insight in digital transformation processes and hence rich and quality data was obtained (Creswell, 2021). The sampling frame was made up of individuals who belonged to the identified organisation and who participated actively or who were familiar with the digital transformation efforts. These were the senior managers who made strategic decisions, the change-driving digital transformation champions, and the IT personnel who implemented and maintained technologies. Participant sampling based on engagement guaranteed varied organisational points of view represented in the data and encompassing leadership, operational, and technical insights necessary in capturing the multi-dimensional character of digital transformation. This basis assisted with the study aim of examining organisational adaptation, integration, as well as effects of digital technology utilisation (Cash, Isaksson, Maier, & Summers, 2022).

The sample size was guided by the data saturation principle and was set between 12 and 15 participants. The size was adequate enough to achieve a rich diversity of data necessary in capturing the complexity of digital transformation in the organisation without being so large as to make qualitative analysis cumbersome. The sample size was also adequate to give full coverage in multiple roles and departments and thus achieved a general understanding of how digital developments affect organisational efficiency, transparency, and decision-making. The existing literature suggests that this range works well for qualitative research on specialised professional groups (Saunders, Lewis & Thornhill, 2019; Creswell, 2021).

4.6 Research instrument

The key research tool was semi-structured interviews, aimed at gathering rich insights from the participants about their experiences, perceptions, and organisational roles in the DT process. The approach was used as a means of flexibility when investigating important areas of concern like operations efficiency, transparency, decision-making processes, change readiness and challenges or facilitators faced when implementing digital technologies. The interview guide was constructed using the research questions and the theoretical foundation was associated with the research aims, and objectives To enrich the analysis, a dedicated section of the interview guide explored organisational culture and its role in shaping transformational outcomes. This domain was essential for understanding the social and behavioural context in which digital initiatives are implemented. The questions in this section included: “How would you describe your organisational culture (e.g. risk taking, collaborative, hierarchical)?”, “In what ways has the existing culture influenced the adoption or resistance of digital technologies?”, “Do you believe that the current organisational culture supports or inhibits innovation and transformation efforts?”. These questions provided valuable qualitative data to examine how the cultural attributes interact with DT processes, and whether cultural alignment facilitates or obstructs organisational performance improvement. The semi-structural approach provided rich data through in-depth and contextual data collection and promoted consistency in the interviews to make the analysis meaningful. Follow-up questions were also be employed as a means of probing and asking about complex issues to strengthen the validity, and reliability(trustworthiness) of the collected data.

4.7 Data gathering process

The approach to gathering the data involved conducting semi-structured in person interviews with carefully selected organisational professionals actively involved in digital transformation. The interviews were conducted via audio-recordings to capture responses clearly and in great detail for qualitative analysis (Saunders, Lewis & Thornhill,

2019). The interviews were timed at about 45-60 minutes per participant to provide adequate time for extensive exploration without inconveniencing the time of the participants (Creswell, 2021). Before the interviews took place, the participants were briefed on the study's objectives as well as the ethical considerations related to their participation (pre-interviews), including the guidelines for participation and confidentiality. The interviews were guided by a thematic guide in line with the research questions so as to maintain consistency but also to offer room for expansion by allowing the respondents space to share their experiences and perceptions (Goldschmidt & Matthews, 2022). After data collection, the tapes were transcribed verbatim for a qualitative analysis of what they contained, and the patterns and themes embedded in the data in relation to digital transformation and organisational performance were noted (Cash et al., 2022).

4.8 Data analysis approach

This involves going through the data systematically and interpreting the same in search of patterns, themes, or meaning. Qualitative research typically involves coding and clustering responses into themes (Goldschmidt & Matthews, 2022). The was analysed through the use of thematic analysis, a commonly applied methodology in qualitative research (Saunders et al., 2019). Thematic analysis involves the coding and examination of patterns and themes in the data (Creswell, 2021). This methodology provides a thorough examination of the data, and through the use of a structured framework, the organising and interpreting of participants' responses are ensured (Parker, Boughton, Lawrence & Bero, 2022). Themes were extracted from the interviews' transcripts, and coding was applied to classify the data into significant segments in relation to the research questions. The analysis paid close attention to the patterns relating to cultural alignment (e.g. values, leadership styles, openness to change) and their relationship to the effectiveness of DT.

4.9 Trustworthiness and Rigour

Trustworthiness in qualitative research means the accuracy, dependability, and credibility of the findings so the research actually captures the opinions and perceptions of the participants and the conclusions derived are reliable and accurate (Lincoln & Guba, 1985; Saunders et al., 2019). To make the research credible, various strategies were employed. One such approach was member checking, which involved inviting participants to review and verify the accuracy and interpretation of the data collected from them. Triangulation which is utilising multiple sources and/or multiple techniques to substantiate findings was also utilised herein. An audit trail was also used to maintain detailed record-keeping throughout the research process, from the choices involved in collecting and analysing the data (Lincoln & Guba, 1985; Creswell, 2021).

These strategies all enhanced the research's quality, so the findings are actually representative of participants' opinions and meaningfully inform the subject of organisational digital transformation (Goldschmidt & Matthews, 2022).

4.10 Ethical Considerations

Ethical considerations were the priority in this research on the effect of digital transformation on organisational performance (Saunders et al., 2019). The participants' fully informed consent was requested, and they were fully aware of the intent and purpose of the research, how they were to be involved, and what was to be carried out in terms of the data (Creswell, 2021). The participants were assured of anonymity and confidentiality, and identifying details were removed from the transcripts as pseudonyms were used throughout the research (Parker, Boughton, Lawrence & Bero, 2022). The participants retained the right to withdraw from the study at any point, at no adverse implications, in the interest of making them feel relaxed to share their experience and opinions. The integrity of the research process was upheld by collecting, analysing, and reporting accurate and truthful data. Ethical approval was sought from the respective institution's review boards to ascertain conformity to the established practices (Parker, Boughton, Lawrence & Bero, 2022). A summary of the study's key findings was made available to the participants who expressed interest at the conclusion of the study, in exchange for transparency and appreciation of the participants' contributions.

4.11 Limitations of the Research Design

This research design and approach had a number of limitations. Firstly, the application of non-probability snowball sampling might have resulted in selection bias and hence resulted in the restriction of the generalisability of the findings to the chosen organisations and actors (Saunders, Lewis & Thornhill, 2019). Secondly, the application was largely based on semi-structured interviews which might have introduced subjectivity since the responses were reliant upon the participants' willingness to be open with their own points of view, and they may not have captured general organisational reality (Creswell, 2021). The face-to-face interview mode may have been limited by logistical issues like scheduling conflicts and availability of time, consequently reducing the participants and the diversity of opinions (Goldschmidt & Matthews, 2022). Thirdly, making the unit of analysis at the organisation level meant the variations of individuals and surrounding wider contextual aspects lying outside of the chosen organisations were not completely captured and hence this impacted the quality of comprehensiveness of the findings (Cash et al., 2022).

4.12 Conclusion

CHAPTER 5: FINDINGS AND RESULTS

5.1 Introduction

This chapter discusses the research findings of how organisational culture and digital transformation influence efficiency and performance in South African public sector institutions. Data was gathered from 15 senior executives and digital transformation specialists across national departments, provincial governments, municipalities, and various industry partners, thereby providing diverse insights into digital initiative adoption and execution. The main research question was: To what degree do organisational culture and digital transformation affect efficiency and performance in South African public sector entities?

This chapter is structured into four main sections to systematically interpret the data. The introduction details the participants, including their demographic and professional characteristics. The second section explains how the data analysis was carried out, covering the coding process and the thematic analysis of the interview transcripts. The third section addresses data saturation, indicating that no new information emerged after a certain point and that the sample size was sufficient. The final section presents the findings related to the research sub-questions, illustrating the connections between organisational culture, digital transformation activities, and organisational performance. Therefore, the results encompass both the technological and socio-organisational aspects of digital transformation, demonstrating how leadership, culture, and institutional readiness impact efficiency and performance outcomes. This discussion lays the groundwork for the analysis in Chapter 6.

5.2 Overview of Participants

The study was conducted with 15 participants who were selected based on their direct participation in digital transformation efforts and organisational leadership within South African public sector institutions. The sample included senior executives, Chief Information Officers (CIOs), IT auditing managers, ICT directors, digital strategy and governance specialists, and departmental heads. The participants represented a diverse range of organisations including national departments, provincial entities, municipalities, and selected industry partners. Together, they contributed insights into the strategic and operational aspects of digital transformation, organisational culture, and performance outcomes.

Table 2 summarises the roles of the participants, the organisational settings, the years of experience, and educational qualifications.

Table 2: Participants overview

Participant	Role	Organisation	Years of experience	Education / qualifications
P1	IT audit manager	Government department	15	Master of Business Administration (MBA)
P2	Director of ICT shared services and acting CIO	Municipality	20+	MBA
P3	Digital strategy and governance specialist	Government department	17	BSc Computer Science; pursuing Master of Management in Public Policy
P4	Manager (IT support, reports to CIO)	Government department	20	PhD in Science
P5	Director for business systems	Government department	15	Master's; pursuing PhD in Business Administration
P6	Head of data analytics and strategic planning	SOE	15	Pursuing MBA
P7	Chief Information Officer (CIO)	Government entity	22	MBA; Engineer
P8	Specialist in Strategy for Municipalities	SOE	20+	Honors in Public Administration
P9	CIO	Government department	20+	MBA
P10	Head of IT	National department	18	MBA
P11	Director, strategy and governance	Public sector institution	23	MBA
P12	Head of corporate strategy and planning (EXCO member)	Public sector entity	27	MPA
P13	IT strategist	National department	20	BSc Hons Computer Science ; MBA
P14	CIO	Government department	16	BSc Computer Science; pursuing Master's
P15	Senior solutions engineer (industry expert)	SOE	12	Master's in electronic engineering

Table 2 presents the participants' profiles, which reveal a high presence of top management and technical skills within South African public sector institutions. The

majority of the sample consisted of chief information officers, ICT directors, department heads, and strategy specialists, which reflects a preference for individuals with decision-making authority and experience in digital transformation efforts. The roles are crucial in the leadership structure because they directly influence organisational culture, guide technology adoption, and impact performance outcomes. Also, the other participants, including the IT audit managers and governance professionals, contributed additional data on regulatory compliance, process optimisation, and risk management, thereby providing a broader understanding of digital strategy practices.

Furthermore, the participants' level of experience ranged from 12 to 27 years, with a significant proportion having over 20 years in ICT, digital strategy, and public sector management. This extensive experience base ensured that the participants had undergone multiple technology change cycles, organisational restructuring, and policy development. Consequently, they could provide both historical perspectives and contemporary insights into the digital transformation challenges and achievements. The long-term involvement also enabled a retrospective view of how organisational culture influences technology adoption, employee engagement, and long-term performance outcomes.

The participants reflected data that was made rich by their educational profile. The majority of the participants had postgraduate degrees, primarily MBA degrees, while the others were pursuing or had already completed doctoral degrees in business administration, public policy, or science. A significant portion integrated technical backgrounds with computer science or engineering and advanced management qualifications, which points to the need to combine technical skills and strategic leadership to realise successful digital initiatives. Therefore, such a set of skills and knowledge is in favour of an advanced vision of both the technological and socio-organisational aspects of digital transformation.

Moreso, the diversity in organisational settings, including national departments, provinces, municipalities, and industry partners, reflects varying perspectives on implementing digital transformation such as policy design, strategic planning, operational work, and technology integration. For example, those working in national departments and municipalities provided insights into bureaucracy functions, resource limitations, and cultural readiness for change. The industry experts offered best practices and discussed emerging technologies and innovation-driven approaches. This variety of roles, experiences, and organisational conditions ensured that the study results are balanced and representative, providing strong evidence of how organisational culture and digital

transformation interact to influence the efficiency, transparency, and performance of South African public sector institutions.

5.3 Data Analysis Process

Data analysis in this study was based on thematic analysis, as described by Braun and Clarke (2006) as a systematic and rigorous process of identifying, analysing, and reporting patterns in qualitative data. The method was adopted for the study as it allowed for both a deductive and inductive exploration of the participants' experiences regarding organisational culture and digital transformation programmes in the South African public sector. The data was analysed using the Atlas.ti software for qualitative data analysis, which aided in systematically coding the 15 interview transcripts and in organising the codes into categories, patterns, and overarching themes.

The process began with familiarising with the data, involving multiple readings of the transcripts to understand the participants' narratives and identify key concepts, experiences, and patterns. This stage included making initial notes and observations to capture early impressions related to digital transformation, leadership, culture, and performance. Subsequently, the first coding phase was conducted in ATLAS.ti, where meaningful passages were assigned codes reflecting their significance and meaning. This iterative process allowed for the refinement, merging, or splitting of codes as new insights emerged.

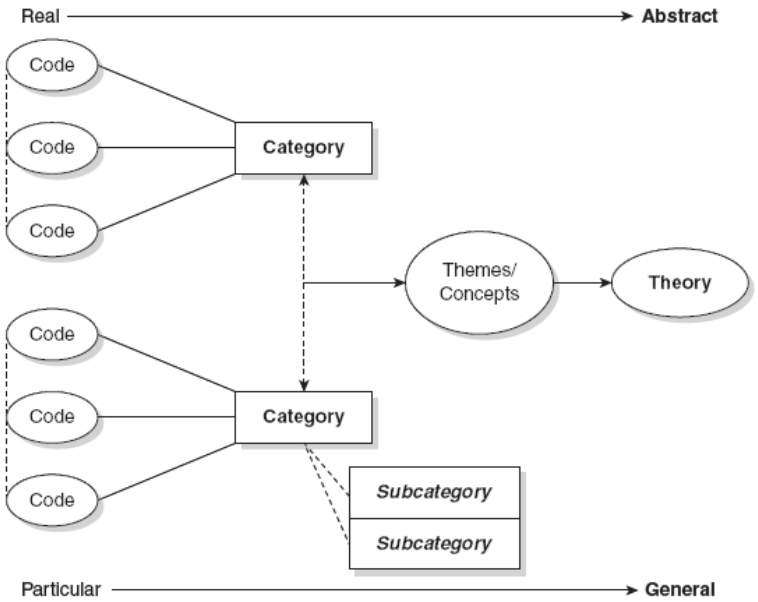


FIGURE 1.1 A streamlined codes-to-theory model for qualitative inquiry

Source: Saldana, 2009

After all the transcripts had been imported into ATLAS.ti, the process of code construction began with the development of open codes (Level 1), which consisted of detailed and granular insights expressed in the participants' own words. Each meaningful segment of the text was coded to represent specific ideas, experiences, or challenges narrated by the participants. As coding progressed, similar codes were grouped into code families or categories (Level 2) to identify common patterns across the participants and to unify similar concepts. The relationships among codes, categories, and emerging themes were then visualised as ATLAS.ti networks, enabling the researcher to explore how the data was interconnected, hierarchical, and interactive. Pruning and refinement were employed to combine or remove redundant or less significant codes, simplifying the analysis and focusing on the most critical insights. Iterative processes helped to develop Level 3 themes, which condensed overarching, higher-order concepts addressing the research questions. The themes were then aligned with the sub-questions, ensuring a clear correspondence between participant perspectives, organisational culture, digital transformation initiatives, and organisational performance outcomes. By and large, the ATLAS.ti project was exported with all codes, networks, and thematic structures, creating a comprehensive audit trail that enhanced transparency, reliability, and the reproducibility of the findings.

5.3.1 Data Saturation

The level of data saturation was assessed during the iterative coding process to determine when no new meaningful information emerged from further interviews. The first code that was developed (P1) generated a high number of codes due to the diversity of experiences and perspectives among participants. As the analysis progressed through the transcripts, the rate of new codes per participant slowed, indicating that recurring patterns were consistently being identified. Therefore, by the eighth participant (P8), the creation of new codes had slowed considerably, signaling that data saturation had been reached.

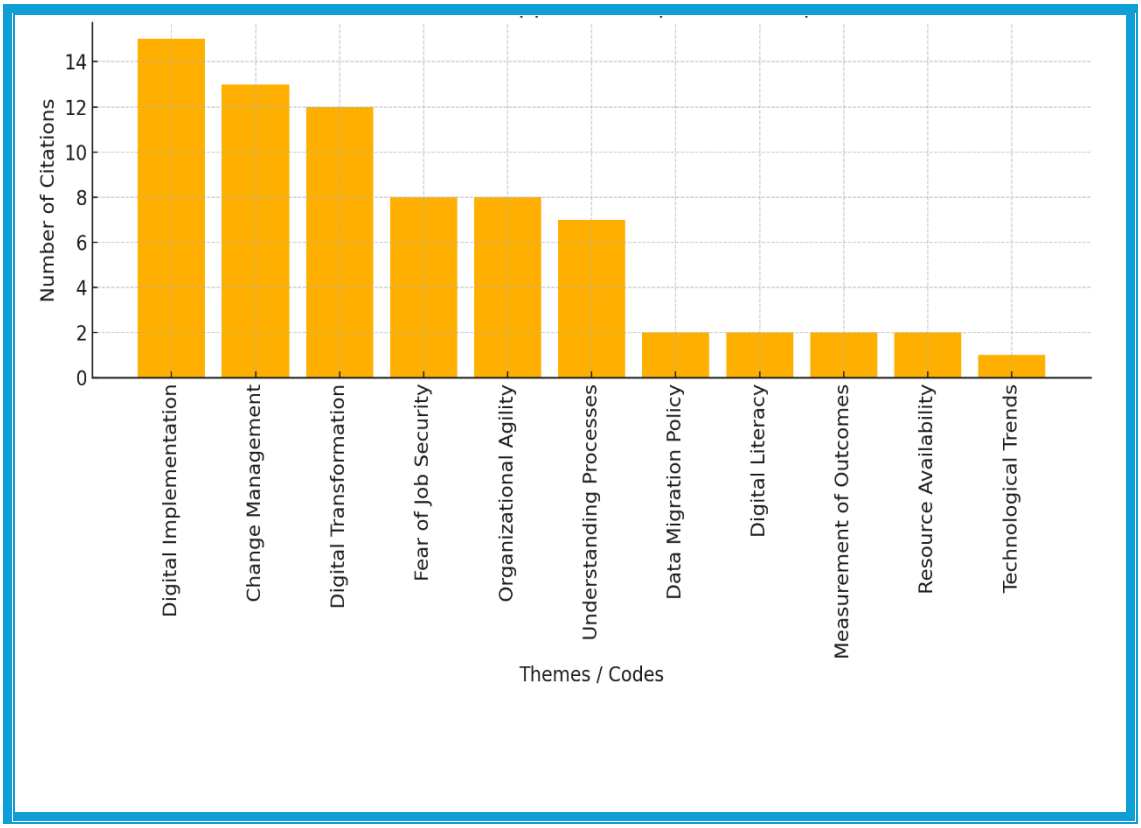


Figure 3: Data saturation

Figure 3 illustrates the increase in code generation and the rate at which each participant produced a new code.

In ATLAS.ti, the successive evaluation of data saturation was conducted through the coding process, examining the frequency and distribution of codes among participants. The thematic analysis demonstrated a high level of saturation regarding key themes, including the resistance to change (14), digital system implementation (13), citizen-oriented digital transformation (11), and change management, collaboration, and digital transformation (9 each), thereby indicating that the main ideas were well-covered. Culture as a foundation, fear of job security, and the barriers to implementation had eight citations each. Organisational agility, value and impact, as well as understanding processes had seven citations each and were moderately saturated and featured adequate, but less comprehensive representation. These results indicate that the key features of digital transformation and organisational culture are always reflected throughout the narratives of the participants.

Despite overall saturation, several key gaps emerged, highlighting underrepresented or missing aspects. The codes related to business case development, data migration policy, digital inclusion, digital literacy, cultural agility, measurement of outcomes, operational inefficiency, resource availability, risk management, and technological trends received only 0-2 mentions, while P7, P13, P14, and P15 had fewer than 10 citations. Only one

or two participants referenced multiple codes pointing to strategic, technical, and cultural gaps, including strategic alignment, challenges with legacy systems, and employee training. The conceptual coverage map and saturation diagram demonstrates that the codes were well represented, and the identified gaps were valid, confirming that the dataset was suitable for a robust thematic analysis and, simultaneously, indicating areas for further exploration of the relationship between organisational culture, digital transformation, and performance in South African public sector institutions.

