

Developing a framework for implementing digital Business Process Reengineering: An
analysis of KwaZulu-Natal Department of Social Development

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Thesis submitted in fulfilment of the requirements for the degree Doctor of Management in
Technology and Innovation

at

The Da Vinci Institute for Technology Management

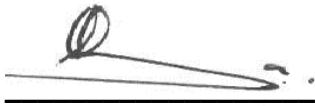
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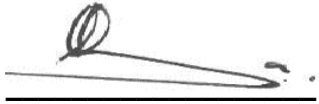
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ACKNOWLEDGEMENTS

The successful completion of this research project is a testament to the invaluable support and contributions of many individuals who played pivotal roles throughout the journey. I am deeply indebted to all those who assisted, guided, and inspired me along the way, and I wish to express my heartfelt gratitude for their encouragement and involvement in this endeavour.

First and foremost, I extend my profound thanks to my Lord, Jesus Christ, for His boundless love, grace, and divine mercy, which sustained me throughout the course of this study. His presence and guidance were my source of strength and perseverance during challenging moments.

I am especially grateful to my academic supervisor, Dr. John Mgwenya, for his unwavering support, invaluable mentorship, and constructive feedback throughout this process. While there were moments when his critiques felt particularly demanding, I came to realize that his rigorous standards and dedication were aimed at helping me produce work of the highest calibre. His encouragement pushed me to achieve a level of excellence that I can proudly stand by. The lessons I have learned under his guidance have not only shaped this doctoral programme but have also prepared me to embrace the responsibilities and honour of being called a doctor.

I also wish to acknowledge the profound impact of my family, whose values instilled in me a deep sense of commitment and pride in my work. My siblings and work colleagues deserve special thanks for their constant encouragement, support, and interest in the progress of this project. Their frequent reminders during family gatherings about the importance of my studies, though sometimes overwhelming, played a crucial role in keeping me focused and motivated. Today, as I celebrate this milestone, I am grateful for their persistence and belief in me.

To my beloved wife, Valerie Nyathikazi, my heartfelt gratitude knows no bounds. Your unwavering support and role as my pillar of strength carried me through this journey. Thank you for stepping in to manage additional responsibilities during this demanding period, allowing me the space and time to concentrate on my research. To my children, I am deeply thankful for your prayers, understanding, and patience. I know my attention was often divided, and I could not always be fully present, but your love and inspiration kept me going. You were a constant reminder of why this achievement matters, and I hope it serves as an example of perseverance and dedication for you in the future.

I also wish to express my gratitude to my colleagues at the KwaZulu-Natal Department of Social Development, my classmates from the DaVinci Institute, and my friends, who have all been a source of encouragement and motivation. Their understanding, words of support, and occasional reminders to stay focused were invaluable during this demanding time.

My sincere appreciation goes to the DaVinci Institute for providing me with the opportunity to pursue this study and supporting my career aspirations. I am deeply grateful for their permission to conduct this research, which laid the foundation for this accomplishment. Additionally, I am thankful to the management of the KwaZulu-Natal Department of Social Development for granting me access to the department's employees, facilitating the collection of data crucial to the success of this study.

To all the respondents and participants who took the time to share their insights, opinions, and experiences, I extend my deepest gratitude. Your contributions provided the vital information and perspectives needed to bring this research to fruition. Without your input, this study would not have been possible.

Finally, I wish to acknowledge everyone whose contributions, both large and small, played a part in this journey. Your support and encouragement have not gone unnoticed. I am forever grateful for the collective effort that made this achievement possible. I hope the generosity, understanding, and support shown to me will be extended to others embarking on similar paths, enabling them to realize their dreams as well.

Thank you all for being part of this remarkable journey and for helping me reach this significant milestone. Your influence, directly or indirectly, has been a beacon of light guiding me toward the successful completion of this study.

ABSTRACT

This study addresses the critical need for a context-specific framework for implementing digital Business Process Reengineering (BPR) within South Africa's public social development sector, where conventional models often fail. The research investigates the systemic inefficiencies and unique implementation challenges at the KwaZulu-Natal Department of Social Development (KZN DSD). Employing a qualitative, constructivist single-case study design, data were collected through semi-structured interviews with 31 purposively sampled departmental employees, from frontline staff to senior management. Thematic analysis revealed deep-rooted inefficiencies stemming from fragmented manual processes, significant technological and infrastructural constraints, and critical gaps in digital literacy. Key findings indicate that successful digital BPR is contingent upon strong, adaptive leadership; inclusive stakeholder co-design; and the deployment of mobile-first, offline-capable technologies tailored to the province's diverse operational environments. The study's primary contribution is a novel, ten-pillar implementation framework that integrates strategic alignment, human capital development, and agile governance. This framework provides an actionable roadmap for KZN DSD to enhance operational efficiency and deliver more responsive, citizen-centric services.

Keywords: Digital Transformation, Business Process Reengineering, Case Study, Implementation Framework, Public Sector, Social Development, South Africa

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LIST OF ACRONYMS AND ABBREVIATIONS

4IR	Fourth Industrial Revolution
AI	Artificial Intelligence
B2B	Business-to-Business
BP	Business Process
BPI	Business Process Improvement
BPM	Business Process Management
BPR	Business Process Re-Engineering
CRM	Customer Relationship Management
DSD	Department of Social Development
DSR	Design Science Research
DT	Digital Transformation
DTM	Digital Transformation Model
EA	Enterprise Architecture
GDP	Gross Domestic Product
HR	Human Resource
HWSETA	Health and Welfare Sector Education and Training Authority
ICT	Information and Communication Technology
IS	Information System
IT	Information Technology
KPI	Key Performance Indicator
KZN	KwaZulu-Natal
KZNDSD	KwaZulu-Natal Department of Social Development
ML	Machine Learning
NIT	National Institute of Technology
NPO	Non-Profit Organisations
PaaS	Platform as a Service
QR	Quick Response
ROI	Return on Investment
RSA	Republic of South Africa
SoS	System-of-Systems
TIPS	Technology, Innovation, People and Systems
TM	Theoretical Model
TQM	Total Quality Management
UK	United Kingdom
US	United States of America

CHAPTER 1

INTRODUCTION

1.1 Introduction

The study is premised on South Africa's National Digital Transformation Strategy, introduced in 2017 (Nkuna, 2017), which aims to craft a roadmap for the digital transformation of the public service in South Africa. The national strategy aims to promote an inclusive digital society, enabling ordinary citizens to access the opportunities offered by digital technologies and thereby improve their quality of life. As a sequel to *the National Digital Transformation Strategy*, the KwaZulu-Natal area, along with the nine other provincial governments in South Africa, adopted a Digital Transformation strategy for implementation over the period 2020-2025. However, the exploratory nature of the initiative revealed a methodological gap that needs to be addressed to guide the implementation phase in the province of KwaZulu-Natal. According to Mellinger and Hansonn (2020), as well as other leading scholars in research gap studies, methodological gaps may influence the validity and dependability of research results.

It is therefore necessary to design research strategies that address these gaps and enhance the reliability and usefulness of study findings. If methodological shortcomings are ignored, the research findings on digital transformation may become invalid and irrelevant. Further, this can compromise the accuracy of analysis, potentially limit the scope of research, and hinder the development of robust methodologies or frameworks to guide the implementation of digital transformation processes. This, in part, falls within the scope of business process reengineering because business process reengineering is universally understood as "The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed" (Nkomo & Marnewick, 2021; Fetais *et al.*, 2022.). The work of Hammer and Champy (1993) is widely referenced as ground breaking and seminal by most Business Process Reengineering (BPR) researchers (Mertens *et al.*, 2024).

Recent research focuses on business management reengineering during global crises such as the coronavirus pandemic (Butt, 2020; Tajpour, Hosseini & Salamzadeh, 2020). Some studies suggest moving beyond the traditional factory paradigm (Wang, Schlagwein, Cecez-Kecmanovic & Cahalane, 2020). Top management support is identified as a crucial factor in business process reengineering to enhance a company's performance (Dubey, Bryde, Foropon, Tiwari, Dwivedi & Schiffling, 2020) by motivating and empowering employees, which ultimately improves performance.

Further, paragraph 16.3 of *KwaZulu-Natal digital transformation strategy 2020-2025 (2020)* on implementation indicates, “State entities shall be responsible for different aspects of implementation within their mandates” but does not prescribe a framework linked to implementation methodology. Against this backdrop, the current study intended to develop a framework for implementing digital business process reengineering within the KwaZulu-Natal Department of Social Development as an implementing agency department.

Over 70% of BPR implementations have failed globally due to the lack of a suitable framework and methodology (Hossain, Mohammed & Abdullah, 2014; Bhaskar, 2018). This study proposes a common BPR framework and methodology for implementing the *National digital transformation strategy* in KwaZulu-Natal Department of Social Development, based on recent designs identified in the literature.

The study is situated within the broader international shift towards public sector transformation and modernisation. Across the world, governments are increasingly adopting Business Process Reengineering (BPR) to redesign institutional processes, improve efficiency, and deliver citizen-centred services (Weerakkody, Janssen & El-Haddadeh, 2021; Fetais, Abdella, Al-Khalifa & Hamouda, 2022; Chewe, Shidende & Matogoro, 2025).

Empirical studies show that BPR initiatives in the public sector contribute to process integration, enhanced organisational efficiency, and improved service delivery outcomes, although challenges related to institutional structures and implementation remain (Weerakkody *et al.*, 2021; Charalabidis, Lachana, Alexopoulos & Loutsaris, 2023).

Furthermore, the increasing emphasis on digital transformation has reinforced the role of process redesign approaches such as BPR in meeting growing citizen expectations for seamless and responsive public services (Haug, Dan & Mergel, 2024; Latupeirissa, Dewi, Prayana, Srikandi, Ramadiansyah & Pramana, 2024)

This study aims to address systemic inefficiencies and implementation challenges by developing a comprehensive, context-specific framework for implementing digital Business Process Reengineering (BPR) in Kwa Zulu-Natal Department of Social Development (KZN DSD). The research is, therefore, fundamentally constructive in its intent. Its ultimate objective is not merely to describe, analyze, or critique a pre-existing condition but to create a tangible, actionable, and theoretically robust tool, the implementation framework. The academic gap, the absence of a suitable framework to guide digital BPR in this specific context, which contributes to a global BPR implementation failure rate of over 70%, necessitates the creation of a new methodology. Consequently, the primary aim must be understood as the development of this specific solution. This chapter begins by outlining the

research context (Background Information), discussing the problem statement and subsequent aims, as well as the objectives of the study and research questions. This is followed by a discussion of research philosophy, encompassing ontology, epistemology, and axiology. The final sections include brief discussions on theoretical or conceptual frameworks, research design and methodology, before concluding with a discussion of significance and scope of the study.

1.1.1 The KwaZulu-Natal Department of Social Development: A Case for Reengineering

The KwaZulu-Natal Department of Social Development (KZN DSD) is responsible for providing social welfare services to the residents of KwaZulu-Natal, with a mission to transform society by building conscious and capable citizens through integrated social development services (KZN DSD, 2025). However, the department faces significant challenges, including resource constraints, high demand for services, and systemic inefficiencies ranging from manual processes to fragmented service delivery frameworks.

Implementing digital BPR in the KZN DSD aims to address these challenges by redesigning and optimising the department's processes to improve service delivery, reduce costs, and enhance overall efficiency. This study is situated within a multi-level framework that captures the complex ecosystem in which public institutions like the KZN DSD operate, considering the micro (internal enablers), meso (staff development and stakeholders), miso (critical outcomes), and macro (institutional context) levels. By applying this analytical framework, the study aims to diagnose inefficiencies, assess institutional readiness, and propose a context-specific digital BPR framework to empower the KZN DSD to deliver better, faster, and more accountable public services.

This study is situated within a multi-level framework that captures the complex ecosystem in which public institutions operate. At the Miso Level, the focus is on critical outcomes, including customer experience, operational efficiency, and improved service delivery. These elements reflect the department's ability to meet the expectations of service beneficiaries through optimised and responsive workflows.

The Micro Level addresses the foundational enablers within the department, including governance structures, policy alignment, strategic direction (such as business school frameworks for institutional learning), technological advancements, and the allocation of human and financial resources. These internal dynamics significantly influence the success of digital transformation initiatives.

At the Meso Level, the study considers the role of staff development, capacity-building initiatives, and the adoption of digital practices within the organisation. It also recognises the impact on key stakeholders such as students and service beneficiaries, who stand to gain from more efficient, technology-enabled services.

Finally, at the Macro Level, the research situates KZN DSD within the broader context of institutional autonomy, organisational digital maturity, improved operational structures, and the long-term goal of sustainability. These dimensions frame the strategic intent of reengineering efforts and guide the design of policies that support systemic transformation.

By applying this Meso–Micro and Macro–Meso analytical framework, the study aims to diagnose inefficiencies, assess institutional readiness, and propose a context-specific digital BPR framework that aligns with both internal capabilities and external imperatives. The ultimate goal is to empower the KZN DSD to deliver better, faster, and more accountable public services.

1.2 Background Information and Research Context

1.2.1 The Case of Using DBPR

This link becomes even more important in the context of the KZN DSD. The department works in a complicated public sector setting that is marked by manual methods, fragmented workflows, bureaucratic inefficiencies, and limited resources. These operational and structural difficulties show that underlying inefficiencies would not be instantly fixed by merely implementing digital tools. As a result, DBPR becomes an essential precondition that sets up the organisational framework for a successful digital transformation.

From a research standpoint, the thesis's conceptual coherence is strengthened by clearly presenting DBPR as an enabling approach. It guarantees that the argument makes sense by first pointing out inefficiencies in current procedures, then using DBPR to redesign those procedures, and lastly putting digital technology in place to support the enhanced structures.

Additionally, by aligning the study with established literature that sees process reengineering as a fundamental stage in digital transformation programs, clearly stating this relationship early in the thesis improves theoretical rigour and academic clarity. By showing how DBPR can work as a useful and strategic link between conventional administrative systems and digitally enabled public service delivery, it further enhances the study's contribution.

Ultimately, this placement guarantees that the thesis offers a logical, cohesive, and progressive argument, supporting DBPR's function as a crucial facilitator rather than a parallel or supporting idea in the discourse surrounding digital transformation.

1.2.2 The Principles of Business Process Reengineering

As a strategic management approach, BPR focuses on optimising end-to-end processes and eliminating redundancies to streamline workflows and improve resource utilisation (IBM, 2025). The goal is to fundamentally reshape how work is performed, often using Information Technology (IT) for automation and integration. The advent of digital technologies has given rise to Digital BPR, which leverages tools such as artificial intelligence (AI), robotic process automation (RPA), and data analytics to enhance the reengineering process. This approach allows organisations to achieve even greater efficiencies by automating repetitive tasks, improving data accuracy, and enabling real-time decision-making (The Digital Academy, 2025).

Successful implementation of digital BPR hinges on several key considerations. Strong leadership and effective change management are crucial, as leaders must champion the initiative and provide the necessary resources and support (Kaponda *et al.*, 2024; Santamäki, 2023). Engaging all stakeholders, including employees and service users, is essential for ensuring buy-in and support. Furthermore, BPR is not a one-time project but a continuous journey of innovation and optimisation, requiring organisations to constantly evaluate and refine their processes to adapt to evolving environments.

1.2.3 Digital Transformation and BPR in a Global and South African Context

The global community has witnessed an accelerated push towards digital transformation, a trend intensified by the COVID-19 pandemic, which necessitated minimising human contact. As Microsoft CEO Satya Nadella noted, *"We have seen two years' worth of digital transformation in two months."* This shift poses significant challenges for traditional businesses and public sector organisations, which are rooted in industrial-era structures and norms (Volberda *et al.*, 2021).

In South Africa, the government faces unprecedented pressure to adapt to these rapid changes across national, provincial, and local spheres (Khatiwada, Dhakal & Pandit, 2020). Citizens increasingly expect a greater variety and higher quality of public services, driving digital transformation in the public sector (Mielli & Bulanda, 2019; Kayyali, 2025). The Department of Social Development, a government agency responsible for delivering public social security and welfare services, plays a central role in this context. The organic modernisation of service platforms is no longer an option but is critical for organisational sustainability and meeting public demand.

1.2.4 Research Context

The public sector, particularly departments such as the KwaZulu-Natal Department of Social Development (KZN DSD), is under increasing pressure to deliver high-quality, efficient, and citizen-centric services. Government agencies face growing expectations from citizens for a greater variety and higher quality of public services, a demand that is driving digital transformation globally (Arntz, Gregory & Zierahn, 2016; Mielli & Bulanda, 2019; Latupeirissa *et al.*, 2024). However, the KZN DSD continues to face systemic inefficiencies, with traditional business processes often characterised by redundancies and a lack of integration that hinder prompt and effective service delivery (Smith, 2020). These challenges are compounded by poor infrastructure, low digital skills, and fragmented systems (Ngulube, 2020). In this environment, digital Business Process Reengineering (BPR), defined as the “fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed” (Harika *et al.*, 2024; Tsakalidis and Vergidis, 2024.), offers a compelling solution. By leveraging digital technologies, BPR can streamline operations, improve responsiveness, and enhance overall performance, thereby improving the accessibility and efficiency of public organisations.

1.2.5 Key Considerations

- i. **Leadership and Change Management:** Strong leadership and effective change management are crucial for the successful implementation of digital BPR. Leaders must champion the initiative and provide the necessary resources, support, and direction to enable meaningful change.
- ii. **Stakeholder Engagement:** Engaging stakeholders, including employees, service users, and partners, is essential to ensure buy-in and support for the reengineering efforts.
- iii. **Technology Integration:** Leveraging digital technologies such as AI, Robotic Process Automation (RPA- which is a technology that uses software robots to automate repetitive, manual tasks), and data analytics will be key to achieving the desired improvements in efficiency and effectiveness.
- iv. **Continuous Improvement:** Digital BPR is not a one-time project but a continuous journey of innovation and optimisation. The department must continuously evaluate and refine its processes to adapt to evolving business environments and maintain a competitive edge.

By focusing on these key considerations and leveraging digital technologies, the KZN DSD can develop a robust framework for implementing digital BPR to enhance its service delivery and achieve its mission.

1.2.6 Research Context

The KwaZulu-Natal Department of Social Development (KZN DSD) is responsible for providing social welfare services to the residents of KwaZulu-Natal. The department's mission is to transform society by building conscious and capable citizens through the provision of integrated social development services (KZN DSD, 2025). The KZN DSD faces various challenges, including resource constraints, high demand for services, and the need for efficient service delivery.

Implementing digital BPR in the KZN DSD aims to address these challenges by redesigning and optimizing the department's processes to improve service delivery, reduce costs, and enhance overall efficiency. The framework for digital BPR will involve analysing current processes, identifying gaps and opportunities for improvement, and leveraging digital technologies to implement the redesigned processes.

1.2.7 Global Context: The Acceleration of Digital Transformation

In the global community and in South Africa, 2020 was characterised by the spread of the COVID-19 pandemic, which ravaged lives and family establishments (Chitsamatanga and Ntlama-Makhanya, 2021). Major global developments, such as globalisation, came under scrutiny during this period, while others, like digital transformation, experienced rapid acceleration to minimise human contact, as the COVID-19 virus requires physical contact to multiply and spread.

Unlike other trends, digital transformation is not a temporary phenomenon, it is becoming increasingly powerful and universal each day. This reality poses significant challenges for established digital systems in traditional businesses, based on structures and norms rooted in the industrial era (Volberda *et al.*, 2021).

1.2.8 The South African Context: National Imperatives and a Digital Divide

The Department of Social Development is a government agency of the Republic of South Africa tasked with delivering public social security, welfare services, social development and support programmes. The department plays a vital providing social grants and inadvertently contributing to socio - economic growth. For example, the service delivery business accounts for 61.45% of South Africa's Gross Domestic Product (O'Neill, 2021). Therefore, the organic

modernisation of service platforms and industries is no longer an option but critical for organisational sustainability and competitive market hegemony.

While digital frontrunners, such as prominent municipal service providers in eThekwin Metro and Umgeni Thukela Water, have already begun experimenting with or adopting Web 3.0 applications that leverage technologies like blockchain and artificial intelligence to create decentralised platforms and business frameworks, many other role players have struggled to adapt to digital transformation as enablers to effective basic service delivery to local communities. Some of these organisations may require fresh insights into practical and theoretical digital business frameworks to help managers reconfigure and reposition their firms for an inevitable digital future.

1.2.9 The Local Imperative: The Case for Reengineering in KwaZulu-Natal

The Business Process Reengineering (BPR) Implementation Framework will be designed for the KwaZulu-Natal Department of Social Development (KZN DSD) to address inefficiencies and promote citizen-focused digital services. In light of digital disruption and limited resources, the province adopted a 2020–2025 Digital Transformation Strategy. However, challenges such as poor infrastructure, low digital skills, and broken systems have hindered progress, echoing Ngulube's (2020) findings. The Framework emphasizes context-specific change management and stakeholder engagement. It is grounded in a qualitative case study involving staff interviews and draws on both local insights and global BPR literature.

The social development sector is well poised to contribute to better and more efficient service delivery by leveraging digital technology advancements. This study aims to support the government by introducing a framework to guide the implementation of digital Business Process Reengineering in the KwaZulu-Natal Department of Social Development.

1.3 Research Problem Statement

A problem statement in research provides a precise articulation of the issue under investigation by identifying the specific knowledge gap the study seeks to address. It situates the problem within its broader context, establishes its significance, and defines the scope of the inquiry, thereby guiding the formulation of research questions and the overall direction of the study.

In the South African context, the public sector faces increasing pressure to adapt to rapid socio-economic and technological changes across national, provincial, and local spheres of government (Khatiwada, Dhakal, & Pandit, 2020). Citizens now demand not only improved access to public services but also greater efficiency, responsiveness, and quality in service delivery (Arntz, Gregory, & Zierahn, 2016; Ngomana, 2023). These rising expectations have

intensified the need for digital transformation within government institutions, requiring public sector managers to proactively respond to evolving stakeholder needs and increasingly complex service environments (Mielli & Bulanda, 2019).

Despite these imperatives, the public sector continues to experience significant challenges in adapting to such demands. Many government departments remain constrained by legacy systems, fragmented processes, limited digital capabilities, and institutional inertia, all of which undermine effective service delivery (Khatiwada, Dhakal, & Pandit, 2020). These challenges are particularly evident within the KwaZulu-Natal Department of Social Development (KZN DSD), where service delivery processes are often characterised by inefficiencies, redundancies, and a lack of system integration, ultimately affecting the department's ability to deliver timely and effective social services (Smith, 2020).

Business Process Reengineering (BPR) has been widely recognised as a strategic approach for fundamentally rethinking and redesigning organisational processes to achieve substantial improvements in efficiency, effectiveness, and service quality (Davenport, 2018; Santamäki, 2023). In the context of digital transformation, BPR is increasingly integrated with digital technologies to enable more agile, data-driven, and citizen-centric service delivery models. However, the implementation of digital BPR in the public sector and particularly in resource-constrained and institutionally complex environments such as KZN DSD remains uneven and challenging.

A critical review of the literature indicates that while numerous BPR and digital transformation frameworks exist, they are largely developed within private-sector or technologically mature contexts and tend to adopt generic, technology-centric assumptions. As such, these frameworks often lack sensitivity to the institutional realities of public sector organisations, including regulatory constraints, limited resources, socio-economic disparities, and varying levels of digital literacy. Therefore, the problem is not the absence of frameworks per se, but rather the limited contextual applicability and practical relevance of existing frameworks to environments such as KZN DSD.

Furthermore, the study does not identify a methodological gap in the strict sense, as a range of established research methodologies for studying digital transformation and BPR already exists. Instead, the gap is more appropriately conceptualised as a contextual and practice-oriented knowledge gap, where existing theoretical models fail to adequately address the operational complexities and service delivery demands of provincial government departments in South Africa.

Against this backdrop, this study seeks to address this gap by developing a context-specific digital BPR implementation framework tailored to the unique institutional, technological, and socio-economic conditions of KZN DSD. The framework aims to integrate key dimensions such as process optimisation, technology enablement, change management, and

stakeholder engagement, thereby providing a structured and practical approach to improving operational efficiency and enhancing service delivery outcome.

Table 1.1: Differences between organisational culture and identity

Problem statement: This research aimed to close the identified methodological gap by developing a comprehensive framework for implementing digital BPR in the KZN DSD.	
The Aim	Primary Question
To develop a comprehensive framework for implementing digital Business Process Reengineering (BPR) for KZN DSD to address the inefficiencies and challenges faced by the department.	How can a comprehensive framework for implementing digital Business Process Reengineering (BPR) be developed to address the inefficiencies and challenges faced by the KwaZulu-Natal Department of Social Development?
Objectives	Research Questions (RQ)
Objective 1: To identify the current inefficiencies and challenges in the business processes of KZN DSD	RQ1 What are the current inefficiencies and challenges in the business processes of KZN DSD?
Objective 2: To determine how digital BPR can be effectively implemented to address challenges in the business processes of KZN DSD	RQ2 How can digital BPR be effectively implemented to address these challenges?
Objective 3: To establish the critical success factors for the successful implementation of digital BPR in the public sector	RQ3 What are the critical success factors for the successful implementation of digital BPR in the public sector?
Objective 4: To design a framework tailored to the specific needs and context of KZN DSD	RQ4 How can the proposed framework be tailored to the specific needs and context of KZN DSD?

1.4 Chapter Organisation

This research report contains eight chapters:

- i. **Chapter 1: Introduction.** The chapter acquaints the reader with the topic, background, introduction and problem statement of the research. The reader is well-versed in the purposes, aims, objectives and precincts. Introduces the overall research objectives and how they relate to the research questions and provides an overview of the articles as well as an outline of the study.

- ii. **Chapter 2: Literature Review.** The second chapter conducts a detailed literature review of selected articles. The chapter is divided into two sections, each of which examines both the theoretical and practical aspects of Digital Frameworks.
- iii. **Chapter 3: Research Methodology.** In Chapter 3, a specific research design approach and data analytic structure were utilised to respond to the primary and secondary questions, characterising the problem, along with a literature-based explanation for justification. A description of the study's chosen methodology, a quantitative method design approach, is given. Lastly, the development and conceptual framework of a comprehensive digital framework are examined.
- iv. **Chapter 4: Data Analysis and Presentation of the Findings.** This chapter presents the findings and statistical analysis of the data obtained through the questionnaires. The data was processed into clear and concise results that the reader can easily understand and comprehend.
- v. **Chapter 5: Discussion of the Results.** This chapter connects the study's findings to existing literature, comparing them with previous research. It highlights both similarities and differences between the new findings and those in the literature.
- vi. **Chapter 6: New Conceptual Framework.** This chapter presents the new conceptual framework illustrating the relationship between Digital Transformation and its impact on BPR.
- vii. **Chapter 7: Conclusion and Recommendation,** presents the summary, conclusion, and recommendations of the study. The chapter summarises the study's findings by linking them to the research objectives or main questions. The chapter explains how the research objectives were met by reviewing secondary and primary data. The chapter is important because it explains the importance of the research and its contribution. It concludes by providing ROI, the Framework development and recommendations for the study and for future studies on digital transformation

1.5 Chapter Summary

This section discusses the various theoretical works relevant to this study. It presents the idea of Theoretical frameworks and their role in research studies. Theoretical Frameworks are responsible for determining the pillars and methods of the research project. They place the study within a precise scholarly discourse, thus connecting the research to the broader literature. In addition, Theoretical frameworks assist in considering theories and ideas related

to the research subject. This research employed a comprehensive approach to the subject being studied by adopting a particular Theoretical framework.

Various theoretical works were measured for this study, but the researcher concentrated on the value proposition, departmental identity, efficient digital transformation and gaps framework for BPR theories. The researcher applied each theoretical work to the study, highlighting its strengths and weaknesses.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction to the Chapter

This chapter lays the scholarly foundation for the study's primary aim: to develop a comprehensive and context-specific framework for implementing digital Business Process Reengineering (BPR) within the KwaZulu-Natal Department of Social Development (KZN DSD). The review systematically addresses the research objectives by identifying process inefficiencies, determining effective implementation strategies, establishing critical success factors, and informing the design of a tailored framework. To achieve this, the literature review is deliberately structured into three distinct yet interwoven strands: theoretical, conceptual, and empirical.

This architecture serves a crucial analytical purpose. The theoretical strand grounds the study in foundational, and often conflicting, paradigms of radical organizational change, providing the intellectual history of the core problem. The conceptual strand defines and deconstructs the central building blocks of the research such as 'digital transformation' and 'citizen-centricity' tracing their evolution and clarifying their application in a public sector context. Finally, the empirical strand examines real-world evidence from global, regional, and local contexts, testing the theories and concepts against the practical realities of implementation. This tri-partite approach facilitates a systematic deconstruction of the research problem, moving from abstract principles to tangible evidence, thereby building a robust and multi-layered argument for the identified research gap.

The chapter commences by critically examining the core theories that have shaped, and in some cases, misguided, BPR initiatives for decades. It will then proceed to a conceptual review of key terms, models, and frameworks that define the modern landscape of digital public service. Following this, an empirical review synthesizes findings from documented cases of public sector transformation. The chapter culminates in a synthesis that draws these three strands together, explicitly identifying the knowledge gap that necessitates this research and justifying the methodological approach chosen to address it.

2.2 Definition and Origins of BPR

Business Process Reengineering (BPR) emerged in the early 1990s as a radical management approach to organisational improvement. Hammer and Champy's *Reengineering the Corporation* (1993) remains the seminal work, defining BPR as "the fundamental rethinking and radical redesign of business processes to achieve dramatic

improvements in cost, quality, service, and speed” (Kassahun, 2024). Unlike earlier approaches such as Taylor’s scientific management or Total Quality Management (TQM), which emphasised incremental efficiency, BPR advocated for fundamental change and process reinvention (Kaponda *et al.*, 2023).

Later scholars such as Davenport (1993) and Kettinger *et al.*, 1997) extended this foundation by highlighting the role of information technology as a key enabler of process innovation (Grisold, *et al.*, 2023; Akang, 2024). Recent studies reaffirm the relevance of BPR while adapting it to contemporary challenges. For instance, Nkomo and Marnewick (2021) developed a framework for enhancing BPR success in South Africa’s financial sector, demonstrating how contextual factors influence outcomes. Similarly, a resurgence of interest in public sector transformation has drawn on Hammer and Champy’s definition to address systemic challenges in government reform (Information Systems and e-Business Management, 2021). More recently, process mining research has positioned BPR principles as vital for enhancing organisational performance in digital contexts (Knowledge and Information Systems, 2024).

Overall, while BPR’s origins lie in the early 1990s, its core principles of radical redesign and performance improvement continue to inform both private and public sector transformation, underscoring its enduring relevance to contemporary debates on digital reengineering.

2.3 Critical Factors in BPR Implementation

Despite its potential, the literature consistently reports that 50% to 70% of BPR initiatives fail to achieve their intended objectives (Nkomo & Marnewick, 2021). This has led to extensive research aimed at identifying the critical success factors (CSFs) and common causes of failure.

2.3.1 Critical Success Factors

A synthesis of the literature reveals a consistent set of factors deemed essential for successful BPR implementation:

Top Management Commitment and Sponsorship: Strong and visible support from senior leadership is universally cited as the most critical factor. Leaders must articulate a clear vision, allocate necessary resources, and champion the change to overcome organisational inertia (Musonda & Okoro, 2022).

Effective Change Management: BPR is a profoundly disruptive process that often faces resistance from employees who may fear job loss or feel uncomfortable with new ways of

working (Harika *et al.*, 2021). A structured change management strategy that includes clear communication, employee involvement, and training is crucial for mitigating this resistance (Swartz, 2018).

Competent and Empowered Team: The success of a BPR project depends on the skills and composition of the reengineering team. The team should be cross-functional, empowered to make decisions, and possess the right blend of technical and interpersonal skills (Nkomo & Marnewick, 2021).

IT Infrastructure: The availability of an adequate and flexible IT infrastructure is a foundational requirement for redesigning and automating processes (Dinata, 2020).

Strategic Alignment: BPR initiatives must be tightly aligned with the organisation's overall strategic goals. Projects that are not linked to clear strategic objectives are often perceived as irrelevant and fail to gain traction (Nkomo & Marnewick, 2021).

2.3.2 Common Challenges and Reasons for Failure

The high failure rate of BPR projects is often attributed to a range of interconnected challenges:

Resistance to Change: As noted, employee resistance is a primary obstacle. This is often rooted in a lack of understanding of the BPR concept and fear of its consequences (Swartz, 2018).

Lack of a Formal Methodology: Many organisations embark on BPR without a clear, structured methodology, resulting in poorly defined roles, unclear objectives, and inadequate documentation (Nkomo & Marnewick, 2021; Zuhaira & Ahmad, 2021).

Inadequate Resources: Insufficient allocation of financial and human resources can cripple a BPR project before it gains momentum (Harika *et al.*, 2021).

Organisational Culture: A bureaucratic or siloed organisational culture can be a significant barrier to the cross-functional collaboration required for successful BPR (Musonda & Okoro, 2022).

2.4 BPR in the Public Sector and Developing Economies

While BPR originated in the private sector, its application in the public sector presents a unique set of challenges. Public sector organisations are often characterised by rigid hierarchies, complex regulations, political influences, and a focus on accountability rather

than efficiency, all of which can clash with the radical, "clean slate" approach of BPR (Kassahun, 2024; Swartz, 2018).

In the context of a developing economy, these challenges are often magnified by issues such as limited digital infrastructure, significant skills gaps, and severe resource constraints (Kassahun, 2024). Therefore, BPR frameworks must be carefully adapted to this context, often favouring a more phased and participatory approach over a purely radical one.

2.5 Principles of BPR

Business Process Reengineering (BPR) is underpinned by a set of core principles that guide organisations in fundamentally redesigning their processes for dramatic performance improvements. According to Mertens *et al.*, (2024), BPR emphasises organising work around outcomes rather than individual tasks, thereby ensuring that processes are designed to achieve desired results rather than merely completing a sequence of activities. Central to this approach is the empowerment of employees, allowing those who use the outputs of a process to take responsibility for executing the process itself, which enhances ownership, accountability, and efficiency (Kassahun, 2024; Kaponda *et al.*, 2023).

Another foundational principle is the integration of information processing into the work itself, ensuring that data collection, analysis, and decision-making occur as part of operational workflows rather than as a separate, administrative activity (Kaponda *et al.*, 2023). Similarly, organisations are encouraged to treat geographically dispersed resources as if they were centralised, promoting coordination and reducing inefficiencies associated with fragmented operations (Grisold *et al.*, 2024). The linkage of parallel activities is also critical, enabling simultaneous processes to operate cohesively rather than merely connecting their outputs post hoc.

Furthermore, BPR advocates decentralising decision-making, positioning decision points where the work is performed to minimise delays and bottlenecks, while emphasising the importance of capturing information once at its source to eliminate duplication, reduce errors, and improve data accuracy (Kassahun, A.E., 2024; Senkus *et al.*, 2021). Collectively, these principles ensure that process redesign is not only technically effective but also aligned with organisational objectives, employee capabilities, and customer requirements.

2.6 Assumptions of BPR

BPR operates on several fundamental assumptions that distinguish it from traditional process improvement approaches. Foremost among these is the belief that radical change is necessary; incremental adjustments are insufficient to achieve the substantial performance

gains envisioned, requiring organisations to fundamentally rethink their core processes (Mertens *et al.*, 2024). Closely linked to this is the assumption that technology serves as a critical enabler, with advanced tools such as automation, data analytics, and real-time monitoring being essential to achieving significant improvements in efficiency and effectiveness (Zuhaira & Ahmad, 2021).

Equally important is the customer-centric orientation of BPR, which posits that processes should be redesigned primarily to meet customer needs and enhance satisfaction, rather than merely optimising internal efficiencies (Tsai *et al.*, 2019). Finally, the approach assumes the necessity of cross-functional integration, recognising that collaboration across departments is vital for seamless process execution, minimising redundancies, and ensuring that organisational activities function as coherent, end-to-end systems (Ngulube, 2020). Together, these assumptions form the conceptual foundation upon which successful BPR initiatives are designed and implemented, guiding both strategy and operational execution in pursuit of transformative outcomes.

2.6.1 Major debates in the field of BPR

Business Process Reengineering (BPR) has sparked numerous debates, often informed by both academic and practical perspectives.

- i. *Definition and scope*: There is an ongoing discussion about the exact boundaries of BPR. Hammer and Champy (1993) emphasised radical redesign, while others, like Davenport (1993), argue for integrating continuous improvement with redesign processes (Kassahun, 2024; Mertens *et al.*, 2024).
- ii. *Role of technology*: While some scholars like Hammer (1990) argue that technology drives successful BPR, recent scholars caution that over-reliance on IT can ignore vital human and organisational dynamics (Kassahun, 2024; Mertens *et al.*, 2024).
- iii. *Human factor*: Employee resistance and cultural shifts are critical factors. (Kassahun, 2024; Mertens *et al.*, 2024) highlighted the role of effective change management, contrasting with BPR approaches that sometimes undervalue human considerations
- iv. *Success rates*: Studies, such as Amarasingh and Wickramarachchi (2021), indicate high failure rates in BPR projects, sparking debates on whether such initiatives are inherently flawed or poorly executed.
- v. *Ethical concerns*: Critics like Arnott and Gao (2022) argue that process automation in BPR can lead to significant workforce disruptions, raising ethical and societal concerns.

2.7 BPR tools and techniques

Business Process Reengineering (BPR) tools and techniques encompass software applications and methods for analysing, redesigning, and improving business processes, which can potentially enhance operational efficiency and effectiveness, reduce costs, and improve overall organisational performance and competitiveness (Zaini & Saad, 2019). Furthermore, it is essential to consider the organisation's strategic goals and business objectives when selecting an appropriate methodology, as this will contribute to long-term sustainability (Zaini & Saad, 2019).

Examples of key tools include value stream mapping, SIPOC, root cause analysis, gap analysis, benchmarking, and process virtual modelling notations such as BPMN (Business Process Model and Notation) and UML (Unified Modelling Language) (Lopes & Guerreiro, 2023). BPMN focuses on business processes, while UML is a more generic language for modelling software systems, including business processes (Lopes & Guerreiro, 2023). The ensuing discussion provides more pertinent details on specific tools and techniques.

2.7.1 Process analysis tools

SIPOC (Suppliers, Inputs, Process, Outputs, Customers)

This tool helps in understanding the inputs, outputs, and processes involved in a specific business process. A study by Nshirim and Nwagwu (2023) confirmed that SIPOC and Value Stream Mapping (VSM), jointly create a 'comprehensive framework for continuous process improvement and waste reduction.'

Value Stream Mapping

Ajayi and Laseinde (2023) posit that Value Stream Mapping (VSM) is a technique which enables visualising the entire process flow, "identifying bottlenecks and areas for improvement." Furthermore, identifying waste is helpful in lean manufacturing, and by adapting, it can be applied to green and sustainable manufacturing industries (Khalili *et al.*, 2020).

2.7.2 Process analysis techniques

Root Cause Analysis (RCA) is a technique used to identify the underlying reasons for process problems. RCA can identify how flawed systems adversely influence decision-making (Latino, Latino & Latino, 2019; Barsalou, 2023).

Gap Analysis is a process analysis technique that compares current processes with desired outcomes, highlighting areas that require intervention and improvement. The process may involve the systematic collection and evaluation of relevant literature, comparing and

classifying current approaches in a selected area or topic to identify and explain existing research gaps (Kaponda *et al.*, 2023).

2.7.3 Data Automation Tools

These are tools used to analyse current processes and supply data and insights for better decision-making. Benchmarking and change management are commonly used data automation tools (Scot *et al.*, 2021).

Benchmarking

Benchmarking is used to compare an organisation's internal operational processes with those of industry leaders and trend setters to establish best practice standards (Singhania & Saini, 2022). To comply with ethical rules in the commercial environment, third parties are commonly used to conduct pertinent benchmarking exercises. Benchmarking can serve as a starting point for overall process reorganisation and improvement (Sesana *et al.*, 2020).

Change Management

Employee resistance to change can be best managed through an effective change management process that addresses any inherent concerns associated with change in the work environment. The first Lewin's (1947) three-step model represents a framework for planned change (Burnes, 2019). However, these steps must be seen as part of other interrelated processes, such as action research, group dynamics, and force field analysis (Rosenbaum, More & Steane, 2018). Some of the key strategies used to manage change effectively are education and communication, participation and involvement, support and facilitation, negotiation and agreement, coercion and manipulation. Employees need to feel valued and understood during a change process (Mansaray, 2019)

2.7.4 Process modelling tools

Flowcharts visually represent process steps and decision points, while Business Process Modelling Notation (BPMN) is a standardised language for modelling business processes. Additionally, enterprise architecture tools help map out the entire organisation's processes and systems (Zuhaira & Ahmad, 2021).

2.7.5 Process Simulation Tools

These include, but are not limited to, *simulation software* and *what-if analysis*:

Simulation software facilitates the modelling and evaluation of various process scenarios prior to implementation (Thelen *et al.*, 2022). By enabling the virtual creation of processes, it allows for an in-depth study of their behaviour, the analysis of potential changes, and the comparison of alternative designs at a significantly reduced cost, as opposed to the

substantial expenses associated with large-scale experimental trials (García-García *et al.*, 2020; Naciri *et al.*, 2024).

What-if analysis utilises simulation to examine the potential effects of changes on processes. However, a cautionary note is that recent published studies suggest that the use of *what-if analysis* often leads decision-makers to become overly confident in their resulting decisions, thereby compromising the actual quality of those decisions (DavTalirz *et al.*, 2021; Rabia & Bellabdaoui, 2022).

2.7.6 Process implementation tools

Process implementation tools include, among others, workflow automation software, robotic process automation (RPA) and business process management (BPM) systems. *Workflow automation software* involves automating *repetitive* tasks and processes. The intricate complexity and volatility of the engineering processes require specialised process modelling tools and solutions to “define, model, implement, and evaluate individual engineering process steps” (Winkler, Schönbauer & Biffi, 2014; Zayas-Cabán *et al.*, 2021).

Robotic Process Automation (RPA) tools use software robots to automate tasks that require human intervention, thereby improving efficiency and reducing costs (Santos, Pereira, & Vasconcelos, 2020).

Business Process Management (BPM) Systems are used as tools for managing and improving business processes. Zuhaira and Ahmad (2021) concluded that, although certain areas require further exploration, their comprehensive analysis of Business Process Management and its associated tools establishes a clear connection between these tools and the key stages of the BPM life cycle, as well as their alignment with Business Process Reengineering methodologies.

2.8 BPR Methodologies

Popular BPR methodologies include Hammer and Champy’s contribution, Davenport’s BPR methodology, and Adaptive Business Process Reengineering (ABPR). Michael Hammer and James Champy (1993) are widely recognised for introducing the concept of Business Process Reengineering (Li and Nazif, 2022; Nazaria *et al.*, 2024). They advocate for the radical redesign of core business processes to achieve significant improvements in key performance metrics, such as cost, quality, and speed (Gamar & Agrawal, 2015; Imediogwu *et al.*, 2020). Consequently, their approach became a foundational methodology for BPR, emphasising radical process transformation.

Another BPR methodology, which emphasises process analysis and improvement, was proposed by Davenport (1993), who conceptualises BPR as an innovation-driven process

(Nazaria *et al.*, 2024). Davenport's study on the redesign of processes within various organisations indicates that the methodologies implemented in these entities play a pivotal role in the success of innovation projects (Zaini & Saad, 2019).

Adaptive Business Process Reengineering (ABPR) refers to a methodology that integrates both radical and incremental elements of reengineering to respond effectively to dynamic and evolving environments. According to Zaini & Saad (2019), a review of prior research studies concluded that there is no single, universally applicable approach to BPR, nor can it be assured that the adoption of BPR will guarantee organisational success.

2.8.1 The developing QM and continuous improvement agendas

Business Process Reengineering is a strategic approach to achieving dramatic improvements in organisational performance through the fundamental rethinking and redesign of business processes (Mertens *et al.*, 2024). As discussed earlier, this concept, introduced by Michael Hammer and James Champy, emphasises radical rather than incremental changes to drive efficiency, quality, and customer satisfaction (Asif, 2020).

2.8.2 Core Principles of Business Process Reengineering

Business Process Reengineering is grounded in a set of foundational principles that are crucial for promoting quality management (QM) and integrating continuous improvement into organisational processes (Rabia *et al.*, 2022). Central to BPR is outcome-oriented design, which emphasises structuring processes around the achievement of strategic results rather than the mere execution of individual tasks (Zondo, 2021). This approach ensures that organisational activities are purpose-driven and aligned with overarching institutional goals, thereby enhancing the effectiveness and impact of reengineering initiatives (Kotjoprayudi, 2021).

Complementing outcome orientation is the elimination of redundancies, whereby information processing is seamlessly integrated into workflows to reduce duplication, streamline operations, and improve efficiency. By embedding information-handling tasks directly into operational processes, organizations can achieve more coherent and effective workflows (Hnylianska, 2022).

Another cornerstone is leveraging technology as a strategic enabler of process transformation. The deployment of advanced tools, including automation, digital platforms, and artificial intelligence, not only accelerates decision-making but also supports real-time monitoring, predictive analytics, and cross-functional integration, ultimately improving operational performance and responsiveness (Dinata, 2020; Fotso, 2020).

Finally, a customer-centric approach underpins BPR initiatives, ensuring that process redesigns prioritise stakeholder experiences, satisfaction, and service quality. By explicitly aligning internal efficiencies with external value creation, organisations can simultaneously optimise operations and enhance their market or social impact (Mukwakungu *et al.*, 2018; Zondo, 2021).

Collectively, these principles establish a structured framework that enables organisations to undertake radical process transformations, embed quality management, and cultivate a culture of continuous learning, while also responding effectively to technological advancements and evolving stakeholder expectations (Harika *et al.*, 2021; Nkomo & Marnewick, 2021)

2.9 Theoretical Literature Review

Theoretical Literature Review: Paradigms of Process Transformation

To understand the opportunities and pitfalls of digital BPR in the public sector, it is essential to first engage with the foundational theories that have shaped the discourse on radical organisational change. These theories provide the intellectual framework for process improvement, but they also contain inherent assumptions and biases that require critical scrutiny, especially when applied outside their original private-sector context.

2.9.1 Core Theories of Radical Organisational Change

The literature on process-oriented change is dominated by several key theoretical contributions that emerged in the late 20th century.

i. Hammer & Champy's Business Process Reengineering Theory

The modern BPR movement was catalysed by the seminal work of Hammer and Champy (1993), who defined it as the “fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed” (Mertens *et al.*, 2024; Zondo, 2021). At its core, their theory advocates a ‘clean slate’ approach, in which existing processes are not merely improved but entirely reimaged (Mertens *et al.*, 2024). This approach entails a shift from traditional, task-based, functionally siloed structures to cross-functional, end-to-end processes that directly deliver value to the customer (Zaini, 2019; Hnylianska, 2022).

Central to Hammer and Champy's framework is the principle that change must be radical rather than incremental, driven from the top by visionary leadership prepared to make difficult decisions regarding workflow redesign, resource allocation, and workforce management

(Nkomo & Marnewick, 2021). Leadership commitment is essential to overcoming organisational inertia, fostering a culture receptive to change, and aligning BPR initiatives with strategic goals.

Recent literature reinforces the relevance of these principles while expanding their practical application. Information technology (IT) emerges as a critical enabler, supporting automation, process monitoring, and real-time decision-making, which amplifies the potential gains from reengineered processes (Dinata, 2020; Fotso, 2020). In higher education, Kotjoprayudi (2021) illustrates how the redesign of official trip procedures at a university enhanced administrative efficiency, demonstrating that even within complex bureaucracies, BPR can yield measurable operational improvements. Similarly, Kunene (2021) found that at a South African university technology institution, BPR implementation improved academic administrative workflows, reduced bottlenecks, and enhanced service delivery standards.

In the public sector, the South African Social Security Agency (SASSA) provides a salient example of BPR in action. SASSA embarked on a multi-phase BPR project to streamline grant administration, implement new service channels, and redesign its operating model. These initiatives illustrate the challenges of applying BPR in a highly regulated environment, including navigating legislative requirements, entrenched bureaucratic practices, and stakeholder expectations, thereby emphasising the need for context-specific adaptation (Kassahun, 2024).

Empirical studies also emphasise that, while the clean slate approach is conceptually transformative, its successful implementation requires careful change management, employee engagement, and strategic alignment (Harika *et al.*, 2021; Musonda & Okoro, 2022). In practice, BPR initiatives that neglect organisational culture, capacity building, or IT infrastructure frequently encounter resistance, delays, or partial success, reinforcing that theory alone is insufficient without robust operational planning (Swartz, 2018; Dinata, 2020).

In conclusion, Hammer and Champy's BPR theory continues to provide a robust conceptual foundation, while South African case studies illustrate the practical considerations and contextual adaptations necessary for effective implementation. Integrating strong leadership, IT enablement, stakeholder engagement, and a customer-centric orientation ensures that BPR initiatives achieve both radical performance improvements and sustainable organisational transformation (Mukwakungu *et al.*, 2018; Zondo, 2021).

2.9.2 Davenport's Process Innovation

In parallel, Davenport (1993) introduced the concept of process innovation, which, while sharing BPR's focus on process improvement, places a more strategic emphasis on

Information Technology (IT) as an enabler of transformation (Mertens et al., 2024). Unlike the radical, clean-slate approach of Hammer and Champy (1993), Davenport framed IT not merely as a tool for automating existing tasks but as a critical enabler capable of fundamentally reshaping work processes (Sesana et al., 2024). His framework advocates a symbiotic relationship between process redesign and technological capability, highlighting that an understanding of IT's potential should inform process innovation strategies from the outset (Sesana et al., 2024; Mertens et al., 2024).

Recent studies underscore the relevance of Davenport's perspective, particularly in contexts where organizations operate within complex regulatory and infrastructural constraints. Dinata (2020) emphasises that organisations leveraging IT in reengineering initiatives are more likely to achieve operational efficiency and a competitive advantage. Meanwhile, Fotso (2020) demonstrated in South African banks that digitalisation, coupled with process innovation, improved service delivery, reduced processing times, and enhanced customer satisfaction. In higher education, Kotjoprayudi (2021) noted that integrating digital tools into administrative workflows, such as travel authorisation and procurement, enabled more efficient process execution without the need for a complete redesign. Similarly, Kunene (2021) highlighted that IT-enabled process changes in university administration reduced bottlenecks while maintaining alignment with strategic goals, illustrating the practical utility of Davenport's measured, technology-driven approach in resource-constrained environments.

2.9.3 Socio-Technical Systems (STS) Theory

While both Hammer & Champy and Davenport provide frameworks for process redesign, the Socio-Technical Systems (STS) theory introduces a complementary lens that foregrounds the interplay between social and technical elements within organisations. Emerging from the Tavistock Institute, STS theory posits that organisational performance is maximised only when the social system comprising people, skills, culture, values, and relationships and the technical system including tools, technology, processes, and infrastructure are jointly optimised (Musonda & Okoro, 2022; Harika et al., 2021).

STS theory reveals a critical limitation of early BPR approaches, which often prioritised technical redesign while treating human factors as secondary or as obstacles to be overcome. Empirical research indicates that failures in BPR initiatives often result from neglecting social considerations, including employee resistance, inadequate training, and misaligned incentives (Swartz, 2018; Nkomo & Marnewick, 2021). By contrast, projects that integrate STS principles actively engage employees, aligning culture with process changes, and fostering cross-functional collaboration tend to achieve sustainable improvements in

efficiency, service quality, and stakeholder satisfaction (Masokoameng, Mofokeng, & Nyakala, n.d.; Zondo, 2021).

In South African contexts, STS considerations are particularly pertinent. For instance, the multi-phase BPR initiative at the South African Social Security Agency (SASSA) underscores that technical innovations alone cannot improve grant administration; alignment with employee capabilities, bureaucratic norms, and client expectations is equally critical (Kassahun, 2024). Integrating STS insights with Davenport's technology-centric perspective enables organizations to achieve holistic process transformation, balancing efficiency gains with human and organizational realities

2.10 Key aspects of these theories

2.10.1 Clean Slate Approach

This core BPR principle is that the redesign process begins on a clean slate, beginning from nothing instead of building on existing processes and making incremental changes. This implies a comprehensive re-evaluation of business needs and potential solutions, independent of existing practices (Li and Nazif, 2022). In Hammer and Champy's (1993) conception, the clean-slate approach is defined as *business process re-engineering* involving 'fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical measures of performance, such as cost, quality, service and speed' (Nazaria *et al.*, 2024).

2.10.2 Cross-functional integration

In the context of Business Process Reengineering, "cross-functional integration" emphasises the elimination of departmental silos within an organisation and the creation of fluid, transparent processes across different functions, thereby fostering team and individual collaboration and optimising the overall workflow (Frankel & Mollenkopf, 2015). Breaking down departmental silos ensures an integrated approach to process improvement, considering all relevant touchpoints and optimising integration into the new design (Bhaskar, 2018; Pellathy, Mollenkopf, Stank, & Autry, 2019; Chen, 2022).

2.10.3 Customer-centric design

This theory places the customer (or citizens in the case of government departments) at the centre of the planning and decision-making process, guided by the Batho-pele principles in South Africa. In this scenario, priority design processes are premised on customer needs and the goal of delivering superior service and value by focusing on the lifelong customer journey and experience (Wechsler & Schweitzer, 2019; Kaarttinen, Ojasalo, & Wait, 2025).

Al-Shammari (2023) notes that customer-centric design is a philosophy grounded in understanding customer needs, preferences, and desires. Furthermore, such a knowledge-enabled customer-centric competitiveness strategy (KCCS) may integrate four pillars: business process reengineering, knowledge management (KM), customer relationship management (CRM), and competitiveness strategy, to cater to market fluctuations and dynamic customer needs. Customer-centric design enables cross-functional cooperation and coordination, with other with other customer-centric approaches (Al-Shammari, 2023). Customer-centric design appears to be a suitable approach for the KZN DSD in its effort to enhance service delivery to citizens by leveraging digital technologies.

2.10.4 Critical Engagement with Foundational Theories

While these theories have been profoundly influential, their application has been fraught with challenges, prompting decades of academic and practical critique.

i. Strengths and Enduring Influence

The revolutionary appeal of BPR cannot be understated. It offered a compelling solution to the inefficiencies of hierarchical, functionally siloed organisations that dominated the industrial era (Zondo, 2021; Mertens *et al.*, 2024). By focusing on cross-functional processes that directly serve customer needs, BPR promised extraordinary gains in speed, efficiency, and quality (Zayas-Cabán *et al.*, 2021). This was highly seductive to senior executives facing intense market competition. Principles such as organising around outcomes, empowering frontline workers, and using IT to treat geographically dispersed resources as if they were centralised remain relevant and influential in modern management thinking (Zayas-Cabán *et al.*, 2021).

ii. Weaknesses and Criticisms

The primary criticism is the theory's profound neglect of the human element. While Hammer and Champy acknowledged that "companies are not asset portfolios, but people working together," their model failed to demonstrate how to reengineer the human resources in conjunction with processes (as cited in Alsaadi, 2022). Classic BPR is often described as a top-down, "ruthless" approach that treats employees as cogs in a machine rather than active participants in the change process (Alsaadi, 2022; Muthuveloo & Teoh, 2021). This mechanistic worldview failed to account for the complexities of organisational culture, politics, and human psychology. This oversight led to widespread fear, employee resistance, and a fierce backlash from middle management who felt their roles were explicitly threatened by the radical nature of the changes (Muthuveloo & Teoh, 2021; Obara & Wilfred, 2020). The approach often ignored the critical role of organizational culture as a determinant of success

or failure, treating it as a secondary concern rather than an integral component of the reengineering effort (Alsaadi, 2022).

2.10.5 Relevance to the South African Public Sector Context

When applied to a public sector entity like the KZN DSD, the limitations of classic BPR theory become even more pronounced. The foundational assumptions of BPR are a deeply problematic fit for this context for several reasons:

Mission and Purpose: Public organisations exist to create public value and deliver services as a matter of social and constitutional mandate, not to maximise profit. An exclusive focus on efficiency and cost-cutting can conflict with the core mission of providing equitable and accessible social services.

Operating Environment: The KZN DSD operates within a complex web of legal constraints, political influences, public scrutiny, and bureaucratic procedures. A 'clean slate' approach that ignores these realities is not only impractical but legally and politically impossible.

Stakeholder Dynamics: The South African public sector is characterised by strong trade unions and a constitutional commitment to public participation and consultation (Batho Pele principles). A top-down, command-and-control implementation style, as advocated by early BPR theorists, would likely encounter significant institutional and political resistance.

2.10.6 The Identified Theoretical Gap

The critical review of the foundational theories reveals a significant gap. There is no existing theoretical paradigm that successfully reconciles the need for dramatic process improvement with the complex socio-technical realities of a resource-constrained, citizen-facing public institution in a developing country. Classic BPR theory is too mechanistic and fails to account for the human and political dimensions of public service. Conversely, while Socio-Technical Systems theory provides a powerful critical lens, it does not offer a clear, actionable methodology for implementing large-scale, transformative change. This study is therefore situated within this theoretical void, seeking to build a framework that is both ambitious in its goals and realistic in its understanding of the socio-technical context.

The following table provides a comparative summary of the foundational theories discussed.

Table 2.1: Comparative Analysis of Foundational BPR Theories

Theory	Core Tenets	Key Strengths	Documented Weaknesses/Criticisms	Relevance to KZN DSD
Hammer & Champy's BPR	Fundamental rethinking and radical redesign of processes. 'Clean slate' approach. Top-down driven. Focus on dramatic improvements in cost, quality, service, and speed.	Shifts focus from functional silos to cross-functional, customer-oriented processes. Promises significant performance gains.	High failure rate (>70%). Neglects human/cultural factors, leading to resistance and fear. Associated with downsizing. Lacks a clear methodology.	Low. The radical, top-down approach is incompatible with the public sector's bureaucratic, unionized, and citizen-facing nature. The focus on cost-cutting can conflict with the service delivery mandate.
Davenport's Process Innovation	IT-enabled process redesign. Views IT as a strategic enabler, not just an automation tool. Combines process redesign with strategic IT deployment.	Provides a more strategic and integrated view of IT's role in transformation. Less radical than Hammer & Champy, allowing for more measured change.	Can be overly techno centric. Still shares some of the classic BPR limitations regarding organisational change and human factors.	Moderate. The strategic focus on IT is highly relevant. However, it does not fully address the unique governance, resource, and human capacity constraints of the South African public sector.
Socio-Technical Systems (STS) Theory	Organisations are composed of interdependent social (people, culture) and technical	Provides a holistic, human-centric view of organisations. Explains why technology-	More of an analytical framework than an implementation methodology. Does not provide clear steps for executing radical	High. The core principle of joint optimisation is essential for KZN DSD, where human capacity,

Theory	Core Tenets	Key Strengths	Documented Weaknesses/Criticisms	Relevance to KZN DSD
	(technology, processes) systems. Performance requires 'joint optimization' of both systems.	focused initiatives often fail. Emphasises user participation and quality of work life.	change. Can be complex to apply in practice.	culture, and stakeholder buy-in are critical success factors. It provides the necessary theoretical lens to critique and adapt other models.

2.11 Digital Governance Models for Developing Contexts

For an entity like KZN DSD, digital governance models that address the specific challenges of developing countries are particularly relevant. These models emphasise the use of Information and Communication Technologies (ICTs) not just for efficiency, but for empowerment. They focus on creating knowledge networks that can cut across traditional hierarchies, providing citizens with greater access to information and a stronger voice in their own governance. The key consideration is access over ownership, utilising public telecentres and mobile technologies to bridge the digital divide.

2.11.1 The Da Vinci TIPS™ Framework

To operationalise this theory in a complex organisational setting, the study applies the Da Vinci Institute's TIPS™ framework, which stands for Technology, Innovation, People, and Systemic Thinking (Da Vinci Business School, 2022). This managerial leadership framework offers a transdisciplinary, systems-based lens for navigating organisational complexity, enabling strategic decision-making across functional domains.

2.11.2 Technology (T): Theoretical Foundations

This pillar draws on theories of technology adoption, cybersecurity, change management, and risk management, offering insight into the enablers and barriers of digital transformation in public organisations (Rodríguez-Espíndola, 2022). The theoretical basis helps shape research questions and establish a robust digital BPR framework tailored for the operational realities of the KZN DSD.

2.11.3 Innovation (I): Framework Execution

Innovation in this context involves incremental and radical process improvements, embedded in continuous evaluation and responsiveness to organisational challenges. This aligns with Lean and Six Sigma methodologies, which also emphasise process efficiency and defect elimination.

2.11.4 People (P): Pragmatic Implementation

This dimension is closely linked to the change management and stakeholder engagement elements of the conceptual framework. It emphasises creating user-friendly, inclusive digital systems that are accessible to front-line staff, encouraging ownership and minimising resistance to change (Safitra, 2023). People are not passive recipients but active participants in driving digital transformation

2.11.5 Systems (S): Strategic Alignment and Sustainability

The Systems pillar reflects the integration of digital transformation into the broader strategic goals of the KZN DSD. It ensures scalability, adaptability, and alignment with organisational mandates, operational integrity, and public accountability. This systems-thinking approach supports sustainability and long-term success by embedding flexibility to accommodate evolving technologies and societal needs (Da Vinci Institute for Technology Management, 2022).

The strength of the TIPS™ framework lies in its holistic and transdisciplinary nature, which forces an integrated view of change. It moves beyond a narrow focus on process or technology to consider the entire socio-technical system. While it is a robust conceptual model, a potential critique is its abstractness; the challenge lies in operationalising its high-level principles into concrete, actionable steps within a specific organisational context, particularly a public one with unique constraints.

2.11.6 Positioning TIPS in the Literature

The Da Vinci TIPS™ framework, an acronym for Technology, Innovation, People, and Systemic Thinking, offers a robust managerial and leadership model for navigating complex organisational change, particularly within the context of digital transformation and Business Process Reengineering. Rooted in systems thinking, the TIPS™ framework encourages leaders to adopt a holistic view of organisational processes by integrating technical capabilities, fostering innovation, prioritising human factors, and ensuring strategic coherence across operations (Da Vinci Institute for Technology Management, 2022). The Technology pillar supports the strategic adoption and governance of digital tools essential for process redesign. Innovation emphasises continuous improvement and adaptive thinking to

sustain long-term transformation. People underscore the role of leadership, employee engagement, and change management in driving successful implementation. Lastly, Systemic Thinking ensures that interventions are not siloed but integrated across organisational functions, policies, and service delivery outcomes. Within the public sector, such as the KwaZulu-Natal Department of Social Development, the TIPS™ framework provides a practical lens through which digital BPR efforts can be structured, monitored, and sustained, enabling responsive, citizen-centred, and future-proof solutions.

A. Cross-Industry Frameworks

One of the most influential cross-industry models is the Capability Maturity Model Integration (CMMI). CMMI offers a structured progression of process maturity, ranging from the initial, ad hoc stage to the final, optimised stage of continuous improvement (Marincean, 2024). Its value lies in providing a scalable roadmap for organisational transformation, which is particularly pertinent to digital BPR initiatives that require systematic reengineering of legacy systems. In short, Minh and Thanh (2022) emphasise the importance of Cross-Industry Frameworks, particularly the Capability Maturity Model Integration (CMMI), highlighting its value for organisations seeking systematic process redesign and enhanced efficiency. This makes it particularly relevant for benchmarking in the context of digital Business Process Reengineering.