5.4 Presentation of Findings

The findings are presented as the codes that emerged from the developed themes. The network linkages between the themes and codes were established through diagrams, and the codes are discussed and aligned with the verbatim quotes that supported their development.

5.4.1 Theme 1: Digital transformation and organisational efficiency

- *RQ: How does digital transformation drive improvements in operational efficiency within organisations?*

The theme reflected on how digital transformation enhances organisational efficiency by streamlining processes, optimising resource use, and improving service delivery within the public sector. The central codes, citizen-focused digital transformation, digital system implementation, e-government portals, faster service delivery, internal process digitisation, and resource allocation demonstrated the alignment between technology adoption and operational performance. The network diagram in Figure 4, indicates the relative power and frequency of relationships, providing a clear overview of the most impactful drivers and interdependencies in the public sector environment.

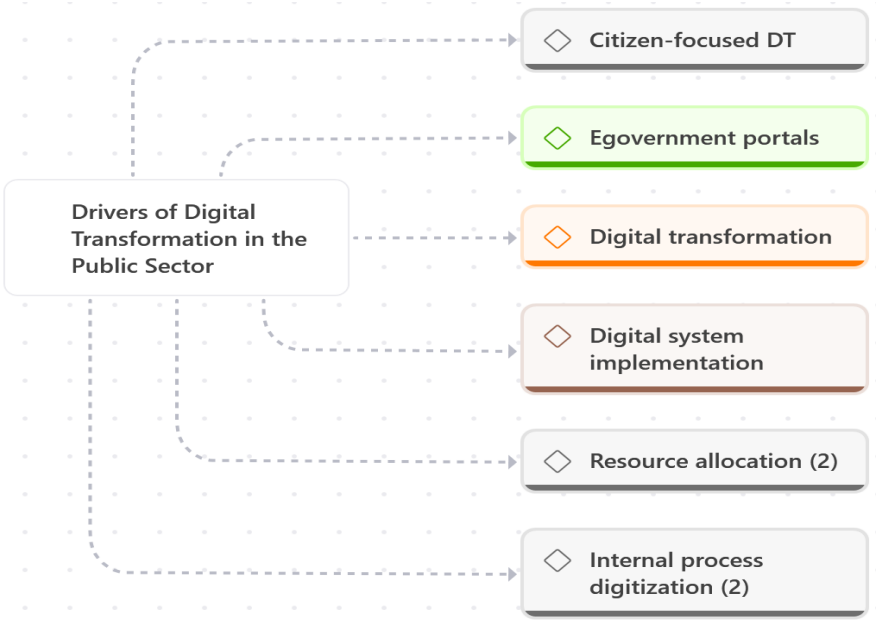


Figure 4: Network Diagram

The codes under the theme are discussed below:

5.4.1.1 Digital system implementation

One of the fundamental sources of digital transformation in the government is the implementation of digital systems, which involves introducing technology to simplify internal operations and enhance the delivery of services to citizens. Many participants emphasised that the shift to automating processes can strengthen employee engagement, morale, and efficiency. One of the participants asserted that, *"It's more about people, process and technology…once the system is working, it brings joy to the people and enthusiasm to say something has been done here"* (P15). This highlights the importance of both technical and human factors in achieving successful digital implementation. The following quotations depict this observation.

> *"We use the digital system to make internal processes more effective, such as the RLS 01 form which helps streamline workflows within business units"*(P1).
>
> *"It is very important to ensure that any new system or digital tool introduced into the environment is properly received and adopted by users" (P3).*
>
> *"Externally, we upgrade physical infrastructure to enable seamless integration of data and information with other entities, improving service delivery for customers" (P5).*

"It's about people, process, and technology. Once the system is implemented correctly, it brings enthusiasm and joy to employees because they can see tangible improvements" (P15).

Therefore, the adoption of digital systems can illustrate how operational efficiency in public sector organisations is improved through focused technology implementation, process automation, and infrastructure upgrades, thus providing the answer to the research question on how digital transformation can increase efficiency and service delivery.

5.4.1.2 Citizen-focused DT

Citizen-based digital transformation highlights efforts to enhance accessibility, responsiveness, and quality of public services through digital means. A significant number of the participants affirmed that citizen-centricity should be embedded in digital strategies, serving both external service delivery and internal efficiency. One participant stated that *"citizen centricity is non-negotiable, which led to the introduction of digital literacy, staffing, and performance-based systems"* (P7). This emphasised the importance of culture, technology, and accountability in launching citizen-driven digital initiatives. The following quotations depict this observation.

"You don't have a culture that is client-centric or citizen-centric, and when I say client-centric, I mean internal clients as well. If these key elements are missing, the system will not function effectively"(P1).

"We use the digital system to allow citizens to report issues they see in the province directly to the department, for example, reporting a pothole" (P1).

"The court process can now be accessed online, so, citizens don't need to physically go to court to lodge a case; they can do it from the comfort of their homes" (P10).

"To enable citizen engagement, we rolled out public Wi-Fi capabilities and fibre connections to homes, ensuring broader access to digital services" (P15).

"Citizen engagement platforms must address both political service and governance. Investments in digital literacy, performance-linked APIs, and staff enablement are critical to ensure citizen-centric digital transformation" (P7).

The development of digital initiatives demonstrates how citizen-centric digital transformation enhances the accessibility, accountability, and efficiency of services. In this regard, the digital initiatives contribute to improving the performance of the public

sector and underpinning the significant role of digital transformation in organisational efficiency.

5.4.1.3 Digital transformation

Digital transformation in the public sector involves the strategic use of technology to enhance operational effectiveness, deliver services efficiently, and drive innovation across various sectors. The majority of the participants emphasised that digital transformation is not a type of technological upgrade, but it is a pillar that supports innovative city projects, employment, and organisational competitiveness. One participant argued that *"One of the most significant consequences of digital transformation is that any organisation and company must work at a beneficial level with the help of new technologies"* (P3), which confirms the universality and strategic value of digital programs.

> *"We are driving specific key smart city, job creation, and digital equity opportunities. We are busy establishing what we call an SMME reseller, because the city is ultimately moving towards this direction"* (P2).
>
> *"Digital transformation is a tool that every organisation and company needs to operate at an advantageous level"* (P3).
>
> *"So, the digital and smart economy, I believe, every job relates to it. The SMME reseller, a program we initiated, is expected to gain momentum in this financial year, and for the open unified data governance, we have adopted certain frameworks and standards"* (P6).
>
> *"To drive digital transformation as part of the restoration of the city of Johannesburg. So, right now, I can tell you that even the GC, if you want to speak to the mayor, literally calls him on the phone and says, 'Dude, we need to talk"* (P9).
>
> *"Digital technology has extended into nearly every industry you can think of, from waste management to policing, emergency services, and disaster recovery — all connected through technology. We're at a point where technology and AI can be integrated even into non-IC areas"* (P12).
>
> *"There is transparency, and subsequently accountability. If someone makes a mistake or commits misconduct, does the system provide an audit trail? These are the kinds of things they prefer not to discuss"* (P14).

The participants clearly depicted how digital transformation initiatives can enhance the efficiency, transparency, and strategic capabilities of public sector institutions,

demonstrating the role of digital transformation in organisational performance and operational efficiency.

5.4.1.4 E-government portals

E-government portals are a vital system for enhancing citizen connectivity, service delivery, and transparency within the government. Most of the participants highlighted that these portals are designed to ensure seamless access to services as well as information for citizens and internal stakeholders, thereby facilitating efficiency and accountability.

> *"The strategic significance of such online portals was underscored, as all the e-government portals that we are developing are geared towards enhancing intelligent citizen engagement*" (P2).
>
> *"The government portal handles licensing, billing, and service requests, and we're also implementing a new e-procurement system. We have an e-procurement system that provides us with real-time access to procurement information and decisions made within the city" (*P1).
>
> "*In redundancies, we increased our capacity between our data centres, and we did a whole lot of these things. Now, if you look at smart citizen engagement, I mentioned the AI chatbots that are being introduced with CSD, the WhatsApp service delivery elements that are being implemented, and all the e-government portals that we're currently developing"* (P2).
>
> *"There's transparency. Then there can be accountability. If someone did something wrong, there's an audit trail on the system. Such things that they don't want to hear you talk about"* (P5).

Against this background, the role of digital transformation in improving organisational performance and efficiency in public sector institutions is significant, since e-government portals are linked to operational efficiency, transparency in decision-making, and citizen-centric service delivery.

5.4.1.5 Internal process digitisation

The digitisation of internal processes is a crucial tool for improving efficiency, transparency, and accountability within public sector institutions. Six of the participants highlighted that digitising internal processes will ensure quicker service delivery, reduce manual errors, and provide a systematic way to monitor organisational operations. Additionally, the integration of digital tools fosters process improvement and organisational value creation, enhancing efficiency and employee engagement:

"Digital solutions so that you can embed, integrate as part of the organisation, to improve processes and add value. However, to be effective, such solutions must possess some kind of structure" (P11).

“So, it is now benefiting them as consumers of that digitisation, and it's benefiting the organisation as well. When it comes to government, as the financial year-end approaches, they must run a particular report called the Leaf Lab. The second involves utilising the digital system to enhance our internal processes, specifically through a form called RLS 01” (P1).

“Yes, more internal efficiency, and also the issue of being more service delivery-oriented, in terms of both external and internal customers” (P10).

“There's transparency. Then there can be accountability. If someone did something wrong, there's an audit trail on the system. Such things that they don't want to hear you talk about” (P13).

The participants' views indicate that internal process digitisation is a crucial factor in enhancing operational efficiency and service delivery, demonstrating how digital transformation can lead to greater organisational performance and efficiency in public sector institutions.

5.4.1.6 Resource allocation

The allocation of resources is a crucial aspect of promoting digital transformation and enhancing efficiency within public sector organisations. Some of the respondents highlighted that it is vital to find the right balance between financial and human resources to ensure digital initiatives are effectively implemented, sustainable, and aligned with organisational goals. One participant noted that

“it is more beneficial to bring in the appropriate high-skilled resources, which implies that these resources should be paid a higher price. These are specific processes that influence your internal processes” (P3).

"There is transparency. It is then possible to have accountability. In case of a wrongdoing or an equal crime that a person commits, there is an audit trail in the system" (P5).

“It is not possible to roll out digital initiatives without the proper budgets and staffing. Resource shortage slows down the project and influences performance results" (P7).

"Assigning the appropriate individuals to manage the digital projects ensures that the process is undertaken efficiently and adequately, which ultimately affects service delivery" (P9).

As revealed by the participants, strategic resource allocation builds internal capabilities. The strategic resource allocation facilitates accountability and transparency, making it central to enhancing organisational efficiency and overall performance in South African public sector organisations.

5.4.2 Theme 2: Enablers and Barriers to Digital Transformation

- *RQ: What are the most important facilitators and inhibitors of the success of digital transformation programmes?*

This theme explored the enablers and inhibitors of digital transformation in South African public sector institutions. Participants highlighted that while digital initiatives can enhance efficiency, service delivery, and governance, their success relies on specific enabling conditions and organisational barriers. The critical aspects include accountability, decision-making, digital inclusion, regulatory compliance, resistance to change, and governance improvements, all of which either promote or impede progress.

The network diagram (Figure 5) illustrates the relationships between the codes and their relative importance, as well as how enablers of accountability, improved governance, and better data integration are linked to obstacles such as resistance to change, digital exclusion, and challenges in implementing changes. This mapping provides a clear view of the socio-technical dynamics influencing digital transformation, highlighting key leverage points to promote adoption and identifying existing gaps.

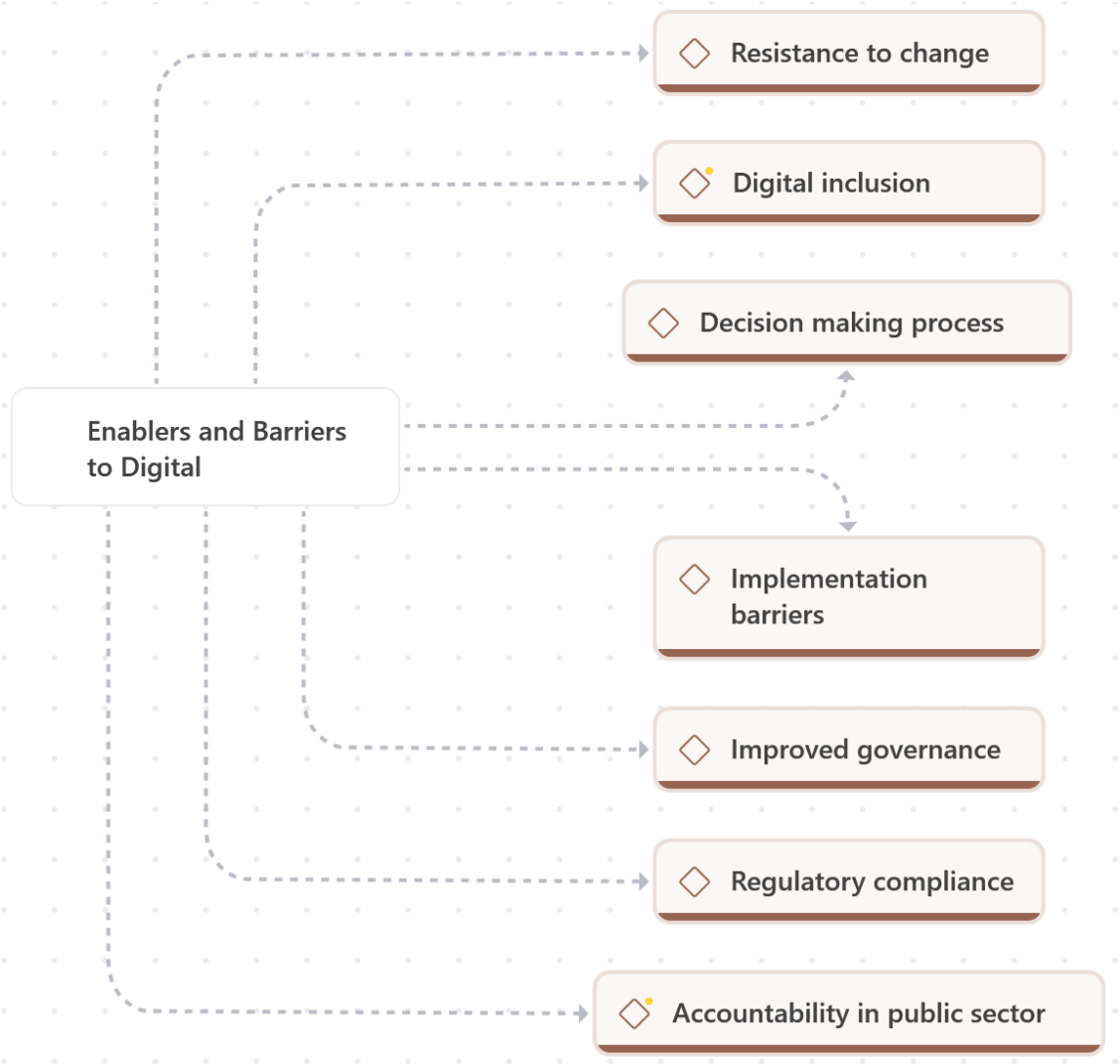


Figure 5: Network diagram - Enablers and barriers to digital transformation

The codes are discussed individually in the following sections, incorporating the participants' insights related to the research questions and how their combination affects organisational efficiency and performance in the public sector. The enablers are discussed from Sections 5.4.2.1 to 5.4.2.5, and the barriers are addressed from Sections 5.4.2.6 to 5.4.2.7.

5.4.2.1 Accountability in the public sector

Accountability in the public sector plays a crucial role in facilitating digital transformation by ensuring control and transparency, which are key to successful digital initiatives. Unlike the private sector where accountability mainly involves reporting to shareholders and receiving market feedback, public sector accountability involves a broader set of reporting standards. The standards in the public sector include political leaders,

governance boards, as well as audit and oversight committees. P1 highlighted the importance of accountability, noting that;

> *"There's the accountability aspect. The private sector is only answerable to its shareholders, whether they are individual investors or a group of shareholders, through reporting. They report to those shareholders and give market feedback. In contrast, accountability in the public sector must address political oversight"*.

> *"The X, for example, is the group CTO of the Y. He has to report to various committees. I have to report to different committees. Some of these are governance committees, audit committees, and finance committees" (*P2).

> *"There's transparency. Then there can be accountability. If someone did something wrong, there's an audit trail on the system. Such things that they don't want to hear you talk about those issues" (*P5).

The participants' views suggested that accountability is a vital facilitator because it oversees digital initiatives, reduces risks, and ensures compliance with rules and regulations. Thus, a well-established accountability framework improves organisational governance and fosters trust in digital systems. This makes it easier to implement and sustain digital transformation programmes in South African public sector institutions.

5.4.2.2 Decision-making process

A significant portion of the participants affirmed that an effective decision-making process is an essential facilitator of successful digital transformation in public sector institutions. Five of the participants emphasised that transparency, stakeholder consultation, and clarity in assigning responsibilities can be improved through structured decision-making, which will reduce errors and support the effective implementation of digital projects. One participant noted that:

> *"It helps in enhancing the process of decision-making". Right. And it assists in improving the decision-making process, but in other initiatives, which you know often get realised over time, such as some of the initiatives we have recently implemented"* (P3).

> *"Relevant stakeholders will be consulted, and during this consultation, the project owner will be appointed as the project leader"* (P14).

The participants emphasised the importance of effective decision-making for the success and sustainability of digital transformation projects. Through the involvement of stakeholder input, creating accountability, and establishing robust leadership frameworks,

organisations can improve operational efficiency and amplify the impact of digital initiatives. This directly supports the successful implementation of digital transformation in the public sector.

5.4.2.3 Digital inclusion

The majority of the participants highlighted that digital inclusion is a vital facilitator of effective digital transformation within public sector institutions. Digital inclusion enables the access to digital platforms, tools, and services for citizens and internal stakeholders, ultimately leading to enhanced service delivery and the bridging of historical digital disparities. Initiatives such as wi-fi implementation, SMME reseller schemes, and spatial planning using GIS were identified as viable solutions to achieve digital inclusion and transfer the benefits of digital transformation to underserved groups. P1 pointed out that;

> *"BI and analytics tools that can extract information from it. So, it will serve as both an EDI and a data store, as well as a data integration platform".*
>
> *"The creation of the GIS I mentioned involves spatial planning and updates, emphasising digital inclusion in townships. We discussed the three programmes: SMME reseller, Wi-Fi rollout, and others"* (*P8*).
>
> *"Integration. There is a significant challenge in merging your systems, especially ERP, because ultimately, all systems need to connect with your ERP"* (*P10*).
>
> *"Citizens should be able to digitally interact with services such as licensing or reporting infrastructure problems; otherwise, the digital transformation will be futile"* (P12).
>
> *"The digital inclusion requires that staff are digitally savvy and properly trained to use these platforms, as otherwise, organisational inclusion will fail"* (P15).

The participants emphasised that the positive effects of digital inclusion include accessibility and engagement. However, the success of such initiatives depends on robust infrastructure, system integration, and targeted programmes that empower citizens and staff. Nevertheless, facilitating equitable access to digital tools and services can enhance the efficiency of operations and the overall effectiveness of digital transformation processes in South African public sector institutions.

5.4.2.4 Improved governance

Improved governance has become a key facilitator of digital transformation in public sector institutions. Four of the participants highlighted that digital transformation strengthens governance frameworks by enhancing compliance levels, reducing

organisational risks, and fostering more transparent and accountable processes. The respondents noted that:

> *“Governance has significantly improved, leading to better compliance and lower organisational risk*. *Departments or government organisations must comply, resulting in overall improvements. Governance has significantly enhanced, leading to better compliance and reduced organisational risk. Previously, data protection was a concern, but now, with strengthened security measures, the risk associated with POPIA threats has decreased because employee data is better protected”* (P2).

> *“The project will succeed, and another important aspect is to ensure that the project governance is managed effectively and that the exceptions and risks related to the digital transformation project are properly addressed”* (P9).

> *“Inclusive governance requires us to integrate governance and decision-making around procurement and related matters. Resilient urban systems are the ones that drive”* (P11).

> *‘So, data must drive governance. That's why, with the investment we've made in the data lake and artificial intelligence, and now with AI coming into the picture, we can have real-time interventions driven by data, of course”* (P13).

The accumulated perspectives indicate that reinforced governance, supported by stable digital technology, real-time data streams, and well-designed oversight systems, provides a solid foundation for digital transformation. In this regard, improved governance will enhance accountability and compliance with regulations, enabling quicker and evidence-based decision-making.