Within the context of the TIPS™ framework, the Technology pillar intersects with CMMI's structured methodology by offering a strategic lens for managing digital tools, infrastructure, and process automation. Thus, the integration of CMMI into the TIPS™-based approach strengthens the technological dimension, ensuring that KZN DSD's digital BPR framework progresses through measurable maturity levels while remaining aligned with broader organisational goals.

B. Human-Technology-Organization (HTO) Framework

The HTO framework emphasises the interaction between human, technological, and organisational factors in reengineering processes. Unlike some frameworks that focus heavily on technology or organisational structure, HTO balances all three dimensions to ensure holistic implementation (Fetails *et al.*, 2022; Svensson *et al.*, 2024). In a digital BPR context, this framework highlights the importance of user-centric technology design, effective change management to reduce resistance, and aligning technological investments with strategic organisational goals. Aligning these three components, human, technological, and organisational dimensions, to ensure successful BPR implementation is crucial for balanced and effective digital reengineering (Svensson *et al.*, 2024).

In this regard, the TIPS™ framework's People and Systemic Thinking pillars resonate strongly with the HTO model. While HTO underscores balance and interaction, TIPS™ extend this by fostering leadership agility, team alignment, and systemic insight. For KZN DSD, where frontline service providers and internal stakeholders must jointly adopt new digital processes, aligning human and organisational factors through a TIPS™ lens ensures that reengineering efforts are inclusive, sustainable, and co-created with those most affected.

C. Continuous Process Improvement (CPI)

Although CPI often contrasts with BPR's radical nature, its iterative approach offers benchmarks for continual optimisation. Ammirato (2020) point out its relevance in aligning incremental improvements with strategic goals. Additionally, this approach is instrumental in stabilising newly implemented digital processes post-reengineering. CPI frameworks are beneficial for benchmarking educational or organisational processes (Harika *et al.*, 2021). Within the TIPS framework, CPI aligns closely with the Innovation pillar, where innovation is viewed not as a one-off event but as an ongoing process driven by real-time feedback and adaptation. For KZN DSD, applying CPI within a TIPS™-guided framework ensures that digital BPR is not only transformative but also resilient and responsive to contextual dynamics.

D. Conceptual Models

Furthermore, conceptual models serve as the theoretical scaffolding that links abstract principles to practical implementation. One such model is Davenport's (1993) process innovation framework, which emphasises customer-centricity, process efficiency, and the strategic use of digital tools (Davidson, Parnell, and Davenport, 2024). These theoretical principles are echoed in the Customer-Centric Design theory that underpins this study's theoretical framework, while TIPS™ ensure their grounded application. Specifically, the Technology and People pillar in TIPS™ supports Davenport's call for user-centred design and participatory change management, while Systemic Thinking ensures alignment across all organisational layers. The integration of such conceptual models within the broader TIPS™-informed strategy ensures that BPR is not merely technical, but also philosophical and human-centred.

Table 2:2: TIPS alignment with Models in the Literature

Framework	Core Focus	Alignment with TIPS	Convergence/Alignment with TIPS
CMMI (Capability Maturity Model Integration)	Process maturity and capability benchmarking across five levels (Initial → Optimising)	TIPS complements CMMI by embedding maturity and scalability into its Systems pillar. Both emphasise continuous improvement, but TIPS adds a people-centric and innovation-driven dimension.	Strong
HTO (Human-Technology-Organisation)	Interaction between humans, technology, and organisational structures to optimise work systems	Both adopt a holistic systems view. TIPS™ extend HTO's operational focus by integrating strategic Innovation and digital transformation.	Moderate
CPI (Continuous Process Improvement)	Incremental, iterative improvements to enhance efficiency, quality, and adaptability	TIPS aligns with CPI through its Innovation and Systems pillars. While CPI emphasizes process refinement, TIPS embeds this within a strategic, transdisciplinary framework.	Strong
TAM (Technology Acceptance Model)	User acceptance of technology	TIPS builds on TAM by embedding technology adoption within a broader organizational and societal context, ensuring alignment with systemic goals.	Moderate

* This classification is based on how much overlap

The alignment between the TIPS™ framework and established process and innovation models reflects varying degrees of conceptual and practical convergence.

CMMI=>TIPS – *Strong Convergence*

CMMI's staged maturity model resonates closely with the Systems pillar of TIPS™, both emphasising structured progression and continuous improvement. TIPS strengthens this

alignment by embedding Innovation and People-centricity, ensuring that process maturity is not only technical but also human-driven and adaptable.

HTO – Moderate Convergence

The Human-Technology-Organisation model shares TIPS™'s holistic orientation, but its focus is largely operational. TIPS extends HTO by strategically embedding Innovation and systemic digital transformation, making convergence moderate rather than vigorous since HTO does not fully address broader institutional and societal contexts.

CPI – Strong Convergence

Continuous Process Improvement is highly compatible with the Innovation and Systems dimensions of TIPS™. Both stress iterative adaptation and efficiency gains. However, TIPS adds a transdisciplinary dimension by integrating technology and people more strategically, reinforcing rather than diverging from CPI's principles.

TAM – Moderate Convergence

The Technology Acceptance Model offers valuable insights into user adoption of new systems, aligning with the Technology pillar of TIPS. Nevertheless, TAM is narrow in scope, focusing on individual acceptance rather than systemic transformation. TIPS broadens this by embedding adoption within organisational, societal, and strategic goals, creating moderate but not strong convergence.

2.11.7 Benchmarking frameworks for implementing digital Business Process Reengineering

Benchmarking frameworks play a critical role in guiding the implementation of digital Business Process Reengineering (BPR), particularly in public sector environments such as the KwaZulu-Natal Department of Social Development (KZN DSD). By systematically comparing existing models and industry best practices, organisations can identify proven strategies, avoid common pitfalls, and adapt contextually relevant solutions. This section explores key benchmarking frameworks and illustrates how their principles align with or complement the Da Vinci TIPS™ managerial leadership framework, which underpins this study's conceptual and practical orientation.

The following table provides a comparative evaluation of the key transformation frameworks discussed

Table 2.3: Evaluation of Digital Transformation Frameworks

Framework	Primary Focus	Approach (Radical vs. Incremental)	Key Tools	Strengths for Public Sector	Weaknesses for Public Sector
BPR	Efficiency, cost, speed	Radical, revolutionary	Process mapping, IT enablement	Potential for dramatic improvement in inefficient systems.	High risk of failure; neglects culture and people; top-down approach clashes with participatory governance.
TQM	Quality, customer satisfaction	Incremental, continuous	Quality circles, statistical process control	Fosters a culture of quality and employee engagement, with a customer-focused approach.	Can be slow to produce results; may lack the urgency needed for deep-rooted problems; less effective in data-poor environments.
Lean Six Sigma	Waste reduction, defect elimination	Incremental, data-driven	DMAIC, value stream mapping, and statistical analysis	Provides a rigorous, evidence-based methodology; delivers measurable results.	Can be overly technical and rigid; may focus on internal process metrics at the expense of broader public value outcomes.

Framework	Primary Focus	Approach (Radical vs. Incremental)	Key Tools	Strengths for Public Sector	Weaknesses for Public Sector
Da Vinci TIPS™	Holistic integration of Technology, Innovation, People, and Systems	Both (framework for managing change)	Systems thinking, stakeholder engagement	Provides a holistic and integrated view of transformation, balancing technical and social factors.	Can be abstract and difficult to operationalise without a specific methodology; sustainability in the public sector is untested.

Collectively, these frameworks, CMMI, HTO, benchmarking methods, CPI, and conceptual models offer a robust foundation for developing a digital BPR framework for the KwaZulu-Natal Department of Social Development. By drawing on cross-industry insights, embedding human-technological balance, and applying iterative benchmarking techniques, the proposed framework can be both strategic and context-sensitive. The TIPS™ framework provides a unifying structure that synthesises these benchmarking tools, guiding their adaptation into a coherent, agile, and sustainable model tailored for public sector transformation.

In essence, the Da Vinci TIPS™ framework does not operate in isolation but instead interphases fluidly with these established benchmarking models. It offers a systemic leadership tool that helps translate abstract theory into actionable steps, aligns innovation with stakeholder realities, and ensures that digital transformation within the KZN DSD is sustainable, citizen-centric, and institutionally aligned.

The proposed framework for the KwaZulu-Natal Department of Social Development draws inspiration from these benchmarked models by incorporating cross-industry insights, technology integration, and robust theoretical principles to ensure a practical and contextually relevant implementation. These elements align seamlessly with the Da Vinci TIPS™ framework, where Technology informs the adoption and governance of digital tools, Innovation guides adaptive redesign and continuous improvement, People emphasise stakeholder engagement and change readiness, and Systemic Thinking ensures strategic alignment, scalability, and sustainability across the organisation. Together, these pillars provide a cohesive structure for transforming service delivery through digital Business

Process Reengineering that is not only technically sound but also human-centred and systemically integrated.

The analysis of the KwaZulu-Natal Department of Social Development highlights the critical role of digital Business Process Reengineering in transforming organisational efficiency and service delivery. By leveraging digital tools and technologies, the department can streamline its processes, eliminate redundancies, and improve its responsiveness to the needs of its stakeholders. The following key insights emerged from the study:

Strategic Alignment: A successful digital BPR framework must align with the department's strategic objectives, ensuring that redesigned processes contribute to improved service delivery and resource optimisation.

Technology Integration: The adoption of advanced technologies, such as automation, data analytics, and digital platforms, is essential for achieving the desired outcomes of BPR. These tools enable real-time monitoring, data-driven decision-making, and seamless service delivery.

Stakeholder Engagement: Involving employees, beneficiaries, and other stakeholders in the BPR process fosters collaboration, builds trust, and ensures that the redesigned processes meet the needs of all parties involved.

Change Management: Addressing cultural resistance and providing adequate training are critical for the successful implementation of digital BPR. A focus on change management ensures that employees are equipped to adapt to new workflows and technologies.

Continuous Improvement: Digital BPR is not a one-time initiative but an ongoing process. Regular evaluations and feedback mechanisms are necessary to refine processes and maintain alignment with organisational goals.

By developing a comprehensive framework that incorporates these elements, the KwaZulu-Natal Department of Social Development (based on *Cross-Industry Frameworks*) can enhance its operational efficiency, improve service delivery, and better address the needs of its communities. This approach may serve as a model for other public sector organisations seeking to implement digital BPR initiatives. The development of the implementation framework highlights the importance of both the systems and people components of the TIPS framework. People play a critical role in the implementation process, as emphasised in the stakeholder engagement key insight. Simultaneously, the framework serves as a foundational element of systems that encompass strategic alignment, continuous

improvement, and technology integration (Management of Technology). This integration is specifically designed to function as an enabler for organisational change projects, ensuring long-term sustainability.

2.11.8 Conceptual and theoretical frameworks of the study

In qualitative research, a conceptual framework is a structured, visual, or written representation of the key concepts, variables, and relationships that guide a study. It provides a roadmap for understanding and interpreting the phenomenon under investigation (Amarasinghe and Wickramarachchi, 2021). A conceptual framework should clearly articulate the relationships among the components of the investigation (Anfara & Mertz, 2014; Collins & Stockton, 2018). These relationships serve to guide the researcher's approach to the study (Miles, Huberman & Saldana, 2014) and inform both the types of data to be collected and the methods for analysing that data. As Amarasinghe and Wickramarachchi (2021) observe, a conceptual framework is “a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied.” Figure 2 below highlights the specific nodal areas where the conceptual framework and the theoretical framework integrate to support the qualitative research process.

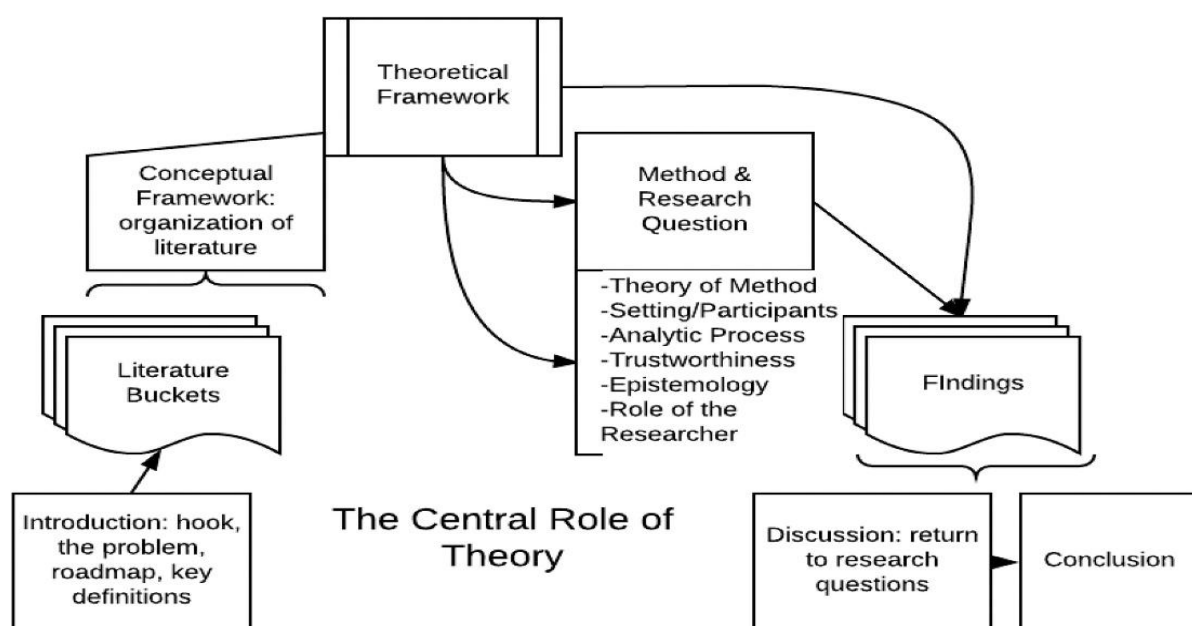


Figure 2:1 The qualitative process.

Source: Collins, C. S. and Stockton, C. M. (2018). The Central Role of Theory in Qualitative Research. *International Journal of Qualitative Methods*, 17(1).

2.11.9 Theoretical framework:

The theoretical framework as Broadley discussed in Chapter 2 (paragraph 1.6.2: 120) is briefly restated below:

Theory selection

This is a study of how to develop a framework for implementing digital Business Process Reengineering in a selected state department, where the theoretical framework is based on “*Customer-centric design*” (a well-established theory) which explains the centrality of customer in planning and decision-making processes for business efficiency and service delivery performance through process re-evaluation and restructuring for the benefit of the customer. The conceptual framework, on the other hand, outlines specific variables like leadership and change management, stakeholder engagement, technology enablement/integration, and process analysis and design, as well as using digital technologies.as measurable aspects of this relationship, thus connecting the theory to the study's specific research questions and methods.

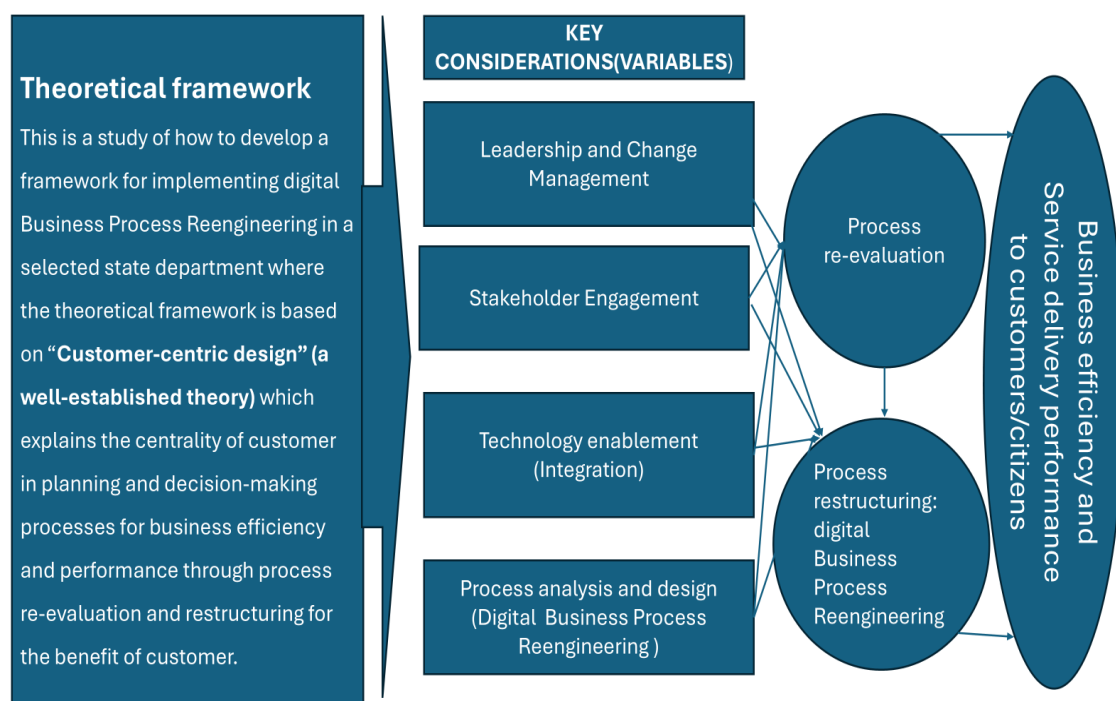


Figure 2:2 Theoretical framework based on 'Customer-centric design' (theory).

The above theoretical framework is organised clearly and logically, outlining the key concepts and their relationships.

Justification

This theory places the customer (or citizens in the case of government departments) at the centre of the planning and decision-making process, guided by the Batho-pele principles in

South Africa. In this scenario, the priorities for designing processes are based on customer needs and the goal of delivering superior service and value by focusing on the lifelong customer journey and experience (Wechsler & Schweitzer, 2019; Kaarttinen, Ojasalo, & Wait, 2025).

Customer-centric design appears to be a suitable approach for the KZN DSD in its effort to enhance service delivery to citizens by leveraging digital technologies. The researcher collected views and data using qualitative methods. Qualitative data analysis was the logical next step. In this study, the research paradigm (and philosophy) is constructivism, while the researcher adopts the individual relativist ontological stance. The researcher adopted a constructivist approach, viewing reality as subjective and shaped by subjective experiences (Gautam, 2023). The epistemological stance is that knowledge is subjective and socially constructed, while customer-centric design has become an enabler in canvassing individual experiences within the adopted framework and promoting the goal of meeting customer needs.

The customer-centric theory underpinning the study framework helps explain the centrality of the customer in planning and decision-making processes, enhancing business efficiency and service delivery performance through process re-evaluation and restructuring for the customer's benefit.

By integrating existing literature, this research highlights its significance in enhancing understanding within its field, identifies gaps in current knowledge (in this instance, the methodological gap), and illustrates how it contributes to digital transformation and business process reengineering. It also establishes clear definitions and parameters for key concepts such as leadership and change management, Technology enablement (Integration) and digital transformation standards, process analysis and design and standard operating procedures. This structured approach ensures clarity, relevance, and an actionable implementation framework for digital Business Process Reengineering in a selected state department, where the theoretical framework is based on "Customer-centric design" (a well-established theory).

2.12 Conceptual Literature Review: Clarifying the Constructs of Digital Public Service

Having established the theoretical landscape, this section clarifies the key concepts, frameworks, and models that are central to the research. A critical understanding of these constructs is essential for building a coherent argument and a relevant implementation

framework. The review traces the evolution of these ideas, moving from simple definitions to a nuanced analysis of their application in the public sector.

2.12.1 Evolving Paradigms in Public Management: From NPM to New Public Governance

To understand process-oriented management in the public sector, it is crucial to first situate it within the broader evolution of public administration paradigms. For decades, the dominant model was New Public Management (NPM), which emerged in the 1980s and 1990s. NPM sought to reform traditional bureaucratic models by importing private-sector principles, emphasising efficiency, performance measurement, and treating citizens as "customers" (De Vries & Sobis, 2022). Its core tenets included decentralisation, competition in service delivery, and a focus on results-oriented governance (Fabi *et al.*, 2023). However, NPM faced criticism for inadequately addressing the complexities and interdependencies of public problem-solving. Its focus on efficiency sometimes came at the expense of equity and democratic accountability, and its "customer" metaphor was widely critiqued for failing to capture the full role of citizens in a democracy (Osborne, 2021; Fabi *et al.*, 2023).

In response to these limitations, New Public Governance (NPG) has emerged as an innovative paradigm. Unlike NPM's intra-organisational focus, NPG emphasises the inter-organisational dimension of public service, recognising that governments operate within complex networks of public, private, and non-profit actors (Osborne, 2021; Torfing & Sørensen, 2022). NPG is grounded in governance network theory and prioritises collaboration, co-production, and citizen engagement to solve "wicked problems" that no single entity can address alone (Torfing & Sørensen, 2022). Its core principles include horizontal steering mechanisms, shared responsibility, and the creation of public value through deliberative and participatory processes (Osborne, 2021). This shift from a market-based model to a network-based one provides the essential context for modern, process-oriented public management, which must now account for these collaborative and citizen-centric dynamics.

2.12.2 Defining and Deconstructing Key Concepts

The language of organisational change is often imprecise. This subsection provides academically grounded definitions for the core concepts used throughout this study.

Digital Transformation (DT)

In the context of government, Digital Transformation has evolved significantly. Its origins lie in 'e-government', which often involved little more than digitising existing paper-based

processes, a process of "doing digital" (Mergel *et al.*, 2021). Contemporary understanding of DT, however, signifies a far more profound change. It refers to a fundamental rethinking of how a public organization uses technology, data, and people to deliver public value (Gong & Janssen, 2022). This involves transforming core operations, organisational culture, and the very relationship between the state and its citizens. True DT is about "being digital", embedding digital logic into the organisation's DNA to create services that are personalised, proactive, and seamless (Mergel, 2023).

Business Process Reengineering (BPR)

As a concept, BPR has also evolved from its initial formulation in the 1990s. Originally conceived as a radical, revolutionary private-sector strategy, its meaning has broadened. Today, BPR is often used more generally to refer to a spectrum of methodologies and tools for analysing and redesigning workflows in a digital context (Muthuveloo & Teoh, 2021). While the "radical" element remains a point of debate, the core focus on cross-functional process improvement, enabled by technology, remains central. In a public sector context, BPR aims to move beyond simple automation to fundamentally redesign processes for greater efficiency and citizen value (Gong & Janssen, 2022).

Citizen-Centric Service Delivery

This concept represents a paradigm shift from a traditional, agency-centric model of public service to one designed from the citizen's perspective. Instead of forcing citizens to navigate complex bureaucratic silos, a citizen-centric approach organises services around their needs and life events (e.g., having a child, starting a business) (Osborne, 2021). This "outside-in" design philosophy aims to make government interactions more intuitive, accessible, and responsive, thereby building public trust and satisfaction (Mergel, 2023). However, implementing citizen-centricity in government is a challenging task. Unlike private companies, public agencies must balance customer service with legal mandates, equity considerations, and the needs of diverse stakeholders, often with limited resources (Torfing & Sørensen, 2022).

Change Management in Public Administration

Change management is the structured approach to managing the human side of organisational transformation. In public administration, this process is complicated by unique factors such as short political cycles, rigid hierarchical structures, complex procurement regulations that delay innovation, and decentralised policy ownership that can create conflicting priorities (Kuipers *et al.*, 2021). Effective change management in this context requires not only clear communication and training but also political acumen, stakeholder

negotiation, and building resilient coalitions to sustain change over time, a process often described as building a "guiding coalition" for transformation (Alsaadi, 2022).

Innovation in the Public Sector

Innovation in government differs fundamentally from that in the private sector. While often associated with technological invention, public sector innovation is more frequently about the creative adoption, adaptation, and diffusion of existing ideas to solve complex societal problems and create public value (Torfing & Sørensen, 2022). It can manifest as new services, streamlined administrative processes, novel policy approaches, or new forms of collaboration (De Vries & Sobis, 2022). The primary barriers are often not a lack of ideas but bureaucratic risk aversion, resource constraints, and the difficulty of scaling successful pilots in a complex political system, a challenge known as the "pilot paradox" where projects succeed in isolation but fail to achieve systemic change (Mergel *et al.*, 2021).

2.12.3 Analysis of Frameworks and Methodologies

Organisations rely on various frameworks to structure their improvement efforts. This subsection provides a critical comparison of the dominant models.

BPR Methodologies vs. Continuous Improvement Frameworks

2.12.3.1 Lean Methodology and Quality Management

This approach aims to improve operational efficiency by eliminating redundant process steps and delivering value more quickly. The key advocates of lean methodology are John Krafcik, who coined the term "Lean" in 1988, and James Womack and Daniel Jones, who defined the Lean methodology's five core principles in 1996: identify value, map the value stream, create flow, establish pull, seek perfection (Ahmad *et al.*, 2023; Ojo, Feldman, and Rampersad, 2022).

The lean manufacturing methodology is primarily used within production systems and customer relations environments to reduce response times from suppliers and customers. It is closely related to the concept of JIT(Just-In-Time), based on the delivery of goods and services at the correct time and quantities expected (Singh & Ahuja, 2012; Ojo, Feldman, and Rampersad, 2022).

2.12.3.2 Six Sigma

It employs a data-driven approach, utilising statistical analysis and rigorous quality control measures to identify and eliminate defects within a process aimed at achieving near-perfect quality (Lakrash, Ali, & Shortt, 2019). DMAIC (Define, Measure, Analyze, Improve, Control)

is a central problem-solving methodology used in Lean Six Sigma to improve processes (Von Rosing, Scheer, Zachman, Jones, Womack, Von Scheel, 2015).

2.12.3.3 Lean Six Sigma

Lean methodology focuses on eliminating waste and optimising processes for efficiency, while Six Sigma concentrates on reducing variation and defects to enhance quality. Lean Six Sigma combines both approaches (Michael, Rowlands, & Kastle, 2012; Ojo, Feldman, & Rampersad, 2022).

2.12.3.4 Total Quality Management (TQM)

Total Quality Management is perceived as a holistic approach (management framework) to quality improvement that requires the involvement of all employees at all levels of an organisation, irrespective of rank, to focus on continuous process improvement, employee empowerment, and customer satisfaction (Permana, Purba and Rizkiyah, 2021). TQM is aligned with eight fundamental principles to improve quality: customer focus, employee involvement, process focus, integrated business systems, strategic and systematic approach, continual improvement, data-driven focus, and effective communication. Although there are inherent benefits of TQM, such as well-defined cultural values, there may also be additional costs for staff training, infrastructure, and team development (Deming, 1993; Ansah, Tekpe & Ametepey, 2024; Helmold, 2023).

2.12.4 The Paradigmatic Shift to New Public Governance (NPG)

To fully grasp the imperatives of modern, process-oriented public management, it is essential first to understand the governing paradigm in which it operates. For much of the late 20th century, the public sector was dominated by the tenets of New Public Management (NPM), which sought to inject market-based principles such as competition, performance measurement, and a customer orientation into the bureaucracy (De Vries & Sobis, 2022). However, NPM's predominantly intra-organisational and efficiency-driven focus proved inadequate for addressing complex, cross-cutting "wicked problems". It was often criticised for undermining equity and the deeper democratic role of citizens (Osborne, 2021).

In response to these limitations, New Public Governance has emerged as the dominant contemporary paradigm. NPG represents a fundamental shift from a market-based to a network-based model of governance. It recognises that a single agency rarely creates public value but that it is co-produced within complex networks of public, private, and non-profit actors (Torfing & Sørensen, 2022). The core principles of NPG include collaboration, partnership, and a focus on building sustainable relationships to achieve collective goals.

This paradigm is grounded in governance network theory and prioritises holistic, citizen-centric approaches over fragmented, agency-specific solutions (Osborne, 2021).

Network Governance and Management Challenges

NPG shifts managers' roles from hierarchical control to facilitating horizontal interactions across networks. Managers are tasked with building trust, coordinating resources, mentoring stakeholders, and fostering stable partnerships. Klijn *et al.*, (2025) highlight key network management activities, including facilitating interactions, exploring new content, and organising collaboration among actors. Despite these benefits, network governance can face significant challenges, including high transaction costs, prolonged deliberations, and the risk of opaque decision-making (Kapucu & Hu, 2020).

2.12.5 Public Value and Accountability in Governance

Central to NPG is the creation of public value, which occurs when governments address priorities most important to citizens and ensure that societal benefits are delivered effectively (Grossi & Argento, 2022). This requires governments to act not only as providers but also as conveners and collaborators, balancing responsiveness to elected officials, citizens, and stakeholders while upholding constitutional values and accountability (Grossi & Argento, 2022). As such, governments must support reform initiatives that strengthen networks, sustain collaboration, and ensure equitable outcomes.

Business Process Reengineering in Public Administration

Business Process Reengineering (BPR), initially designed for private-sector competitiveness (Hammer & Champy, 1993), has increasingly influenced public sector reforms (Elapatha & Jehan, 2020). Scholars and policymakers recognise BPR as a strategic management tool that drives organisational transformation, enhances efficiency, and supports service delivery (Pembi & Abdulazeez, 2023). In the public sector, BPR aligns well with NPG principles, as it encourages rethinking processes, breaking down silos, and promoting integrated service delivery across networks.

The primary benefits of this approach include enhanced efficiency, improved service delivery, increased organisational agility, and significant cost reduction. BPR has been applied across various sectors, including the public sector (to enhance transparency), healthcare (to improve patient outcomes), and manufacturing (to optimise production).

2.12.6 Digital Governance Models for Developing Contexts

For an entity like KZN DSD, digital governance models that address the specific challenges of developing countries are particularly relevant. These models emphasise the use of Information and Communication Technologies (ICTs) not just for efficiency, but for empowerment. They focus on creating knowledge networks that can cut across traditional hierarchies, providing citizens with greater access to information and a stronger voice in their own governance. The key consideration is access over ownership, utilising public telecentres and mobile technologies to bridge the digital divide

2.12.7 Organisational redesign

Business Process Reengineering is a strategic approach that fundamentally rethinks and redesigns organisational processes to achieve substantial improvements in performance measures, such as efficiency, quality, and speed (Hammer & Champy, 1993). This methodology is particularly beneficial for addressing inefficiencies, outdated workflows, and operational challenges in organisations (Li *et al.*, 2023).

2.12.7.1 Key steps in organisational redesign using BPR

- I. *Identify the need for redesign:* This step requires organisations to assess existing processes to identify inefficiencies that hinder the achievement of strategic objectives (Xue *et al.*, 2023). Clear goals, such as improving service delivery and reducing costs, must be set to guide redesign efforts (Agrawal, Sahai & Goel, 2020).
- II. *Set strategic objectives:* Ensure that redesign initiatives are aligned with the organisation's strategic vision, and are relevant to key priorities (Tsai *et al.*, 2019). It is also important to define key performance indicators (KPIs) to monitor progress and measure success (Agrawal, Sahai & Goel, 2020).
- III. *Analyse existing processes:* This involves process analysis using tools like workflow mapping to identify critical areas for improvement (Hammer & Champy, 1993). In this way, inefficient processes and redundancies are pinpointed for elimination or restructuring (Tsai *et al.*, 2019).
- IV. *Radical redesign of processes:* The emphasis is on process simplification, elimination of redundancies, and cross-functional integration (Tsai *et al.*, 2019). Furthermore, the adoption of advanced technologies takes place. These technologies may include robotic process automation (RPA) and artificial intelligence (AI) to streamline operations (Tsai *et al.*, 2019).
- V. *Engage stakeholders:* Stakeholder collaboration ensures diverse perspectives and fosters support for redesign initiatives (Ngulube, 2020). Participatory methods, such as

workshops, can facilitate buy-in and idea generation (Bryson et al., 2014; Tsai *et al.*, 2019).

- VI. *Implement redesigned processes:* The project manager must carefully implement redesigned processes, either incrementally or through large-scale changes (Zondo, 2021). It is vital that adequate training be provided and that those resources for employees be made available to enable them to adapt effectively to new workflows (Grossi & Argento, 2022).
- VII. *Monitor and optimise performance:* Continuously evaluate redesigned processes using KPIs to identify areas for refinement (Agrawal *et al.*, 2020). Iterative improvement ensures sustainability and alignment with organisational goals (Attaran, 2004).

2.12.7.2 Benefits of organisational redesign with BPR

When successfully implemented, organisational redesign guided by Business Process Reengineering (BPR) principles yields a suite of interconnected benefits that fundamentally enhance public sector performance. The most immediate advantage is enhanced efficiency. By critically examining and streamlining workflows and eliminating non-value-adding redundancies, BPR directly reduces operational costs and cycle times, freeing up resources for more strategic purposes (Gong & Janssen, 2022; Muthuveloo & Teoh, 2021).

This internal streamlining is not an end in itself but a crucial enabler for the primary goal of improved service delivery. A BPR-led redesign shifts the focus from internal administrative convenience to an outside-in, citizen-centric perspective. By reorganising processes around life events and user needs, public agencies can significantly enhance accessibility, responsiveness, and overall stakeholder satisfaction (Mergel, 2023; Osborne, 2021).

Furthermore, this new process-oriented structure inherently fosters increased organisational agility. The move away from rigid, siloed hierarchies towards more integrated, digital workflows enable governments to adapt more rapidly to evolving citizen expectations, new policy demands, and disruptive technological changes (Torfinn & Sørensen, 2022). A deliberate cost-reduction strategy often accelerates this agility. A core component of modern BPR is the strategic integration of automation technologies such as robotic process automation (RPA) and AI, which lowers long-term operational expenditure while maintaining, or even improving, service quality and consistency (Gong & Janssen, 2022). In essence, BPR transforms the organisation from a static cost centre into a dynamic, value-driven entity capable of meeting the challenges of modern governance.

2.12.7.3 The Business Process Re-engineering challenges

Despite its potential, implementing Business Process Reengineering is fraught with significant challenges that organisations must proactively navigate to avoid failure. A primary and persistent obstacle is resistance to change, where employees, driven by fear of job displacement or scepticism towards new workflows, can derail initiatives. This underscores the critical need for robust change management strategies that address these human factors directly (Alsaadi, 2022; Kuipers *et al.*, 2021). Compounding this issue is a frequent lack of clear, strategic objectives. Without well-defined goals that are aligned with broader public value creation, BPR projects can easily lose direction and fail to secure sustained organisational commitment (Gong & Janssen, 2022).

Further complexities arise during technology integration, where the introduction of new digital tools into legacy systems and established workflows presents substantial technical and adaptive hurdles. Success depends on ensuring that technology complements, rather than overshadows, human expertise and organisational dynamics (Mergel *et al.*, 2021). Communication breakdowns across different levels of the organisation often exacerbate this technical challenge. Poor communication can foster misunderstandings and siloed efforts, making it essential to foster transparent and continuous dialogue to ensure all stakeholders are aligned (Torfing & Sørensen, 2022). Ultimately, all these challenges hinge on effective leadership and governance. Strong, committed leadership is indispensable for championing the initiative, maintaining strategic focus, and building the coalitions necessary to sustain momentum through inevitable setbacks (Muthuveloo & Teoh, 2021).

To successfully implement BPR, organisations must therefore adopt a holistic approach that systematically identifies re-engineering opportunities, proactively manages the change process, controls associated risks, and mitigates organisational stress to maximise the benefits of the transformation (Gong & Janssen, 2022).

Despite these challenges, the application of BPR principles remains relevant across diverse sectors. In the public sector, it is utilised to enhance citizen-centric service delivery and foster greater transparency in government operations (Osborne, 2021). Within healthcare, BPR initiatives aim to reengineer patient care pathways to reduce clinical inefficiencies and improve health outcomes (Torfing & Sørensen, 2022). Similarly, the manufacturing sector continues to adopt BPR by integrating lean processes and advanced IoT technologies to optimise production workflows and supply chains (Muthuveloo & Teoh, 2021).

In summary, organisational redesign through BPR serves as a powerful, albeit demanding, framework for enhancing operational efficiency and effectiveness. By leveraging stakeholder

collaboration, advanced technologies, and iterative improvements, organisations can navigate their inherent challenges to achieve sustainable benefits and ensure their operations are fully aligned with strategic goals in a complex and evolving environment.

2.12.7.4 Digital Governance Models for Developing Contexts

When these frameworks are evaluated for their suitability for the KZN DSD, a critical tension emerges. Frameworks like classic BPR and Lean Six Sigma are methodologically rigorous and focused on achieving measurable efficiency gains. However, their underlying logic is often rooted in a private-sector ethos that can be misaligned with the public sector's mission of creating public value. Conversely, concepts like citizen-centricity and public value are philosophically aligned with the KZN DSD's mandate but often lack the structured, actionable implementation methodologies needed to overcome entrenched bureaucratic inertia.

This leads to the identification of a clear conceptual gap: the absence of a hybrid, integrated framework that is simultaneously:

Methodologically Rigorous: Providing clear, structured steps for process analysis, redesign, and implementation.

Philosophically Grounded: Explicitly oriented around the principles of public value, citizen-centricity, and social equity.

Contextually Aware: Specifically designed to navigate the unique socio-technical realities of the South African public sector, including its resource constraints, governance challenges, and human capacity needs.

The strength of the TIPS™ framework lies in its holistic, transdisciplinary nature, which fosters an integrated view of change. It moves beyond a narrow focus on process or technology to consider the entire socio-technical system. While it is a robust conceptual model, a potential critique is its abstractness; the challenge lies in operationalising its high-level principles into concrete, actionable steps within a specific organisational context, particularly a public one with unique constraints.

The following table provides a comparative evaluation of the key transformation frameworks discussed.

Table 2.4: Evaluation of Digital Transformation Frameworks

Framework	Primary Focus	Approach (Radical vs. Incremental)	Key Tools	Strengths for Public Sector	Weaknesses for Public Sector
BPR	Efficiency, cost, speed	Radical, revolutionary	Process mapping, IT enablement	Potential for dramatic improvement in inefficient systems.	High risk of failure; neglects culture and people; top-down approach clashes with participatory governance.
TQM	Quality, customer satisfaction	Incremental, continuous	Quality circles, statistical process control	Fosters a culture of quality and employee involvement; customer-focused.	Can be slow to produce results; may lack the urgency needed for deep-rooted problems; less effective in data-poor environments.
Lean Six Sigma	Waste reduction, defect elimination	Incremental, data-driven	DMAIC, value stream mapping, statistical analysis	Provides a rigorous, evidence-based methodology; delivers measurable results.	Can be overly technical and rigid; may focus on internal process metrics at the expense of broader public value outcomes.
Da Vinci TIPS™	Holistic integration of Technology, Innovation, People, and Systems	Both (framework for managing change)	Systems thinking, stakeholder engagement	Provides a holistic, integrated view of transformation; balances technical and social factors.	Can be abstract and difficult to operationalize without a specific methodology; sustainability in public sector untested.

2.13 Empirical Literature Review: Digital BPR and Transformation in Practice

This section grounds the theoretical and conceptual discussions by reviewing empirical evidence. It examines documented studies of digital transformation and BPR in public service contexts to identify common patterns, success factors, challenges, and lessons learned.

2.13.1 Global and Regional Empirical Evidence

A review of international case studies offers valuable insights into the practical dynamics of public-sector transformation.

Global Cases in Public Service: The public health sector offers compelling examples. Studies on digital health transformation in countries such as Canada and Estonia highlight the importance of interoperable electronic medical records, clear data governance, and strategic engagement with private-sector technology partners. However, they also reveal significant barriers, including clinician resistance and payment models that disincentivise efficiency. The global response to the COVID-19 pandemic further accelerated digital health initiatives, underscoring the need for robust data-sharing infrastructure, ethical data use, and context-sensitive communication strategies. These cases demonstrate that even in well-resourced countries, the human and institutional dimensions of change are paramount.

Empirical Studies of BPR in South Africa

The African context presents unique challenges and opportunities. Studies on digital transformation in African higher education, for example, point to systemic weaknesses such as limited resources, underdeveloped infrastructure, and the persistent urban-rural digital divide. Despite these hurdles, there is evidence of progress driven by mobile technology and innovative partnerships. Within South Africa, the public social development sector has seen targeted efforts at modernisation. The South African Social Security Agency (SASSA), for instance, has embarked on a multi-phase BPR project to improve grant administration through new service channels and a redesigned operating model (Moabi, A.P., 2020). These local cases highlight the direct challenges of implementing BPR within the country's specific legislative and bureaucratic framework, reinforcing the need for context-specific solutions.

Several studies have explored the application and impact of BPR in various South African sectors, providing valuable context for this research. Zondo (2021) investigated the impact of BPR on labour productivity in the automotive assembly industry in KwaZulu-Natal, finding a positive relationship and recommending structural changes to improve performance. In the higher education sector, Kunene (2021) evaluated the impact of BPR in the academic

administration department at a University of Technology, highlighting the specific outcomes of reengineering in a public service-oriented academic environment.

Nkomo and Marnewick (2021) addressed the low success rate of BPR projects in South Africa's financial sector by developing a framework that integrates project and change management processes to guide implementation. Similarly, Fotso (2020) proposed an integrated framework for digitalisation and BPR to enhance the performance of South African banks. These studies indicate that while BPR is being actively implemented in South Africa, there is a clear need for context-specific frameworks to improve success rates.

2.13.2 The cultural challenge of Business Process Reengineering

Culture is a critical contextual factor that directly influences the outcome of BPR implementation. The Empirical Review is dedicated to examining evidence from practice across different settings. A subsection here would be the perfect place for a comparative analysis of how cultural nuances in the USA, Europe, India, and South Africa have shaped BPR success and failure, drawing directly on case studies and regional analyses.

Regional and cultural perspectives (USA, Europe, India, South Africa) are important for understanding why BPR fails or succeeds in different contexts. It also ties into the human element discussed earlier.

BPR in USA: In the United States, cultural challenges in BPR often stem from resistance to change and the hierarchical nature of many organisations. Employees may fear job losses due to automation and process redesign, leading to reluctance in adopting new workflows (Madsen & Slåtten, 2025). Additionally, the emphasis on individualism in American culture can hinder cross-functional collaboration, which is essential for BPR success (Fetais *et al.*, 2023). Effective change management strategies, including transparent communication and employee involvement, are critical to overcoming these challenges (Davenport, 2013; Fetais *et al.*, 2023).

BPR in Europe: The diversity of cultures across countries poses unique challenges for BPR. Differences in organisational norms, languages, and regulatory frameworks can complicate the implementation of standardised processes. Moreover, the strong emphasis on employee rights and unionisation in many European countries can lead to resistance against radical process changes (Tsai *et al.*, 2019). To address these challenges, organisations must adopt a culturally sensitive approach that aligns with local values and regulations (Ngulube, 2020).

BPR in India: Hierarchical organisational structures and traditional management practices often pose significant barriers to BPR. Employees may resist changes due to a preference

for stability and fear of disrupting established power dynamics (Satapathy *et al.*, 2021). Additionally, inadequate training and technological infrastructure can hinder the adoption of new processes (Ahmad *et al.*, 2007; Satapathy *et al.*, 2021). Overcoming these challenges requires a focus on employee empowerment, skill development, and fostering a culture of innovation (Al-Mashari & Zairi, 2000; Satapathy *et al.*, 2021).

BPR in South Africa: Cultural challenges in BPR are influenced by the country's socio-economic disparities and historical context. Concerns about job security and the impact of automation on employment often exacerbate resistance to change (Zondo, 2021). Furthermore, the need for inclusivity and stakeholder engagement in a diverse cultural environment adds complexity to BPR initiatives (Ngulube, 2020). Addressing these challenges involves prioritising transparent communication, fostering trust, and ensuring that BPR efforts align with broader social and economic goals (Bryson *et al.*, 2014; Zondo *et al.*, 2021).

Considering the above discussion, cultural challenges in BPR vary across regions due to differences in organisational norms, employee attitudes, and socio-economic contexts. Successfully addressing these challenges requires a tailored approach that considers local cultural dynamics, emphasises employee engagement, and aligns with organisational objectives.

2.13.3 The Empirical Gap

This review of the empirical literature culminates in the identification of a precise and significant research gap. While there is a growing body of research on digital transformation in the South African public sector, there is a marked scarcity of in-depth, empirical studies that focus specifically on public social development services at a provincial level. The unique mandate, client base, and operational challenges of an entity like the KZN DSD have not been sufficiently investigated.

Furthermore, while existing studies identify general success factors, very few attempt to synthesize these into a comprehensive, contextually-tailored implementation framework based on empirical evidence gathered from within such an organization. The literature describes what is needed (e.g., leadership) but provides little guidance on how to achieve it in this specific setting. This is the critical empirical void that the present study is designed to fill.

The following table synthesizes key findings from the empirical literature reviewed.

Table 2.5: Synthesis of Key Empirical Findings

Study/Source	Context (Country/Sector)	Methodology	Key Findings (Success Factors/Barriers)	Noted Limitations
Kelley et al. (2020)	Canada / Public Health	Qualitative Case Study	Barriers: Payment models rewarding in-person care, non-standard EMR systems, lack of external evaluation. Success Factors: Early partnership with clinical users.	Focus on startups attempting to scale, not internal government reform.
Various	Africa / Higher Education	Literature Reviews, Case Studies	Barriers: Limited resources, infrastructure gaps, digital divide. Enablers: Mobile technology, new partnership models, focus on digital culture.	Often broad and continent-level, lacking specific institutional depth.
PSA (2023)	South Africa / Social Security (SASSA)	Internal Report/Update	BPR project is multi-phased (initiation, assessment, design, implementation). Focus on multiple service channels (face-	Descriptive account of a project in progress; lacks critical analysis or outcome data.

Study/Source	Context (Country/Sector)	Methodology	Key Findings (Success Factors/Barriers)	Noted Limitations
			to-face, mobile, online). Redesigned regional and local office structures.	
Various	General / Public Sector	Literature Reviews	Common Barriers: Bureaucratic structures, resistance to change, skills gaps, lack of digital strategy. Success Factors: Leadership, training, clear communication.	Methodological weaknesses in the field: over-reliance on case studies and self-reported data; lack o

2.13.4 Critique of Existing Studies

While the existing empirical literature is informative, it is essential to approach it with a critical eye. A methodological review reveals several limitations that temper the conclusiveness of the findings:

Prevalence of Single-Case Studies: Much of the research, particularly in the public sector, relies on single-case study designs. While this approach provides a rich, in-depth understanding of a specific context, it limits the generalizability of the findings to other organisations or jurisdictions.

Reliance on Self-Reported Data: Many studies are based on interviews with, or surveys of, managers and public officials. This reliance on self-reported data can introduce bias, as participants may present an overly optimistic view of their initiatives or may not have a complete picture of frontline realities.

Cross-Sectional Nature: Most studies are cross-sectional, offering a snapshot of a transformation initiative at a single point in time. This methodology is ill-suited to capturing the dynamic, complex, and often non-linear process of organisational change. It fails to provide insight into the long-term sustainability of BPR efforts and how they evolve.

This critique underscores the need for more methodologically robust research in the field, including comparative case studies, longitudinal analyses, and mixed-methods approaches that triangulate data across multiple sources.

2.13.5 Comparing and Contrasting Findings

Despite the methodological limitations, a synthesis of the empirical literature reveals clear patterns of convergence and divergence.

Points of Convergence: Across diverse contexts, a consistent set of critical success factors for public sector digital transformation emerges. These include strong, visible leadership commitment; a comprehensive, well-communicated change management strategy; and early and continuous engagement with all relevant stakeholders, including frontline employees and citizens. These factors appear to be universally critical, regardless of the specific technology or process being changed.

Points of Divergence and Debate: There is far less consensus on other key issues. The debate between radical, top-down BPR versus incremental, bottom-up improvement remains unresolved in practice. Similarly, the role of technology is contested; some cases treat it as the primary driver of change, while others view it as a subordinate enabler of a human-led strategy. The appropriate balance between centralised strategic direction and localised, context-sensitive implementation is also a recurring point of tension.

2.13.6 Common Risks and Failure Factors in BPR Implementation

While BPR risks are a theoretical concern, a systematic discussion is most powerful when grounded in real-world evidence. The Empirical Review examines practical outcomes, including the well-documented high failure rates of BPR initiatives. A dedicated subsection here can synthesise findings from various studies on why projects fail, making the risks concrete and evidence-based rather than purely abstract.

Inherent risks in embarking on a BPR programme are real and must be managed:

- i. *Resistance to change:* Employees may resist the radical restructuring of processes, primarily due to fear of job loss or significant disruptions to established routines. This

resistance can hinder the successful adoption of redesigned processes (Satapathy *et al.*, 2021).

- ii. *Insufficient leadership and vision*: A lack of strong leadership and a clear strategic vision can lead to confusion during implementation. Effective leadership is critical for articulating objectives and motivating stakeholders to embrace the change (Madsen & Slåtten, 2025).
- iii. *High implementation costs*: Business Process Reengineering (BPR) requires substantial financial investment in advanced technologies, employee training, and operational restructuring. Budget constraints can significantly impact the programme's feasibility (Klijn *et al.*, 2025).
- iv. *Disruption of operations*: Redesigning workflows may temporarily disrupt routine operations, adversely affecting productivity and customer satisfaction during the transition period (Kassahun, 2024).
- v. *Risk of failure*: Poor planning, inadequate stakeholder engagement, or insufficient resource allocation can result in programme failure, leading to wasted efforts and resources (Kassahun, 2024).
- vi. *Overemphasis on technology*: Over-reliance on technological solutions without adequately addressing cultural and human elements within the organisation can hinder successful implementation (Tsai *et al.*, 2019).
- vii. *Complex integration*: Challenges Aligning redesigned processes with existing organisational systems and workflows can present significant challenges, particularly in large and complex organisations (Ngulube, 2020).
- viii. *Loss of institutional knowledge*: The elimination of specific processes or roles during reengineering efforts may inadvertently lead to the loss of critical institutional knowledge, reducing organisational innovation and expertise (Zondo, 2021).
- ix. *Limited stakeholder involvement*: Excluding key stakeholders from the planning and execution stages of the programme can result in misaligned goals, lack of commitment, and diminished support for the initiative (Bryson *et al.*, 2014; Zondo *et al.*, 2021).
- x. *Unrealistic expectations*: Organisations may overestimate the anticipated benefits of BPR while underestimating the associated challenges, leading to unrealistic expectations and potential disillusionment (Kassahun, 2024).

2.14 Synthesis of the Literature

This final analytical section draws together the theoretical, conceptual, and empirical strands to construct a unified argument that establishes the rationale and necessity for this research.

It synthesises what is known, articulates precisely what remains unknown, and justifies the methodological approach chosen to bridge this gap.

Drawing the Three Strands Together

The literature review has demonstrated a profound disconnect between the available scholarly tools and the practical needs of an organisation like the KZN DSD. The theoretical strand revealed that the foundational paradigms of radical change, like classic BPR, are theoretically flawed and practically unsuitable for the public sector's socio-political context. They offer ambition but lack applicability.

The conceptual strand showed that, while desirable concepts such as citizen-centricity and public value exist, they often remain philosophical aspirations, lacking the rigorous, actionable frameworks needed for implementation in a bureaucratic environment. They offer a destination but no clear map.

The empirical strand identified a consistent set of general success factors for digital transformation but found no specific, evidence-based models tailored to the unique context of provincial social development services in South Africa. It offers general advice but no specific guidance.

This synthesis reveals that the KZN DSD is operating in a vacuum. It is tasked with a mission of radical improvement. However, it is equipped with theories that do not fit, concepts that are not operationalised, and evidence that is not specific enough to guide action. This identified vacuum directly reinforces the importance of each of the study's research questions.

RQ1 (What are the current inefficiencies?): The literature confirms that public bodies suffer from bureaucracy and process fragmentation, but a deep, contextual diagnosis within KZN DSD is needed before any framework can be designed.

RQ2 (How can digital BPR be implemented?): The literature offers competing models (radical vs. incremental) but no clear answer for this specific context. This question must be answered through empirical investigation inside the organisation.

RQ3 (What are the critical success factors?): While general factors are known, their specific manifestation, priority, and interplay within KZN DSD's unique culture and constraints are unknown.

RQ4 (How can a tailored framework be designed?): This is the ultimate question that arises from the failure of the literature to provide one. The absence of an existing, suitable model makes the development of a new one the central task of this research.

2.15 Articulating What is Known and What is Unknown

Based on the literature, the state of knowledge can be articulated as follows:

What is known: The literature well establishes that radical process redesign is a theoretical possibility for transforming public services. Furthermore, the key conceptual pillars that should guide such reform, such as citizen-centricity, digital transformation, and collaborative governance under the New Public Governance paradigm, are clearly defined (Osborne, 2021; Torfing & Sørensen, 2022). There is also a broad empirical consensus on the general success factors for these initiatives, including the critical role of strong leadership, robust change management strategies, and deep stakeholder engagement to mitigate high failure rates (Mergel *et al.*, 2021; Kuipers *et al.*, 2021).

What is unknown: However, what remains unknown is how to adapt and integrate these disparate, well-understood concepts into a coherent, actionable, and sustainable implementation framework tailored to the unique constraints of a South African provincial social development department. The specific mechanisms for balancing ambitious transformation goals with the complex bureaucratic reality, severe resource limitations, and the constitutional imperative for meaningful public participation in this specific context are neither documented nor sufficiently understood. The literature provides a generic map, but not the contextual compass needed to navigate this particular terrain.

2.15.1 Status of BPR and Research Gap.

After reviewing debates and empirical studies, it is important to highlight the current status of BPR, existing gaps in research, and why the study is relevant. This positions the research within the literature.

While BPR has been extensively studied, several research gaps remain:

- i. *Integration of emerging technologies:* Although there is growing interest in leveraging technologies like AI and RPA, limited research exists on how these tools can be systematically integrated into BPR methodologies to achieve optimal outcomes (Tsai *et al.*, 2019).
- ii. *Sector-specific applications:* Most studies focus on generic BPR frameworks, with insufficient attention given to sector-specific challenges and adaptations, particularly in

industries like agriculture, small enterprises, and non-profit organisations (Ngulube, 2020). The current study on “Developing a framework for implementing digital Business Process Reengineering: An analysis of KwaZulu-Natal Department of Social Development” is an example of the need for *sector-specific applications* and the need to consider cultural and regional contexts within the overriding *political-public sector* challenges.

- iii. *Evaluation frameworks*: There is a lack of comprehensive frameworks for evaluating the long-term impact of BPR initiatives on organisational performance, sustainability, and employee well-being (Kassahun, 2024).
- iv. *Cultural and regional contexts*: Research on the influence of cultural and regional factors on BPR implementation is limited, especially in developing countries where socio-economic conditions may significantly affect outcomes (Kassahun, 2024).
- v. *Public Sector challenges*: While BPR has been applied in the public sector, there is limited research on overcoming bureaucratic resistance and aligning BPR initiatives with public policy objectives (Bryson *et al.*, 2014).
- vi. *Interdisciplinary approaches*: Few studies explore interdisciplinary approaches that combine BPR with other methodologies, such as Lean Management or Total Quality Management (TQM), to address complex organisational challenges (Kassahun, 2024).

The current status of BPR research highlights its relevance in addressing organisational inefficiencies and adapting to dynamic environments. However, addressing the identified *research gaps* is essential to advancing the field and ensuring the successful implementation of BPR across diverse contexts.

2.15.2 Establishing the Rationale for the Chosen Methodology

The precisely defined knowledge gap, a lack of understanding of how to implement transformative change within the unique constraints of a South African provincial department, creates a powerful imperative for a specific research methodology. This problem is not one of theoretical abstraction or generalisable correlation, but of practical, contextualised process. It demands an approach capable of uncovering the complex "how" and "why" behind implementation challenges.

Consequently, a qualitative, constructivist single-case study design is the most logical and rigorous path forward. This methodology is uniquely suited to generate the deep, nuanced understanding required. It allows for an exploration of the lived experiences, perceptions, and practical wisdom of individuals within the KwaZulu-Natal Department of Social Development. The aim is to understand the organisation from the inside-out, ensuring that any proposed

framework is not an abstract model imposed externally, but is instead empirically grounded and co-constructed from the specific realities it is intended to serve.

To navigate this complex inquiry, a conceptual framework was developed to structure the research journey and ensure conceptual coherence. This framework, depicted in Figure 2.3 below, served as both a map and a mirror, guiding the investigation and prompting critical reflection throughout the process

2.16 The conceptual framework

The **conceptual framework** guiding the practical aspects of the study is captured in figure 2.3 below

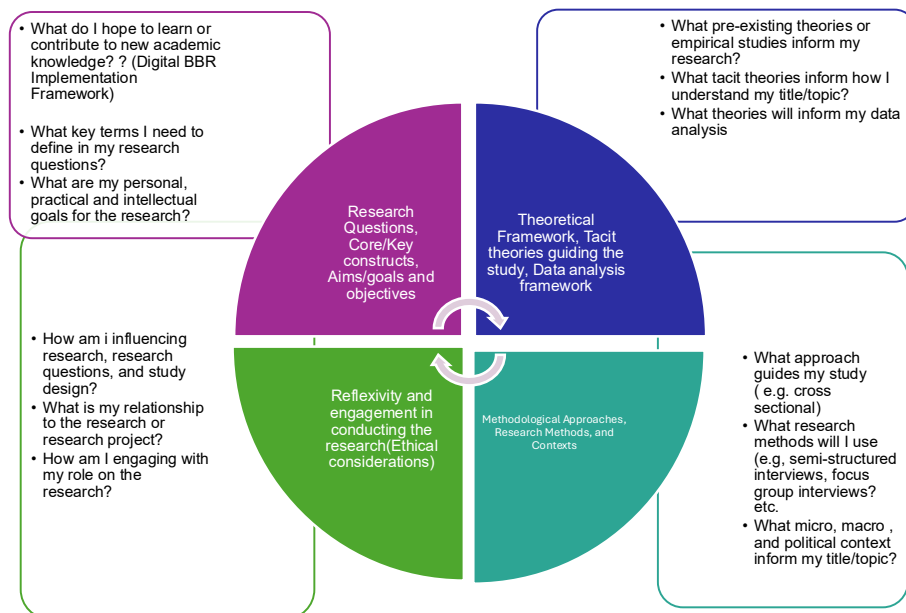


Figure 2:3 Conceptual framework for the study

Source: Own creation

The Conceptual Framework is the architect's blueprint for the entire research project. It shows all the key components and how they should relate to one another. The framework visually articulates how the study's theoretical foundations inform the examination of core concepts within the case study context, through a specific methodological lens, to produce a relevant outcome. It ensured that every decision, from research question refinement and methodological selection to the practice of reflexivity was consciously linked back to the study's overarching purpose, maintaining analytical rigour and focus.

2.17 Conceptual Review for Digital Business Process Reengineering

Recent empirical studies underscore numerous important success elements that influence the attainment of desired goals in BPR operations. Digital maturity is among the most significant factors. Digital maturity denotes the degree to which a business has established cohesive digital infrastructure, effective data governance frameworks, and a proficient digital workforce. Kane (2019) and Westerman *et al.*, (2014) assert that technology in isolation does not generate value; instead, value arises when digital tools are integrated into organisational frameworks, leadership methodologies, and decision-making processes. Organisations with elevated digital maturity typically demonstrate smooth system integration, dependable data quality, cybersecurity awareness, and a workforce equipped with both technical and analytical skills. In the absence of such foundations, BPR initiatives frequently provide disjointed automation instead of comprehensive transformation.

A crucial aspect of effective BPR is customer-centricity. The internal focus of traditional process design was frequently on control and efficiency. However, the client or service recipient is at the core of redesign efforts in modern BPR. Customer path mapping, pain point identification, and service delivery personalisation are all made possible by digital interfaces, analytics, and real-time feedback systems. With the help of digital technologies, companies can transition from standardised procedures to data driven, responsive, and flexible interactions. In service-oriented and public sector settings, where citizens are expecting more smooth, transparent, and easily accessible digital services, this is especially pertinent. Thus, customer-centric BPR improves perceived value and confidence in addition to efficiency.

The success of BPR is also significantly shaped by the culture of the organisation. It is inevitable that habits, power dynamics, and professional identities will be disrupted by radical change. According to Kane *et al.*, (2019), companies need to foster cultures that are agile, collaborative, and psychologically safe. Workers must have the confidence to try new things, grow from mistakes, and question established procedures. BPR frequently runs against fear, resistance, and compliance-based behaviour in inflexible, hierarchical organisations, which thwarts change initiatives. On the other hand, BPR initiatives have a higher chance of being adopted and maintained when executives encourage transparency, cross-functional

collaboration, and ongoing learning. Therefore, culture both promotes and inhibits process innovation (Kane *et al.*, 2019).

To successfully navigate the complexities of BPR, leadership is equally important. Digital leaders need to be able to manage change, comprehend technology, and have a strategic vision. They must successfully distribute resources, unite stakeholders behind common goals, and present a convincing case for why reengineering is required. Furthermore, BPR leadership is not limited to upper management. To convert strategy into operational realities, middle managers and process owners are essential. They serve as intermediaries between operational personnel, technical experts, and outside partners. BPR runs the risk of disintegrating and dying quickly in the absence of solid governance frameworks and leadership commitment.

BPR needs to be viewed as more than just a technical intervention from a socio-technical standpoint. It is an all-encompassing change that incorporates institutional frameworks, technology, people, and processes. Although it placed a strong emphasis on drastic change, classical BPR frequently overlooked the organisational and human aspects of change. By acknowledging that digital tools interact with organisational culture, skills, incentives, and power dynamics, BPR overcomes this problem. Workflow logic, system architecture, job roles, performance management, and learning methods must all be considered concurrently while redesigning a process. Instead of producing short-term performance gains, BPR creates long-term organisational capacities when these dimensions are in line.

2.17 Linking BPR and Digital Transformation

The relationship between Business Process Reengineering (BPR) and digital transformation is increasingly conceptualised in contemporary public management and information systems literature as a sequential, interdependent, and enabling continuum of organisational change. While digital transformation is broadly understood as the integration of digital technologies into organisational processes, services, and governance structures, recent scholarship emphasises that technology alone is insufficient to achieve meaningful transformation without fundamental process redesign and organisational restructuring (Ahmad. and Van Looy, 2020).

Within this conceptualisation, BPR serves as a foundational mechanism for digital transformation, providing the structural and analytical basis upon which digital technologies can be effectively implemented. BPR is traditionally defined as the radical redesign of core business processes to achieve dramatic improvements in performance, efficiency, service

delivery, and organisational outcomes. In the context of the public sector, this involves breaking down functional silos, eliminating redundant processes, and restructuring workflows to enable integrated, citizen-centric service delivery (Nadkarni and Prügl (2021)).

Recent studies in public-sector transformation reinforce the argument that digital transformation initiatives often fail when implemented without prior or concurrent process reengineering. This is because digital technologies tend to automate existing inefficiencies rather than resolve structural weaknesses embedded in legacy administrative systems . Therefore, BPR is increasingly viewed as a precondition for successful digital transformation, ensuring that organisational processes are simplified, standardised, and optimised before digitisation occurs.

From a theoretical standpoint, the BPR digital transformation relationship can be understood through three key dimensions:

Structural Enablement

BPR provides the structural redesign required to align organisational processes with digital capabilities. Without this restructuring, digital systems risk reinforcing fragmented workflows rather than enabling integration and interoperability.

Process Optimisation

Digital transformation depends on efficient and streamlined processes. BPR ensures that processes are re-engineered to remove inefficiencies, duplication, and bureaucratic delays, thereby creating a suitable environment for digital tools to operate effectively (O'Higgins 2023).