5.4.2.5 Regulatory compliance

Compliance with regulations has proven to be a key facilitator of digital transformation in public sector institutions, shaping the design, implementation, and management of digital systems. Participants noted that the public organisations operate within effective legislative frameworks such as the Public Finance Management Act (PFMA) and other compliance tools, which require all digital processes, data inputs, and systems to adhere to existing regulations. These compliance requirements influence the speed and manner of digital transformation, ensuring it maintains integrity, transparency, and auditability. The participants mentioned,

> *"As a government agency, we are governed by the PFMA, so whatever we input into the system must comply with the regulation"* (P1).

“We must confirm that all digitisation efforts comply with government regulations. Once this is accomplished, you need to ensure, as you, unfortunately, mentioned in government” (P4).

“Since public sector operations need to be auditable, our outputs are driven by compliance requirements. Regardless of the number of services we provide, our primary goal is to ensure they meet compliance standards. Conversely, the private sector prioritises profitability and customer impact above all else” (P5).

“We've just completed one of the initial steps towards M score compliance. We actually have a comprehensive programme of initiatives we're implementing regarding M score compliance, utilising that data lake as a means to achieve M score compliance within our financial systems” (P10).

The participants' views revealed that compliance with regulations has a significant influence on the implementation of digital transformation, thereby enhancing accountability, transparency, and ethical governance. Against such a background, incorporating compliance requirements into digital initiatives helps public sector organisations to make their transformations more credible and sustainable.

5.4.2.6 Resistance to change

Resistance to change is viewed as one of the main barriers to digital transformation in public sector institutions. The participants highlighted that this resistance often stems from the fear of the unknown, concerns about job security, entrenched organisational habits, and a lack of understanding of the long-term benefits of digital initiatives. The interviewees noted that,

“Some employees claim they've been using the same system for years and see no reason to switch, believing it works fine” (P10).

“I'm going to do X, but I'm just five years from retirement. What does this person mean? Since this person has the IP knowledge and has been in the environment for so long, when they speak, people listen. This also causes some resistance” (P2).

“And it's misinformed to a certain extent because they don't see the bigger picture; they're just protecting their territory, and you will have to work with the leadership of the organisation” (P6).

“The current portrayal does not accurately represent the reality on the ground. The top leadership is indeed involved, but they have many responsibilities and

have delegated tasks to lower levels. If resistance exists, it is likely to be found among middle management and subordinate levels" (P7).

"The resistance mainly stems from middle management that is not pushing this forward enough" (P9).

"I've used this old system for years and am familiar with its operation. Why switch to a new system? Because the current one works. From their view, it's functioning fine. They don't consider that it can't handle AI, connect to Home Affairs, manage sales, or other features" (P10).

"So, resistant to change and also hindered by red tape, tedious approval processes, and siloed work and ownership. Sometimes, what is also critical is a lack of buy-in, especially at the executive and senior management levels" (P12).

"There is considerable resistance from employees who fear they will lose their jobs due to automation and system development, as workflows are being replaced. Instead of carrying paper to the next office, the process now happens via the workflow" (P14).

"Yes, there was some resistance in certain cases, mainly because some IT solutions are developed in-house, as if we built them. This helps ensure stakeholders feel confident that these solutions are based in South Africa" (P15).

The participants experienced the process of digital transformation, with resistance to change being a key driver and a barrier that hampers its implementation and reduces organisational coherence.

5.4.2.7 Implementation barriers

A significant barrier to digital transformation in public sector organisations is the implementation challenges. The participant noted that although digital transformation strategies are well designed, the implementation process is hindered by legislative restrictions, fragmented processes, complex procurement procedures, and poor cross-functional integration. Some participants observed that:

"It's slightly harder to understand internal personnel, but externally, legislation is the problem, as existing laws do not account for new modes of operation. And understanding the internal staff was somewhat challenging. On the external front, the issue was legislation. That's difficult because current legislation does not account for the method of doing things. There were certain things we wanted to implement, but they would tell us" (P2).

"I think the procurement process, if you understand it very well, you can do it. The issue lies in understanding and implementing the process. For instance, the National Treasury provides regulations that specify how it should be done" (P3).

"Implementing the detailed transformation project involves deploying those servers and ensuring they install the application, and that they have implemented it according to the BRS" (P5).

"Clearly, we are limited by fragmented implementation and governance challenges, but the recent consolidations from an ICT perspective have made things easier. So, what are the steps we need to take to achieve those ten high-level points?" (P7).

"Different divisions are working very effectively, but they are not integrated. There is no cross-functional collaboration among different divisions, and the value chain dictates that no single organisation can succeed in what they do" (P11).

"There is no R&D that exists in isolation. It is a risk that influences you to become that. They will remain laggards if they do not pursue it. Yes, they might have said Sita plays that role. Sita and other organisations are different because Sita is a government" (P15).

The elicited views from the participants highlighted the gap between digital operating models and regulatory frameworks, which impacted successful implementation. The participants noted that the obstacles to implementation, such as legislative restrictions and organisational fragmentation, are significant factors that hinder the effectiveness of digital transformation programmes.

5.4.3 Theme 3: Digital transformation effect on transparency and decision-making

- *RQ: How does digital transformation impact transparency and decision-making processes in organisations?*

This theme examined how digital transformation redefines transparency within organisations and improves the quality of decision-making in South African public sector institutions. The participants consistently emphasised that, when digital technologies are used appropriately, they enhance access, accuracy, and the timeliness of information used in administrative decisions. The main factors highlighted include greater convenience in obtaining information, improved understanding of internal processes,

reduced reporting times, and simplification of administrative procedures through computerisation of internal workflows.

Figure 6's network diagram illustrates the relationships among these codes, showing how internal process digitisation, improved process knowledge, and expanded reporting functions increase transparency. The inefficiencies or implementation weaknesses can undermine decision-making processes. The mapping highlights digital transformation as both a technological and organisational tool that improves the speed, reliability, and traceability of decisions.

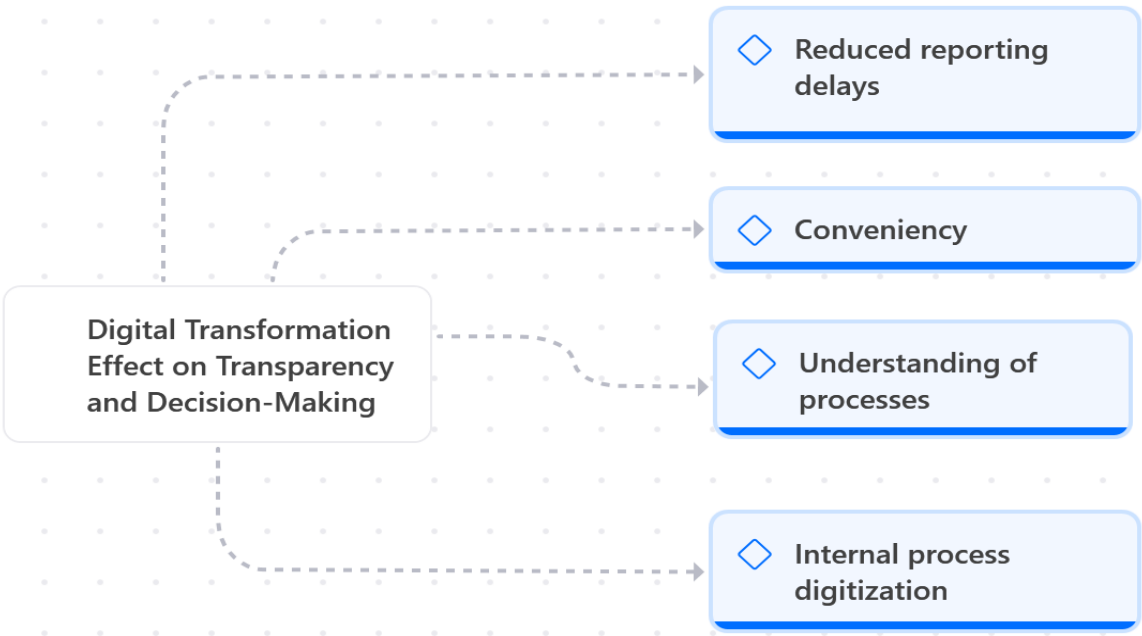


Figure 6: Network diagram

The following sections discuss the codes and draw on insights from the participants to show how digital transformation enhances organisational accountability, reduces administrative bottlenecks, and improves the quality of decisions in South African provincial and local government contexts.

5.4.3.1 Convenience

Convenience was one of the main advantages of digital transformation, and the participants noted how the digital platform makes services more accessible to people, reduces administrative workload, and improves the experience for both citizens and employees. The participants observed that this convenience is further supported by the use of multichannel service provision, mobile service delivery, and digital self-service options for government services, which eliminate the need to physically visit government

offices. One participant highlighted that *“places like eJoburg now allow citizens to view their statements in real-time... and even read their own meters” (P7),* demonstrating the role of digital tools in making access and ease of use more convenient for people.

> *“On the revenue side, I'll give you an example. Many people are unaware that the city has a digital platform called eJoburg. And on that platform, you can check your statement in real time. You can check your account that is due. You can even settle it. You can even capture your own meter readings”* (P3).
>
> *“Various channels are available to access those grants, typically in areas where they usually gather, such as your shop rides, checkers, boxers, and places where they buy necessities. This adds more efficiency and convenience and also saves money on their side. If you have only one channel and you're far from it, it becomes less effective”* (P6).
>
> *“The broader workforce of 20-somethings, comprising approximately 1,000 people, utilises methods such as multi-factor authentication on their mobile devices, fingerprints, or facial recognition to access other systems. That’s how we have bypassed the entire Active Directory Microsoft licensing”* (P9).

The participants noted that convenience encompasses ease of access and the development of more understandable, expeditious, and responsible processes. Digital transformation can also improve transparency by minimising delays and improving the accessibility and availability of real-time information, as well as by enabling more efficient and evidence-based decision-making throughout the organisation.

5.4.3.2 Internal process digitisation

The digitisation of internal processes has become a powerful tool, enhancing transparency and enabling better decisions within public sector institutions. The participants emphasised that digitised internal workflows reduce manual errors, provide automatic audit trails, and speed up organisational processes, thereby enhancing the accuracy, reliability, and timeliness of decisions. One of the participants noted that

> *“digital systems enhance transparency, particularly at critical times such as the end of the financial year, by requiring a specific report to be generated. They also emphasised that digitisation serves the interests of both the consumer and the organisation*” (P4).

Other highlights included the importance of digitising major internal templates and workflows, including the RS01 processes, which automate approvals and provide real-time visibility of decisions and activities.

"The second one is where we also utilise the digital system to enhance internal processes, such as the RLS 01 form" (P5).

"This benefits both them as consumers of the digitisation and the organisation itself, especially when handling government matters. Near the end of the financial year, they need to run a specific report called the Leaf Lab" (P8).

"Yes, more internal efficiency, as well as being more service delivery-oriented, for both external and internal customers" (P9).

"Digital solutions that you can embed and integrate into the organisation to improve processes and add value. However, for these solutions to be effective, they must meet a certain standard" (P13).

Generally, digitised internal processes were found to provide participants with a more structured and transparent environment where decisions are based on accurate data, timelines are shortened, and accountability is improved. This demonstrates that digital transformation boosts the visibility and quality of organisational decision-making.

5.4.3.3 Reduced reporting delays

The participants consistently emphasised that digital transformation has significantly reduced reporting delays, leading to greater transparency and improved decision-making in public sector organisations. Digital systems streamline processes by automating routine tasks such as leave approvals, invoice tracking, and workflow escalations, as well as provide real-time insights into pending work. This ensures that managers receive timely and accurate reports, supporting informed decisions and prompt interventions. One participant observed that

"automating leave forms has significantly shortened turnaround times in internal workflows" (P6),

thereby enabling instant approvals instead of waiting for manual ones, thus enhancing overall efficiency. Additionally, a significant portion of the participants emphasised that workflow automation promotes accountability through structured escalation procedures, minimises backlogs, and leads to more reliable reporting.

"Automating the leave form system also helps streamline reporting, minimising delays and enabling a smoother process. This leads to faster internal service delivery and benefits your customers- whether users or employees- by improving turnaround times. They no longer need to wait for Ostimi to review and approve

their leave after two weeks; instead, they can receive prompt approval, increasing overall efficiency" (P1).

"Every day at that time, the HOD instructed everyone to escalate to him any item in their inbox that remained unattended for over 48 hours. As a result, nobody wanted their items escalated to the HOD. Subsequently, leave approvals began to occur" (P5).

"Please leave it to be automated, then I handed it over to the middle managers to handle. I'm only expecting a report, and it will arrive as and when it does" (P8).

"It's similar to sending an invoice and needing to call them 100 times over 20 days for them to complete the task. Now, this system sends daily reminders and displays the number of days they've been engaged with you. I had to add that feature when I sent my updates" (P12).

The observations suggested that automated reporting systems can assist an organisation in becoming more transparent by providing traceable and time-constrained records of actions and delays. This improved visibility, as reported by the participants, facilitates faster operational decision-making and strengthens accountability structures.

5.4.3.4 Understanding of processes

The participants emphasised that successful digital transformation largely depends on the employees' understanding of core business processes. This knowledge directly impacts transparency and decision-making, since only informed staff using digital tools can improve organisational performance by being aware of procedures, roles, and needs. They stressed that business processes are crucial in both regions, and organisations must prioritise them to succeed in digital transformation. Additionally, training employees is essential for establishing clear and effective digital workflows. The importance of process knowledge is especially critical in fields like procurement.

"Business processes across both areas, in terms of skilling resources, are crucial because an organisation needs to do so if it wants to succeed in digital transformation" (P2).

"A significant amount of understanding is required in the procurement process, particularly among those implementing or executing it, regarding their level of experience" (P5).

“Additionally, another concern is job security. Job security influences many things. If a person is not secure, especially in our environment, it's because they're not sure, given the nature of our environment” (P8).

“Manual processing at the end of the day, yeah. So, I think one of the things that helped us is the organisational management” (P10).

Generally, the participants argued that digital transformation enhances transparency when organisational processes are well understood, and employees feel secure working within them. This leads to better decision-making by ensuring digital systems are used appropriately and that data recorded by these systems is accurate and detailed. In this way, process knowledge becomes a central element of clear, data-driven decision-making in the digital transformation of organisations.

5.4.4 Theme 4: Organisational culture and digital readiness

- *How does the organisational culture shape the effectiveness of digital transformation initiatives and influence overall organisational performance?*

This theme explored how organisational culture influences the success of digital transformation and the overall performance of public sector institutions. The participants observed that digital transformation involves technological changes as well as cultural and behavioural shifts. An innovative, continuously learning, collaborative, and change-driven culture facilitates organisations in adopting digital tools more easily. Conversely, strict hierarchies, rigid bureaucratic standards, and low digital awareness impede progress, slow down adoption, cause fragmentation in implementation, and lead to employee resistance.

The network diagram (Figure 7) illustrates the interaction between the organisational culture and other major components of digital readiness, including leadership support, staff competencies, communication flows, and openness to experimentation.

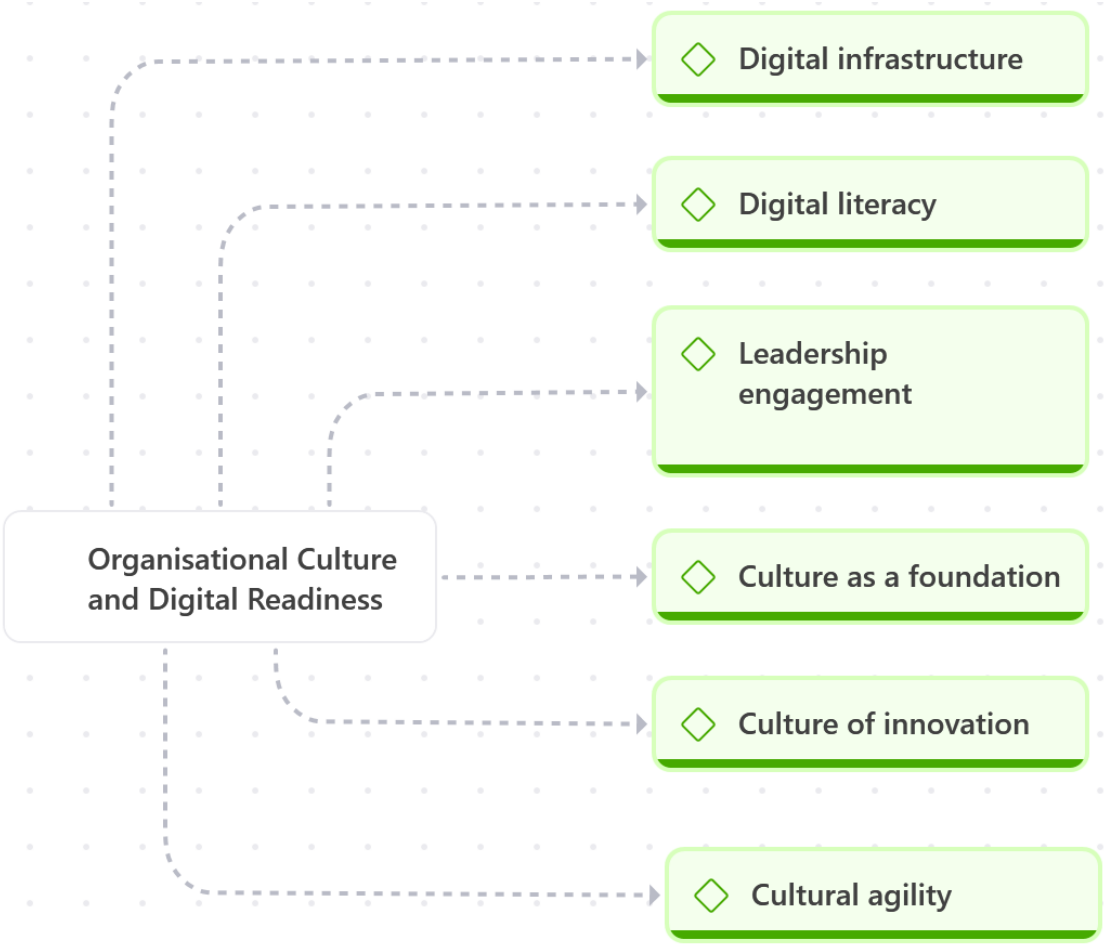


Figure 7: Network diagram organisational culture and digital readiness

The following codes, related to this theme, utilised the participants' accounts to demonstrate how organisational culture can either support or hinder digital transformation in the public sector.

5.4.4.1 Cultural agility

Cultural agility has been recognised as a vital facilitator of successful digital transformation in public sector organisations. The participants highlighted that simply adopting technology is not sufficient and that organisations must cultivate a culture that is adaptable, open to experimentation, and eager to evolve. In this regard, the employees who learn from mistakes and swiftly adjust to new processes can achieve digital adoption and overall transformation results more rapidly.

> *"The second lesson for us is that cultural change is as critical as technology, because we're accustomed to implementing things before, as you say, encountering resistance from people, and so on. However, what we have done is create that cultural agility"* (P5).

"We realised early on that the technology itself is never the problem, it's the mindset. Once people became more open to experimenting, making mistakes, and learning fast, the culture shifted. That agility made it easier for new digital tools actually to gain traction" (P8).

"Cultural agility for us meant breaking away from the old 'wait-for-instructions' mentality. Teams are now encouraged to adapt, respond quickly, and collaborate across units. Without that cultural flexibility, the digital transformation would have stalled completely" (P12).

The participants emphasised that the ability to promote cultural agility enhances the organisation's capacity to implement digital solutions efficiently, reduces resistance, and generally boosts performance. Therefore, such alignment between culture and digital readiness demonstrates that behavioural flexibility is as vital as technological infrastructure for the success of transformation efforts.

5.4.4.2 Culture as a foundation

Culture is widely recognised as the foundational element that underpins the success of digital transformation initiatives in public sector organisations. The participants observed that without a strong and positive organisational culture, technological interventions can never achieve their intended outcomes. An organisational culture characterised by collaboration, learning, and openness to innovation is essential to ensure the effective adoption and utilisation of digital tools.

"This clearly demonstrates that your statement is true: culture equals digital transformation. Culture is fundamental, as it drives both the success of digital transformation and the overall achievement" (P1).