Organisational Readiness and Change Management

BPR facilitates cultural and operational readiness by preparing institutions for change. It addresses resistance to change, clarifies roles, and improves process transparency factors that are critical for the adoption of digital systems (Butt 2020).

Baiyere, *et al*, (2020) highlights that digital transformation is not merely a technological shift but a socio-technical and organisational transformation involving culture, governance, skills, and processes. In this regard, BPR becomes the mechanism that operationalises this transformation by aligning institutional structures with digital ambitions.

In public-sector contexts, particularly in developing economies, this relationship is even more significant. Institutions often operate with legacy systems, manual processes, and fragmented service delivery models. Introducing digital technologies without prior reengineering risks perpetuating inefficiencies. Consequently, scholars argue that BPR should be positioned as an enabler and preparatory phase of digital transformation, rather than a parallel or competing initiative (Van Tonder, *et al*, 2020).

In summary, the convergence of contemporary digital strategy and organisational theory with traditional reengineering ideas is reflected in contemporary BPR. It blends the resource-based view's strategic logic, the dynamic capabilities framework's adaptive orientation, and Hammer and Champy's (1993) radical redesign philosophy. While leadership, culture, and governance offer the institutional support required for transformation, data, analytics, and digital platforms serve as the catalyst for ongoing process innovation. As a result, BPR becomes an organisational competence that allows institutions to react proactively to changes in the market, society, and technology rather than a one-time initiative.

Future studies should investigate how ethical frameworks, adaptive governance models, and digital leadership are supporting long-term reengineering initiatives. Organisations will require governance frameworks that strike a balance between creativity and responsibility, adaptability and control, and automation and human judgement as digital ecosystems grow increasingly complex. According to Vial (2019), digital transformation is dynamic by nature and necessitates constant coordination of organisational design, technology, and strategy. Therefore, in an increasingly digital environment, it will be crucial to comprehend how organisations institutionalise continual BPR processes to advance both theory and practice

2.18 Chapter Summary

This chapter has navigated the extensive literature on Business Process Reengineering and digital transformation to build a case for this study. The review established three key points. First, foundational BPR theories, while influential, are largely unsuited to the public sector due to their mechanistic worldview and neglect of human and political factors. Second, while modern concepts like citizen-centricity provide a necessary philosophical orientation, they lack the actionable methodologies required to drive change in complex bureaucracies. Third, the empirical literature identifies general success factors but fails to provide a specific, evidence-based implementation model for the unique context of South African provincial social development services.

This comprehensive review culminates in the identification of a clear and compelling knowledge gap. This study addresses a critical gap in the literature by developing a context-

specific framework for implementing digital BPR in a South African public social development institution, for which no such integrated, empirically grounded model currently exists.

Having established the theoretical, conceptual, and empirical lacuna, the subsequent chapter outlines the research methodology designed to construct this much-needed framework. It will detail the research design, data collection methods, and analytical strategies employed to move from the identified problem to a proposed solution.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

In Chapter 1, an orientation of the research was provided. This study focuses on addressing the identified methodological gap by developing a comprehensive framework for KZN DSD implementing digital Business Process Reengineering in the department. Chapter 2 presented a synoptic view of literature on business process reengineering. This Chapter 3, outlines the methodology employed to address the research objectives identified in Chapter 1. A qualitative approach was deemed appropriate, given its ability to explore participants' experiences and perspectives in depth (Creswell, 2014).

The primary research question is: *How can a comprehensive framework for implementing digital Business Process Reengineering (BPR) be developed to address the inefficiencies and challenges faced by the KwaZulu-Natal Department of Social Development?* As a result of the problem statement and primary research question referred to in Chapter 1, the overarching aim of this study was to develop a comprehensive framework for implementing digital business process reengineering, thereby addressing the inefficiencies and challenges faced by the KwaZulu-Natal Department of Social Development. It is essential to analyse the existing knowledge as a foundation for the current study. In this way, the researcher aims to generate new knowledge that could make the implementation of digital Business Process Reengineering more purposeful, efficient, and sustainable. Consequently, this chapter seeks to operationalise the theme of the research design and methodology for the current study, as well as substantiate the methodological choices made. A qualitative approach was selected due to its capacity to thoroughly explore participants' experiences and perspectives (Creswell, 2014; Yadav, 2022).

The research design is applied to ensure that suitable research methods are employed to achieve the goals and objectives set out in Chapter One. Hence, the rationale for discussing the research design and methodology is two-fold: Firstly, to provide the plan or blueprint for the research (conceptual framework); and secondly, to enable the researcher to anticipate an appropriate research design that ensures the trustworthiness (credibility, transferability, dependability, and confirmability) of the research results. Therefore, the chapter begins by discussing conceptual and theoretical frameworks of the study, the philosophical position of the study, followed by the elaboration on the outline and justification of the methodological choice.

3.2 Philosophical perspectives (position) of the study

This study was guided by Saunders' Research Onion, a widely accepted framework for designing a rigorous and methodologically sound research process (Saunders, Lewis, & Thornhill, 2019). The framework, comprising six layers, provides a structured path from overarching philosophical assumptions to specific techniques and procedures. The first and most fundamental layer is research philosophy, which establishes the foundational beliefs about how knowledge is developed. This study's philosophical position is rooted in interpretivism, a decision that fundamentally shapes all subsequent methodological choices (Phair and Warren, 2021).

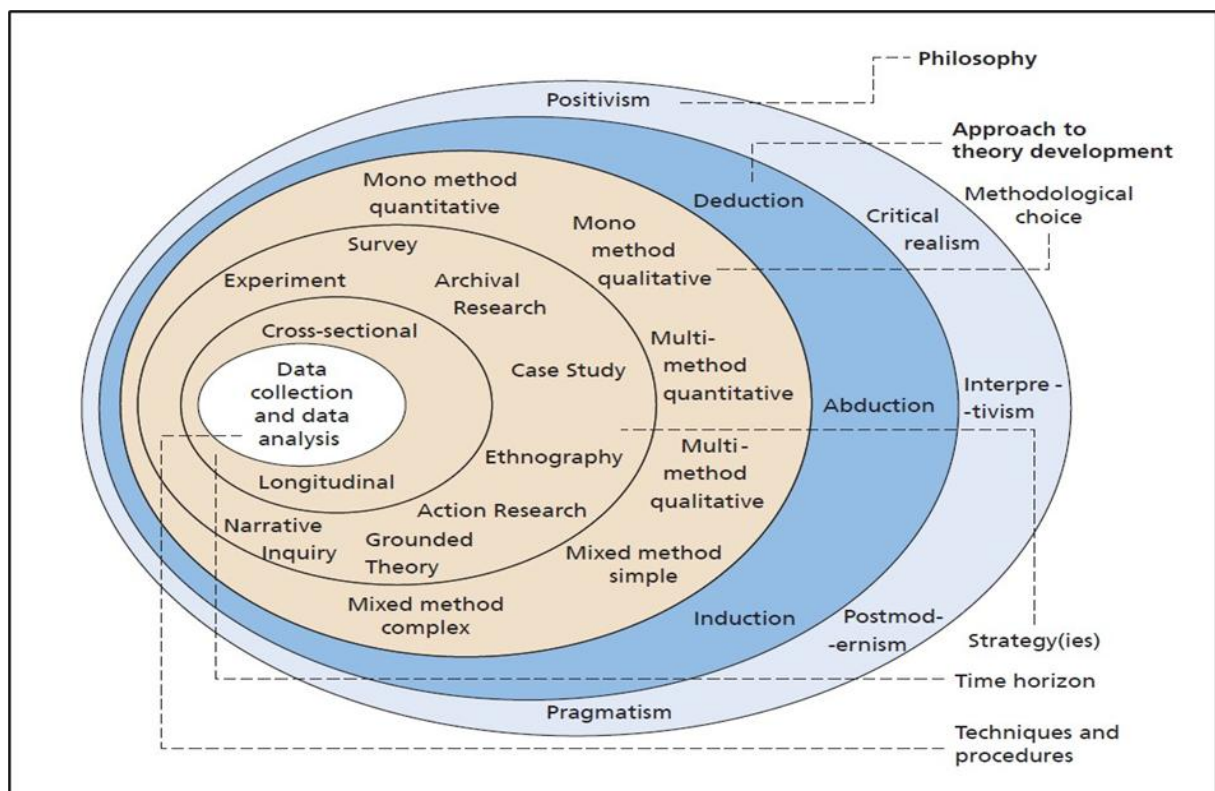


Figure 3:1 Research Onion

Source: Research onion (Saunders *et al.*, 2023)

The Research Onion has been adopted as a reference guide for this research and provides invaluable information as a bedrock for this research study. The Research Onion is a visual framework designed to guide researchers through the process of developing their research methodology. This approach was introduced by Mark Saunders, Philip Lewis, and Adrian Thornhill in their book "Research Methods for Business Students" (Saunders *et al.*, 2019). This study employs layers of an onion as a metaphor for the various stages researchers must

navigate. The breakdown in detail of the six key layers discussed in paragraphs 3.3.1-3.3.7 is as follows:

- i. *First layer is Philosophies (Outer Layer)*: This includes the overarching research philosophy, like positivism, interpretivism, realism, or pragmatism, which shapes the approach. As discussed above, *interpretivism* is the philosophy underpinning the study.
- ii. *Second layer is Approaches*: Whether the research is deductive (testing hypotheses) or inductive (generating theory). The current study uses an *inductive approach* to generate a theory, and in this case, develops a framework for implementing digital business process reengineering for the KwaZulu-Natal Department of Social Development
- iii. *Third layer is Strategies*: This layer covers how the research is conducted, such as through experiments, case studies, surveys, or ethnography. The study employs a case study strategy, focusing on a single case of the KwaZulu-Natal Department of Social Development, which is tasked with implementing a digital business process reengineering initiative in the province.
- iv. *Fourth layer is Choices*: Refers to the method choices like qualitative, quantitative, or mixed-methods research. This study employs a qualitative methodological approach to answer the research question: *How can a comprehensive framework for implementing digital Business Process Reengineering (BPR) be developed to address the inefficiencies and challenges faced by the KwaZulu-Natal Department of Social Development?*
- v. *Fifth layer is Time Horizons*: Includes cross-sectional (snapshot) or longitudinal (over time) studies. *This is a cross-sectional study* in a specific moment. A cross-sectional study is a type of observational research method commonly used in various fields, including public health, epidemiology, and social sciences. It involves collecting data from a population, or a representative subset, at a single point in time or over a short period. This study design enables researchers to identify and analyse the prevalence of specific characteristics, conditions, or outcomes within a population (Saunders *et al.*, 2023).

Key features of a cross-sectional study, according to Phair and Warren (2021), Saunders *et al* (2019) are:

- i. *Snapshot in Time*: It provides a "snapshot" of a particular group or population at one specific moment.

- ii. *Observational*: Researchers do not manipulate variables; they observe and record them.
- iii. *Prevalence Focus*: It is excellent for studying the prevalence of diseases, behaviours, or conditions.
- iv. *Quick and Cost-Effective*: Since it does not involve following participants over time, it is typically faster and less expensive than longitudinal studies. However, one limitation of this method is that it cannot establish cause-and-effect relationships, as it captures data at one specific point, making it impossible to determine temporal sequences between variables.

Sixth layer is Techniques and Procedures (Inner Layer): This is where the researcher decides on specific data collection methods, analysis techniques, and tools. The sixth layer of the Research Onion model, known as "Techniques and Procedures," represents the core or inner layer. It encompasses the practical methods and procedures that researchers use to collect and analyse data. This layer is highly specific to the research study and involves decisions such as:

- i. *Data Collection Methods*: Whether to use surveys, interviews, experiments, observations, etc. In the current study, *semi-structured and focus group interviews* were used.
- ii. *Data Analysis Techniques*: The statistical or qualitative methods applied to interpret the collected data. Thematic analysis techniques were employed in the study.
- iii. *Sampling Strategies*: How participants or data sources are selected (random sampling, purposive sampling, etc.). *Purposive sampling* includes stakeholders with expertise or direct involvement in the department's processes and were intentionally selected to provide targeted insights (Makwana *et al.*, 2023). A sample of 52 participants, selected from a population of 750, took part in the study.

This layer is all about execution and operationalising the research strategy developed in the outer layers. It brings the *conceptual framework* into action. Each layer must be peeled back systematically to ensure a comprehensive and coherent research design.

Ethical Considerations: Ensuring the research adheres to ethical standards like confidentiality and informed consent. Informed Consent, Confidentiality and Ethical Approval were all observed in the current study (Creswell & Poth, 2018; Saunders, Lewis & Thornhill, 2019).

3.2.1 Philosophical Underpinnings of the Study

A methodologically sound research design requires a coherent and justified pathway from foundational assumptions to practical execution. To provide this structured logic, the study is guided by Saunders' Research Onion, a seminal framework for developing robust methodological choices (Saunders *et al.*, 2019). The model conceptualises research design as a multi-layered process, progressing from abstract philosophical commitments to specific techniques for data collection and analysis. This layered approach ensures methodological coherence, where every strategic choice is logically consistent with the underlying philosophical stance (Saunders *et al.*, 2019). The journey begins at the outermost and most formative layer: research philosophy.

3.3 The Interpretivist Paradigm: A Foundation for Understanding Social Reality

This study is grounded in the interpretivist paradigm, a philosophical stance predicated on the assumption that social reality is not singular and objective, but is subjectively and intersubjectively constructed through human experiences, interactions, and language (Denzin & Lincoln, 2018; Mustofa, 2023). Its core epistemological concern is not with generalisable laws but with understanding the nuanced, context-laden meanings that individuals and groups ascribe to their social world (Mustofa, 2023).

This philosophical position was selected as it is ontologically and epistemologically aligned with the central research aim: to develop a deep, contextualised understanding of the complex social phenomena surrounding digital transformation and Business Process Reengineering (BPR) within the KwaZulu-Natal Department of Social Development. The challenges of implementation, such as resistance, adapting work practices, and negotiating meaning around new technologies, are not objective facts to be measured but are embedded in the lived experiences and perceptions of organisational actors (Myers, 2020). An interpretivist stance provides the necessary philosophical justification for privileging these subjective meanings as valid and essential data (De Villiers, 2022).

To further substantiate this choice, it is contrasted with alternative philosophical positions:

Positivism, which seeks causal explanations through objective, value-free observation and measurement, was deemed inappropriate as it would fail to capture the subjective interpretations and complex social constructions at the heart of the research problem (Saunders *et al.*, 2019; Ryan, 2018).

Pragmatism, while focused on practical problem-solving, was considered insufficient for its methodological eclecticism and lack of a deep ontological commitment to understanding the nature of social reality, which is central to this inquiry (Phair & Warren, 2021).

Critical Realism, which seeks to uncover the underlying structural mechanisms that generate events, was also considered (Fletcher, 2017; Pandey *et al.*, 2025). While it shares with interpretivism a rejection of positivism, its primary aim is explanatory critique rather than empathetic understanding (Archer *et al.*, 2016). Given that this study's objective is to understand lived experience rather than critique power structures, interpretivism was judged to be the more direct fit (Pandey *et al.*, 2025).

In adopting an interpretivist philosophy, the study acknowledges that knowledge is co-constructed through the interaction between the researcher and participants (Adil, Khan, and Ahmad, 2024). It values the voices and narratives of stakeholders as the primary means of accessing the multifaceted reality of organisational change (Lincoln *et al.*, 2018). This foundational commitment to understanding subjective experience directly informs the inductive approach, qualitative strategy, and case study design elaborated in the subsequent layers of the research onion.

3.3.1 Justification of Methodological Choices

As discussed in Chapter 1 (Paragraph 1.7, Research Design and Methodology), the study adopted a qualitative research design, focusing on developing a framework for implementing digital Business Process Reengineering within the KwaZulu-Natal Department of Social Development. The study employed a *qualitative approach*, as this method provides depth and richness in understanding complex phenomena (Patterson *et al.*, 2023). Given the dynamic nature of business processes and the socio-economic context of KZN DSD, qualitative research allowed for detailed exploration of the lived experiences of stakeholders. Furthermore, qualitative methods have gained prominence in organisational and management literature (Patterson *et al.*, 2023) and among researchers due to their provision of greater flexibility through various data elicitation and analysis techniques. This methodology encompasses case studies, ethnographies, grounded theory, phenomenology or a mix of two or more of these approaches. Details of the study's research design, population and sampling, data collection, data analysis, Trustworthiness and Credibility, as well as ethical consideration follow in the next paragraphs.

Table 3.1: Summary of Methodological Choices

CONCEPT	DESCRIPTION
Paradigm	Interpretivism / Constructivism (3.3.4)
Approach to theory	Inductive
Typology	Exploratory research
Methodology	Qualitative
Method/s	Interviews based on phenomenological stance: Phenomenology, as a qualitative research approach, prioritises the deep exploration of participants lived experiences through structured interviews and rigorous analysis. Rooted in philosophical inquiry, phenomenology examines how individuals interpret and construct meaning within their lived realities (Bryant,2011). Through systematic engagement with participants, researchers seek to uncover nuanced perspectives, facilitating a comprehensive understanding of subjective experience.
Instruments (Data collection)	Semi-structured interviews and focus group discussions, <i>Document Analysis</i>
Time horizon	Cross-sectional

3.3.2 Research design of the study

As referenced in the Da Vinci Research guide (2024), Takona (2024) defines research design as a systematic framework, a master plan that delineates the methodologies and procedures for data collection and analysis. It establishes the research type, paradigm, underlying theory, sampling strategies, data sources, collection techniques, measurement considerations, and analytical procedures (Saunders *et al.*, 2023). A well-constructed research design is essential for producing a rigorous and high-quality research report (Saunders *et al.*, 2023). Notably, a scientific research design consists of seven distinct steps (Saunders *et al.*, 2023), viz.

- i. Assessment of relevant existing knowledge of the phenomenon
- ii. Formulation of concepts and proposition
- iii. Proposition, Idea or hypothesis
- iv. Research methodology to test the proposition, idea or hypothesis
- v. Acquisition of meaningful data (method(s))
- vi. Analysis and evaluation of data

- vii. Proposal for an explanation of the phenomenon and a statement of new problems raised by the research (Saunders *et al.*, 2023).

In this study, the outlined methodological steps were systematically applied, with an exploratory research design serving as the foundational framework. The mode of inquiry was interactive, facilitating direct engagement with participants.

Exploratory Research Design: This study, as explained above, employed a qualitative, exploratory approach as the foundational framework, focusing on understanding the digital business process reengineering experiences and perspectives of government employees within the jurisdiction of the KwaZulu-Natal Department of Social Development. This design is well-suited for identifying critical success factors and challenges in digital BPR, where limited prior studies may exist (Saunders *et al.*, 2023).

3.3.3 Population and sampling

Population: Saunders *et al.*, (2019) describe a population as a collective of occurrences from which a sample is drawn or a group of individuals from whom the desired data are sought. In the context of the KZNDS, the population consisted of its entire user base.

In 2024, the KZNDS has a database of **750** active system accounts a diverse group of individuals with varying roles, responsibilities and levels of engagement with departmental systems (Microsoft Active Directory, 2024).

A purposive sampling strategy (selecting 52 respondents from a population of 750 users) was employed to gather rich and relevant information about participants' experiences and perspectives. The sample size was determined by saturation levels in qualitative research. Purposive sampling involves selecting stakeholders with expertise or direct involvement in the department's processes, with the intention of providing targeted insights (Saunders *et al.*, 2023). These choices ensure that the study produces actionable findings while respecting the complexity of public-sector environments. Table 3.1 contains details about the population and sample size for the study.

Table 3.1: Population and sample size

Location of Computer Users	Population	Sample Per Location
Head Office (174 Mayors Walk and 208 Hoosen Haffejee)	230	14
Midlands Cluster (Amajuba, Umzinyathi and uThukela)	105	7
Northern Cluster (uMkhanyakude, Zululand and King Cetshwayo)	180	14
Durban Cluster (Ilembe, eThekwini South and eThekwini North)	107	9
Southern Cluster (Ugu, Harry Gwala and uMgungundlovu)	128	8
Total	750	52 (target) Actual 31 based on saturation levels

Once the sample size was determined, proportional distribution among the various clusters within the DSD ensured adequate representation across different departmental business units.

By adhering to rigorous sampling procedures and consulting established guidelines, the researcher ensured that the resulting sample was representative of the broader population, thereby enhancing the validity and generalisability of the research findings (Saunders *et al.*, 2019).

3.3.4 Data Collection Methods

The researcher used one-on-one semi-structured interviews, which combined elements of both structured and unstructured interviews, allowing for flexibility while maintaining focus. Focus group discussions were conducted in a comfortable and neutral setting. All responses to questions were in writing on the semi-structured questionnaires, while focus group discussions were recorded with participants' permission.

- i. *Semi-Structured Interviews*: Primary data was collected through semi-structured interviews with key stakeholders such as department officials, IT specialists, and process managers. This methodology employs a case study approach, utilising semi-

structured interviews with a purposive sample of employees to explore their individual experiences and perspectives. The researcher targeted system users in the KZN DSD, capturing a broad sample (Tolbert & Mossberger, 2006). The researcher conducted face-to-face interviews because they allowed the researcher to be physically present with all participants during the data collection process. This method enabled flexibility and encouraged participants to share their experiences and perspectives in detail, which is crucial for qualitative inquiry (Flick, 2007). Interview questions were guided by the research objectives, including identifying inefficiencies, critical success factors, and practical implementation strategies.

- ii. *Document Analysis*: Supplementary data were gathered from departmental policies, annual reports, and process manuals to gain insights into existing practices and constraints (Kayesa & Shung-Kin, 2021).

During the data-gathering process, the researcher enlisted the services of IT specialists to locate and collect information from all KZN DSD district offices, two head offices, and four clusters (i.e., 12 district offices).

3.3.5 Qualitative Data Analysis and Interpretation

The qualitative data collected through semi-structured interviews and focus groups were analysed using a systematic thematic analysis approach, as delineated by Saunders *et al.*, (2019) and Saunders *et al.*, (2023). This method was selected for its theoretical flexibility and capacity to facilitate a rich, detailed, and complex account of the data, which is essential for addressing the "how" and "why" questions central to this study. The analysis was an iterative process, moving back and forth between the data, the emerging codes, and the final themes, and was conducted with the support of the qualitative data analysis software, ATLAS.ti (version 12). The use of ATLAS.ti was instrumental in managing the voluminous textual data, ensuring a structured, auditable, and rigorous analytical process (Welsh, 2022).

The analysis followed a six-phase recursive process:

Familiarising with the Data: This initial phase involved repeated reading of the interview and focus group transcripts, alongside listening to the audio recordings. This immersive process enabled the recording of initial ideas, patterns, and impressions, thereby forming a foundational understanding of the data's depth and breadth (Nowell *et al.*, 2017).

Generating Initial Codes: Systematic coding was conducted to identify fundamental segments of meaning within the data. Using ATLAS.ti, codes were generated to label features of the data that were relevant to the research questions. This process was both data-driven

(inductive) and concept-driven (deductive), allowing for the emergence of unexpected insights while remaining anchored to the study's conceptual framework (Saldana, 2021).

Searching for Themes: The initial codes were then collated and sorted into potential overarching themes. This phase involved analysing how different codes could combine to form a coherent pattern, moving from a granular to a broader level of analysis. ATLAS.ti's query and visualisation tools were leveraged to explore relationships and connections between codes, aiding in the identification of candidate themes (Bazeley, 2020).

Reviewing Themes: This critical phase involved a two-level review. First, the candidate themes were checked against the coded extracts to ensure they formed a coherent pattern. Second, they were reviewed in relation to the entire dataset to verify their accuracy and ensure that they faithfully represented the data's narrative. This process refined the themes, leading to some being split, merged, or discarded (Braun & Clarke, 2019).

Defining and Naming Themes: Once a coherent thematic map was established, each theme was precisely defined and given a distinct name. This involved articulating the essence of each theme and its significance to the research questions, ensuring a clear and compelling story was being told about the data.

Producing the Report: The final phase involved weaving the analytic narrative together, selecting vivid and compelling examples from the data, and finalising the analysis in Chapter 4. This chapter constitutes the results and findings of this thesis, linking the evidence back to the literature and conceptual framework to draw meaningful conclusions.

3.3.6 Ensuring Trustworthiness and Credibility

To ensure the rigour and trustworthiness of the qualitative findings, this study adhered to the criteria established by Lincoln and Guba in 1985 (Alexander, 2019; Haq *et al.*, 2023), employing specific strategies throughout the research process:

Credibility: To ensure that the findings accurately represent the participants' realities, several techniques were employed. Data triangulation was achieved by collecting data from multiple sources (interviews with different levels of management, focus groups with frontline staff). Furthermore, member checking was conducted, whereby a summary of the initial findings was presented to a subset of participants to verify the accuracy and resonance of the interpretations (Creswell & Poth, 2018; Alexander, 2019).

Transferability: In alignment with the principles of qualitative inquiry, this study prioritises transferability over statistical generalizability. This is achieved through the provision of a "thick description" (Ponterotto, 2021) of the research context, encompassing the specific operational environment of the KZN DSD, the data collection procedures, and the detailed

characteristics of the 31 participants involved. By offering a rich, contextualised account, the study enables readers and researchers working in analogous public-sector settings to assess the relevance and potential application of the findings to their own contexts, thereby facilitating analytical generalisation (Hays & McKibben, 2021).

Dependability: To demonstrate that the research process is logical, traceable, and consistent, a dependability audit was maintained. This involved meticulous documentation of all methodological decisions, changes in the research design, and the evolution of the coding framework within ATLAS.ti creating a clear audit trail that could be followed by an external reviewer (Miles *et al.*, 2020).

Confirmability: This criterion addresses the degree to which the respondents shape the findings and not the researcher's bias. The use of ATLAS.ti helped objectify parts of the coding process, and the maintained audit trail allows others to confirm that the findings flow from the data (Berger, 2015; Alexander, 2019).

3.3.7 Ethical Considerations

The study was conducted under the guiding principles of ethical research, as outlined below:

Ethical Approval: Formal approval was obtained from the Da Vinci Institute Ethics Review Board prior to the commencement of any data collection activities.

Informed Consent: All potential participants were provided with a comprehensive information sheet detailing the study's purpose, procedures, risks, and benefits. Written consent was secured prior to their participation, affirming their voluntary involvement and their right to withdraw at any time without penalty (Saunders *et al.*, 2023; Creswell & Poth, 2018).

Confidentiality and Anonymity: To protect the identity of participants and the organisation, all identifiable information was removed from the transcripts. Pseudonyms are used throughout the thesis, and data is stored securely on password-protected servers, with access limited to the research team, in compliance with data protection regulations.

3.4 Reporting

Data and findings are presented clearly and concisely, using rich quotes and examples to illustrate the experiences and perspectives of the participants. The results of qualitative methods are more descriptive, and the inferences can be drawn quite easily from the obtained data.

3.4.1 Strengths of the Study

- i. *Depth of insights*: The qualitative approach provided rich and detailed insights into the specific context of KZN DSD, which is vital for designing a tailored framework.
- ii. *Contextual relevance*: Incorporating perspectives from stakeholders ensured the framework addresses the department's unique challenges and needs (Alexander, 2019).
- iii. *Flexibility*: The exploratory design and semi-structured interviews allowed the study to adapt to emerging themes and participant insights (Creswell & Poth, 2018).

3.5 Summary of the Chapter

This chapter presented the research methodology adopted to achieve the objectives of developing a comprehensive framework for implementing digital Business Process Reengineering (BPR) within the KwaZulu-Natal Department of Social Development (KZN DSD). Guided by Saunders' Research Onion, the study was grounded in the interpretivist paradigm, which emphasises understanding social reality through participants' experiences and perspectives. This philosophical stance informed the adoption of a qualitative, exploratory, and phenomenological research design, enabling an in-depth examination of the lived experiences of departmental stakeholders involved in digital transformation processes.

A case study strategy focusing on KZN DSD was employed, using an inductive approach to generate theory from empirical evidence. Data were collected through semi-structured interviews and focus group discussions, complemented by document analysis of organisational policies, reports, and manuals. The purposive sampling technique ensured the inclusion of participants with direct involvement and expertise in departmental operations. Although a target of 52 participants was established, the final sample size of 31 was determined based on data saturation.

Data analysis followed a six-phase thematic analysis process supported by ATLAS.ti software, which enhanced rigour, traceability, and transparency in coding and theme generation.

To ensure trustworthiness, the study adhered to Lincoln and Guba's (1985) criteria of credibility, transferability, dependability, and confirmability, employing strategies such as data triangulation, member checking, thick description, and maintaining an audit trail. Ethical standards, including informed consent, confidentiality, anonymity, and institutional review board clearance, were strictly adhered to.

Overall summary, Chapter 3 established a coherent and methodologically sound foundation for the study, ensuring that the subsequent analysis and findings presented in Chapter 4 are credible, contextually relevant, and grounded in the lived realities of participants.

CHAPTER 4

FINDINGS OF THE STUDY

4.1 Introduction

This chapter presents the findings derived from the analysis of interview data collected from participants within the KwaZulu-Natal Department of Social Development. The primary objective of this study is to develop a framework for implementing digital Business Process Re-engineering by first identifying current inefficiencies, determining how digital BPR can address these challenges, and establishing the critical success factors for its implementation.

The findings are organised and presented according to the four main themes that emerged from the data analysis. The chapter begins by detailing the Pervasive Operational Inefficiencies and Systemic Challenges currently hindering the department's performance. It then explores the Pathways and Barriers to Effective Digital BPR Implementation, identifying both opportunities and obstacles. The third section synthesises the Critical Success Factors for Public Sector Digital BPR, outlining the essential elements required for a successful transformation. Finally, the chapter concludes by presenting the core Principles for a Tailored Digital BPR Framework, which are designed to address the unique context of the KZN DSD. This structure provides a comprehensive overview of the current state, the potential for change, and the strategic considerations necessary for a successful digital transformation.

The qualitative data collected from stakeholder interviews were systematically analysed using ATLAS.ti 12. The software facilitated the organisation, coding, and thematic analysis of interview transcripts, enabling both deductive and inductive identification of patterns, categories, and themes relevant to the study objectives. Codes were iteratively refined to capture nuanced insights from participants, allowing for the development of a comprehensive understanding of critical success factors, contextual constraints, and principles for designing a tailored digital BPR framework. ATLAS.ti 12 also supported the visualisation of findings through models, word clouds, and heat maps, which highlighted the frequency and co-occurrence of themes. This approach provided a structured, transparent method for linking participant perspectives to the study's objectives, ensuring the resulting framework was grounded in empirical evidence. The following thematic and sub-themes emerged from the process and inform the structure of this chapter.

Table 4.1: ATLAS.ti Thematic coding matrix

ATLAS.ti Coding Scheme with Code IDs

Code ID	Code Name	Parent Code ID	Description	Example Questions
MT1	Central Theme 1: Pervasive Operational Inefficiencies and Systemic Challenges		Deep-rooted, systemic problems are hindering KZN DSD's performance.	
1.1	Process Fragmentation and Manual Workflows	MT1	Siloed operations, poor coordination, reliance on paper/manual processes causing delays and errors	1.1.1, 1.1.2, 1.1.3, 1.6.1
1.2	Technological Constraints and Digital Gaps	MT1	Inadequate IT infrastructure, poor system interoperability, and connectivity issues	1.2.1, 1.2.2
1.3	Human Capital and Resource Deficits	MT1	Staff shortages, digital skills gaps, and insufficient teams for digital transformation	1.4.1, 1.7.1
1.4	Policy and Compliance Challenges	MT1	Bureaucratic rigidity, complex compliance monitoring, and slow procurement processes	1.5.1, 1.5.2
1.5	Negative Stakeholder Experience	MT1	Service delays, inaccessibility, and lack of citizen-centric service delivery	1.3.1, 1.3.2
MT2	Central Theme 2: Pathways and Barriers to Effective Digital BPR Implementation		Explores enablers and obstacles for digital BPR implementation in KZN DSD	
2.1	Readiness for Digital Transformation	MT2	Urgency for change, assessment of current digital skills and technology	2.1.1, 2.2.1, 2.9.1
2.2	Opportunities for Digital Integration	MT2	Areas/processes that can benefit from automation, streamlining, mobile/offline tools	2.3.1
2.3	Critical Role of Stakeholder Involvement	MT2	Inclusive co-design with staff, beneficiaries, and partners for successful BPR	2.4.1, 4.10.1
2.4	Barriers to Implementation	MT2	Resistance to change, fear of job loss, lack of leadership support	2.5.1, 2.5.2

Code ID	Code Name	Parent Code ID	Description	Example Questions
2.5	Foundational Requirements for Success	MT2	Skills development, capacity building, and aligning new systems with policies and regulations	2.6.1, 2.6.2, 2.7.1, 2.7.2, 2.8.1
MT3	Main Theme 3: Critical Success Factors for Public Sector Digital BPR		Essential elements that must be in place for successful digital BPR implementation	
3.1	Strong Leadership and Commitment	MT3	Visible, adaptive leadership that champions the change and provides strategic direction	3.1.1
3.2	Skilled Workforce and Human Capital Development	MT3	Investing in digital literacy, training, and appointing digital champions to drive adoption	3.4.1, 3.9.1
3.3	Adequate Technology and Infrastructure	MT3	Reliable, integrated, and secure digital infrastructure is a foundational prerequisite	3.3.1, 3.10.1
3.4	Effective Change Management and Culture Shift	MT3	Proactive strategies to manage resistance, communicate benefits, and foster a new organisational culture	3.5.1, 3.7.1
3.5	Supportive Enablers	MT3	Early stakeholder engagement, performance measurement, adequate resource allocation, risk management, and policy alignment	3.2.1, 3.6.1, 3.8.1
MT4	Main Theme 4: Principles for a Tailored Digital BPR Framework		Core design principles that must underpin the proposed framework for KZN DSD	
4.1	Contextualization as a Design Imperative	MT4	Tailoring the framework to the unique needs, operational environments (urban-rural), and constraints of KZN DSD	4.1.1, 4.2.1–4.2.2

Code ID	Code Name	Parent Code ID	Description	Example Questions
4.2	Stakeholder Inclusivity and Co-Creation	MT4	Continuous engagement with staff, citizens, and partners in framework design	4.3.1, 4.10.1
4.3	Technology Integration and Customisation	MT4	Leveraging and upgrading existing technologies while ensuring new tools are fit-for-purpose	4.4.1, 4.5.1
4.4	Human-Centric Capacity Building	MT4	Focusing on psychological readiness, continuous learning, and support systems for staff	4.5.1, 4.6.1
4.5	Sustainability and Continuous Improvement	MT4	Embedding feedback loops, monitoring & evaluation mechanisms, and scalability into the framework	4.7.1, 4.8.1, 4.9.1

4.2 Primary Research Findings from the Data

4.2.1 Demographic Characteristics

Gender Distribution

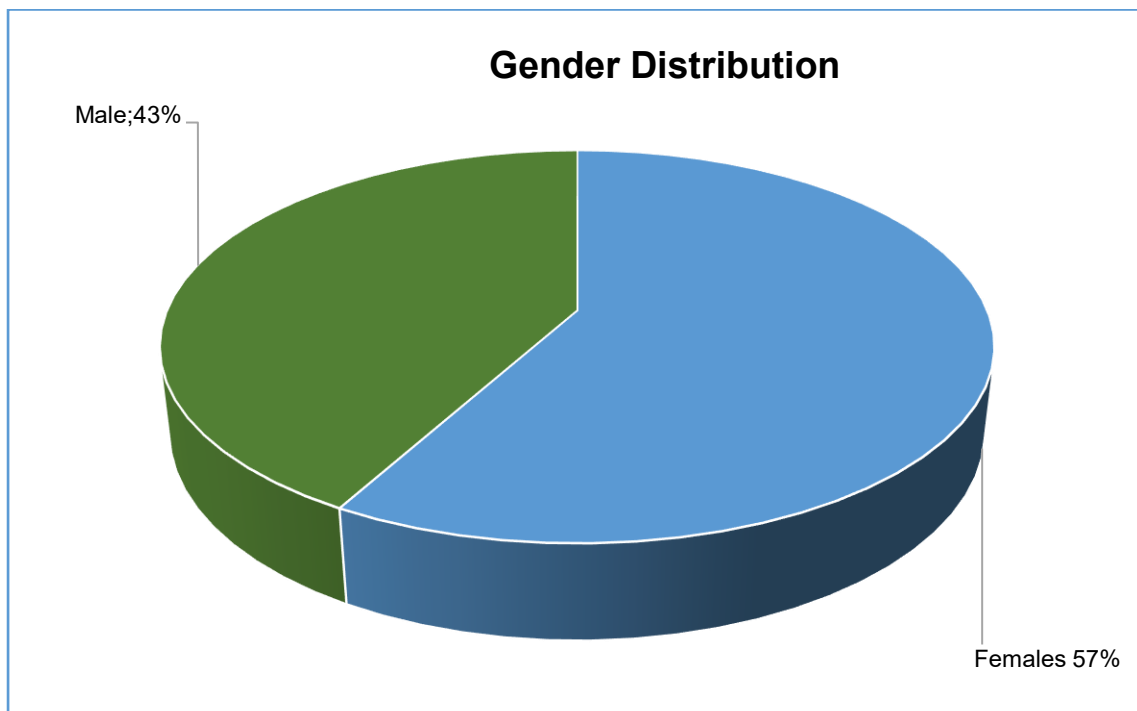


Figure 4:1 Gender Distribution

The data indicate a higher representation of females (57%) than males (43%) among the respondents. This is consistent with broader patterns observed in social development and

care-related sectors, where female employment is often predominant. Gendered occupational norms and the historical feminisation of the care world may shape this trend.

Table 4.2: Years of Experience and Qualifications

Demographic	Variable	Frequency	Percentage (%)
Years of Experience	Less than 5 years	2	8%
	6 – 10 years	9	29%
	11 – 20 years	13	41%
	More than 21 years	7	22%
	Total	31	100%
Qualification Level	Diploma / Junior Degree	15	47%
	Honours / BTech	14	45%
	Master's / PhD	2	8%
	Total	31	100%

The demographic data provides insights into the experience and educational background of the sample population.

Years of Experience: The distribution of work experience among participants reveals a diverse professional landscape. A small proportion (8%) have less than five years of experience, representing individuals at the early stages of their careers who are still building foundational skills and gaining exposure to industry norms. The largest portion of respondents falls within the 11–20 years category (41%), indicating a strong presence of seasoned professionals with substantial expertise who are likely occupying leadership or highly specialised roles. Meanwhile, those with 6–10 years of experience (29%) represent mid-career professionals, balancing practical experience with growing strategic insight as they transition into managerial or specialist positions. Finally, the group with more than 21 years of experience (22%) comprises highly experienced leaders and advisors who contribute a wealth of institutional knowledge and a long-term strategic perspective. Together, these proportions illustrate a workforce that blends emerging talent with deep expertise, fostering both innovation and stability within the industry.

Qualification Level: The respondents' educational profiles indicate a well-balanced mix of practical and advanced qualifications. Nearly half (47%) hold a Diploma or Junior Degree, reflecting a strong foundation in technical and operational skills. These individuals are likely to occupy hands-on roles that require applied expertise and contribute significantly to the functional aspects of their organisations. A slightly smaller but substantial portion (45%) possesses Honours or B.Tech degrees represent professionals with advanced undergraduate qualifications who are well-positioned for managerial or specialised roles. They bring both theoretical understanding and practical experience, enabling them to bridge strategic and operational functions effectively. Only a small share (8%) of respondents hold postgraduate qualifications such as a Master's or PhD, indicating a select group with highly specialised or research-oriented expertise often engaged in strategic leadership or analytical roles. Overall, the data suggest that the workforce is composed mainly of practically skilled and experienced professionals, complemented by a smaller segment of academically advanced individuals who enhance the sector's strategic capacity and innovation.

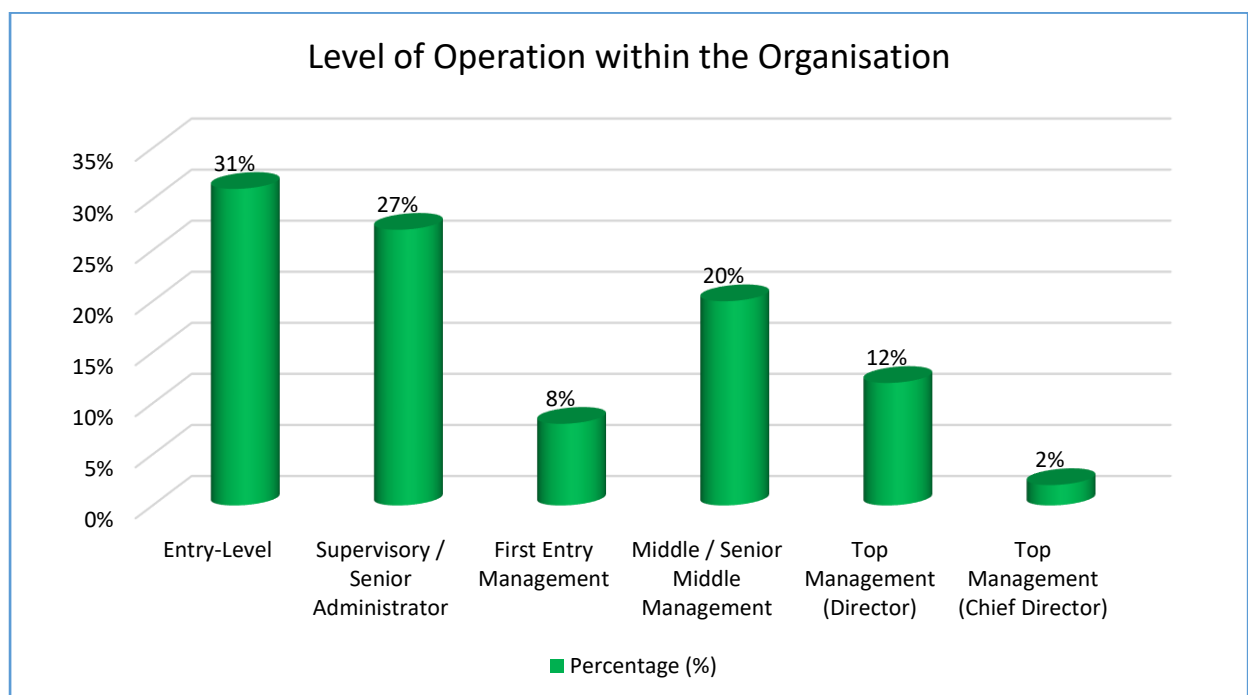


Figure 4:2 Level of Operation within the Organisation

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Length of Tenure in the Department

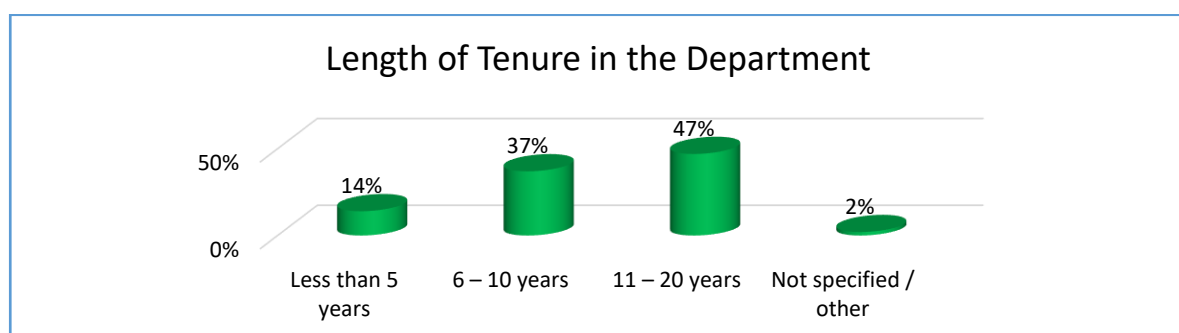


Figure 4:3 Level of Tenure in the Department

The data from Figure 4.3 provides an overview of employee tenure within the KZN Department of Social Development, highlighting the Department's workforce stability and experience.

A relatively small portion (14%) of employees have been with the Department for less than five years. This group represents newer additions to the organisation, indicating that while fresh perspectives and skills exist, most employees have substantial experience. A significant 37% of the workforce has been with the Department for 6 to 10 years, which reflects a well-established portion of the staff who have likely developed a strong understanding of the Department's operations and culture.

The largest group (47%) has been with the Department for 11 to 20 years, signalling a highly experienced and long-serving workforce. These employees will likely hold senior or middle management positions and possess valuable institutional knowledge, contributing to the Department's stability and continuity. Their extensive tenure demonstrates a deep organisational commitment and expertise. A small percentage (2%) of respondents did not specify their tenure, which might reflect a data entry issue or indicate employees whose tenure status does not fit typical categories.

Overall, the KZN Department of Social Development benefits from a seasoned workforce, with 84% of employees having six or more years of experience. This high tenure level suggests strong employee retention, institutional knowledge, and a committed workforce. The relatively small proportion of employees with less than five years of tenure (14%) could imply stability, with fewer newer hires and opportunities for fresh insights and innovation.

4.3 Main Theme 1: Operational Inefficiencies and Systemic Challenges

The findings indicate that inefficiencies within the KwaZulu-Natal Department of Social Development (KZN DSD) are systemic in nature, shaped by interdependent structural, procedural, and technological constraints. Rather than being discrete problems, these inefficiencies operate in a self-reinforcing cycle that constrains organisational effectiveness, undermines staff morale, and delays service delivery to beneficiaries.

Three interrelated sub-themes emerged as central to understanding these operational challenges: process fragmentation, manual workflows, and resistance to human capital. Each reflects a dimension of inefficiency that not only hampers operations individually but also amplifies weaknesses across the system.

To substantiate these findings, a Matrix Coding Query was conducted in ATLAS.ti to identify the extent to which participants contributed evidence across these themes. The resulting

table is not a simple output, but rather the product of iterative coding, querying, and visualisation processes, ensuring a rigorous synthesis of participant accounts. The subsections that follow present each sub-theme in detail, supported by participant narratives and coded evidence.

Table 4.3 below summarises these themes, illustrating their operational manifestations, representative participant accounts, and the level of consensus achieved. The table serves as an empirical anchor for the detailed discussion that follows, where each sub-theme is unpacked with further narrative analysis and supporting evidence.

Table 4.3: Matrix Coding of Entrenched Manual Processes and Resistance to Change

Theme	Description of Inefficiency	Representative Participant Quotes	Level of Consensus
Inefficient Manual Workflows	Pervasive use of paper-based systems for core services (e.g., grant applications, SCM requisitions, approvals). This creates severe bottlenecks, duplicates effort, slows service delivery, and makes information retrieval difficult.	“Social Relief of Distress grant application process is slow because it is a manual paper-based process, which results in the entire process being slow and causing a bottleneck.” (P11)	<i>Strong Consensus (29 out of 31 participants described specific, impactful manual processes as a primary cause of delay.)</i>
		“The reliance on paper-based filing systems causes inefficiencies and makes it difficult to retrieve documents quickly.” (P22)	
		“Creation copies of paper-based forms for record keeping purposes. manual movement of paper-based forms up the value chain.” (P1)	
Process Fragmentation & Data Silos	Reliance on physical documentation and a lack of integrated digital systems result in	“Manual documentation of social workers and community development practitioners' reports is a big problem. A lot of our records are still physical, which means they can get lost or misfiled,	<i>Strong Consensus: (27 out of 31 participants cited lack of integration, data</i>

	fragmented processes. Data is duplicated across silos, and records are at a high risk of being lost or misfiled, resulting in delays and errors.	leading to delays and inefficiencies.” (P8) “We have to manually transfer data from one system to another, increasing the risk of data errors.” (P9) “The systems lack integration. We have to duplicate efforts because the systems do not talk to each other.” (P4)	<i>duplication, or disconnected systems as a key inefficiency.)</i>
Human Capital & Resistance to Change	Widespread fear of digital adoption is driven by job insecurity, perceived complexity, and concerns over increased workload. A deep-seated familiarity with manual systems creates a significant cultural barrier to transformation.	“Employees fear change and are hesitant to adopt new technologies. They often think that new digital solutions will introduce more work for them. They also fear losing their jobs...” (P2) “Resistance to change is a major obstacle because the staff is more familiar with the manual paper system.” (P3) “Yes, there are challenges, some users are resistant to technology advancement and change from the manual paper process.” (P6)	<i>Consensus: (24 out of 31 participants explicitly identified staff resistance and fear as a major obstacle to implementing new processes.)</i>
Inadequate Digital Infrastructure & Skills	Outdated hardware, unreliable network connectivity	“The infrastructure and tools of trade are outdated. Slow connectivity and lack of basic ICT knowledge cause many delays.” (P3)	Strong Consensus: (28 out of 31 participants cited technological or

	(especially in rural areas), and a fundamental lack of digital skills prevent the effective use of technology. This erodes confidence in digital solutions and reinforces dependence on manual methods.	“Outdated computers and software make it hard to work efficiently. Even basic tasks take much longer than they should.” (P17)	skill-based limitations as a critical barrier to efficiency and digital adoption.)*
		“The most significant hinderance... is the slow network connection or absence of network infrastructure in certain rural and urban areas.” (P2)	

4.3.1 Process Inefficiencies and Resistance in the KZN DSD

4.3.1.1 Process Fragmentation

The findings indicate that process fragmentation is a defining feature of inefficiency in the KZN DSD, rooted in the continued reliance on disconnected, paper-based systems. Reports and applications are frequently documented manually, which not only introduces delays but also heightens the risk of loss and duplication. As Participant 8 observed, “manual documentation of social workers and community development practitioners’ reports is a big problem,” highlighting how fragmentation disrupts service continuity across units.

Crucially, this inefficiency is exacerbated by the absence of system integration. As Participant 3 noted, “many sections use different systems that do not work well together, causing inconsistencies and duplication in terms of the data provided.” These silos compel staff to engage in repetitive data entry, reinforcing inefficiency, increasing error rates, and diluting accountability.

From an analytical perspective, fragmentation here is not simply a technical issue but a structural barrier: it reflects a lack of alignment between information management systems and organisational processes. The result is a cycle where inefficiencies are normalised, service quality is compromised, and staff are disincentivised from adopting digital solutions. This positions fragmentation as a systemic constraint that directly addresses RQ1 by illustrating how entrenched process design undermines organisational performance.

4.3.1.2 Inadequate Digital Infrastructure and Skills

A strong consensus (28 of 31 participants) emerged that the Department's technological limitations constitute a significant impediment to efficiency. Outdated hardware, unreliable network connectivity, especially in rural areas, and limited ICT competencies prevent effective digital adoption. As Participant 3 explained, "The infrastructure and tools of trade are outdated. Slow connectivity and lack of basic ICT knowledge cause many delays," while Participant 17 underscored that "outdated computers and software make it hard to work efficiently. Even basic tasks take much longer than they should." These accounts reveal that digital inadequacies are not only technical flaws but structural constraints that limit the organisation's capacity to modernise.

Critically, poor connectivity further entrenches exclusion, with Participant 2 stressing that "the most significant hindrance... is the slow network connection or absence of network infrastructure in certain rural and urban areas." This structural inequity widens the efficiency gap between regions, undermining the Department's ability to deliver consistent services. Even when staff are willing to engage with digital processes, inadequate infrastructure and insufficient skills act as systemic barriers to transformation, reinforcing dependence on manual workflows and hindering the integration of digital solutions.

4.3.1.3 Manual Workarounds

A near-unanimous consensus (29 of 31 participants) highlights that manual workarounds are central to understanding operational delays within the KZN DSD. Staff consistently reported that, in response to fragmented systems and inadequate digital infrastructure, they adopt compensatory practices, such as duplicating forms, manually transferring documents, and tracking approvals by hand, to maintain workflow continuity. As Participant 11 noted, *"the SRD application is a manual paper-based process which results in the entire process being slow and causing a bottleneck"* (P11). Similarly, Participant 22 observed, "The reliance on paper-based filing systems causes inefficiencies and makes it difficult to retrieve documents quickly" (P22), while Participant 1 described, "Creation copies of paper-based forms for record keeping purposes... manual movement of paper-based forms up the value chain" (P1).

Analytically, these practices can be interpreted as organisational coping mechanisms: they emerge to bridge systemic gaps but, over time, institutionalise inefficiency. The duplication of forms, while mitigating the immediate risk of document loss, simultaneously embeds redundancy into core workflows such as Social Relief of Distress grant applications, supply chain requisitions, and case reporting. These workarounds lengthen processing times and

consume resources that could otherwise be used to enhance service delivery, creating a self-reinforcing cycle of inefficiency. Systemic inadequacies drive manual practices, which normalise delays, thereby reducing the perceived urgency for structural reform.

From an organisational behaviour perspective, manual workarounds reveal adaptive yet maladaptive patterns. Initially, they provide stability in an under-resourced environment, allowing staff to meet operational demands despite infrastructural constraints. However, as these practices become routine, they institutionalise stagnation, creating procedural inertia that sustains bottlenecks and delays. In effect, the very mechanisms designed to manage risk (form duplication, manual routing) transform into barriers to efficiency, highlighting a misalignment between process design and operational realities.

In summary, the data suggest that manual workarounds are both symptom and driver of inefficiency: they are necessary adaptations to systemic shortcomings, yet their routinization perpetuates delays and resource wastage. Effective interventions must therefore target both infrastructure gaps and entrenched compensatory behaviours, acknowledging that practices initially adaptive at the individual level can become maladaptive at the organisational level.

4.3.1.4 Staff Resistance

The persistence of manual workarounds has become embedded in the organisational culture, fostering resistance to change. Employees perceive paper-based processes as reliable and familiar, even as inefficiencies accumulate. As Participant 2 observed, “Employees fear change and are hesitant to adopt new technologies. They often think that new digital solutions will introduce more work for them.” This sentiment reflects an underlying tension between perceived job security and the impact of technological change.

Participant 3 highlighted how the comfort of manual systems acts as a cultural anchor, sustaining outdated practices. This resistance is not simply a matter of individual reluctance but is reinforced by tenure and institutional history; nearly half of the staff have over 11 years of service, making long-standing habits deeply entrenched. From an analytical standpoint, staff resistance highlights the social dimension of inefficiency, where cultural inertia and a fear of change hinder digital reforms from taking root, even when technical solutions are available

4.3.1.5 The Self-Reinforcing Cycle of Inefficiency

Findings reveal that process fragmentation, manual workarounds, and staff resistance interact to create a self-reinforcing cycle that sustains inefficiency within the KZN DSD. Fragmented systems necessitate manual practices, which consume additional time and

resources, normalise inefficiency, and generate further work through safeguards such as duplicating forms to prevent document loss (P1). Over time, these workarounds become embedded in institutional routines, turning inefficiency into an accepted norm.

Human factors further intensify this cycle. Staff, particularly those with long tenure, have grown accustomed to paper-based processes, which they perceive as familiar and reliable despite their drawbacks. As a result, resistance to digital adoption is high, as echoed by 24 out of 31 participants who explicitly identified staff resistance and fear as major obstacles to implementing new processes. Employees fear that new systems may increase their workload or threaten job security (P2; P3). This cultural resistance entrenches reliance on outdated workflows, making process innovation difficult to implement.

The interplay of these technical and human barriers illustrates why entrenched inefficiencies persist despite their apparent limitations. Breaking this cycle requires a holistic Business Process Reengineering (BPR) approach that simultaneously addresses system redesign, digital integration, and structured change management. Only by tackling both the operational and cultural dimensions can the KZN DSD disrupt the cycle, improve efficiency, and realign its processes with its service delivery mandate.

4.3.1.6 Implications for KZN DSD's Mission

These findings are directly tied to the KwaZulu-Natal Department of Social Development's mission to "transform society by building conscious and capable citizens through the provision of integrated social development services" (KZN DSD, 2025). The persistence of fragmented, paper-based systems undermines this mission by delaying service delivery, reducing accuracy, and limiting accountability. At a time when the department faces rising service demands and resource constraints, such inefficiencies further widen the gap between mandate and performance.

Below is an ATLAS.ti mind map analysis of participants' responses identified three interrelated themes that underpin the persistence of manual processes within the KwaZulu-Natal Department of Social Development.

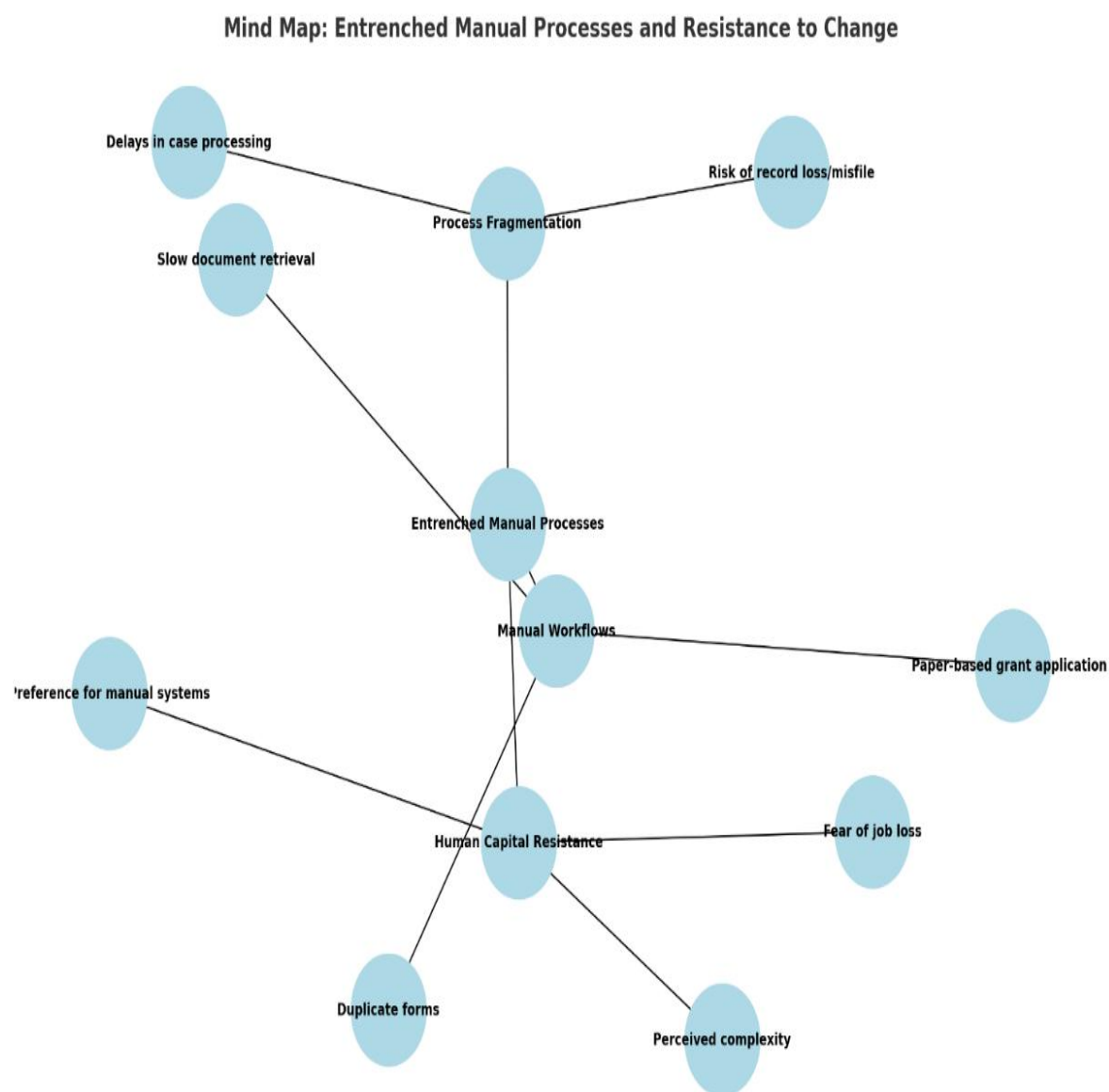


Figure 4:4 Mind Map: Entrenched Manual Processes and Resistance to Change

4.3.2 KZN DSD's Operational Challenges: Level of Concern Analysis

The following table (4.2) is a summary that powerfully demonstrates the KZN DSD's operational challenges are not random but are an interconnected system of failures. The table offers a more advanced and nuanced perspective compared to the initial qualitative analysis in Table 4.1. While both address the same core problems, they serve different analytical purposes. Table 4.2 illustrates the extent and severity of each problem across the organisation. The heatmap does not contradict the initial findings but enhances them with empirical weight and strategic clarity. It transforms qualitative concerns into quantifiable business cases for intervention. The initial analysis explains the "why" behind the problems, while the heatmap provides the "what first" for solutions. Both are essential for developing a

practical BPR framework. The clear takeaway from the BPR framework is that it must be a multi-pronged approach focused on the high-concern triad: immediately investing in human capital (training, devices), modernising core technological infrastructure (hardware, connectivity), and utilising that new capacity to dismantle and digitise manual workflows systematically.

Explanatory Note: The self-constructed *"Level of Concern"* is a synthesised metric based on the frequency of participant mentions and the perceived severity of the issue's impact on daily operations and service delivery. The colour coding reflects the collective perception of the issue's negative impact on organisational efficiency.

Red (High Concern): Critical, high-impact barriers that severely impede core service delivery and require immediate strategic intervention.

Amber (Moderate Concern): Significant inefficiencies that cause daily challenges but have established workarounds; they are priorities for medium-term improvement.

Green (Low Concern): Issues recognised by staff but not perceived as primary obstacles to their core work.

Table 4.4: Heatmap Showing Levels of Concern Across Key Thematic Areas Identified

Theme	Issue	Description	Level of concern	Level of Concern
Process Fragmentation	Manual Workflows	Over-reliance on manual processes	19/31	High
	Non-standardized Processes	Inconsistencies across regional offices	16/31	Moderate
	Supervisor Overload	Excessive approvals required	16/31	Moderate
	Lack of Real-Time Tracking	No monitoring of process status	14/31	Moderate
	Data Re-entry	Duplication of efforts across systems	14/31	Moderate
Technological Constraints	Poor Integration	Systems do not communicate with each other	17/31	Moderate

Theme	Issue	Description	Level of concern	Level of Concern
	Underutilised Platforms (e.g., SAMS)	Functional tools are not being maximised	8/31	Low
	Connectivity Issues	Network interruptions and Downtime	17/31	High
	Outdated Hardware	Inadequate or obsolete IT equipment	19/31	High
Human Capital	Digital Literacy Gaps	Basic digital skills lacking	21/31	High
	Inadequate Training	Limited formal upskilling opportunities	18/31	High
	Shared Devices	Multiple users per workstation/device	19/31	High
Policy & Compliance	Compliance > Efficiency	Over-focus on rules at the expense of outcomes	12/31	Low
	Lack of Accountability	Weak policy enforcement mechanisms	13/31	Low
Stakeholder Dynamics	Poor Cross-Unit Collaboration	Internal teams not working together	16/31	Moderate
	Unresponsive Services	External stakeholders are frustrated with the services	15/31	Moderate

Legend: Red=negative perception Green=positive perception

4.3.2.1 Operational Inefficiencies and Process Fragmentation

The challenges are interconnected, systemic, and mutually reinforcing, reflecting both procedural weaknesses and structural constraints that collectively impede service delivery, staff productivity, and stakeholder satisfaction.