"If the culture is positive, then the outcomes and acceptance of the tool will be efficient, leading to the desired result of effective service delivery. The organisation itself will fulfil its mandate" (P4).

"Cultural mindset, exactly. That's why I emphasise their close connection and deep intertwinement. Additionally, I understand that from an artistic standpoint, a foundational culture must be established first" (P6).

"Without a base culture, there is no way that your digital transformation will succeed. Culture plays a very critical role. It plays a significant role. So, we need to have that collaboration" (P9).

“The adoption culture differs from the culture that opposes this technology. So, yes, they are sometimes influenced to use it because they see more people supporting the technology around them. I hope this answers your question” (P10).

“Culture must be integrated into the organisation; it shouldn't be just an additional element. While some might see it as optional, it isn't an accessory but an essential part of the core” (P13).

“If the culture is more open to digital transformation, you are likely to have a successful project, as projects are not straightforward. Success isn't guaranteed, and projects can face ups and downs that make things complicated. However, if employees have a positive attitude towards digital transformation, they will make a significant contribution to its success” (P15).

The participants also indicated that the culture of adoption differs from a technology-averse culture, and peer pressure can enhance adoption. In locations where employees perceive a supportive environment for digital initiatives, there is a higher likelihood of positive engagement, which can accelerate change and improve overall service delivery. Therefore, such an attitude emphasises that organisational culture is not a peripheral element but one of the key drivers of digital transformation. Thus, both practical implementation and long-term impact of digital initiatives in the public sector are predicated on the development of a strong, collaborative, and innovation-driven culture.

5.4.4.3 Culture of innovation

The key to successful digital transformation in public sector organisations is a strong culture of innovation. The participants emphasised that an innovation-oriented mindset and a supportive, innovative environment can facilitate the employees' adoption of new technologies, the testing of digital solutions, and the adaptation of processes to enhance service delivery.

“And so, this clearly shows that what you've just said is evident: culture equals digital transformation. Culture comes first, which supports the success of digital transformation. If the culture is positive, then the outcomes and acceptance of the tools would be effective, leading to improved service delivery. The organisation's mandate will be fulfilled by itself” (P2).

“Cultural mindset is key. That's why I emphasise that they are so closely related and intertwined. From an artistic perspective, there's also a baseline culture that needs to be in place. Without this foundational culture, your digital transformation will not succeed” (P5).

“Culture plays a very critical role. We need to foster collaboration and promote a culture of adoption versus resistance to this technology. Yes, in a way, people are influenced to use it because many around them genuinely support the technology. I'm not sure if I've answered your question” (P7).

“Culture needs to be embedded in the organisation. It should not be, to put it lightly. Or maybe that's what they always say. It shouldn't be an afterthought, but part of the whole” (P11).

“If the culture is more receptive to digital transformation, your project is likely to succeed, since projects are not straightforward. Success is sure, though there will be ups and downs and moments of difficulty. However, if employees have a positive attitude towards digital transformation, they'll ensure the project’s overall success” (P14).

The observations highlight that an innovation culture acts as both a driver and a sustaining force of digital transformation. Organisations can overcome resistance, boost employee engagement, and offer better services by fostering opportunities for experimentation, learning, and adoption.

5.4.4.4 Digital infrastructure

Digital infrastructure is a fundamental pillar necessary for successful digital transformation in public sector organisations. The participants also emphasised the importance of trusted connectivity, secure networks, and robust endpoint systems to implement new digital programmes and maintain service continuity. A developed digital infrastructure enables organisations to leverage emerging technologies, such as cloud services, mobile platforms, and innovative city applications, which in turn streamline and strengthen operational processes.

“*The 10-point innovative city framework, developed to address legacy issues, encompasses digital infrastructure, connectivity, innovative governance, citizen engagement, open data, smart mobility, digital economy, innovation hubs, skills development, and sustainability”* (P3).

“We discuss the reliable digital infrastructure that we have already established through our data centres, and we are now also beginning to extend this to our endpoints. Mobile is now being integrated as a work tool, allowing you to work and stay protected using solutions like Intune, and so forth” (P7).

“The digital transformation initiatives are now moving towards digital transformation. Having covered the stability of the network connectivity

infrastructure and all those aspects, it is honest to say that there's no digital transformation without them" (P10).

The participants' views indicated that digital infrastructure is a vital implementation tool, providing the technologies needed to enable efficient digital operations, improved service delivery, and enhanced organisational performance within public sector institutions.

5.4.4.5 Digital literacy

Digital literacy has become a key factor in successful digital transformation within public sector organisations. The participants also noted that the success of digital initiatives depends on the availability of technology, as well as the ability of the employees and citizens to utilise digital tools effectively. A lack of proper digital literacy can render even well-implemented systems and platforms ineffective, reducing their efficiency, citizen engagement, and overall organisational performance.

"*Creating these ICT hubs in partnership with other organisations, such as Ting, will also address youth innovation through the youth innovation labs that we need to establish. Now, community-based digital literacy programmes have started, and we have realised that it's pointless for the city to be ready without ensuring that the community is also prepared"* (P5).

"We noticed that even when systems are available, people struggle to use them confidently. Therefore, digital literacy training became a priority, not just for employees, but also for residents. If people can't navigate the tools, the whole digital transformation loses its impact" (P6).

"Digital literacy is becoming a foundational skill. We've had to run internal workshops to ensure staff understand basic data handling, cybersecurity practices, and how to operate new platforms. Without that baseline competence, adoption becomes extremely slow" (P10).

The elicited participants' perception demonstrates that digital literacy is crucial for encouraging employees and citizens to engage actively in digital initiatives. The structured digital literacy programmes will lead to higher adoption rates, greater operational efficiency, and sustainable digital transformation outcomes in the public sector through investment.

5.4.4.6 Leadership engagement

A crucial element in driving digital transformation in public sector organisations is leadership engagement. The participants highlighted that committed, aligned, and proactive leadership ensures effective digital implementation, overcomes cultural

resistance, and establishes accountability. The visionary leaders involved in change management and advocating for digital initiatives help to foster a positive environment among employees and stakeholders, built on trust, transparency, and acceptance.

> *"So, it's more about a unified approach, whereby leadership plays a role in overcoming those barriers, because when leaders are on the same page. When leadership is more connected and in unison, it's also easier to execute top-down"* (P1).
>
> *"The process, as well as the people where the change is, will be impacted by the change. They are extremely critical, and they need to be part of the change management process from the beginning to the end"* (P11).
>
> *"Leadership is key in changing the culture of how people think and in shifting their behaviour"*(P15).
> "*From the acting DG and head executives, they'll stop doing that now, at least you know, so, so, so there's this thing of following people and not doing. I wish people could do the right thing without having to worry about whether the acting DG is doing it or not"* (P5).

The views gathered demonstrated that active leadership involvement is vital for fostering a culture of digital readiness, aligning efforts with strategic goals, and enhancing the overall performance of the organisation. The role of leadership engagement is it acts as a catalyst for adoption and a barrier to resistance in digital transformation initiatives within the public sector.

5.4.5 Theme 5: Interplay between digital transformation, organisational culture, and organisational performance

- *What is the interplay between digital transformation, organisational culture, and organisational performance in the public sector?*

This theme examined how digital transformation, organisational culture, and performance interconnect within public institutions. The participants consistently emphasised that a digital progress will not lead to notable improvements in efficiency, transparency, or service quality without a supportive organisational culture. In this context, culture serves as both a facilitator and a mediator; when leadership promotes innovation, teamwork, and ongoing learning, the likelihood of successfully implementing digital tools and enhancing performance increases. Conversely, the digital projects often encounter delays or failure when cultural norms prioritise hierarchy, risk-avoidance, and siloed decision-making.

This relationship is also interconnected and can be mapped as shown in Figure 8, demonstrating the dynamic link between digital transformation initiatives, cultural dimensions, and performance outcomes.

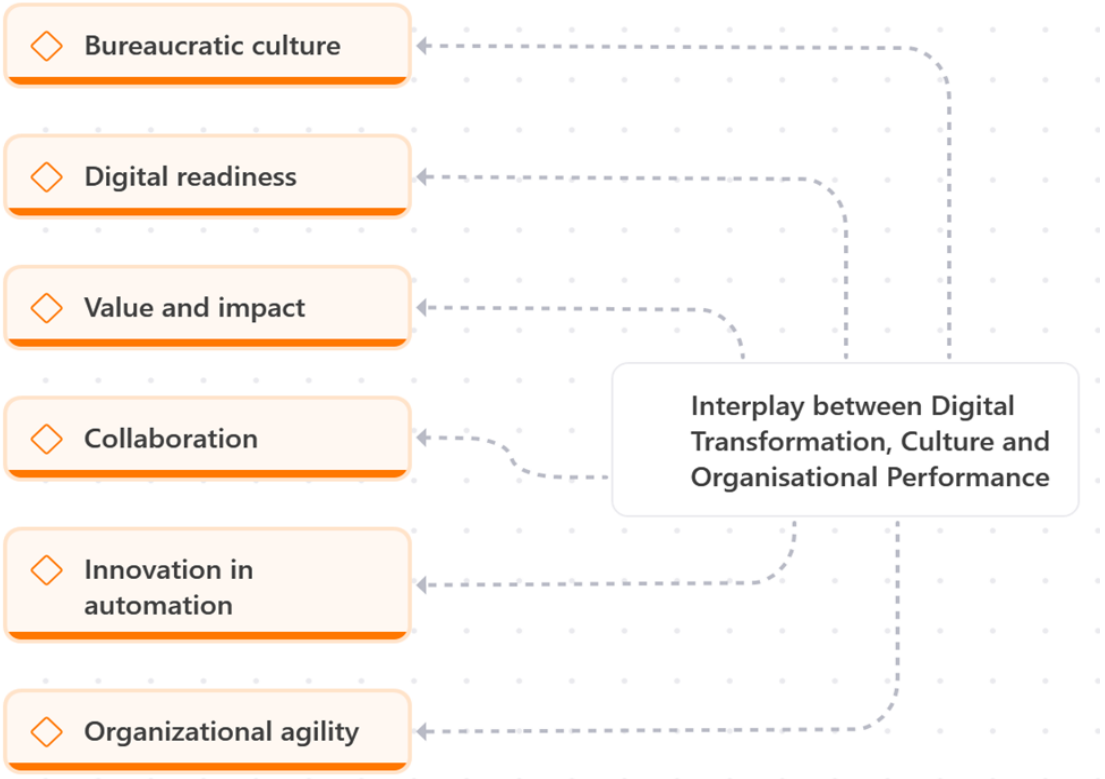


Figure 8: Network diagram digital transformation, organisational culture, and organisational performance interrelations

5.4.5.1 Bureaucratic culture

The bureaucratic culture within public sector organisations often slows down digital transformation efforts. The participants highlighted that hierarchical, multi-layered approval processes and compliance-driven procedures create bottlenecks, thus leading to delays and inefficiencies. This kind of culture can hinder responsiveness and reduce the overall effectiveness of digital tools, service delivery, transparency, and organisational performance. Participants remarked,

> *"You know, outside an innovative culture, there is a clean culture; you also have a very bureaucratic sort of culture, where some elements are intertwined with it"* (P1).

> *"The governance culture in the public sector is bureaucratic and compliance-driven. That is why it takes much longer to get approval in the public sector than*

in the private sector, because the private sector is agile and has delegation at various levels" (P2).

"Performance committees, service delivery committees, smart city committees, and a few others. Then there are political committees, such as Section 79, mayoral committees, and the council, each of which demands feedback. As a result, we spend a lot of time reporting on reporting" (P7).

"Although the organisation's culture was somewhat different, your perception of it has changed today because of what has happened. It was a matter of not knowing, despite the mood being different" (P9).

The views show that although the bureaucratic culture ensures control and regulatory compliance, it can hinder the adoption of agile digital approaches. In this perspective, overcoming bureaucratic rigidity requires adopting more flexible practices to facilitate digital transformation and improve organisational performance.

5.4.5.2 Collaboration

Collaboration was noted as a key factor in achieving successful digital transformation, with the participants emphasising that teamwork, partnerships, and information sharing are vital for implementing digital initiatives and improving organisational performance. Interdepartmental cooperation helps to eliminate silos, align processes, and ensure a consistent adoption of digital resources across the institution. The participants highlighted the importance of strong collaboration, stating that things must progress,

"One reason given was that collaboration is very crucial. I believe that teamwork is highly important, and that is my view" (P1).

"Collaboration is extremely key. Collaboration is extremely key, and in my opinion, that's the case" (P11).

"For collaboration purposes, the system has already been implemented. However, there's also a team that is not particularly open to technology and remains stuck in outdated business habits" (P13).

"Implemented partnerships with Vumacam. We have access to every Vumacam camera in the Johannesburg precinct. We have a Safety IOC, which is our Integrated Operations Intelligent Operations Centre, where JMPD officials, EMS, and fire officials monitor these cameras. Communication between different systems helps us with effective data collection, which is why, even if you start capturing your own meter readings, you won't have to fight with us as much" (P2).

“From an application's perspective, we were all united in one common vision. And that I think is where the difference started, because we were all fragmented before operating our own little kingdoms, and now all those fiefdoms have come together” (P5).

“At the stage of your strategic plans when you initiate this, you need to have them on board and engage with them, even in the process of getting partners ready to go out to tender” (P3).

“This kind of transformational project is not one I can discuss, but it has been entirely IT-focused. Yeah, to where I am today as well. Now we're focusing on hotspots, connecting communities, and that is still IT, you know” (P9).

As detailed by the participants, fostering a culture of collaboration within the organisations and with strategic partners will be vital to enhancing transparency and streamlining decision-making processes. Collaboration enables better access to information, coordination, and alignment of workflows, helping to inform and make decisions more timely, which, in turn, will boost the effectiveness of digital transformation initiatives in the public sector.

5.4.5.3 Digital readiness

Digital readiness encompasses both technological infrastructure and human preparedness, reflecting an organisation's ability to adapt to and effectively implement digital tools. The participants emphasised that readiness involves having the appropriate systems and ensuring employees are prepared, enabled, and mindful to operate in a digital environment. In this regard, without addressing both infrastructure and human preparedness, digital initiatives risk poor adoption, errors, and underutilisation.

“Yeah. And that digital readiness also affects the internal side, which is how ready are the employees for this digital environment? Digital readiness, from an environmental perspective, encompasses equipment and IT infrastructure. However, we need to examine the culture in terms of the employees, who are responsible for operating this” (P10).

“Digital readiness isn’t only about having systems. It’s also whether people are mentally prepared to shift from manual work to automated processes. Some employees are still afraid of breaking the system, so confidence-building becomes part of readiness” (P4).

“Even if the infrastructure is in place, without proper change preparation, the organisation won’t progress. Readiness means training, communication, and

ensuring people understand why the change is necessary, not just introducing the technology" (P7).

"Infrastructure readiness is merely a dream, and that's what most people believe. They keep moving forward, caught up in these buzzing words of digital transformation, actually" (P3).

The participants' insights revealed that digital readiness is the key factor for a successful digital transformation. With the right preparation of infrastructure and staff, organisations can streamline processes, reduce errors, and enhance decision-making. Against such a backdrop, digital readiness has a direct impact on transparency and decision-making, as it equips staff with the necessary tools, confidence, and knowledge to operate digital systems effectively. This leads to informed, timely, and responsible decisions in public sector institutions.

5.4.5.4 Innovation in automation

The participants' views demonstrated that digital readiness is the key enabler of a successful digital transformation. With proper preparation of infrastructure and staff, organisations can streamline processes, reduce errors, and enhance decision-making. In this regard, digital readiness has a direct impact on transparency and decision-making, as it equips staff with the necessary tools, confidence, and knowledge to operate digital systems effectively, ultimately leading to informed, timely, and responsible decisions within public sector institutions.

"We have planned to introduce a chair-moving automation system this financial year. We will implement it in August, followed by the installation of flats" (P1).

"Automation of leave, approval of leave, implementing a system that handles this, and moving away from a more manual approach, where I'm in production or risk, but I can't access financial data that affects my division. We're trying to break down those silos and increase integration" (P10).

"BRICS relationships are now significantly enhancing the cultural capabilities of the city, enabling us to shift our employees' focus from traditional methods to smarter and more efficient approaches" (P2).

The participants' opinions highlighted that automation innovation streamlines processes within the corporation, while also fostering a culture of efficiency and continuous improvement. Thus, automation serves as an effective tool that improves decision-making and transparency by accelerating processes, ensuring accurate data flow, and

enabling employees to focus on more valuable activities that can boost organisational performance.

5.4.5.5 Organisational agility

Organisational agility is a quality that shows how well a public sector institution can quickly adapt to changes, be innovative, and respond to new demands and requirements without compromising operational efficiency. The participants highlighted that fostering agility requires not only implementing digital tools but also cultivating a culture of flexibility, proactive problem-solving, and collaborative decision-making. Agility helps organisations to minimise throughput times, improve responsiveness, and align processes with strategic objectives, regardless of limitations imposed by public sector regulations like PFMA.

> *"Pushing forward with digitisation, embracing agility, and striving to match the private sector's standards, that organisation will always flourish"* (P1).
>
> *"The same principle applies to the culture within a government department. If it is innovative, it is agile, even though we do everything within the ambit of PFME, as long as the organisation is"* (P7).
>
> *"Affordable connectivity, digital skills development, local content creation and effective data collection. To facilitate effective data collection, we established a data lake using Microsoft's reliable digital infrastructure. What we've done is we've replaced all our data centre environments with cloud"* (P2).
>
> *"Employee time management and productivity monitoring were also implemented at that time, and this was achieved by linking the ESS with time management systems. We were able to deploy it in three months, and we are still using it today"* (P6).
>
> *"People are becoming increasingly agile, more intentional about their needs, and they are not afraid to use different platforms to express them. And you'll find that even within one political party, there are multiple voices"* (P8).
>
> *"Driving this digital transformation and driving a particular strategic objective of the organisation in terms of its success. So, there's always a gap there—people always"* (P3).

The participants indicated that organisational agility is both a cultural and operational enabler that boosts the impact of digital transformation. This illustrates the interconnection of digital transformation, organisational culture, and performance; thus,

agility enables more efficient decision-making, promotes transparency, and helps public institutions effectively harness digital initiatives to improve overall performance.

5.4.5.6 Value and impact

The participants also noted that digital transformation is undertaken not solely for technological advantages, but also for the tangible value and benefits it can generate for the organisation and its stakeholders. Any successful digital initiative must deliver measurable improvements in service delivery, operational efficiency, and citizen satisfaction. Some participants stated,

> *"Regarding the value that you know it will bring, we do not choose to drive the digital transformation just because of technology, but we also look at the value, and the impact it will bring out to the citizens out there" (P11).*
>
> *"The GCTO, for example, is the Group CTO of the city. He has to report to different committees. I have to report to different committees. Some of them are governance committees, audit committees, and finance committees"* (P3).
>
> *"At the end of the day, the impact must be visible. If the digital tools don't improve turnaround times, enhance service delivery, or make life easier for citizens, then the investment holds no value. Everything we implement must show measurable benefit"* (P6).
>
> *"So, technology solutions must serve all the communities. It must enable spatial justice and content creation, have affordable connectivity, and embody the Ubuntu philosophy, which guides our infrastructure and design, because we still have indigence"* (P2).

The insights gained demonstrate that digital transformation efforts should only be considered worthwhile if they improve organisational performance and bring positive changes to the citizens' lives. Thus, the perceived value and effects of digital initiatives are both outcomes and contributing factors as a culture centred on accountability, inclusivity, and service orientation drives successful implementation, which then leads to enhanced organisational performance and greater transparency.

5.5 Summary of Findings

The study's findings demonstrate that the digital transformation of South African public institutions is a complex process shaped by technological, cultural, and organisational factors. While digital initiatives such as internal process digitisation, e-government portals, and automation can greatly enhance operations, service delivery, and decision-making, their success heavily relies on the organisational environment and culture in

which they are introduced. The study also highlighted the enablers and barriers, as well as digital readiness and leadership engagement, all of which influence the extent to which digital initiatives can enhance transparency, performance, and the overall value provided to both employees and citizens. Table 3 encapsulates the findings.