- i. **High-Concern Areas:** Three clusters of high-concern issues emerge as the most critical barriers to operational efficiency:

Manual Workflows (Process Fragmentation): The department's most pressing operational constraint, rated as high concern by 19 of 31 participants, is the over-reliance on manual, paper-based processes. This finding aligns with Section 4.1, which highlighted delayed workflows, duplication of effort, and vulnerability to human error as recurring issues. The high level of concern across the department indicates that manual workflows are not localised problems, but systemic bottlenecks that require immediate intervention.

Technological Constraints: Connectivity issues (17/31 participants) and outdated hardware (19/31) were highlighted as critical operational barriers, limiting the department's ability to adopt digital solutions. One participant emphasised the impact of poor infrastructure: *"Network downtime often halts our processes. Even when we try to work digitally, we are forced back to paper because systems crash or are slow"* (P15).

These technological limitations directly reinforce reliance on manual processes, sustaining inefficiency across the department. These limitations corroborate the 4.1 findings, in which staff reported that unreliable systems often force them to revert to paper-based processes. The heatmap emphasises that technological inadequacies are not merely operational inconveniences; they are critical barriers that limit the department's ability to modernise and streamline its processes.

Human Capital Gaps: High-concern human capital challenges include digital literacy gaps (21/31) and inadequate training (18/31), as stated: *"There is limited formal training on the tools we have, so many employees do not use them properly or avoid them altogether"* (P20). Additionally, shared devices (19/31 participants) hinder productivity and create scheduling conflicts: *"We often have to wait for access to computers because multiple staff members share one workstation, which delays submissions and reporting"* (P19). These findings align with Section 4.1, which documented staff resistance to digital adoption and limited capacity to utilise existing systems. The heatmap reinforces that human factors are as influential as technical limitations, making workforce development and targeted capacity-building essential for any successful intervention.

- ii. **Moderate-Concern Areas:** Moderate-concern issues reveal structural weaknesses that magnify the impact of high concern barriers, indicating that inefficiency is not merely procedural but systemic. Process fragmentation, for instance, emerges not only as disparate methods across offices (16/31 participants) but also as a structural flaw that undermines organisational coherence. Non-standardised processes create points of failure where errors can proliferate, reduce predictability in service delivery, and complicate accountability mechanisms.

Supervisor overload (experienced by 16/31 participants) exacerbates this fragmentation, as bottlenecks in approval chains delay decision-making, resulting in cascading effects on operational timelines. Similarly, the lack of real-time tracking (14/31) and repetitive data entry (14/31) are not isolated inefficiencies; they signal an absence of integrated information systems, forcing staff to compensate manually and increasing the risk of duplicated effort.

Participant narratives underscore this structural interpretation: “Each office seems to have its own method for processing the same type of request. It is confusing and sometimes leads to errors” (P14). This highlights how procedural variability increases the likelihood of mistakes and inconsistencies, which, in turn, can degrade staff confidence and morale. Likewise, “Supervisors have too many approvals on their desks. Things sometimes sit for days before being signed off” (P13) illustrates how localised overload translates into systemic delay, creating feedback loops where inefficiency begets further inefficiency.

Viewed through an analytic lens, these findings suggest that moderate-concern issues function as structural accelerants: they do not independently halt processes but intensify high-concern barriers by embedding inefficiency into the operational architecture. In essence, fragmented workflows and inadequate oversight are not merely operational nuisances; they actively reproduce organisational bottlenecks and erode the capacity for coordinated action, reinforcing the self-perpetuating cycle of inefficiency discussed in Section 4.1.

Technological Integration: The poor integration of systems (17/31) and underutilization of platforms contribute to the duplication and underperformance of digital tools. While not immediately critical, these inefficiencies prevent the department from realising the full potential of available technologies.

Stakeholder Dynamics: Internal misalignment (16/31) and unresponsive services (15/31) continue to hinder service delivery. Moderate concern here signals that internal collaboration and responsiveness require structured attention to prevent escalation into higher-impact operational failures.

iii. Low-Concern Areas: Policy and compliance issues

Policy and compliance issues, including excessive adherence to rules (12/31) and weak enforcement mechanisms (13/31), were identified as low-concern areas in Table 4.1. While not immediate obstacles to daily operations, they reveal structural rigidity that limits flexibility and reinforces entrenched inefficiencies.

The procurement process exemplifies this tension. Policies were described as “strict and often delay the purchase of necessary technologies and resources,” with “lengthy approval routes for budgets and projects” that slow decision-making. Participant 19 noted, “We are caught between compliance and delivery, and compliance always wins, even if it means the people we serve suffer the consequences.” This highlights a culture where procedural adherence takes precedence over outcomes, stifling innovation and risk-taking.

Compliance with regulations such as the Protection of Personal Information Act (POPIA) poses additional challenges. Participant 07 explained, “The rigid compliance framework often hampers operational efficiency,” as complex and inconsistently applied rules complicate data sharing. Contributing to this issue are internal capacity constraints, including inconsistent understanding of policies among staff and outdated Standard Operating Procedures. Participant 14 observed, “We cannot chase every violation when we do not have the staff or systems to track them properly,” illustrating a system that is rigid in principle but inconsistently enforced in practice.

Analytically, these findings reflect classic public sector bureaucracy, where rules intended to ensure accountability can inadvertently inhibit responsiveness. The department’s service delivery is constrained by its own control mechanisms, creating a disconnect between policy and practice. Participants called for more agile frameworks; as Participant 30 stated, “We need a policy that allows room for innovation, not one that restricts it.” Addressing this requires simplifying procurement, clarifying data privacy guidelines, and updating SOPs to align regulatory frameworks with the strategic goal of transformative service delivery.

Convergence and Strategic Implications

The cross-analysis of qualitative narratives (4.1) and heatmap levels of concern (4.2) demonstrates convergence between perceived and quantified operational barriers. High-concern issues highlight areas that require immediate attention, including manual workflows, technological limitations, and gaps in human capital. Moderate-concern items identify structural bottlenecks and process irregularities that, if addressed, could significantly improve efficiency. Low-concern areas, although less urgent, indicate institutional norms and policy rigidity that may hinder long-term reform.

- i. Collectively, these findings underscore that effective Business Process Reengineering (BPR) must be multi-dimensional, addressing:
- ii. Human Capital Development – targeted training, digital literacy programs, and provision of adequate workstations.

- iii. Technological Modernisation – upgrading hardware, enhancing connectivity, and integrating systems to eliminate silos.
- iv. Process Redesign – standardising workflows, eliminating redundant tasks, and implementing real-time tracking.

Only through a holistic approach that concurrently tackles high-, moderate-, and low-concern issues can the KZN DSD disrupt entrenched inefficiencies, improve service delivery, and create the conditions necessary for sustainable digital adoption and operational effectiveness.

4.3.2.2 The Digital Gap: A Technological Constraint

The study revealed that technological constraints remain a critical barrier to efficient operations at KZN DSD, with participants consistently identifying outdated infrastructure, poor connectivity, and unreliable systems as the root causes of inefficiency. In addition to hardware and connectivity issues, system downtime was flagged as a significant concern. Participant 03 lamented that *"The infrastructure and tools of trade are outdated"*.

Respondents also noted that when critical systems such as Persal or BAS fail, operations come to a complete halt, leaving staff with no fallback mechanisms. As one participant explained, "We experience much downtime due to system outages. When Persal or BAS is down, work comes to a complete halt, and there is no contingency plan in place" (P7). This not only stalls workflows but also frustrates employees and service users.

Even when systems are operational, **process inefficiencies** further disrupt productivity. For instance, one participant complained, *"Systems timeout too quickly when idle, forcing staff to log in repeatedly, which wastes time"* (P15). Similarly, slow response times during peak hours were reported, with another respondent stating, *"Even when systems are working, the response time is slow, especially during peak usage hours"* (P20).

Finally, the study highlighted weak IT support structures, with slow response times to technical queries compounding frustrations. One participant remarked, "The helpdesk or IT support is slow to respond to tickets. Even small issues take a long time to be resolved, affecting productivity" (P13).

Taken together, these findings indicate that technological inefficiencies are systemic, undermining productivity, delaying service delivery, and limiting the Department's ability to transition to digital platforms effectively. The digital gap is not just about a lack of technology, but about a dysfunctional technological environment. Poor connectivity and incompatible systems create a cycle of frustration and workarounds. This directly impacts staff morale and

productivity, forcing employees to battle their tools rather than focus on their core duties, thereby exacerbating the human capital deficit. Without urgent interventions to upgrade infrastructure, strengthen IT support, and enhance connectivity, the Department risks perpetuating inefficiencies that digital transformation is intended to eliminate.

4.3.2.3 The Cost of Outdated Technology in KZN DSD

The testimony from KZN DSD staff reveals that outdated technology is not merely an IT issue, but a critical human capital and operational crisis. The daily friction caused by technological failures creates a work environment characterised by frustration, inefficiency, and demotivation, transforming technology from a potential enabler of public service into a primary obstacle.

Table 4.5: The Foundation of Failure: Systemic Inefficiency and Resource Deficits

Theme	The Core Problem: How Outdated Tech Cripples the Department	Evidence from the Frontlines (Illustrative Direct Quotes)	Staff Concern Level (Out of 31)
Systemic Productivity Collapse	Outdated systems and infrastructure cause daily work stoppages and severe delays, forcing staff to waste significant time on manual workarounds and system restarts rather than serving the public.	P7: "We experience much downtime due to system outages. When Persal or BAS is down, work comes to a complete halt, and there is no contingency plan in place."	Very High (25 Staff Members)
		P17: "Outdated computers and software make it hard to work efficiently. Even basic tasks take much longer than they should."	
		P15: "Systems timeout too quickly when idle, forcing staff to log in repeatedly, which wastes time."	

The crisis is rooted in a technological environment where systemic inefficiency is endemic. Outdated systems and poor infrastructure cause daily work stoppages and extreme

slowness, forcing staff to waste significant time on manual workarounds and system restart (P7). This is compounded by unreliable network connectivity, especially in rural areas (P2), and a slow, cumbersome procurement process for basic tools of trade (P3). Together, these issues form a foundational infrastructure and resource deficit that prevents the effective use of any digital system from the outset.

Table 4.6: The Direct Impact: Service Delivery Bottlenecks and Citizen Dissatisfaction

Theme	The Core Problem: How Outdated Tech Cripples the Department	Evidence from the Frontlines (Illustrative Direct Quotes)	Staff Concern Level (Out of 31)
Direct Service Delivery Failure	Manual, paper-based, and non-integrated processes create critical bottlenecks that delay essential services to beneficiaries, resulting in legally actionable backlogs and a violation of the department's core mandate.	P11: "Social Relief of Distress grant application process is slow because it is a manual paper-based process... The department was once instructed by the High Court to ensure the backlog was minimised."	Very High (22 Staff Members)
		P8: "Manual documentation... means [files] can get lost or misfiled, leading to delays and inefficiencies."	
		P10: "There are no mobile-friendly versions of the systems. This is a major limitation for fieldworkers."	

These internal inefficiencies directly translate into severe service delivery bottlenecks for the public. Manual, paper-based, and non-integrated processes create significant delays in critical services, directly impacting beneficiaries and leading to backlogs. The Social Relief of Distress (SRD) grant process is a key example, being so slow and manual that it required a High Court instruction to address the backlog (P11). Furthermore, the lack of mobile-friendly

systems severely limits fieldworkers who "need to update case files while on site" (P10), delaying vital interventions and real-time support for vulnerable communities.

Table 4.7: Compounding the Crisis: Data Risks and Administrative Burdens

Theme	The Core Problem: How Outdated Tech Cripples the Department	Evidence from the Frontlines (Illustrative Direct Quotes)	Staff Concern Level (Out of 31)
Compromised Data Integrity & Security	The lack of system integration forces manual data entry, which propagates errors. Outdated and unpatched infrastructure poses a severe security risk, jeopardising the sensitive personal data of vulnerable citizens.	P4: "We often have to duplicate efforts because the systems do not talk to each other, leading to inconsistencies and wasted time."	High (18 Staff Members)
		P3: "Outdated tools make it difficult to install the latest updates, making the whole network infrastructure vulnerable..."	
		P27: "Sometimes backups are compromised when users store sensitive data locally instead of on network drives, against policy."	

The technological environment further compounds operational challenges by creating significant risks to data integrity and security. The lack of system integration necessitates manual data re-entry across multiple platforms, leading to errors and inconsistencies as staff are forced to duplicate efforts because "the systems do not talk to each other" (P4). Simultaneously, outdated infrastructure poses a significant security risk to sensitive citizen data, making the network vulnerable and compromising compliance with data protection

regulations (P3), thereby adding an administrative and compliance burden to an already strained workforce.

Table 4.8: The Human Cost: Eroding Morale and Fostering Resistance to Change

Theme	The Core Problem: How Outdated Tech Cripples the Department	Evidence from the Frontlines (Illustrative Direct Quotes)	Staff Concern Level (Out of 31)
Staff Demoralisation & Change Resistance	The daily friction and unreliability of tools demoralise staff, breeding a culture of resistance to new digital initiatives. Employees perceive technology not as a solution but as an additional burden and source of complexity.	P2: "Employees fear change... They often think that new digital solutions will introduce more work for them."	High (19 Staff Members)
		P5: "Staff may lack adequate training on new systems, leading to errors and increased support requests."	
		P23: "IT support is stretched thin. When problems occur with new systems, users are left frustrated and revert to old ways."	

Ultimately, this constant daily struggle has a profound human cost, fueling staff frustration and resistance to change. Employees are forced to use clunky, non-intuitive systems, which prevent them from developing modern digital skills and trap them in a demoralising cycle of troubleshooting. This poor experience creates a culture of scepticism toward new digital initiatives, which are perceived as potential sources of more frustration rather than improvement (P2), effectively stifling innovation and the willingness to adapt.

The Final Outcome: Undermined Mandate and a Demoralised Workforce

In conclusion, the cost of outdated technology is measured in wasted public funds, delayed services to the most vulnerable, increased data risks, and a demoralised workforce. It transforms public servants from proactive helpers into frustrated troubleshooters, constantly battling their own tools instead of serving the public. This directly erodes morale, as it makes work feel like a continuous, unwinnable struggle against the very systems that are supposed to provide support. This cycle fundamentally undermines the department's ability to fulfil its core mandate, as the very systems are meant to enable service delivery to become the primary obstacle to it.

THE COST OF OUTDATED TECHNOLOGY IN KZN DSD: Severity of Impact & Frequency

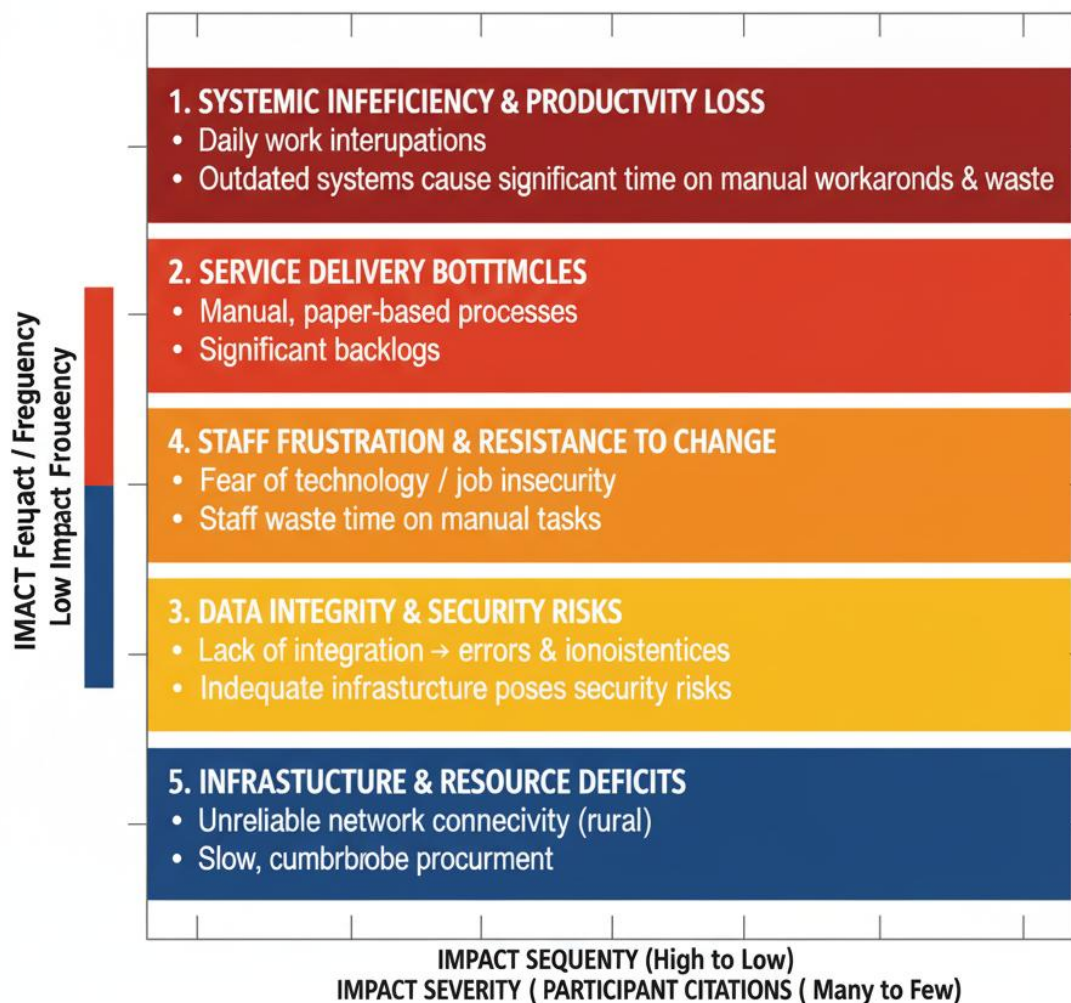


Figure 4:5 Heatmap: Cost of Outdated Technology

This heatmap visually summarises the "Cost of Outdated Technology in KZN DSD," categorising systemic problems by their Impact Severity (High to Low) and Impact Frequency (High to Low), with colour intensity also reflecting severity.

The x-axis represents Impact Severity (Participant Citations - Many to Few), indicating the frequency with which participants cited an issue as a measure of its perceived severity. The y-axis represents Impact Frequency / Frequency from high to low.

Highest Impact/Frequency (Red): "Systemic Inefficiency & Productivity Loss" and "Service Delivery Bottlenecks" are at the top, signifying both high impact and frequent occurrence. This aligns with the consensus that outdated systems cause daily interruptions, waste, and significant backlogs from manual processes.

Moderate-High Impact/Frequency (Orange): "Staff Frustration & Resistances" falls into this category, driven by fear of technology and job insecurity, along with issues such as "Data Integrity & Security Risks," which stem from a lack of integration and pose security threats.

Moderate Impact/Frequency (Blue): "Infrastructure & Resource Deficits" represents challenges with unreliable network connectivity and slow procurement, which, while impactful, might be perceived as less frequent across all operations than daily process issues.

The colour gradient from red (most severe/frequent) to blue (less severe/frequent) clearly highlights that inefficiency, productivity loss, and service delivery bottlenecks are the most pressing and frequently encountered problems due to outdated technology at KZN DSD.

4.3.2.4 The Ripple Effect on Employee Retention and Organisational Reputation

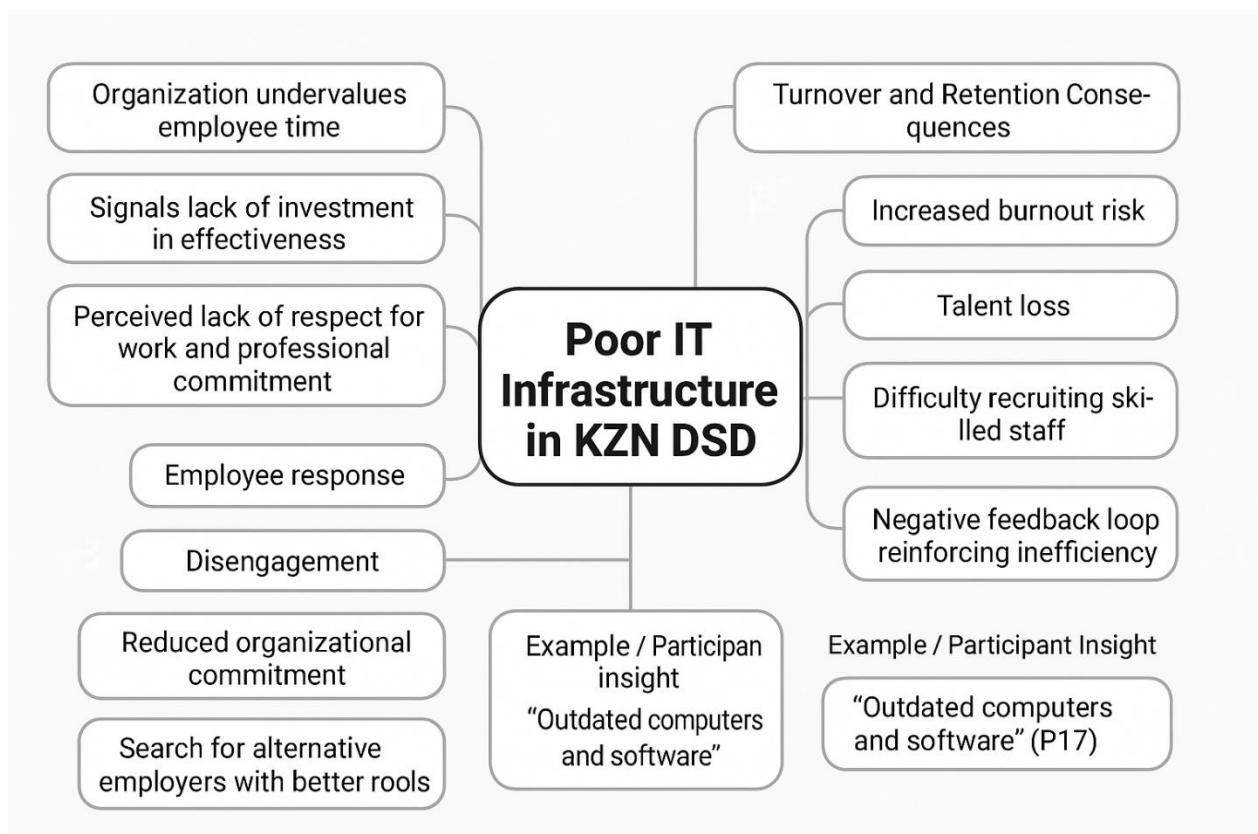


Figure 4:6 A Mind Map for the Ripple Effects of Poor Infrastructure

While the provided data does not contain explicit statements from employees threatening to resign due to poor IT, the described conditions are well-established drivers of burnout and turnover, particularly in the public sector. A poor technological environment sends a powerful, non-verbal message to employees: the organisation does not value their time or invest in their effectiveness. This can be interpreted as a lack of respect for their work and professional commitment.

This perception can lead to disengagement, reduced organisational commitment, and an active search for employers who offer a modern and effective work environment. This presents a critical third-order implication of technological neglect. Poor IT does not just slow down current work; it actively pushes talent out the door and makes it significantly harder to recruit new, skilled individuals who expect functional digital tools as a baseline condition of employment. This exacerbates the human capital deficit, creating a negative feedback loop that leads to declining capacity and an increasing workload for the remaining staff. The *"outdated computers and software"* (Participant 17) are not just an inconvenience; they are a liability in the competition for talent and a direct contributor to the erosion of the department's human capital base.

4.3.3 Human Capital and Resource Deficits: A Critical Barrier to Digital Transformation

A consistent and critical finding across the participant data is the profound deficit in human capital and resources, which forms a primary barrier to both effective daily operations and the successful implementation of digital BPR. This challenge is a self-reinforcing cycle where a significant skills gap, severe resource constraints, and chronic understaffing converge to leave employees under-equipped, overwhelmed, and unable to engage with new processes.

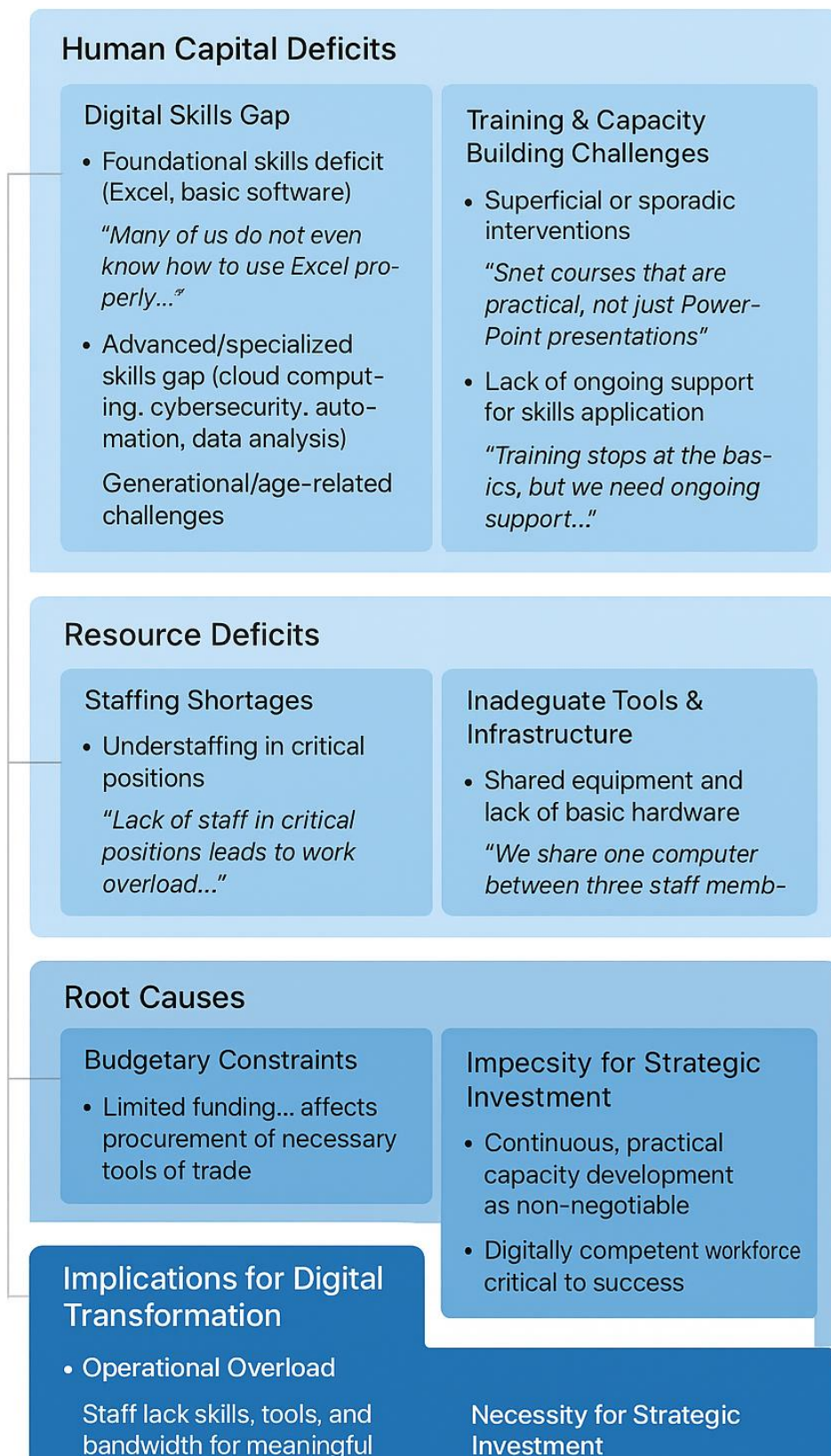


Figure 4:7 Tree Map: Human Capital and Resource Deficits

The digital skills gap is pervasive, extending from foundational to specialised competencies. A stark illustration of this is the observation from Participant 13: *"Many of us do not even know how to use Excel properly. How can we be expected to use advanced case management systems?"* This foundational illiteracy is compounded by a noted *"lack of technological skills, especially in older employees,"* which often manifests as resistance to change. This is not merely reluctance but is frequently rooted in a lack of confidence and capability. The skills deficit deepens at a specialised level, with identified gaps in critical areas for digital BPR such as cloud computing, cybersecurity, data analysis, and process automation. As Participant 29 emphasised, there is a need for *"providing more hands-on training on automation tools, process mining, and digital BPR methods."*

A systemic failure in capacity building exacerbates this skills gap. Training interventions are widely perceived as *"superficial or sporadic, with limited follow-up support."* One participant critically noted that *"Training stops at the basics, but we need ongoing support to use the systems effectively,"* highlighting a disconnect between training delivery and practical, sustained competency development. The demand is for practical, role-specific learning, as summarised by Participant 23's recommendation: *"short courses that are practical, not just PowerPoint presentations."*

Beyond the qualitative skills gap, a severe quantitative resource crunch paralyses progress. Participant 20 pinpointed a core operational flaw: *"The lack of staff in critical positions leads to work overload and delays. Tasks that require specialised skills often sit unattended."* This understaffing is coupled with a crippling lack of basic tools. Nineteen respondents emphasised resource constraints, with Participant 26 providing a vivid example: *"We share one computer between three staff members. Sometimes it is faster to write by hand."* This reality renders any digital tool irrelevant, forcing a regression to inefficient manual processes.

The root cause of these intertwined issues is consistently identified as budgetary. Participant 03's statement that *"Limited funding... affects procurement of necessary tools of trade"* and the summary that *"inadequate funding is a recurring issue"* point to a fundamental financial constraint that limits hardware procurement, infrastructure investment, and hiring. As one participant (P1) asserted, *"Without proper funding and resource allocation, even the best-planned digital BPR initiatives will struggle to succeed."*

From an analytical perspective, the human capital crisis encompasses both qualitative (skills) and quantitative aspects (staffing and tools). The identified "Digital Literacy Gaps" are critically linked to the staff's educational profile; holding a diploma or degree does not automatically confer the digital competence required for a modernised workplace. This indicates a pressing need for foundational, role-specific digital training rather than assuming

a base level of proficiency. The deficit creates a "perfect storm" of operational overload where staff lack the skills, tools, and bandwidth to engage in meaningful change. Consequently, as recognised by nineteen respondents, a digitally competent workforce is the most important success factor. The imperative for strategic resource allocation and continuous, practical capacity development is not merely beneficial but a non-negotiable element for any successful digital transformation, as human capital is central to the entire process.

4.3.4 Negative Stakeholder Experience: The Human Cost of Internal Dysfunction

The department's operational failures create a cascade of negative consequences that ultimately manifest in the daily experiences of those it serves and those serving within it. While only 2 of 31 participants explicitly framed their concerns around stakeholder experience, their powerful testimonies reveal how internal dysfunction inevitably translates into human suffering.

The data reveals a direct cause-and-effect relationship where internal breakdowns culminate in failed service delivery and eroded trust. The diagram below illustrates how the internal issues (heat) directly cause the external failures (fire). It shows how qualitative data (participant quotes) connect to analytical concepts (codes) and theoretical relationships.