Table 3: Summary of findings

Theme	Codes	Description / Impact
Theme 1: Digital transformation initiatives and effects	Citizen-focused digital transformation	Digital initiatives designed to improve service delivery and engagement with citizens, such as, e-government portals and public reporting platforms.
	Internal process digitisation	Automation of internal workflows, like leave forms (RLS01), and financial reporting, which improve efficiency and reduce errors.
	Reduced reporting delays	Systems and tools that speed up approvals, reporting, and monitoring processes, enhancing turnaround times.
	Understanding of processes	Ensures that employees understand workflows and procedures, which are crucial for using the system correctly and making effective decisions.
Theme 2: Enablers and barriers to digital transformation	Accountability	A straightforward assignment of responsibilities ensures the responsible use of digital tools and supports compliance.
	Improved governance	Governance structures and frameworks facilitate structured decision-making and oversight of digital initiatives.
	Regulatory compliance	Alignment with policies, laws, and PFMA ensures legal and ethical implementation of digital solutions.
	Resistance to change	Employee reluctance, driven by fear, job security concerns, or entrenched habits, can slow the adoption of new technologies.
	Implementation barriers	Procedural, legislative, or technical constraints that hinder smooth deployment of digital initiatives.

Theme 3: Digital transformation effect on transparency and decision-making	Convenience	Digital platforms provide citizens and employees with easy access to services, reducing the effort and time required.
	Internal process digitisation	Streamlines workflows, enabling faster and more transparent decision-making, as well as improved record-keeping.
	Reduced reporting delays	Automation reduces bottlenecks, providing timely information to support evidence-based decisions.
	Understanding of processes	Clear workflows and procedural knowledge allow informed and transparent decision-making.
Theme 4: Organisational culture and digital readiness	Cultural agility	Ability of employees and teams to adapt quickly to change, experiment, and learn from new digital tools.
	Culture as a foundation	Organisational culture drives acceptance and sustainability of digital transformation initiatives.
	Culture of innovation	Encourages creative problem-solving, experimentation, and openness to new technologies.
	Digital infrastructure	Reliable systems, network connectivity, and IT equipment that enable effective deployment of digital solutions.
	Digital literacy	Skills and competencies for staff and citizens to use digital tools efficiently.
	Leadership engagement	Involvement of senior management to guide, champion, and sustain digital initiatives.
Theme 5: Interplay between digital transformation, organisational culture, and performance	Bureaucratic culture	Hierarchical structures and complex procedures can slow digital adoption and decision-making.
	Collaboration	Cross-functional teamwork and partnerships support integrated, efficient implementation of digital initiatives.
	Digital readiness	Preparedness of employees and systems for change, including

		training, mindset, and infrastructure.
	Innovation in automation	Use of automated systems to streamline processes, reduce manual workloads, and enhance efficiency.
	Organisational agility	Flexibility and responsiveness of the institution to adapt to new tools and processes.
	Value and impact	Measurable outcomes of digital initiatives, including improved service delivery, inclusivity, and citizen satisfaction.

5.6 Summary

Chapter 5 presented the study findings, beginning with a summary of the participants' demographic traits, followed by a discussion of the themes that emerged from the data. The demographic section provided an overview of the participants' positions, years of service, and departmental affiliations, demonstrating the diversity and relevance of the sample in studying digital transformation within South African public sector institutions. These features offered insight into the perspectives expressed in the interviews and set the context for the subsequent thematic analysis.

The thematic analysis is subsequently presented in the next chapter, and it is organised based on the key themes identified in the data. Theme 1 examined how digital transformation impacted transparency and decision-making, with references to concepts such as convenience, digitisation of internal processes, reduced reporting delays, and process awareness. Theme 2 outlined the facilitators and barriers of digital transformation, including accountability, decision-making, governance, compliance with rules and regulations, resistance to change, and implementation challenges. Theme 3 focused on organisational culture and digital preparedness, with codes encompassing cultural agility, culture as a foundation, innovation-driven culture, digital infrastructure, digital literacy, and leadership engagement. Additionally, Theme 4 explored the relationship between digital transformation, organisational culture, and organisational performance, focusing on aspects such as bureaucratic culture, collaboration, digital readiness, automation, innovation, organisational agility, and value creation. Therefore, all the themes were illustrated using verbatim statements from the participants to ensure the provision of in-depth, contextualised insights related to the research questions.

CHAPTER 6: DISCUSSION

6.1 Introduction

This chapter is a shift from discussing the findings to discussing the critical discussion of the significance of findings. It bases its interpretation of the empirical evidence in Chapter 5 on the available literature and the study's conceptual frame to go beyond what was discovered to the why and so what. The discussion unravels the multi-faceted, and even contradictory, nature of the association between organisational culture and digital transformation in the distinctive crucible of the South African public sector. This discussion is structured in terms of the five main themes that came out and its synthesised evidence to show how cultural dynamics, leadership behaviours, and technological investments interact to either drive or stagnate performance and efficiency in the public sector. The ultimate goal was to bridge the empirical-theoretical gap and derive actionable implications of the research in both scholarly and practical contexts.

6.2 Linking Findings to the Conceptual Framework

The empirical evidence from the research confirms and enhances the developed conceptual framework, revealing the subtle mechanisms underlying the success or failure of digital transformation. The findings established that the journey from technological investment to improved organisational performance is not a simple cause-and-effect relationship, but a complex process intertwined by the formidable, synergistic forces of organisational culture and individual behaviour. This emphasises that technology and culture are inextricably linked in the public sector's redirection process.

The interaction of the framework's elements was clearly demonstrated in the results. RBV considers digital systems as valuable assets; however, this study showed that their potential is mostly locked in without the necessary dynamic capabilities to reconfigure them. Moreso, the results revealed that organisational culture, as determined by the competing values framework and leadership, is the most critical dynamic capability. For example, a hierarchical culture taken to the extreme weakened DT by generating high effort expectancy and negative social influence, both vital constructs of UTAUT. On the other hand, the same UTAUT constructs showed positive activation in settings with adhocracy or clan cultural characteristics, which decreased adoption barriers and increased the need for cooperation to leverage technological resources.

Thus, the framework is validated with significant impact; organisational culture is the key intermediary, the channel through which technological resources are translated into performance outcomes or rendered ineffective. The micro-process of individual acceptance (UTAUT) and macro-process of strategic orchestration of culture dynamics

(CVF) govern this process. This synthesis transcends the mere application of multiple theories or even of technology, revealing digital transformation as a highly socio-technical process in which culture is not a passive backdrop but rather a decisive, active environment in which technological value is produced or lost.

6.3 Discussion by Theme or Research Question

6.3.1 Theme 1: Digital transformation and organisational efficiency

The theme captures the essence of digital transformation, which is its ability to serve as a strategic tool to enhance the efficiency of public sector institutions. The findings extend beyond theoretical advantages and provide evidence about how digital efforts simplify workflows, maximise resources, and expedite services.

The findings demonstrate that two primary, interrelated mechanisms are used to realise the efficiency gains: automation of the processes and citizen-focused redesign. The introduction of specific digital systems was always associated with a decrease in bureaucratic inertia. This aligns with RBV, which posits that technological resources are a crucial organisational resource. The findings, however, are of paramount significance to this theory, as they show that cultural and behavioural variables, as explained by UTAUT, determine whether these resources are activated. One factor influencing the success of a new system was performance expectancy, which is the degree to which users believe it will help them. The returns are high, which results in continued utilisation and actual efficiency.

Moreover, the shift in strategic orientation toward citizen-oriented digital change highlights a broader perspective on efficiency that extends beyond internal cost-saving measures and directly relates to the value of the population. This change requires a culture that emphasises external stakeholders, a factor highlighted by the competing values framework. This suggests that full organisational efficiency in the public sector is not merely about implementing technology, but rather about reorganising the entire approach and resources with the citizen at the core, which is a characteristic of a mature and externally-oriented organisational culture.

Against this background, the findings provided a nuanced response to RQ1 by demonstrating that digital transformation leads to operational efficiency through the physical automation of operations within the organisation and strategic work on citizen-focused services. The achievement of these benefits, however, depends on a favourable organisational culture that promotes the positive adoption of technology and the convergence of digital investments with the generation of public value.

6.3.2 Theme 2: Enablers and barriers to digital transformation

This theme explored the fundamental drivers that accelerate or stall digital transformation initiatives, delving beyond an outline list to uncover the dynamic tension between organisational drivers and barriers. The findings highlighted that the effectiveness of DT does not depend on technological ability, but it is a direct result of the organisational setting in which it is embedded.

The findings place organisational culture as the platform on which all other enablers and barriers are placed. Accountability and a collaborative culture were consistently listed among the most critical enablers. This aligns with CVF, which posits that the culture of clan and adhocracy provides the social fabric that innovation requires. This cultural underpinning is realised through decisive leadership intervention, which serves as the catalyst. The leaders were not just patrons but were also active change agents who instilled confidence and drove the change. Thus, culture is the driver of the social influence construct in UTAUT, and it reflects the dynamic capabilities required to drive the organisation. Moreover, enhanced governance and regulatory compliance were not viewed as hindrances to progress, but rather as important enabling factors that provide a disciplined framework for ethical and sustainable change, thereby establishing legitimacy and trust among stakeholders.

On the other hand, human and systemic resistance and barriers were the most formidable obstacles. Resistance to change became a widespread stumbling block, frequently due to a root cause of fear of the job and familiarity with antiquated systems. The cognitive inertia that compromises performance expectancy and effort expectancy in the UTAUT model is a perfect definition of cognitive inertia. Practical implementation obstacles, including intricate procurement and legislative challenges, further exacerbated this. This indicates a mismatch between the rate of technological change and the inflexibility of public-sector regulatory frameworks, which suffocates the facilitating conditions for success.

Therefore, this suggests that a supportive culture, active leadership, and strong governance are the most critical facilitators, whereas culture resistance, fear-driven behaviour, and rigid systems are the main inhibitors. The findings indicated that the barriers are both technical and financial, as well as socio-culturally related, and require the intervention of a manager and leader more than technical solutions.

6.3.3 Theme 3: Digital transformation effect on transparency and decision-making

This theme explored how digital transformation alters the nature of governance and internal operations, making them more transparent and enabling better-informed, agile decision-making. The findings indicated that DT is an influential tool of institutional accountability that transforms organisations with opaque, hierarchical information control into open, data-driven ones, aligning with Mergel et al.'s (2019) definition of the transition to digital-era governance.

The findings indicate that transparency is mainly achieved through the digitisation of processes within the organisation, which generates indelible digital audit trails. This development of an automated audit trail aligns with Mishra et al. (2024), who associate blockchain-based records with greater accountability in state institutions. This digitisation directly affects the decision-making process, as managers receive up-to-date, accurate information. The delays in reporting were greatly minimised through the automation of workflow, including leave approvals and financial reporting. This also leads to a virtuous circle, in which the ease of access to digital platforms is then used to promote a culture of evidence-based decision-making. In this regard, Yang, Gu, and Albitar (2022) argue that digital tools promote transparency and efficiency in service delivery.

Moreover, RBV is reflected in the view that data becomes a strategic asset that enhances organisational capabilities, supporting Barney's (1991) idea of valuable resources. Nevertheless, UTAUT describes behavioural change (Venkatesh et al., 2003). Employees tend to use systems regularly when they feel they are easy to use (high effort expectancy) and when they see the systems have definite benefits (high performance expectancy). Thus, filling the systems with reliable data that allows for transparency. Moreover, this aligns with the principles of dynamic capabilities (Teece, 2007), as the capacity to perceive and respond to real-time information is a fundamental organisational capability in contemporary public-sector governance. The trend toward transparent, data-driven operations indicates a cultural shift from a hierarchical to a more collaborative, adaptive culture, as described in the competing values framework (Cameron & Quinn, 2011).

By and large, this suggests that digital transformation increases transparency by establishing visible, auditable processes and enhances decision-making by enabling access to reliable data more quickly. This, in turn, fosters a culture of accountability and evidence-based governance in the South African public sector, thereby furthering the overall aims of digital-era governance.

6.3.4 Theme 4:Organisational culture and digital readiness

The theme explored the interplay between an organisation's cultural makeup and its readiness to undergo digital transformation. This data showed that digital readiness manifests as both a technological infrastructure and a cultural phenomenon, influencing an organisation's collective thinking, behavioural patterns, and its internal capacity to adapt to technological change, aligning with the sociotechnical perspective promoted by Cao et al. (2025).

The findings confirmed that culture is the backbone of every digital undertaking. CVF classifies the types of cultures (Cameron & Quinn, 2011). The competing values framework posits that the organisations with adhocracy and clan characteristics, which value innovation, collaboration, and agility, have a much higher level of digital readiness, supporting the views of Cao et al. (2025) that the adhocracy culture is the most conducive to DT. In that regard, such cultural predisposition provides the facilitating conditions and positive social influence necessary to adopt technology, as outlined in UTAUT (Venkatesh et al., 2003). Against such a background, a culture of innovation thrives, allowing employees to experiment and learn from failures, thereby developing greater confidence and motivation to embrace new digital tools.

Nevertheless, culture cannot work on its own unless it is actively stewarded. Leadership involvement was found to be a key driver of digital preparedness. This aligns with the perspectives of leadership positions depicted in dynamic capabilities (Teece, 2007), as it involves reconfiguring organisational routines and attitudes. Moreover, the findings indicate that a culture of preparedness must be digitalised through digital literacy. This highlights that the performance expectancy of a digital tool, as per the UTAUT model, is cancelled when users are not competent enough to use it efficiently. Haidar (2024) notes that this is a challenge in developing contexts. Thus, a well-developed digital infrastructure may be the necessary platform. However, it is the synergetic nature of a favourable culture, dedicated leadership, and ubiquitous digital competence that make up actual organisational preparedness (Mergel et al., 2019; Warner & Wager, 2018).

By and large, this demonstrates that an organisational culture significantly influences the success of digital transformation, as it predetermines the institution's fundamental willingness to embrace, adopt, and utilise new technologies. However, the difference between digital initiatives that have a positive impact on overall organisational performance lies in a culture of agility and innovation, proactively supported by leadership and reinforced through the development of digital skills.

6.3.5 Theme 5: Interplay between digital transformation, organisational culture, and organisational performance

The theme weaved together the study's findings that organisational performance is not directly related to the input of technology, but rather to the by-product of a multifaceted and dynamic interaction between digital transformation agendas and organisational culture. The findings indicated that organisational culture is the driver and a filter through which DT mediates performance outcomes.

Although digital transformation offers technological capability, as RBV posits, it is organisational culture that either realises the potential to the full or it goes down the drain. A bureaucratic culture, typified by rigid rank structures, proved to be a strong performance breaker. The culture of governance is bureaucratic and compliance-based, directly suffocating the organisational agility needed to leverage digital tools as a performance booster. On the other hand, a culture that supports teamwork and innovation in automation enables the automated integration of technology into basic processes. Also, the focus on cross-functional teamwork, in which collaboration plays a critical role, enables effective reconfiguration of digital resources, a central principle of Dynamic Capabilities. This support system is a cultural support that boosts the performance expectancy and effort expectancy of digital tools (UTAUT), resulting in higher adoption rates and, hence, performance.

Moreover, the effectiveness of DT is reflected in its practical value and the value it creates for stakeholders. The findings stress that technology should be intentionally positioned within cultural values to yield significant outcomes. This orientation towards value creation is a sign of an advanced realisation that sustainable performance growth is attained when there is a digitally fit culture. This is the creation of an agile, collaborative, and citizen-centric culture that ensures technological capabilities are focused on strategic goals. The competing values framework can be used to refreeze this, revealing the most suitable cultures for translating digital transformation into tangible performance benefits. In this regard, enhanced service delivery and citizen satisfaction are associated with market and adhocracy cultures, given their focus on the external environment and innovation.

Therefore, the findings demonstrated that the effects of digital transformation and organisational culture on performance are interconnected rather than linear or independent. Thus, a supportive organisational culture enhances the potential of digital technologies, which drives sustainable and meaningful improvements in efficiency and effectiveness within the public sector.

6.4 Theoretical and Practical Implications

The findings have profound implications, extending beyond the research context, as they can contribute to the scholarly literature and offer practical recommendations to practitioners in the public sector.

6.4.1 Theoretical Implications

This study makes several substantive theoretical contributions. Initially, it furthers UTAUT by effectively incorporating it in macro-level organisational setups. The study demonstrated that the main constructs of UTAUT, such as performance expectancy, effort expectancy, and social influence, are not merely personal perceptions but are strongly influenced by the existing organisational culture. This fills one of the most critical gaps in the literature by providing a multi-level model of how individual adoption behaviour of technology is catalysed or inhibited by the broader institutional environment.

Moreover, the study provides empirical support and situational improvements for the competing values framework in the context of digital transformation in the public sector. It transcends typological classification of cultures by explicitly associating cultural types with the outcomes of transformation. The findings indicated that hierarchical cultures negatively affect the adoption of DT in a systematic way by enhancing high effort expectancy and resistance. The adhocracy and clan cultures help to establish the social and structural factors that ensure successful adoption. This provides a subtler insight into how the CVF can be operationalised as a diagnostic instrument for organisational preparedness for digital change.

Therefore, the study advances the dynamic capabilities theory by defining and outlining the micro foundations of these capabilities, specifically in the public sector. It assumes that organisational culture and leadership are not mere supportive factors, but in fact, the key dynamic capabilities needed to restructure technological resources into enduring performance benefits. This narrows the theory by highlighting how public sector organisations can attain agility to cope with the intricacies of digital disruption.

6.4.2 Practical Implications

The study provides crucial, practical lessons for government leaders and policymakers in the field. Initially, it emphasised the need to conduct cultural diagnostics as a precondition for meaningful digital investments. Organisations can apply models such as CVF to assess their cultural preparedness, to identify potential areas of resistance, and to devise specific change management programs before committing to technology solutions. However, it is a risky move to invest in technology without cultural misalignment in place and expect poor returns.

Moreover, the findings promote the creation of interconnected digital transformation plans with clear connections among technology, culture, and people policies. This includes the need to go beyond technical implementation plans and add explicit initiatives to leadership development, digital literacy programmes, and rewards that encourage collaboration and innovation. Since leadership, as the study reveals, is a key accelerator, creating digitally fluent, change-oriented leaders should be a strategic agenda, and the development of change management skills and the creation of a culture of psychological safety and experimentation should be the focus of training.

By and large, for policymakers, the implication is that regulatory frameworks that facilitate rather than impede the agility of digital transformation must be put in place. This can be achieved by revising and updating procurement policies, delegation models, and compliance standards to permit the iterative, user-focused methodologies that effective digital transformation necessitates. Governments can help to build an ecosystem in which public institutions are empowered to change by aligning policies with the realities of digital change.

6.5 Reflections on the South African and African Context

The findings of this study should be interpreted in the context of the complex socio-institutional environment of South Africa, where the legacies of apartheid and systemic inequalities place unique pressure on digital change, unlike in developed economies (Letsoalo & Venter, 2017). The resistance to change and anxiety over job security found in this study are organisational behaviour issues and run so deep in society and are symptomatic of a high unemployment rate and a history of exclusion, both of which are deeply rooted (Nkadimeng, 2021). This implies that the digital transformation projects in the South African state sector are conceived as technical projects and conceptualised as multifaceted socio-technical projects that engage with these structural inequalities as a given framework, while also establishing institutional trust through oversight and inclusive execution (Mbeki & Van der Merwe, 2017).

Moreover, the study confirms a significant implementation gap between ambitious national digital policies and the operational realities of public institutions. Although frameworks such as the Digital Transformation Roadmap 2030 in South Africa are presented as illustrations of a developed policy vision, the study shows that their implementation is methodically constrained by an entrenched bureaucratic culture and the typical resource constraints of most African governments (Mbatha & Phago, 2018). This implementation gap is not an issue of policy design failure but one of inherent incompatibility between organisational preparedness and technological aspiration, a

challenge observed in developing economies (Warner & Wager, 2018). The findings emphasise that to achieve traction with digital transformation, policy should be accompanied by strategic choices for cultural transformation to overcome hierarchical cultural dominance and should also develop the human capabilities required for sustainable change.

Against such a background, this study essentially questioned the practice of directing technology-focused the transformation models that were brought to the global north and exposes their insufficiency in addressing the unique issues of the African public sector context (Hie, 2019). The underlying problems of digital literacy levels, the uneven distribution of infrastructure, and basic access inequalities are not secondary factors in South Africa and across the continent, but the minimum on which any change must be established (Galvez & Revinova, 2025). Thus, effective digital transformation should now be reconsidered as the means of enhancing spatial justice and economic inclusion (Angelopoulos et al., 2023). This requires a type of leadership that can navigate such distinctive complexities to develop context-sensitive, home-based models that leverage technology. The goal is to achieve administrative efficiency and re-establish the social contract between citizens and the state (Mergel et al., 2019). The process of digital transformation of the African social sector should thus be acknowledged as both technological and cultural, and deeply political, requiring solutions that are as subtle and multi-dimensional as the settings they are designed to change.

6.6 Summary

The chapter has integrated and discussed the study's main findings and provided a detailed account of how digital transformation and organisational culture interrelate to influence performance in the South African public sector. The discussion, using a thematic analysis based on the research questions, showed that performance outcomes and technological investment are mediated by organisational culture, which is the key factor. The five central themes revealed that although digital transformation leads to efficiency through automation and citizen-focused design (theme 1), success depends on cultural enablers and blockers (theme 2), especially in maximising transparency and decision-making (theme 3). The analysis also determined that digital preparedness is essentially a cultural condition (theme 4), and performance enhancements are brought about by the synergistic relationship between the technological capability and cultural alignment (theme 5).

These findings have been placed within the study's conceptual framework, which illustrates how UTAUT, CVF, and RBV explain the complex socio-technical nature of

digital transformation. The theoretical implications contribute to the further development of the idea of interactions between micro-level technology adoption and a macro-level organisational culture. In contrast, the practical implications offer practical advice to the leaders of the state sector. Contextual reflections noted that the South African experience is a unique scenario in which digital transformation must address technical implementation, cultural transformation, and historical structural inequalities. The overall discussion lays the groundwork for the conclusions and recommendations in the final chapter, which summarise these insights and outline the strategic directions for making the digital transformation more successful in the public sector.

CHAPTER 7: CONCLUSION

7.1 Introduction

This chapter is the concluding part of the work that summarises the main findings of the study, based on the analysis of digital transformation in the public sector of South Africa. It aims to summarise the principal findings regarding the research questions and the conceptual framework, describing the study's contribution to scientific and practical knowledge, and drawing explicit recommendations for policy-makers, organisational leaders, and the practitioners tasked with promoting digital transformation. It is also a reflection of the methodological and contextual limitations of the study, which imposed valuable constraints on interpreting the findings and suggesting future research opportunities in the field based on the identified gaps.

The chapter is presented in a way that offers a logical flow between empirical evidence, theoretical thinking, and the act of doing. It starts with a summary of the study's significant findings, along with the research questions and the reformulated conceptual framework developed at the conclusion of Chapter 6. This is followed by a general discussion that presents the research's main findings. Subsequently, the chapter provides the scholarly, managerial, and policy contributions that resulted from the research. The final sections of the study include the recommendations, limitations, and areas for further research to enhance the knowledge of digital transformation in the government sector.

7.2 Summary of Key Findings

This part summarises the key results of the research. The paragraphs below offer a more critical and elaborate synthesis, suitable for discussion in an examinable Chapter 7.

7.2.1 Summary of Research Question 1 Findings.

- *RQ1 - How does digital transformation drive the improvements in operational efficiency within organisations?*

The findings showed that the majority of participants consistently perceived digital transformation as a key internal catalyst for enhancing organisational performance. The participants noted that adopting digital systems facilitated internal processes, reduced red tape, and eliminated duplication within departments. The use of automated document routing, online application portals, and digitised approvals was explicitly mentioned as transformative, and the turnaround time for services offered to the public and internally was significantly reduced (Grover et al., 2022). The participants also explained how the digital workflows brought procedural consistency, minimised errors, and removed unnecessary manual interventions, leading to more predictable and reliable service

processes. The availability of automated audit trails also contributed to improved efficiency, thereby enabling faster monitoring, tracking, and accountability than before, an effort that was previously diverted to sorting out process uncertainty or locating lost documentation (Widodo et al., 2024).

However, although such improvements were realised, the findings also indicated that the gains in efficiency are very uneven throughout the public sector. The departments with more developed infrastructure, more trained personnel, and an integrated platform saw significant improvements in their operational activities. Conversely, the units that depended on legacy systems, or were lowly supported by ICT, or worked around the manual system, found it difficult to reap such benefits (Widodo et al., 2024). Also, the participants noted that the lack of system interoperability led to data duplication and re-entry, thereby weakening the potential efficiency gains. Also, low digital literacy, a lack of willingness to adopt new tools, and poor change management became significant impediments to adoption and the minimisation of anticipated efficiency benefits(Mishra, Mishra & Bansal, 2024). Therefore, regardless of whether digital transformation has undoubtedly become an effective part of organisational efficiency, such advantages depend on digital preparedness, cultural fit, and technological infrastructure maturity.

7.2.2 Summary of Research Question 2 Findings

- *RQ2 - How does digital transformation impact transparency and decision-making processes in organisations?*

The findings indicated that digital transformation has significantly enhanced transparency in public-sector institutions by introducing traceability and visibility into the normal operational processes. A majority of the participants affirmed that digital systems and their automated logs, timestamps, and user histories helped them to monitor actions, identify the officials who took them, and confirm proper adherence to the procedure. This enhanced visibility helped to improve accountability procedures, minimise the risk of procedural manipulation, and make the decision environment auditable (Haidar, 2024). In this regard, the digital systems drastically reduced the grey areas that could exist in the manual world, making processes more visible to managers, overseers, and, in certain instances, to the public.

Besides transparency, digital transformation was perceived as a key facilitator of better decision-making. The findings established that the availability of real-time data dashboards, integrated reporting systems, and performance analytics enabled managers to make evidence-based decisions. The participants affirmed that such a data-driven strategy enabled them to identify operational bottlenecks earlier, enhance risk

prediction, and improve strategic responsiveness. Nevertheless, the findings also indicated ongoing limitations, including inconsistent data quality, fragmented information systems, ineffective data governance, and personnel's inability to be analytical. In such situations, decision-making was still, to some extent, based on outdated or incomplete information, thereby reducing the transformative power of digital tools(Mishra, Mishra & Bansal, 2024). However, the general evidence suggests that digital transformation has also made considerable strides in enhancing transparency and decision-making, despite these benefits still being curtailed by organisational culture, digital maturity, and the extent of system integration (Zourou & Oikonomou, 2022).

7.2.3 Summary of Research Question 3 Findings

- *RQ3 - How does organisational culture shape the effectiveness of digital transformation initiatives and influence the overall organisational performance?*

The findings indicate that organisational culture is a potent predictor of the success of digital transformation in the government sector. The participants did not portray culture as a background factor; they portrayed it as an active force that influences the employees' likelihood of embracing digital systems, their belief in technology, and their willingness to adopt new work practices. The cultures described as flexible, collaborative, ready to learn, and open to communication were linked to a more comfortable implementation process, increased system adoption, and better utilisation of digital tools (Mishra, Mishra & Bansal, 2024). Therefore, workers were made to feel safe in these settings, psychologically and more open to trying digital processes.

Conversely, bureaucratic, strict, and fearful cultures were consistently identified as barriers to change. It was observed that the employees also felt intimidated by the prospect of automation in specific departments, fearing that it would threaten their jobs. Others cited resistance stemming from bureaucratic procedures, siloed thinking, and a history that discouraged experimentation. This disconnect between culture and the goals of digital transformation often resulted in slow adoption, reluctance to utilise new media, and in the inconsistent use of digital technologies, even when technology was capable of practical use. Additionally, cultural resistance contributed to poor communication, a lack of cross-unit cooperation, and a lack of shared ownership of digital initiatives, ultimately undermining the effectiveness of transformation activities on organisational performance (Widodo et al., 2024). Thus, the findings demonstrated that organisational culture acts as both a mediator and a moderator as it influences how the employees perceive digital transformation, and it affects the extent to which digital tools are seen as enhancing performance.

7.2.4 Summary of Research Question 4 Findings

- *RQ4- What are the most important facilitators and inhibitors of the success of digital transformation programs?*

The findings revealed a complex system of facilitators and obstacles that shape the pattern of digital transformation. In this perspective, some of the most effective enablers, as highlighted by the participants, include dedicated leadership, strategic focus, sound digital governance frameworks, and proper resource allocation. The leaders who continually championed digital tools, offered empowerment during implementation, and communicated clearly about the aims of transformation played a significant role in enhancing organisational preparedness. Digital governance frameworks, including data management, interoperability, and security standards, were also cited as necessary to establish overall system and unit coherence (Govindan & Arampatzis, 2023). Therefore, scarce resources such as investment in infrastructure, the development of digital skills, and staffing, proved to be key facilitators that defined the speed and extent of digital change.

More so, resistance was also imminent. The participants frequently mentioned outdated legacy systems, limited interoperability, weak ICT infrastructure, and limited staff digital literacy. Many organisations highlighted fear, uncertainty, and poor change management as significant barriers. Additionally, political influence, inconsistent policy enforcement, and incoherent decision-making further hindered the continuity and stability necessary for digital transformation. Data governance failures and ineffective information systems across numerous departments reduced the effectiveness of digital tools and the use of evidence-based decision-making (Kocaoglu & Kirmizi, 2024). Therefore, the findings indicated that digital transformation faces challenges from technology and from systemic organisational, cultural, and structural issues that require comprehensive solutions.

7.3 Academic Contribution

The research makes several contributions, including extending theoretical frameworks, developing empirical knowledge of digital transformation in the public sector, and offering nuanced, context-specific insights into how organisational culture, leadership, and digital maturity interact to influence transformation outcomes. The contributions are organised into three areas: theoretical, methodological, and contextual/knowledge.

7.3.1 Contribution to Theory

The study significantly extended theory by developing a conceptual framework that integrates UTAUT, CVF, (RBV, DCT, and the digital maturity model. Unlike existing research which often examines these theories separately, the findings revealed that

digital transformation in the public sector is a complex socio-technical process that one single theory cannot fully explain. The study contributes to existing knowledge by showing that organisational culture influences the relationship between digital enablers and performance, and that leadership commitment promotes or accelerates the capability reconfiguration essential for transformation.

The findings also enhance the RBV and DCT frameworks by demonstrating that digital capabilities are not fixed assets, but dynamic organisational structures shaped by leadership, governance, and readiness for change. The study shows that digital maturity is an ongoing process rather than a one-off investment, and its impact is influenced by cultural factors such as trust, collaboration, and openness to innovation. The research broadens the application of the technology-acceptance theory by reaffirming UTAUT's behavioural constructs within a public-sector context characterised by hierarchical norms and resistance to change. Thus, this study presents digital transformation as a capability development process moderated by culture, offering a more theoretically nuanced perspective and thereby strengthening and extending the existing academic discourse.

7.3.2 Theoretical Implications

This study makes several valuable theoretical contributions. It initially enhanced UTAUT by effectively integrating it within macro-level organisational contexts. The study demonstrated that the core constructs of UTAUT, such as performance expectancy, effort expectancy, and social influence, are not solely personal perceptions but are significantly influenced by organisational culture. This addressed a notable gap in the literature by introducing a multi-level model that explains how individual technology adoption behaviour is affected by, and at times impeded by, the broader institutional environment.

The study offers empirical evidence and contextual insights into the competing values framework within digital transformation in the public sector. It goes beyond basic typologies by explicitly connecting cultural types to transformation results. The findings indicated that hierarchical cultures tend to impede digital transformation efforts by heightening effort expectancy and resistance. In contrast, adhocracy and the clan cultures foster social and structural conditions favourable for successful adoption. This enhances the understanding of how CVF can serve as a diagnostic tool for evaluating organisational readiness for digital change.

Therefore, the study advanced the dynamic capabilities theory by clarifying the micro foundations of these capabilities, especially in the public sector. It argued that organisational culture and leadership are merely supporting factors, whereas the key dynamic capabilities are essential for transforming technological resources into

sustained performance advantages. This refined the scope of the theory by emphasising how public sector organisations can attain agility to navigate the challenges of digital disruption.

7.3.3 Contribution to Methodology

This research contributes to the body of knowledge on digital transformation by emphasising the importance of qualitative enquiry in uncovering the complex, yet nonlinear, dynamics that drive change in the public sector. The study provided valuable insights into the realities of culture, behaviour, and organisation that quantitative methods often miss, through semi-structured interviews with senior managers, ICT professionals, digital strategists, and transformation specialists. Thematic analysis uncovered the rich and nuanced interactions among leadership, culture, readiness, and digital capability, which emerged as key factors in developing the revised conceptual framework. This approach affirmed the importance of interpretive methods in exploring the phenomena central to organisational context and human behaviour.

The study also contributes methodologically by showing how qualitative data can be systematically synthesised with theoretical models to strengthen and broaden existing frameworks. The step-by-step process for thematic analysis and conceptual refinement provided a thorough, reproducible approach to generating theoretically grounded insights tailored to specific contexts. This provided a methodological route for future researchers aiming to understand the process of digital transformation within environments characterised by significant structural constraints, political influences, and cultural barriers. The analysis thereby advanced the method by demonstrating how qualitative methods can uncover overlooked or insufficiently explored aspects that significantly shape the effects of digital transformation.

7.3.4 Contribution to Contextual Knowledge

This research significantly enriches the literature by providing empirical insights into the South African public sector, which has been relatively understudied in the context of digital transformation. Scholars point out that most research on digital transformation has been carried out in developed countries, resulting in limited understanding of how these processes occur in public institutions in developing nations with long-standing bureaucratic traditions (Mbatha & Phago, 2018; Govindan & Arampatzis, 2023). Recent works by Kocaoglu and Kirmizi (2024) also highlight the existing research gaps concerning digital transformation in the Global South, despite the unique resource and institutional challenges faced by these regions. Unlike the resource-rich and technologically advanced settings often discussed globally, public institutions in this

context face capacity constraints, political influences, and historical administrative cultures. The study enriches knowledge on digital transformation in the global south by highlighting how resistance to change, low interoperability, uneven digital literacy, and unstable governance affect the process. The findings challenge mainstream models that assume consistent technology ecosystems and stable organisational environments, emphasising the importance of context-specific factors.

Moreover, the study highlights that digital transformation in South Africa's public sector is uneven, varying across departments based on digital maturity, leadership behaviour, and cultural factors. This reveals the contingent nature of transformation results and explains why digital projects cannot be uniformly implemented across different public entities. The findings offer a more accurate understanding of the challenges of transformation in developing countries, underscoring the need for flexible, context-specific digital strategies. Therefore, by embedding digital transformation within the socio-political and structural realities, this research broadens global knowledge and advances academic discussions on digital transformation in emerging economies.

7.4 Practical Implications

Diagnostic frameworks like the Competing Values Framework (CVF) help organisations assess their cultural readiness, identify potential resistance points, and develop targeted change management strategies before investing in technology. The CVF underpins tools such as the Organisational Culture Assessment Instrument (OCAI), which is a validated, effective method for evaluating an organisation's current culture and pinpointing necessary cultural changes to support successful digital transformation. Using tools like the OCAI enables leaders to make decisions based on evidence, align digital initiatives with organisational realities, and increase the chances of successful adoption and long-term effectiveness of digital changes.

Furthermore, the findings encourage the development of interconnected digital transformation strategies that clearly link technology, culture, and people policies. This involves going beyond technical implementation plans, and incorporating specific initiatives for leadership development, digital literacy programmes, and incentive systems that promote collaboration and innovation. As the study indicates, leadership is a vital driver, making the creation of digitally fluent, change-oriented leaders a strategic priority. Trainees should focus on enhancing change management skills and fostering a culture of psychological safety and experimentation.

Generally, policymakers should design regulatory frameworks that facilitate, not hinder, digital transformation agility. This involves revising procurement policies, delegation models, and compliance standards to support iterative, user-focused approaches that are essential to successful digital change. Governments can foster an adaptable ecosystem within public institutions by aligning policies with the practical realities of digital innovation.

7.5 Recommendations

This section outlines a series of integrated initiatives to improve digital transformation in South Africa. The recommendations are grounded in the results and focus on strategic alignment, cultural readiness, technological capacity, human capital development, and policy flexibility.

7.5.1 Recommendtion for management

Effective management plays a vital role in guiding and achieving digital transformation. The analysis highlights several key areas that demand special attention. Senior and middle managers should develop a clear, unified vision for digital transformation and communicate it consistently across all organisational levels. This vision should be supported by strengthened governance structures, such as digital steering committees or transformation task forces, which promote accountability, strategic alignment, and coordinated interdepartmental planning. Managers must ensure that digital projects are logically prioritised, sufficiently resourced, and completed within realistic timeframes.

Additionally, management should proactively foster a culture of digital confidence by demonstrating openness to new ideas, encouraging transparency, and supporting behaviours that enhance collaboration and innovation. Regular evaluations of digital preparedness, organisational culture, and ICT skills will help leaders identify bottlenecks, manage resistance, and ensure technology adoption aligns with organisational objectives. With focused leadership and continuous strategic oversight, managers can significantly increase the likelihood of a successful, sustainable digital transformation.

7.5.2 Recommendations for Government and Policy Makers

Government and policymakers play a crucial role in fostering an environment conducive to digital transformation in the public sector. This includes enhancing digital governance frameworks that define interoperability standards, data management, cybersecurity measures, funding strategies, and minimum departmental capabilities. These frameworks must facilitate coordination among national, provincial, and local

governments to prevent fragmentation and ensure a unified digital transformation effort, rather than isolated initiatives. Moreover, the government should invest in scalable, secure infrastructure and implement nationwide programmes to build digital capacity, addressing longstanding skill gaps. Sharing knowledge, best practices, and encouraging cross-border collaboration can speed up learning and reduce redundant efforts. Policymakers should also institutionalise digital capability audits and readiness assessments to guarantee that public institutions possess the necessary technical, cultural, and skill sets. By setting clear, supportive policies, the government can enable more public organisations to reach higher digital maturity levels and provide more integrated, citizen-centred services

7.5.3 Recommendations for Organisational Culture

To overcome cultural barriers, organisations are advised to implement systematic change management programmes that foster trust, reduce fear of technology, and reinforce an organisational culture that supports learning and innovation. This involves promoting cross-functional cooperation, improving communication freedom, and creating psychologically safe environments where staff feel comfortable experimenting with digital solutions. Leadership plays a crucial role in shaping these cultural changes; therefore, leaders must set an example by demonstrating transparency and confidence in digital and innovative initiatives. Additionally, recognising and rewarding employees who adopt or promote new digital practices can help to reinforce positive norms and accelerate cultural alignment.

7.5.4 Recommendations for Stakeholders (HR, ICT Units, Employees, Labour Bodies, Citizens)

Digital transformation depends on various internal and external stakeholders. HR teams should lead multi-tier skills development initiatives to improve employees' digital literacy, system operation, data analysis, cybersecurity, and problem-solving abilities. This includes establishing ongoing learning opportunities, mentorship programmes, and peer support to reduce resistance and assist staff as technology evolves. ICT units are responsible for ensuring the reliability and integration of digital systems through infrastructure upgrades, stronger cybersecurity, and robust data governance procedures that protect data integrity and availability. Employee engagement should be early and meaningful in transformation projects, helping staff understand the purpose of digital changes, contribute to solution design, and adapt smoothly to new systems.

Also, consultation processes should involve labour unions and employee representatives to discuss automation, role changes, and job security, fostering trust and preventing misalignment. Citizens and service users should also benefit from more accessible, faster, and transparent public services. Their feedback must be included in digital service design to ensure solutions are inclusive and user-friendly. A coordinated effort involving all stakeholders will help organisations develop a supportive environment that encourages adoption, improves service delivery, and leads to better long-term outcomes in digital transformation.

7.6 Limitations of the Study

While the study offers valuable insights into digital transformation in South Africa's public sector, several limitations should be recognised. It employed a qualitative methodology with a relatively minor participant sample, which allowed for an in-depth exploration of experience and perceptions but limited the generalisability to the entire sector. The findings were shaped by the participants' subjective interpretations and their work settings. Despite efforts to maintain credibility and rigour, qualitative research's inherently subjective nature remains. Furthermore, because the study used semi-structured interviews, the differences in the participants' response scope and focus could have affected the prominence of specific themes.

The study was conducted within a selection of public-sector organisations and may not fully reflect the diverse realities of departments and entities across national, provincial, and local governments. The variations in digital maturity, operational needs, political factors, and resource endowments suggest that the experiences described herein might differ from those in other organisations. Additionally, the research took place during a phase of digital transformation, with many initiatives still ongoing; therefore, the results captured a snapshot in time rather than the complete development of digital implementation. As a result, the conceptual framework employed was limited to the study's theoretical scope. Although incorporating UTAUT, CVF, RBV, DCT, and DMM provided a comprehensive perspective, it excluded other structures that could also explain aspects of digital transformation. However, these limitations do not diminish the value of the research but emphasise the contextual and methodological boundaries within which the findings should be interpreted.

7.7 Future Research Suggestions

Further research could build on this study by employing longitudinal designs to track digital transformation initiatives over time. As digital transformation is a dynamic process, future investigations could explore how cultural alignment, digital maturity, and

leadership commitment develop, and how these changes influence the transformation's outcomes. Longitudinal approaches could also enhance the understanding of the sustainability of digital initiatives, the shifts in user behaviour, and long-term impacts of policy adjustments.

Additionally, mixed-method or quantitative research methods, such as structural equation modelling or digital maturity scales, could be utilised in future studies to verify and reinforce the relationships identified in the current research, thereby boosting the external validity and explanatory power of the findings.

Furthermore. research is also necessary to deepen the understanding of digital transformation across different public-sector contexts. Comparing national, provincial, and local government entities might uncover differences in digital readiness, governance, and cultural influences. Including the views of frontline staff and citizens could provide additional insight into the user experience, digital access to services, and the social value of change overall.

Future research areas could also include the adoption of artificial intelligence, cybersecurity practices, the maturity of data governance, or the digital skills gap in the public sector. By and large, studies focused on developing and validating context-specific digital culture measurement tools or transformation capability metrics could be valuable to policymakers and practitioners seeking to assess progress in resource-constrained environments.

7.8 Concluding Remarks

This study aimed to explore digital transformation in South Africa's public sector and to assess the roles of organisational culture, leadership, and digital maturity in shaping its outcomes. The findings highlighted that digital transformation is much more than just adopting new technologies; it is an extensive organisational and behavioural process that depends on cultural alignment, strategic priorities, and long-term leadership commitment. While digital tools are beginning to improve efficiency, transparency, and decision-making, the study revealed that these benefits are unevenly distributed due to differing levels of digital readiness and cultural openness across institutions.

Moreover, the study will significantly impact both scholarly and practical fields by improving the understanding of the human, cultural, and structural factors that determine the success or failure of digital transformation. Although several challenges remain, such as legacy systems, resistance to change, fragmented governance, and capacity gaps, the research indicates that notable progress can be made when leadership, culture, and capability are addressed simultaneously. The gained insights establish that digital

transformation should be seen as an integrated and comprehensive process, warranting strategic investment, cultural reform, and institutional commitment as South Africa moves towards a modernised, citizen-centred public service. Therefore, by acknowledging that technology alone cannot drive change in public institutions, the study established a foundation for future policy, research, and practice aimed at developing a digitally resilient and responsive public sector.

REFERENCES

Abd-Rabo, A. M. & Hashaikeh, S. A. (2021). THE DIGITAL TRANSFORMATION REVOLUTION. *International Journal of Humanities and Educational Research*, *03*(04), 124–128. https://doi.org/10.47832/2757-5403.4-3.11

Alexandru, A., Bedaque, P. F., Harmalkar, S., Lamm, H., Lawrence, S. & Warrington, N. C. (2019). Gluon field digitization for quantum computers. Physical Review. D/Physical Review. D., 100(11). https://doi.org/10.1103/physrevd.100.114501

Alvesson, M. (2013). *Understanding organisational culture*. Sage.

Angelopoulos, S., Bendoly, E., Fransoo, J., Hoberg, K., Ou, C., & Tenhiälä, A. (2023). Digital transformation in operations management: Fundamental change through agency reversal. Journal of Operations Management, 69(6), 876–889. https://doi.org/10.1002/joom.1271

Antony, J., Swarnakar, V., Gupta, N., Kaur, J., Jayaraman, R., Tortorella, G. L. & Cudney, E. (2022). Critical success factors for operational excellence initiatives in manufacturing: a meta-analysis. Total Quality Management & Business Excellence, 34(9–10), 1152–1172. https://doi.org/10.1080/14783363.2022.2157714

Armstrong, B., & Lee, G. J. (2021). *Digital business* (2nd ed.). Silk Route Press.

Aryani, R., & Widodo, W. (2020). The Determinant of Organizational Culture and its impact on Organization: A Conceptual framework. International Journal of Higher Education, 9(3), 64. https://doi.org/10.5430/ijhe.v9n3p64

Ashwini, J., & Joshi, P. P. (2023). Culture, digital transformation and its effect on organisations. IOSR Journal of Business and Management, 27(5), 51–56. Retrieved from https://www.iosrjournals.org/iosr-jbm/papers/Vol27-issue5/Ser-5/G2705055156.pdf

Bagraim, J. J. (2001). Organisational psychology and workplace control: the instrumentality of corporate culture. South African Journal of Psychology, 31(3), 43–49. https://doi.org/10.1177/008124630103100306

Bhatti, A., Rehman, S. U., & Rumman, J. B. A. (2020). Organizational capabilities mediates between organizational culture, entrepreneurial orientation, and organizational performance of SMEs in Pakistan. Entrepreneurial Business

and Economics Review, 8(4), 85–103. https://doi.org/10.15678/eber.2020.080405

Black, P. A., Calitz, E., & Steenekamp, T. J. (2015). *Public Economics* (6th ed.). Oxford University Press Southern Africa.

Bogers, M., Chesbrough, H., & Moedas, C. (2018). Open Innovation: research, practices, and policies. California Management Review, 60(2), 5–16. https://doi.org/10.1177/0008125617745086.

Butt, A., Imran, F., Helo, P., & Kantola, J. (2024). Strategic design of culture for digital transformation. Long Range Planning, 57(2), 102415. https://doi.org/10.1016/j.lrp.2024.102415

Cacciattolo, K. (2014). Understanding organisational cultures. European Scientific Journal, 10(10), 1–10. Retrieved from https://www.eujournal.org/index.php/esj/article/view/4782

Caliskan, A. & Zhu, C. (2019). Organizational Culture Type in Turkish Universities using OCAI: Perceptions of Students. Journal of Education Culture and Society, 10(2), 270–292. https://doi.org/10.15503/jecs20192.270.292

Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organisational culture: Based on the competing values framework* (3rd ed.). San Francisco, CA: Jossey-Bass.

Cao, G., Duan, Y., & Edwards, J. S. (2025). Organizational culture, digital transformation, and product innovation. Information & Management, 104135. https://doi.org/10.1016/j.im.2025.104135

Cash, P., Isaksson, O., Maier, A., & Summers, J. (2022). Sampling in design research: Eight key considerations. Design Studies, 78, 101077. https://doi.org/10.1016/j.destud.2021.101077.

Chetty, K. & Price, G. (2024). Ubuntu leadership as a predictor of employee engagement: A South African study. SA Journal of Human Resource Management, 22. https://doi.org/10.4102/sajhrm.v22i0.2462

Ciampi, F., Faraoni, M., Ballerini, J., & Meli, F. (2021). The co-evolutionary relationship between digitalization and organisational agility: Ongoing debates, theoretical developments and future research perspectives. Technological Forecasting

and Social Change, 176, 121383. https://doi.org/10.1016/j.techfore.2021.121383

Cichosz, M., Wallenburg, C. M. & Knemeyer, A. M. (2020). Digital transformation at logistics service providers: barriers, success factors and leading practices. The International Journal of Logistics Management, 31(2), 209–238. https://doi.org/10.1108/ijlm-08-2019-0229

CMMI Institute. (2014). *Data Management Maturity (DMM) Model*. Carnegie Mellon University

Cosa, M. & Torelli, R. (2024). Digital Transformation and Flexible Performance Management: A Systematic literature review of the evolution of performance measurement systems. Global Journal of Flexible Systems Management, 25(3), 445–466. https://doi.org/10.1007/s40171-024-00409-9

Creswell, J. W. (2021). *A concise introduction to mixed methods research*. SAGE publications.

de Vos, M., Ishmaev, G., & Pouwelse, J. (2022). Decentralizing components of electronic markets to prevent gatekeeping and manipulation. Electronic Commerce Research and Applications, 56, 101220. https://doi.org/10.1016/j.elerap.2022.101220

Department of Home Affairs. (2025). Strategic plan 2025–2030. Pretoria: Government Printer. Retrieved from https://www.dha.gov.za/images/AnnualReports/DHA-STRATEGIC-PLAN-25-30.pdf

Department of Public Service and Administration (DPSA). (2024). Draft Digital Government Policy Framework. Pretoria: Government of South Africa. Retrieved from https://www.dpsa.gov.za/dpsa2g/documents/egov/2024/DRAFT%20DIGITAL%20GOVERNMENT%20POLICY%20FRAMEWORK.pdf

Di Tullio, P., La Torre, M., & Rea, M. A. (2021). Social media for engaging and educating: from universities' sustainability reporting to dialogic communication. Administrative Sciences, 11(4), 151. https://doi.org/10.3390/admsci11040151

Elia, G., Margherita, A., Ciavolino, E., & Moustaghfir, K. (2021). Digital society incubator: Combining exponential technology and human potential to build resilient entrepreneurial ecosystems. *Administrative Sciences*, *11*(3), 96.

Fard, A. (2020). Cloudy landscapes: On the extended geography of smart urbanism. Telematics and Informatics, 55, 101450. https://doi.org/10.1016/j.tele.2020.101450

Farrell, M. (2018). Leadership Reflections: Organizational Culture. Journal of Library Administration, 58(8), 861–872. https://doi.org/10.1080/01930826.2018.1516949

Felipe, C., Roldán, J. & Leal-Rodríguez, A. (2017). Impact of organizational culture values on organizational agility. Sustainability, 9(12), 2354. https://doi.org/10.3390/su9122354

Fey, C. F. & Denison, D. R. (2003). Organizational culture and effectiveness: Can American theory be applied in Russia? Organization Science, 14(6), 686–706. https://doi.org/10.1287/orsc.14.6.686.24868

Filatotchev, I., Ireland, R. D., & Stahl, G. K. (2021). Contextualizing Management Research: An Open Systems perspective. Journal of Management Studies, 59(4), 1036–1056. https://doi.org/10.1111/joms.12754

Firican, D. A. (2023). Digital Transformation and Digital Culture: A Literature review of the digital Cultural Attributes to Enable Digital Transformation. Proceedings of the . . . International Conference on Business Excellence, 17(1), 791–799. https://doi.org/10.2478/picbe-2023-0073

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing Digital Technology A New Strategic Imperative. https://sloanreview.mit.edu/projects/embracing-digital-technology

Furr, N., Ozcan, P., & Eisenhardt, K. M. (2022). What is digital transformation? Core tensions facing established companies on the global stage. Global Strategy Journal, 12(4), 595–618. https://doi.org/10.1002/gsj.1442

Galvez, D. P. C. & Revinova, S. (2025). Assessing Digital technology development in Latin American countries: challenges, drivers, and future directions. Digital, 5(2), 20. https://doi.org/10.3390/digital5020020

Geertz, C. (1973). *The interpretation of cultures.* New York: Basic Books

Global Trends in Government Innovation 2024. (2024). In OECD public governance reviews. https://doi.org/10.1787/c1bc19c3-en

Gökalp, E., & Martinez, V. (2021). Digital transformation maturity assessment: development of the digital transformation capability maturity model. International Journal of Production Research, 60(20), 6282–6302. https://doi.org/10.1080/00207543.2021.1991020.

Goldschmidt, G., & Matthews, B. (2022). Formulating design research questions: A framework. Design Studies, 78, 101062. https://doi.org/10.1016/j.destud.2021.101062.

Goncalves, D., Bergquist, M., Bunk, R. & Alänge, S. (2020). Cultural aspects of organizational agility affecting digital innovation. Journal of Entrepreneurship Management and Innovation, 16(4), 13–46. https://doi.org/10.7341/20201641

Gong, C., & Ribiere, V. (2020). Developing a unified definition of digital transformation. Technovation, 102, 102217. https://doi.org/10.1016/j.technovation.2020.102217

Gong, Y., Yang, J., & Shi, X. (2020). Towards a comprehensive understanding of digital transformation in government: Analysis of flexibility and enterprise architecture. Government Information Quarterly, 37(3), 101487. https://doi.org/10.1016/j.giq.2020.101487

Govindan, K., & Arampatzis, G. (2023). A framework to measure readiness and barriers for the implementation of Industry 4.0: A case approach. Electronic Commerce Research and Applications, 59, 101249. https://doi.org/10.1016/j.elerap.2023.101249.

Grover, V., Tseng, S. & Pu, W. (2022). A theoretical perspective on organizational culture and digitalization. Information & Management, 59(4), 103639. https://doi.org/10.1016/j.im.2022.103639

Haidar, A. (2024). An Integrative Theoretical Framework for Responsible Artificial Intelligence. International Journal of Digital Strategy, Governance, and Business Transformation (IJDSGBT), 13(1), 1-23. https://doi.org/10.4018/IJDSGBT.334844.

Hanelt, A., Bohnsack, R., Marz, D. & Marante, C. A. (2020). A Systematic review of the literature on Digital Transformation: Insights and implications for strategy and Organizational change. Journal of Management Studies, 58(5), 1159–1197. https://doi.org/10.1111/joms.12639

Harada, T. (2020). The effects of risk-taking, exploitation, and exploration on creativity. PLoS ONE, 15(7), e0235698. https://doi.org/10.1371/journal.pone.0235698

Harris, M. (1968). *The rise of anthropological theory: A history of theories of culture.* New York: Thomas Y. Crowell.

Hartnell, C. A., Ou, A. Y. & Kinicki, A. (2011). Organizational culture and organizational effectiveness: A meta-analytic investigation of the competing values framework's theoretical suppositions. Journal of Applied Psychology, 96(4), 677–694. https://doi.org/10.1037/a0021987

Hatch, M. J. (1993). The dynamics of organizational culture. *Academy of Management Review, 18*(4), 657–693.

Herbert, L. (2017). *Digital transformation: Build your organization's future for the innovation age*. Bloomsbury Publishing

Hie, B. P. (2019). IMPACT OF TRANSFORMING ORGANISATIONAL CULTURE AND DIGITAL TRANSFORMATION GOVERNANCE TOWARD DIGITAL MATURITY IN INDONESIAN BANK. International Review of Management and Marketing, 9(6), 51–57. https://doi.org/10.32479/irmm.8785

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organisations: Software of the mind* (3rd ed.). McGraw-Hill.

Hollister, R., Tecosky, K., Watkins, M., & Wolpert, C. (2021). Why every executive

Hossain, M. S., Hussain, K., Kannan, S., & Nair, S. K. K. R. (2021). Determinants of sustainable competitive advantage from resource-based view: implications for hotel industry. Journal of Hospitality and Tourism Insights, 5(1), 79–98. https://doi.org/10.1108/jhti-08-2020-0152

Hughes, L., Seddon, J. J., & Dwivedi, Y. K. (2023). Disruptive change within financial technology: A methodological analysis of digital transformation challenges. Journal of Information Technology. https://doi.org/10.1177/02683962231219512

Hund, A., Wagner, H., Beimborn, D. & Weitzel, T. (2021). Digital innovation: Review and novel perspective. The Journal of Strategic Information Systems, 30(4), 101695. https://doi.org/10.1016/j.jsis.2021.101695

Jones, O. & Gatrell, C. (2014). Editorial: The Future of Writing and Reviewing for IJMR. International Journal of Management Reviews, 16(3), 249–264. https://doi.org/10.1111/ijmr.12038

Knowledge, 8(3). https://doi.org/10.1016/j.jik.2023.100409

Kocaoglu, B., & Kirmizi, M. (2024). Prescriptive digital transformation maturity model: a development and validation study. Kybernetes. https://doi.org/10.1108/k-02-2023-0243.

Koch, G. (2017). Digitisation: theories and concepts for empirical cultural research.

Kotter, J. P. (2014). Accelerate: building strategic agility for a faster moving world. Choice Reviews Online, 52(05), 52–2639. https://doi.org/10.5860/choice.184981

Kroeber, A. L., & Kluckhohn, C. (1952). *Culture: A critical review of concepts and definitions.* Cambridge, MA: Harvard University Press.

Leal-Rodríguez, A. L., Sanchís-Pedregosa, C., Moreno-Moreno, A. M. & Leal-Millán, A. G. (2023). Digitalization beyond technology: Proposing an explanatory and predictive model for digital culture in organizations. Journal of Innovation & Knowledge, 8(3), 100409. https://doi.org/10.1016/j.jik.2023.100409

Li, K., Kim, D. J., Lang, K. R., Kauffman, R. J., & Naldi, M. (2020). How should we understand the digital economy in Asia? Critical assessment and research agenda. Electronic Commerce Research and Applications, 44, 101004. https://doi.org/10.1016/j.elerap.2020.101004.

Liao, Z. (2018). Corporate culture, environmental innovation and financial performance. *Business Strategy and the Environment*, *27*(8), 1368–1375. https://doi.org/10.1002/bse.2186

Liere-Netheler, K., Packmohr, S. & Vogelsang, K. (2018). Drivers of digital transformation in manufacturing. Proceedings of the . . . Annual Hawaii International Conference on System Sciences/Proceedings of the Annual Hawaii International Conference on System Sciences. https://doi.org/10.24251/hicss.2018.493

Majumdar, A., Garg, H., & Jain, R. (2021). Managing the barriers of Industry 4.0 adoption and implementation in textile and clothing industry: Interpretive

structural model and triple helix framework. Computers in Industry, 125, 103372. https://doi.org/10.1016/j.compind.2020.103372.

Mangaliso, M. P. (2001). Building competitive advantage from ubuntu: Management lessons from South Africa. Academy of Management Perspectives, 15(3), 23–33. https://doi.org/10.5465/ame.2001.5229453

Marwala, T. (2021). *Leading in the 21st century: the call for a new type of African leader*. Tracey McDonald Publishers.

Mash, R., De Sa, A. & Christodoulou, M. (2016). How to change organisational culture: Action research in a South African public sector primary care facility. African Journal of Primary Health Care & Family Medicine, 8(1), e1-9. https://doi.org/10.4102/phcfm.v8i1.1184

Massachusetts Institute of Technology. (1984, January 15). Coming to a new awareness of Organizational Culture | MIT Sloan Management Review. MIT Sloan Management Review. https://sloanreview.mit.edu/article/coming-to-a-new-awareness-of-organizational-culture

Mbae, B. B., Dick-Sagoe, C., Odoom, D. & Adams, I. (2025). Digital Transformation and E-Service Delivery in African Public Sector Organisations: Insights into Botswana's Ministry of Agriculture. Deleted Journal, 4(2). https://doi.org/10.1007/s44206-025-00186-7

Mergel, I., Edelmann, N. & Haug, N. (2019). Defining digital transformation: Results from expert interviews. Government Information Quarterly, 36(4), 101385. https://doi.org/10.1016/j.giq.2019.06.002

Merlano, C. A. (2024). Digital Leadership and Transformation in Contemporary Times. International Journal of Digital Strategy, Governance, and Business Transformation (IJDSGBT), 13(1), 1-20. https://doi.org/10.4018/IJDSGBT.352047.

Metz, T. (2011). Ubuntu as a moral theory and human rights in South Africa. African Human Rights Law Journal, 11(2), 532–559. Retrieved from https://www.ahrlj.up.ac.za/metz-t

Mhaka, T. W. & Hodhera, A. C. (2025). DIGITAL TRANSFORMATION IN ZIMBABWE'S PUBLIC ADMINISTRATION: OPPORTUNITIES, CHALLENGES, AND ETHICAL IMPLICATIONS OF E-GOVERNANCE. gphjournal.org. https://doi.org/10.5281/zenodo.17217518

Mishra, K., Mishra, A., & Bansal, R. (2024). Impact of Technology and Governance on Consumer Behaviour: A Systematic Review. International Journal of Digital Strategy, Governance, and Business Transformation (IJDSGBT), 13(1), 1-13. https://doi.org/10.4018/IJDSGBT.335917.

Monrouxe, L. V. & Rees, C. E. (2019). When I say . . . quantification in qualitative research. Medical Education, 54(3), 186–187. https://doi.org/10.1111/medu.14010

Moussa, M., McMurray, A. & Muenjohn, N. (2018). Innovation in public sector organisations. Cogent Business & Management, 5(1), 1475047. https://doi.org/10.1080/23311975.2018.1475047

Naas, E. (2019). National Security Strategy Geopolitical Threats and Risks “Libya as an example.” International Journal of Humanities and Educational Research, 1–30. https://doi.org/10.47832/2757-5403.1-1.1

Njagi, A. W., Kamau, J. N. & Muraguri, C. W. (2020). Adhocracy Culture and Strategy Implementation: An Application within Professional Bodies in Kenya. International Journal of Business and Management, 15(9), 47. https://doi.org/10.5539/ijbm.v15n9p47

Noori, N., de Jong, M., & Hoppe, T. (2020). Towards an Integrated Framework to Measure Smart City Readiness: The Case of Iranian Cities. Smart Cities, 3(3), 676–704. https://doi.org/10.3390/smartcities3030035.

Nugraha, R. A., Rusu, L. & Perjons, E. (2025). Organizational Culture Values for a Successful Digital Transformation: A Systematic Literature Review. In Lecture notes in business information processing (pp. 110–126). https://doi.org/10.1007/978-3-031-81325-2_8

Nzimakwe, T. I. (2023). Leading digital transformation and innovation in local government institutions in South Africa. Administratio Publica, 29(2), 23–41. Retrieved from https://assadpam.net/sites/default/files/Administratio%20Publica%20VOLUME%2029%20ISSUE%202.pdf

O’Riordan, J. (2015). Organisational culture and the public service: A review of theory and research (Research Paper No. 16). Institute of Public Administration. Retrieved from https://www.ipa.ie/_fileUpload/Documents/Organisational_Culture.pdf

Obiekwe, O. (2018). Organizational family culture: Theoretical concept definition, dimensions and implication to business organizations. International Journal of Economics and Business Management, 4(1), 11-21

Odor, H. O. (2018). Organisational culture and dynamics. International Journal of Scientific Research and Management (IJSRM), 6(01). https://doi.org/10.18535/ijsrm/v6i1.em05

Olusanya, O. A., White, B., Melton, C. A., & Shaban-Nejad, A. (2022). Examining the implementation of digital health to strengthen the COVID-19 pandemic response and recovery and scale up equitable vaccine access in African countries. JMIR Formative Research, 6(5), e34363. https://doi.org/10.2196/34363

Omol, E. J. (2023). Organizational digital transformation: from evolution to future trends. Digital Transformation and Society, 3(3), 240–256. https://doi.org/10.1108/dts-08-2023-0061

Omol, E. J., Mburu, L. W., & Abuonji, P. A. (2024). Digital Maturity Assessment Model (DMAM): assimilation of Design Science Research (DSR) and Capability Maturity Model Integration (CMMI). Digital Transformation and Society. https://doi.org/10.1108/dts-04-2024-0049.

Parker, L., Boughton, S., Lawrence, R., & Bero, L. (2022). Experts identified warning signs of fraudulent research: a qualitative study to inform a screening tool. Journal of Clinical Epidemiology, 151, 1–17. https://doi.org/10.1016/j.jclinepi.2022.07.006.

Pittaway, J. J., & Montazemi, A. R. (2020). Know-how to lead digital transformation: The case of local governments. Government Information Quarterly, 37(4), 101474. https://doi.org/10.1016/j.giq.2020.101474

Pörtner, L., Riel, A., Schmidt, B., Leclaire, M., & Möske, R. (2025). Data Management Maturity Model—Process Dimensions and Capabilities to Leverage Data-Driven Organizations Towards Industry 5.0. Applied System Innovation, 8(2), 41. https://doi.org/10.3390/asi8020041

Pradana, M., Silvianita, A., Syarifuddin, S. & Renaldi, R. (2022). The implication of digital organisational culture on firm performance. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.840699

predictive model for digital culture in organizations. Journal of Innovation and

Priyadharsan, S., & Nithiya, P. (2020). Association between the organizational culture and employees' performance. International Journal of Research and Innovation in Social Science, 4(8), 692-696

Qaiyum, S. & Wang, C. L. (2018). Understanding internal conditions driving ordinary and dynamic capabilities in Indian high-tech firms. Journal of Business Research, 90, 206–214. https://doi.org/10.1016/j.jbusres.2018.05.014

Reisberger, T., Reisberger, P., Copuš, L., Madzík, P. & Falát, L. (2024). The Linkage between Digital Transformation and Organizational Culture: Novel Machine Learning Literature Review based on Latent Dirichlet Allocation. Journal of the Knowledge Economy, 16(1), 2082–2118. https://doi.org/10.1007/s13132-024-02027-3

Republic of South Africa. (1996). Constitution of the Republic of South Africa, 1996. Pretoria: Government Printer. Retrieved from https://www.gov.za/documents/constitution-republic-south-africa-1996

Republic of South Africa. (1997). White Paper on transforming public service delivery (Batho Pele). Pretoria: Government Printer. Retrieved from https://www.gov.za/documents/white-paper-transforming-public-service-delivery-batho-pele-white-paper

Rodriguez, J., & Piccoli, G. (2024). Sustaining superior visibility within digital platforms through inside and outside competitive action repertoires. Electronic Commerce Research and Applications, 68, 101456. https://doi.org/10.1016/j.elerap.2024.101456.

Rukh, H., & Qadeer, F. (2018). Diagnosing culture of public organization utilizing competing values framework: A mixed method approach. Pakistan Journal of Commerce and Social Sciences, 12(1), 398-418

Saunders, M. N., Lewis, P., & Thornhill, A. (2019). Research methods for business students (Eighth). Harlow: Pearson education limited.Teece, D. J. (2017). Business models and dynamic capabilities. Long Range Planning, 51(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007

Schein, E. H. (1984). Coming to a new awareness of organisational culture. *Sloan Management Review, 25*(2), 3–16

Schein, E. H. (1990). Organizational culture. American Psychologist, 45(2), 109–119. https://doi.org/10.1037/0003-066x.45.2.109

Schein, Edgar H. (Edgar Henry). (2010). Organizational culture and leadership / Edgar H. Schein. San Francisco : Jossey-Bass

Schwab, K. &. D . (2018). *SHAPING THE FOURTH INDUSTRIAL REVOLUTION.*

Schwab, K. (2016). The fourth industrial revolution. World Economic Forum. https://law.unimelb.edu.au/__data/assets/pdf_file/0005/3385454/Schwab-The_Fourth_Industrial_Revolution_Klaus_S.pdf

Serpa, S. (2016). An overview of the concept of Organisational Culture. International Business Management, 10(1), 51–61.https://ores.su/media/filer_public/38/9e/389e6649-33bc-4cd6-8157-437cbc94d171/09779ff3c12d6c373a9601ce674025c8c900f7e6.pdf

Sewell, W. H., Jr. (2004). *The logics of history: Social theory and social transformation*. Chicago, IL: University of Chicago Press.

Shibambu, A. (2024). Transformation of digital government services in the public sector in South Africa. Africa's Public Service Delivery and Performance Review, 12(1). https://doi.org/10.4102/apsdpr.v12i1.753

Shymko, V. (2018). Object field of organizational culture: methodological conceptualization. International Journal of Organizational Analysis, 26(4), 602–613. https://doi.org/10.1108/ijoa-03-2017-1135

Singun, A. (2025). Unveiling the barriers to digital transformation in higher education institutions: a systematic literature review. Discover Education, 4(1). https://doi.org/10.1007/s44217-025-00430-9

Stone, L., Phillips, C. & Douglas, K. A. (2020). With the best will in the world: How benevolent sexism shapes medical careers. Medical Education, 54(2), 94–97. https://doi.org/10.1111/medu.14038

Strategy & Leadership. (2023a). Strategy and Leadership. https://doi.org/10.1108/sl

Szydło, J. & Grześ-Bukłaho, J. (2020). Relations between National and Organisational Culture—Case Study. Sustainability, 12(4), 1522. https://doi.org/10.3390/su12041522

Taylor & Francis Kotter, J. P. (2014). Accelerate: building strategic agility for a faster moving world. Choice Reviews Online, 52(05), 52–2639. https://doi.org/10.5860/choice.184981

Tylor, E. B. (1871). *Primitive culture: Researches into the development of mythology, philosophy, religion, art, and custom.* London: John Murray

Van Den Berg, P. T. & Wilderom, C. P. (2004). Defining, measuring, and comparing organisational cultures. Applied Psychology, 53(4), 570–582. https://doi.org/10.1111/j.1464-0597.2004.00189.x

Vanni, I., & Crosby, A. (2023). Place-based methodologies for design research: An ethnographic approach. Design Studies, 85, 101168. https://doi.org/10.1016/j.destud.2023.101168.

Venkatesh, N., Morris, N., Davis, N., & Davis, N. (2003). User acceptance of information Technology: toward a unified view. MIS Quarterly, 27(3), 425. https://doi.org/10.2307/30036540

Venkatesh, N., Thong, N. & Xu, N. (2012). Consumer Acceptance and use of Information technology: Extending the unified theory of acceptance and use of technology. MIS Quarterly, 36(1), 157. https://doi.org/10.2307/41410412

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). *User acceptance of information technology: Toward a unified view*. MIS Quarterly, 27(3), 425–478

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). *Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology*. MIS Quarterly, 36(1), 157–178

Venkatesh, V., Thong, J., & Xu, X. (2016). Unified Theory of Acceptance and Use of Technology: a Synthesis and the Road ahead. Journal of the Association for Information Systems, 17(5), 328–376. https://doi.org/10.17705/1jais.00428Vial, G. (2021). Understanding digital transformation. Managing Digital Transformation, 13–66. https://doi.org/10.4324/9781003008637-4.

Verhoef, P. C., Broekhuisen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2019). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2019b). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003

Warner, K. S. & Wäger, M. (2018). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 52(3), 326–349. https://doi.org/10.1016/j.lrp.2018.12.001

Warner, K. S. R., & Wäger, M. (2018). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, *52*(3), 326–349. https://doi.org/10.1016/j.lrp.2018.12.001

Warner, K. S., & Wäger, M. (2018). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 52(3), 326–349. https://doi.org/10.1016/j.lrp.2018.12.001

Watling, C. J., Ajjawi, R., & Bearman, M. (2019). Approaching culture in medical education: Three perspectives. Medical Education, 54(4), 289–295. https://doi.org/10.1111/medu.14037

Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading digital: Turning technology into business transformation.* Boston, MA: Harvard Business Review Press.

Widodo, A. M., Widayanti, R., Wisnujati, A., Anwar, N., Bansal, S., Tabassum, F., & Rahaman, M. (2024). Port-to-Port Expedition Security Monitoring System Based on a Geographic Information System. International Journal of Digital Strategy, Governance, and Business Transformation (IJDSGBT), 13(1), 1-20. https://doi.org/10.4018/IJDSGBT.335897.

Yang, C., Gu, M., & Albitar, K. (2024). Government in the digital age: Exploring the impact of digital transformation on governmental efficiency. Technological Forecasting and Social Change, 208, 123722. https://doi.org/10.1016/j.techfore.2024.123722

Zeb, A., Akbar, F., Hussain, K., Safi, A., Rabnawaz, M., & Zeb, F. (2021). The competing value framework model of organizational culture, innovation and performance. Business Process Management Journal, 27(2), 658–683. https://doi.org/10.1108/bpmj-11-2019-0464

Ziaie, A., ShamiZanjani, M., & Manian, A. (2021). Systematic review of digital value propositions in the retail sector: New approach for digital experience study.

Electronic Commerce Research and Applications, 47, 101053. https://doi.org/10.1016/j.elerap.2021.101053.

APPENDICES

APPENDIX 1: RESEARCH QUESTIONS

Interview Schedule /Guide

Draft Interview questionnaire

Section 1: Introduction to Interviewee

Thank you for agreeing to participate in this interview. This research explores how digital transformation and organizational culture influence organizational efficiency and performance in private sector firms across Africa. Your insights will be confidential. Participation is voluntary, and you may withdraw at any time. With your permission, this interview will be recorded for transcription purposes.

Section 2: Participant Background

Could you tell me a little about your current role and what you do on a daily basis?

How long have you been with this organization?

How many years' experience in total do you have doing a similar role?

How would you describe your company in terms of its size and the industry or sector it operates in?

Section 3: Organizational Culture

1. When you think about your organization's culture how would you describe?

2. What kind of cultural behaviours, values, or attitudes are really encouraged and celebrated in your company?

3. In your view, has the culture here made it easier or harder to embrace digital change? Could you share an example?

4. Have you noticed any cultural shifts in how people behave or think since digital technologies were introduced?

5. Do you believe that the current organizational culture supports and drive innovation and

transformation efforts?

6. If you had to describe your company culture, would you call it collaborative, hierarchical, risk- taking or something else?

7. Can you recall a moment where the existing culture either helped or resisted any digital

transformation effort?

Section 4: Digital Transformation

8. Please share with me some of the digital transformation initiatives or projects your organization has undertaken in recent years?

9. If you can please explain what motivated these changes (e.g. was it internal efficiency goals, competition, or maybe customer experience and demands)?

10. What were some of the biggest roadblocks or challenges you faced during these transformations and on the flip side, what made things easier or what were the enablers?

11. How were the employees and the leadership involved in shaping this digital initiatives process?

Section 5: Efficiency and Performance Outcomes

12. From your perspective, what changes (if any) have you observed in operational efficiency due to digital transformation and how have these digital changes impacted the day to day efficiency of operations?

13. Have you noticed any changes in how customers experience your services, or how productive employees feel?

14. Thinking holistically, would you say the organization's overall performance has improved post- transformation? Could you give me an example?"

Section 6: Interrelationship

15. In your opinion, how does organizational culture influence the success or failure of digital transformation?

16. Do you believe there is a direct link between culture, digital transformation, and performance outcomes? Why or why not?

Section 7: Closing

17. Please share what are some key lessons your organization learned about aligning culture with digital change?

18. If you were advising another company embarking on a digital transformation journey, what would be your top piece of advice regarding cultural alignment?"

• Interview duration: 1hr–1:15hr minutes

• Format: Semi-structured (allows for follow-up questions)

• Record with permission

• Transcribe for thematic coding

Consent Form

I am conducting research on The Synergistic Impact of Digital Transformation and Organizational Culture in Enhancing Efficiency and Performance. Our interview is expected to last 45 min to 1hr and will help us understand below Research Questions :-

To what extend do digital transformation and organisational culture contribute organisational efficiency and performance in public sector firms?

1. How does digital transformation drive improvements in operational efficiency within organisations?
2. How does digital transformation impact transparency and decision-making processes in organisations?
3. How does organizational culture shape the effectiveness of DT initiatives and influence the overall organizational performance?
4. What are the most important facilitators and inhibitors of the success of digital transformation programs?

Your participation is voluntary, and you can withdraw at any time without penalty.

By signing this letter, you are indicating that you have given permission for:

– The interview to be recorded;

– Verbatim quotations from the interview to be used in the report, provided they are not identified with your name or that of your organisation;

– The data to be used as part of a report that will be publicly available once the examination process has been completed; and all data to be reported and stored without your name or the organization.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: Goitsemang Galada

Email: 24107736@mygibs.co.za

Phone: 066 291 4529

Research supervisor name: Hugh Myres

Email: myresh@gibs.co.za , Main Tel: +27 11 771 4000

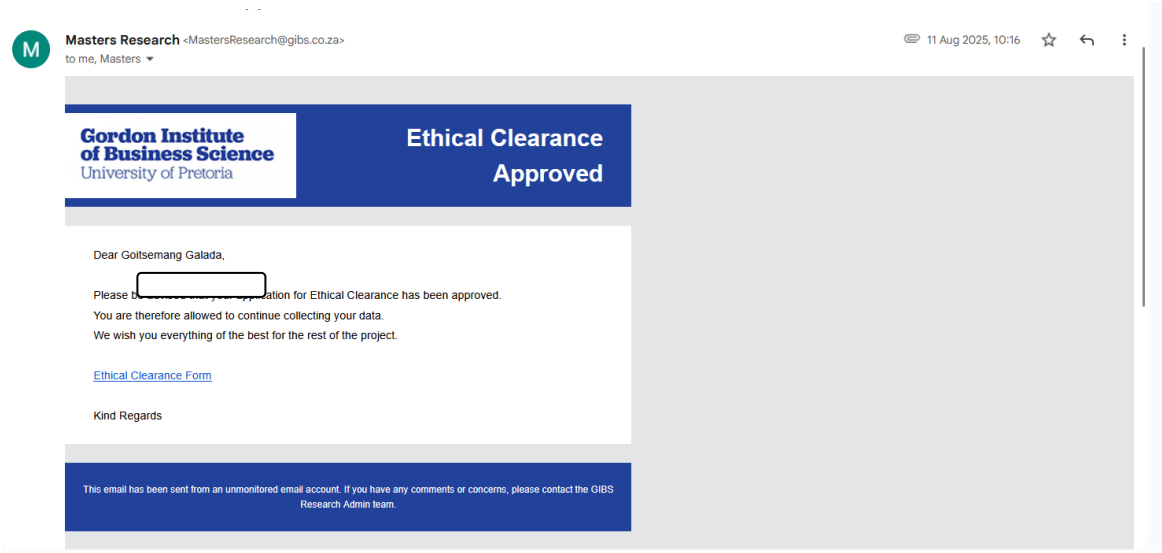
Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

APPENDIX 3: GIBS ETHICAL CLEARANCE FORM



Masters Research <MastersResearch@gibs.co.za>
to me, Masters

11 Aug 2025, 10:16

Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Goitsemang Galada,

Please [redacted] ation for Ethical Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

Ethical Clearance Form

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

Research Question	Theme	Category/Subtheme	Level-2 Code	Frequency
RQ1	Theme 1	Digital system implementation	Digital system implementation	13
RQ1	Theme 1	Internal process digitisation	Internal process digitisation	13
RQ1	Theme 1	Faster service delivery	Faster service delivery	9
RQ1	Theme 1	Citizen-focused DT	Citizen-focused DT	11
RQ1	Theme 1	Reduced reporting delays	Reduced reporting delays	14
RQ1	Theme 1	Understanding processes	Understanding processes	7
RQ1	Theme 1	Resource allocation	Resource allocation	3
RQ2	Theme 3	Convenience	Convenience	5
RQ2	Theme 3	Internal process digitisation	Internal process digitisation	13
RQ2	Theme 3	Reduced reporting delays	Reduced reporting delays	14
RQ2	Theme 3	Evidence-based decisions	Evidence-based decisions	9
RQ2	Theme 3	Process understanding	Process understanding	7
RQ3	Theme 4	Cultural agility	Cultural agility	2
RQ3	Theme 4	Culture as foundation	Culture as foundation	8
RQ3	Theme 4	Culture of innovation	Culture of innovation	3
RQ3	Theme 4	Digital infrastructure	Digital infrastructure	2
RQ3	Theme 4	Digital literacy	Digital literacy	2
RQ3	Theme 4	Leadership engagement	Leadership engagement	9
RQ4	Theme 2	Accountability	Accountability	6
RQ4	Theme 2	Improved governance	Improved governance	6
RQ4	Theme 2	Regulatory compliance	Regulatory compliance	6
RQ4	Theme 2	Resistance to change	Resistance to change	14
RQ4	Theme 2	Implementation barriers	Implementation barriers	8
RQ4	Theme 2	Digital exclusion	Digital exclusion	2
RQ4	Theme 2	Legacy systems	Legacy systems	2
RQ4	Theme 2	Risk management weaknesses	Risk management weaknesses	2
Cross-cutting	Theme 5	Bureaucratic culture	Bureaucratic culture	7
Cross-cutting	Theme 5	Collaboration	Collaboration	9
Cross-cutting	Theme 5	Digital readiness	Digital readiness	7
Cross-cutting	Theme 5	Innovation in automation	Innovation in automation	9
Cross-cutting	Theme 5	Organisational agility	Organisational agility	7
Cross-cutting	Theme 5	Value & impact	Value & impact	7

APPENDIX 4: LANGUAGE EDITING

LoveToEdit

You Write. We Edit. You Love it.

24 November 2025

DECLARATION OF PROFESSIONAL EDIT

THE SYNEGISTIC IMPACT OF ORGANISATIONAL CULTURE AND DIGITAL TRANSFORMATION IN ENHANCING ORGANISATIONAL PERFORMANCE AND EFFICIENCY IN PUBLIC SECTOR INSTITUTIONS

By

STUDENT NUMBER 24107736

I declare that I have edited and proofread this research project. My involvement was restricted to language usage and spelling, completeness and consistency, referencing style, and formatting of headings, captions and tables of contents. I did no structural re-writing of the content and did not influence the academic content in any way.

The research project now conforms to the expected academic editing standards.

Moyo

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