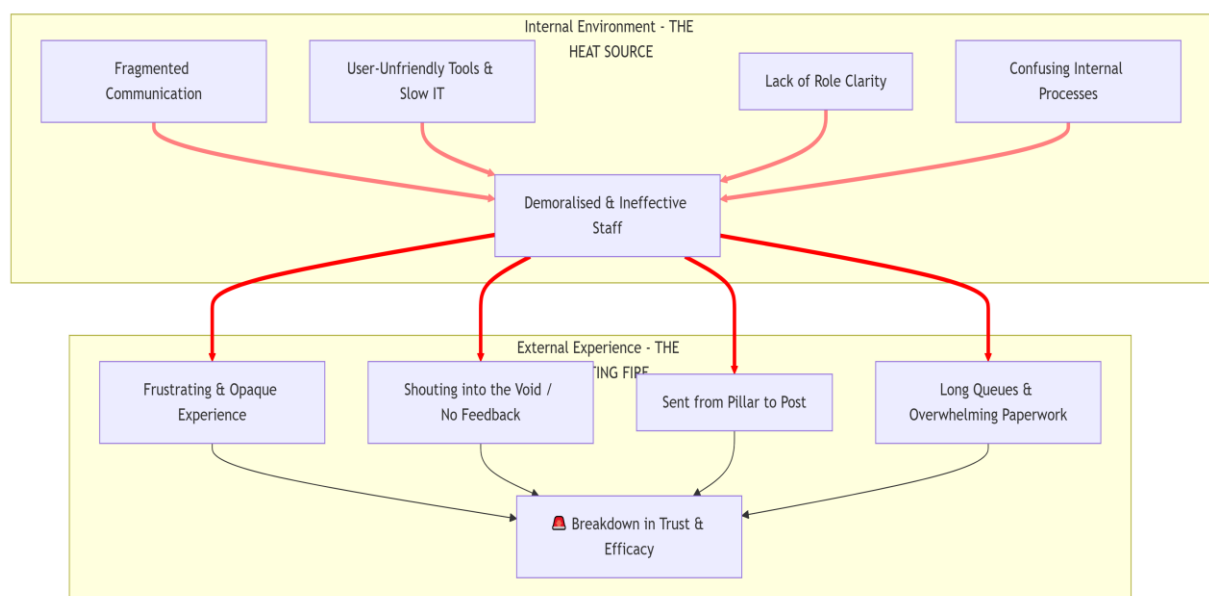


Figure 4:8 Relational model showing negative stakeholder experience

Figure 4.8 shows that the most critical failures for both staff and beneficiaries are broken communication channels and confusing, fragmented processes. The internal environment is not just inefficient; it is actively hostile to both its employees and the public it serves, leading to a total breakdown in trust and efficacy.

Internally, staff operate in a demoralising environment that constrains their ability to perform effectively. A recurring theme is the frustration expressed by employees who are hamstrung by the very systems designed to support them. They face user-unfriendly digital tools, a lack of clarity in roles, and slow response times from IT support, all of which impede their productivity and morale. This internal fragmentation is critically captured by Participant 31, who noted, *"Internal communication is fragmented. Important notices or changes do not reach everyone on time, resulting in inconsistent application of processes."* This lack of a coherent operational reality means that staff cannot form a reliable, unified front in serving the public, directly setting the stage for external service failure.

Externally, this internal dysfunction manifests as a frustrating and opaque experience for beneficiaries. The consequences are starkly visible: "long queues waiting for a service" and confusing processes that force citizens to "move from pillar to post with a bunch of papers." A significant source of anguish, as voiced by Participant 15, is a crippling lack of communication: *"We do not know what is happening with our cases; it is like shouting into the void. We come to the offices, and we are sent from pillar to post."* This metaphor of "shouting into the void" powerfully conveys the perception of an unresponsive and inaccessible system. The complexity and volume of required documentation further overwhelm beneficiaries, reinforcing the department's image as inefficient and indifferent. The absence of follow-up after applications are submitted creates a vacuum of uncertainty, leaving stakeholders feeling abandoned by the services meant to support them.

4.4 Central Theme 2: Pathways and Barriers to Effective Digital BPR Implementation

Objective 2: To determine how digital BPR can be effectively implemented to address challenges in the business processes of KZN DSD

This theme captures the department's ambivalent position, recognising the transformative Digital Effectiveness and Implementation. Despite the challenges, the data also indicate a clear desire for change and identify potential pathways for digital BRP transformation. However, these opportunities are matched by significant barriers that must be addressed for any BPR initiative to succeed.

4.4.1 Pathways to Effective Digital BPR Implementation in KZN DSD: A Narrative Analysis

The journey toward digital transformation at the KZN Department of Social Development is not merely a technological upgrade but a fundamental reimagining of how the department serves its communities. The insights from 31 participants provide a clear picture of the current landscape, the desired future, and the critical pathways to achieve it. The journey is fraught with challenges but illuminated by a clear vision of efficiency, transparency, and improved service delivery.

Table 4.9: Heat Map: Pathways to Digital BPR Implementation in KZN DSD

Pathway	Description	Perceived Effect	Barrier	Quote Example
Leadership & Commitment	Visible, active advocacy and resource allocation from senior management to champion the digital transformation.	High	(25/31 participants)	<i>"Senior Management buy-in and playing the advocacy role for new business processes." (P1)</i>
Change Management & Culture	Strategies to address employee resistance, fear of job loss, and foster a culture that embraces innovation.	High	(22/31)	<i>"Resistance to change and fear of job loss are the major obstacles when introducing a new process or digital solution." (P1)</i>
Digital Infrastructure & Tools	Investment in reliable network connectivity, hardware, and integrated software platforms	High	(23/31)	<i>"The most hinderance... is the slow network connection or absence of network infrastructure in certain</i>

Pathway	Description	Perceived Barrier Effect	Quote Example
	to support digital workflows.		<i>rural and urban areas."</i> (P2)
Funding & Resource Allocation	Dedicated and sufficient budgetary provision for technology, training, and specialised human resources.	High (24/31)	<i>"Budget availability, human resource capacitation and willingness of management to adopt BPR."</i> (P2)
Stakeholder Engagement	Involving internal staff, beneficiaries, and external partners in the design and feedback process for the new systems.	Medium (18/31)	<i>"External stakeholders play a big role because they are the ones using our services. Their feedback helps us understand what is working and what's not."</i> (P3)
Skills Development & Training	Structured, role-specific training programs to bridge digital literacy gaps and build proficiency in new tools and processes.	Medium (16/31)	<i>"To ensure that employees are ready for digital BPR, we need to prioritise training in the key digital tools and systems that will be used."</i> (P3)
Policy & Regulatory Modernization	Reviewing and adapting rigid procurement, data sharing (POPIA), and other policies to enable agile	Medium (19/31)	<i>"The department's procurement policies are strict and often delay the purchase of necessary</i>

Pathway	Description	Perceived Barrier Effect	Quote Example
	digital implementation.		<i>technologies and resources."</i> (P3)
Process Prioritization & Automation	Identifying and reengineering the most cumbersome, manual processes (e.g., SCM, claims, case management) first.	Medium (15/31)	<i>"The compilation and monthly fuel claims... are time-consuming. Automation of these processes would speed processing."</i> (P2)
Data Integration & Interoperability	Ensuring new and legacy systems can communicate to eliminate data silos and duplicate data entry.	Low (14/31)	<i>"We often have to duplicate efforts because the systems do not talk to each other, leading to inconsistencies and wasted time."</i> (P4)
Contextual & Inclusive Design	Designing solutions that account for KZN's rurality, language diversity, and varying levels of digital literacy among staff and citizens.	Low (811/31)	<i>"KwaZulu-Natal has rural areas with limited internet access and a diverse population. We need to consider language, digital literacy, and affordability..."</i> (P3)

The Current Reality: A Tangle of Manual Processes and Systemic Friction

The department's operations are currently hindered by a heavy reliance on manual, paper-based systems, which has led to a cascade of inefficiencies. A significant source of friction is the lack of integration between legacy systems. Data exists in silos, forcing staff to perform redundant tasks. This fragmentation is compounded by unreliable infrastructure, particularly in rural areas. The human experience of these inefficiencies is one of frustration. Staff feel overwhelmed by paperwork, with one noting that they are "stunned by the large amount of paperwork that they do" (P6). Externally, beneficiaries experience the impact directly, complaining about "having to repeatedly [go] to the office for more than a day, repeating the same processes because of misplaced documentation" (P7). This erodes trust and delays critical aid.

The Vision for Change: Efficiency, Empowerment, and Enhanced Service

Despite the challenges, a powerful and unified vision exists for what digital BPR can achieve. Participants envision a future where the department is agile, data-driven, and citizen-centric. The core of this vision is streamlined service delivery: "Digitally transformed BPR can improve the overall department's service delivery capabilities, efficiencies and service delivery turnaround times" (P1).

The goal is to empower both staff and citizens. For employees, automation would free them from repetitive tasks, allowing them to focus on high-value work. For the community, it would mean faster, more reliable access to services. As P3 envisioned, digital BPR will *"improve service delivery to beneficiaries by reducing delays and minimising errors."* Ultimately, this leads to a more responsive and effective department that can better fulfil its social mandate.

Achieving this vision requires a coordinated strategy across several key areas:

a) Foundational: Leadership, Funding, and Infrastructure

Success is impossible without unwavering commitment from the top. *"Senior Management buy-in and playing the advocacy role"* (P1) is repeatedly cited as the first critical step. This must be backed by strategic resource allocation, as *"budget availability"* (P2) is a fundamental enabler. Concurrently, a massive investment in modernising the digital backbone is required. This includes upgrading *"routers and switches"* (P2) and ensuring *"redundant network connections to ensure service continuity"* (P1) to create a reliable foundation for new digital tools.

b) Human-Centric: Managing Change and Building Skills

The single most significant barrier identified is not technological, but human: *"Resistance to change and fear of job loss"* (P1). To overcome this, a robust change management strategy

is essential. This involves *"awareness creation using posters, email communication and timed physical meeting interventions"* (P1) and, crucially, involves staff in the process to *"allay fears"* (P1). Building digital literacy is equally important. Training cannot be generic; it must be *"hybrid [using] virtual and practical instructor-led training methodologies"* (P1) and tailored to address specific skill gaps, from basic computer literacy to specialised training in new systems.

c) Process and Policy: Streamlining and Enabling

The framework must prioritise reengineering high-impact, high-friction processes. Immediate candidates include the *"compilation and monthly fuel claims"* (P2), which are *"tedious to complete,"* and the *"SCM Goods and Services Requisition process"* (P1), which participants recommend for *"end-to-end automation."*

Furthermore, existing policies often hinder progress. Participants called for policies to be *"revised regularly to align with technological advancements"* (P4). The rigid procurement policies, in particular, need reform to *"allow for agile project management practices and quicker procurement processes"* (P4) and to stop *"delay[ing] the purchase of necessary technologies"* (P3).

d) Collaborative and Contextual Design

A successful framework cannot be designed in an ivory tower. It must be co-created with those it will affect. Key stakeholders include *"employees, supervisors, managers, Strategic and ICT Steering committees... Sister government departments, Non-profit organisations and private sector"* (P2). Most importantly, the *"ultimate stakeholders... are the service beneficiaries"* (P1), whose feedback is vital for designing processes that are genuinely accessible and effective. This design must be deeply contextual, considering KZN's unique socio-economic landscape. The framework must account for *"rural areas with limited internet access"* (P3), linguistic diversity by providing services in isiZulu, and cultural norms, acknowledging that *"traditional leadership structures play a huge role"* (P5).

Outcome: A Call for a Coordinated, Compassionate Transformation

The data from KZN DSD presents a clear call to action. The path to effective digital BPR is challenging, requiring a holistic approach that tackles technological debt, cultural resistance, and procedural inertia simultaneously. However, the potential reward is a transformation that transcends efficiency metrics. It is about building a department where social workers can focus on people, not paperwork, and where citizens in need can access support with dignity and speed. By following these pathways anchored in strong leadership, empathetic change

management, and a relentless focus on the end-user, the KZN DSD can reengineer not just its processes, but its very ability to deliver on its vital social mission.

RELATIONAL MODEL: Pathways to Digital BPR Implementation in KZN DSD

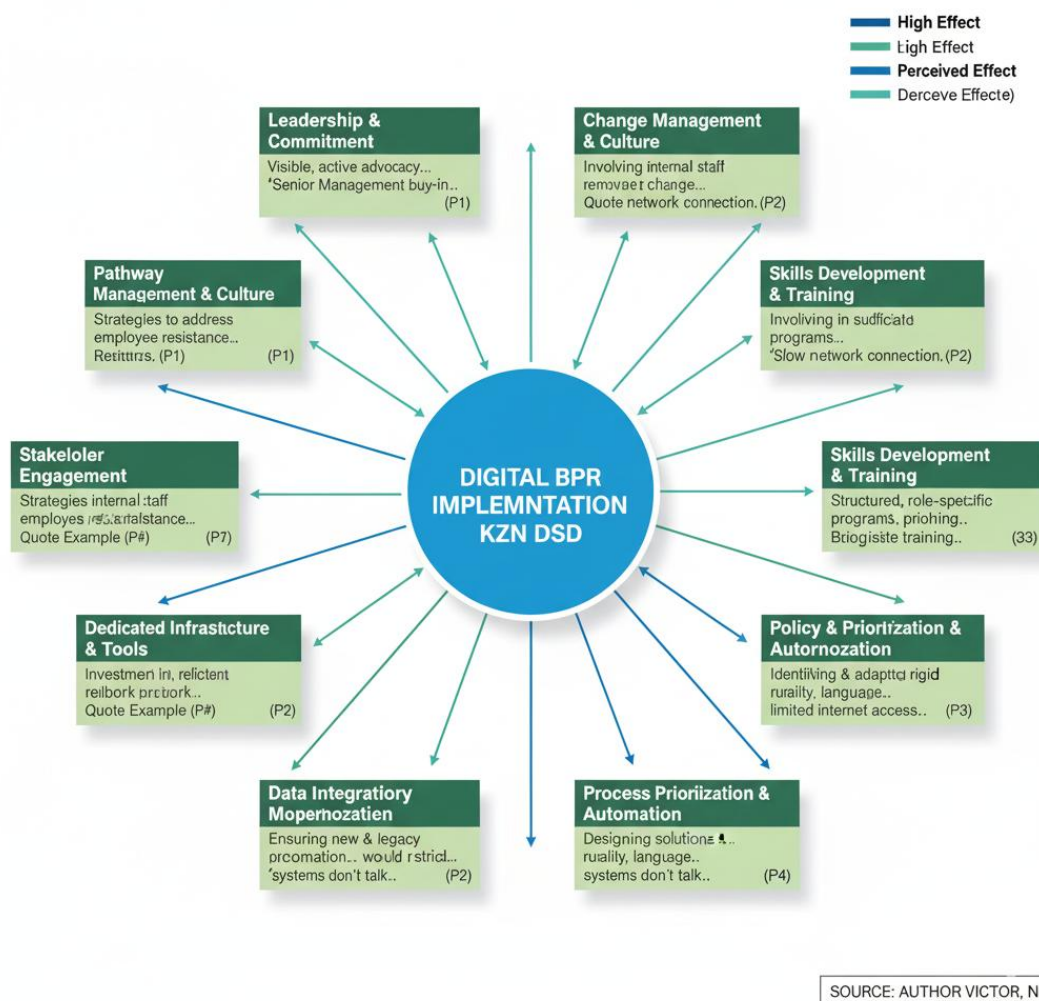


Figure 4:9 Pathways to digital implementation

4.4.2 Readiness for Digital Transformation

The findings reveal that the KZN DSD has a clear vision for digital transformation, but its readiness is uneven and constrained by capacity gaps. While some progress has been made, such as upgrades to network infrastructure in selected offices and the digitisation of basic functions like leave management, digital adoption remains at an early stage. As Participant 01 noted, "Current digital infrastructure is at a mature and reliable level while the technology adoption is still at an early level in need of intensified user awareness creation." This illustrates the disparity between infrastructural progress and user adoption, a theme consistent with the human capital barriers discussed in section 4.4.

Participants widely expressed optimism about the role of digital transformation in enhancing efficiency, improving integration with other government departments, and ultimately, improving service delivery. For example, Participant 05 highlighted the uneven spread of digitisation: “In the head office, you can do a few things digitally. However, in smaller service offices, it is almost all manuals.” The digital divide between urban and rural offices highlights the structural inequities that hinder equitable transformation.

A further readiness challenge lies in resistance to change, with participants highlighting fear of job loss and discomfort with digital platforms, particularly among senior managers. Participant 14 observed that *“Senior managers are uncomfortable with digital platforms; they prefer physical signatures.”* Similarly, Participant 19 cautioned that *“Many colleagues think automation means retrenchment. They are afraid of losing relevance.”* This aligns with earlier findings on staff frustration and resistance to change (section 4.4.2.3), demonstrating how poor experiences with outdated systems have shaped a culture of scepticism towards new digital initiatives.

Despite these challenges, there is a strong consensus around the vision for digital transformation. Twenty-nine participants articulated a future-oriented outlook where automation would reduce administrative burdens, improve responsiveness, and free staff to focus on client services. Participant 31 summarised this vision: “We must get to a point where automation supports, not replacing, human judgment.” This reinforces the need for transformation strategies that balance technology with human capital, ensuring staff view digital tools as enablers rather than threats.

4.4.3 Opportunities for Digital Integration

While readiness is uneven, opportunities for digital integration are abundant and clearly identified. Participants consistently pointed to repetitive, paper-based processes as prime candidates for automation. Recurrent examples include procurement, HR leave processing, case management, reporting, and client intake.



Figure 4:10 Word cloud for opportunities for digital integration

This word cloud visually represents the key themes and sentiments surrounding the KZN DSD's "Readiness for Digital Transformation," as derived from participant feedback. The size of each word indicates its prominence and frequency within the provided text, offering an immediate snapshot of the most emphasised concepts.

Procurement was highlighted as a particularly urgent opportunity, with Participant 02 stressing: *"Our procurement takes weeks; digitising it would be a game changer."* This sentiment was echoed by Participant 18, who argued that digitising the Non-Financial Data (NFD) process would enhance efficiency and minimise fraud. Participant 10 further emphasised HR processes: *"Leave forms could easily be digitised. We spend so much time just chasing signatures."*

Case management and document handling were also repeatedly flagged, with participants envisioning integrated, mobile-friendly platforms that enable real-time updates and reduce

delays. As Participant 24 put it: *“If we could just scan a document once and everyone could access it, that would change everything.”* Similarly, Participant 25 envisioned the potential of real-time dashboards: *“A dashboard showing service delivery turnaround would help managers and staff stay on track.”*

These opportunities align directly with the systemic inefficiencies, bottlenecks, and data risks identified earlier (section 4.4). For example, manual workflows and data entry duplication, previously highlighted as significant sources of inefficiency, map directly to the processes participants identified for digital integration. The consensus across participants reveals a data-driven roadmap for Business Process Re-engineering (BPR), anchored in high-impact processes such as procurement, NFD reporting, HR leave approvals, and case tracking.

Taken together, the findings paint a nuanced picture:

1. Readiness is partial and uneven, with infrastructure in place but adoption hindered by digital literacy gaps and cultural resistance.
2. Opportunities are clear and widely agreed upon, with high frequency mentions of specific processes ripe for automation.
3. Transformation requires more than technology capacity-building; leadership advocacy and phased implementation are essential to bridge the gap between vision and reality.

The juxtaposition of these findings highlights a central paradox: the KZN DSD knows where it wants to go (a digitally integrated, responsive service model), but its ability to get there is constrained by its current human capital and organisational culture. Thus, digital transformation strategies must harmonise infrastructure investment with change management and skills development to ensure readiness translates into realised opportunities. Hence, this study develops a model that facilitates the digital transformation process.

4.4.4 Critical Role of Stakeholder Involvement

A strong consensus emerged that stakeholder involvement is indispensable to the success of digital re-engineering efforts. Participants stressed that external stakeholders, particularly beneficiaries, *“play a big role because they are the ones using our services”* (P3). Their feedback was seen as essential to identifying pain points and ensuring that redesigned processes *“actually meet their needs.”* Partnerships with NGOs and other government departments were also viewed as crucial for avoiding siloed reforms and ensuring that integration reflects the broader service ecosystem. The overarching message was clear:

early and continuous engagement fosters transparency, trust, and ownership, laying the foundation for adoption and sustainability.

However, the findings also revealed a persistent flaw: end users are often excluded from the system design. As one participant observed, *“The systems are not user-friendly because no one asks the actual users how they work”* (P9). Others noted that past reforms were top-down and poorly contextualised, resulting in limited buy-in. *“We are told to use new systems but were never involved in their development”* (P4). These perspectives underscore that technical fixes alone cannot succeed without embedding participatory design approaches such as pilot testing, stakeholder focus groups, and iterative feedback loops. Indeed, several participants argued that even clients should be involved, as they are the ultimate recipients of services (P27).

This finding resonates strongly with the literature on Community-Centric Co-Design, which emphasises that reforms disconnected from users lived realities tend to reproduce inefficiencies and reinforce resistance. Here, Objective 2 comes into focus: internal decisions around process design have direct external consequences, meaning that stakeholder exclusion is not just an implementation oversight but a structural weakness that undermines service delivery outcomes.

4.4.4.1 A Causal Analysis of Stakeholder Experience: Linking Internal Failures to External Perceptions

The analysis demonstrates that negative external experiences, such as long waiting times, confusing processes, and a lack of communication, are not isolated failures but rather the direct and predictable outcomes of internal systemic dysfunctions. Staff frustrations with manual processes, non-integrated systems, and bureaucratic bottlenecks are mirrored in the experiences of beneficiaries, who face delays, repeated visits, and unclear communication channels. In other words, internal inefficiency is externally visible, transferred directly onto the citizens the department is mandated to serve.

This cause-and-effect chain underscores the urgency of participatory reform. By continuing to exclude staff and beneficiaries from system design, the department inadvertently perpetuates inefficiencies that manifest in public dissatisfaction. Stakeholder involvement is therefore not optional; it is a critical safeguard against translating internal dysfunction into external frustration.

4.4.4.2 Juxtaposition Internal Causes with External Effects

Table 4.10 makes this causal chain explicit by mapping specific internal inefficiencies to their external manifestations. This structure shifts the analysis beyond listing problems to demonstrating clear, evidence-backed relationships that reinforce Objective 2.

Table 4.10: The Causal Chain from Internal Inefficiency to Negative Stakeholder Experience

Internal Inefficiency	Supporting Internal Quote	Resulting External Stakeholder Experience	Supporting External Quote
Lack of Internal Transparency	(P28) "Approval queues are long, and the process lacks transparency. We don't always know where the request is stuck or how to follow up effectively."	Lack of feedback and communication leaves beneficiaries in a state of uncertainty.	(P28) "...lack of follow-up communication after they've submitted documents or applications. They often don't know where their requests are in the process." (P15) "Beneficiaries have raised concerns about communication gaps... leaving them unsure of where things stand."
Bureaucratic Complexity	(P1) "The requisition process involves completing an internal requisition form... a copy of the approved submission, signed internal requisition, Directorate's current budget printout... and procurement plan are submitted to SCM..."	Overwhelming and complex documentation requirements for service users.	(P20) "External stakeholders have expressed dissatisfaction with the complexity of documentation required for accessing services. They feel overwhelmed by the amount of paperwork..." (P31) "Beneficiaries have expressed frustration with the complexity of the service process. They often feel lost in the paperwork..."

The direct correlations established in Table 5 provide the foundation for a deeper analysis of the systemic consequences of the department's internal state. The inefficiencies are not contained within the organisation's walls; they are actively externalised onto the public, eroding the fundamental relationship between the state and its citizens.

4.4.4.3 The Externalisation of Internal Costs

The following analysis reveals that the root cause of negative stakeholder experience lies within the department's internal dysfunction.

Table 4.11: Code document table for the costs of its internal inefficiencies

Code (Theme)	Participant 3	Participant 7	Participant 28	Analyst's Interpretation
A. Causal Factor: Internal Dysfunction				
Internal Inefficiencies			X	Inefficient systems and slow response times impede performance and demotivate staff.
Fragmented Internal Systems	X			X
Lack of Process Ownership			X	Absence of accountability structures contributes to inconsistent implementation.
B. Core Phenomenon				
Externalisation of Internal Costs			X	Internal inefficiencies directly transfer operational burdens to citizens.
C. Manifestations (Externalised Costs)				
Long Queues	X			X
Repeated Office Visits		X		X
Process Uncertainty / Confusion	X		X	X
Emotional Distress	X		X	X
Time and Effort Burden	X	X		X
D. Broader Implications				

Code (Theme)	Participant 3	Participant 7	Participant 28	Analyst's Interpretation
Social Inequity / Injustice			X	Poor service delivery disproportionately affects vulnerable citizens, undermining fairness and equity.

The analysis reveals that negative stakeholder experiences stem primarily from internal dysfunctions within the department, which are subsequently externalized to beneficiaries through poor service experiences.

A. Causal Factor: Internal Dysfunction

Staff operate in a demoralising environment characterised by fragmented communication, inefficiency, and unclear accountability. Participant 31 noted, *“Internal communication is fragmented. Important notices or changes do not reach everyone on time, resulting in inconsistent application of processes.”* Such dysfunctions, compounded by “user-unfriendly digital tools and slow IT support”, constrain performance and morale. The absence of clear process ownership results in inconsistent implementation and weak institutional learning.

B. Core Phenomenon: Externalisation of Internal Costs

Internal inefficiencies are transferred to the public, resulting in externalised costs borne by service users. Participant 15 described, *“We do not know what is happening with our cases; it is like shouting into the void.”* This metaphor captures the alienation of citizens in engaging with an unresponsive system. The department’s internal breakdowns thus manifest externally as service failure and citizen frustration.

C. Manifestations (Externalised Costs)

Beneficiaries experience inefficiency through *“long queues waiting for a service”* and being *“sent from pillar to post with a bunch of papers”* (P15). Confusing processes, delays, and lack of feedback create uncertainty and emotional distress (P3, P28). The repeated need to visit offices wastes time and effort, effectively transferring the administrative burden from the organisation to the citizens (P7).

D. Broader Implications

These inefficiencies produce social inequity and administrative injustice, particularly affecting vulnerable citizens who rely on public services (P28). The findings underscore how internal dysfunction erodes trust, exacerbates inequality, and damages institutional legitimacy.

Summary Insight: Internal dysfunction → Externalised inefficiency → Citizen frustration → Erosion of trust and equity.

Improving stakeholder experience, therefore, requires addressing root organisational weaknesses in communication, accountability, and process integration, rather than merely enhancing front-end service interactions.

4.4.4.4 Collaboration and Communication

Findings reveal that perceptions of inefficiency stem from both external experiences of unresponsiveness and internal operational fragmentation.

Table 4.12: Code–Document Table – Perceptions of Departmental Inefficiency

Code (Theme)	Participant 05	Participant 15	Participant 30	General Finding (16 Participants)
A. External Perception				
Unresponsive / Inaccessible		X		Frequently mentioned, citizens describe the department as inaccessible and unresponsive to their needs.
Delays & Poor Communication		X		Widespread frustration with slow processes and limited feedback from officials.
B. Internal Dysfunction				
Siloed Operations / Isolation			X	Common across staff accounts, teams operate in isolation, reducing coordination and efficiency.

Code (Theme)	Participant 05	Participant 15	Participant 30	General Finding (16 Participants)
Lack of Collaboration Platforms			X	Identified as a major gap; absence of shared tools hinders information flow.
Duplicated Efforts / Inefficiency	X			Seen across units; duplication of roles and tasks results in wasted time and resources.

Externally, beneficiaries describe the department as inaccessible and unresponsive. Participant 15 remarked, *“We do not know what is happening with our cases; it is like shouting into the void,”* reflecting frustration with delays and poor communication. Internally, staff report siloed operations, a lack of collaboration, and duplication of effort. Participant 30 noted, *“Teams work in isolation; information does not flow easily across units,”* while Participant 05 highlighted “duplication of tasks that waste time and resources.” Overall, internal dysfunction translates directly into external inefficiency, weakening responsiveness, delaying service delivery, and eroding public trust.

4.4.4.5 A Breakdown of the Social Contract

At the highest level, these failures signify a breakdown of the social contract. The Department of Social Development’s core mandate is to provide accessible, reliable, and dignified support to vulnerable populations. However, the evidence shows systemic failure to uphold this obligation. Beneficiaries report feeling “lost in the paperwork” (P31), experiencing a lack of individual consideration (P27), and shouting “into the void” when attempting follow-ups (P15). These sentiments reflect not only poor service but the collapse of trust and legitimacy in a key public institution. Importantly, these failures are not attributable to staff apathy; frontline workers themselves expressed frustration at being constrained by outdated, bureaucratic, and fragmented systems. Thus, the conclusion is clear: digital Business Process Reengineering is not merely an efficiency exercise, but a fundamental imperative for reform. Without it, the department cannot restore public trust, fulfil its mandate, or deliver services with the dignity and effectiveness that citizens of KwaZulu-Natal deserve.

As demonstrated earlier, this failure is not due to a lack of effort by individual staff members, who are themselves frustrated by the same broken systems. Instead, it is the direct result of the systemic and structural barriers within which they are forced to operate. Therefore, the conclusion is that digital Business Process Reengineering is not merely an

"efficiency exercise" for the KZN DSD. It is a necessary and fundamental reform required to restore the department's capacity to fulfil its social contract, rebuild eroded public trust, and deliver on its foundational mission to serve the people of KwaZulu-Natal with the dignity and effectiveness they deserve.

4.4.5 Barriers to Implementation

The implementation of digital Business Process Reengineering (BPR) within the KZN DSD faces a range of entrenched barriers, both human and structural. The most prominent obstacle is resistance to change, with many employees expressing fear that digital tools may displace them or disrupt their established routines. As one participant observed, *"People are scared that the computer will replace them, so they resist any change that involves technology"* (P22). This resistance is not irrational; it reflects uncertainty created by poor communication from leadership, a lack of clear change management strategies, and inadequate retraining opportunities. Without reassurance and structured support, staff default to the "old ways" of working, even when digital alternatives are introduced. This resistance is compounded by inconsistent leadership support; eleven participants indicated that projects often lose momentum when leadership priorities shift or executive endorsement is absent. Participant 01 reflected, *"Projects are launched with excitement, but if leadership changes, the momentum is lost."*

Leadership and Buy-in Gaps

A related challenge is the lack of sustained leadership commitment. Eleven participants emphasised that the absence of senior-level champions hinders continuity and reduces the likelihood of successful transformation. One participant summarised this concern: "We start something, then it fades because leaders move on or priorities change" (Participant 23). Without consistent leadership engagement, even well-intentioned initiatives struggle to achieve their objectives.

Structural and resource constraints.

Structural and resource constraints compound these human concerns. Multiple participants cited chronic underfunding, limited infrastructure, and slow procurement processes as barriers that stall digital upgrades. For example, "Budget constraints often restrict our ability to upgrade or replace outdated systems" (P5). At the same time, another noted that "procurement for even basic IT tools takes months. By the time we get them, they are obsolete" (P28). These delays mean that staff often revert to manual processes when digital systems fail: "If the system crashes once, we go back to paper and never return to the digital

system” (P6). The cycle of reverting to paper undermines confidence in new tools, further entrenching resistance.

The issue is particularly acute in rural areas, where poor connectivity and insufficient hardware exacerbate exclusion. As one respondent explained, “Limited budget and limited infrastructure in deep rural areas” (P26) make it nearly impossible to roll out digital tools effectively. Tables 4.1 and 4.2 show that resource shortages, outdated hardware, limited access to computers, and unreliable connectivity are critical barriers. These findings align with earlier evidence of technological deficits, highlighting a persistent rural–urban divide that undermines equitable service delivery.

From a systems perspective, these barriers are not discrete; instead, they are interlinked manifestations of the broader dysfunctions identified in previous themes. For example:

1. Bureaucratic procurement delays mirror the policy and compliance challenges raised in Section 4.1.
2. Resistance to change is reinforced by the digital literacy gaps explored in Section 4.4.3.
3. Resource and infrastructure constraints amplify the effects of technological inefficiencies.

This reinforces the conclusion that barriers to digital BPR cannot be addressed piecemeal; they form a tightly integrated problem-system requiring a holistic strategy that addresses people, processes, and infrastructure simultaneously.

4.4.6 Barriers to Digital Training



Figure 4:11: Mind map demonstrating digital literacy gap

Digital literacy gaps stand out as a critical barrier, cited by 21 participants. Staff consistently reported insufficient ICT competencies, often limited to basic skills. As one participant put it, *“Many of us do not even know how to use Excel properly. We just learn by trial and error”*

(P13). This lack of competency breeds dependency on manual methods and deepens resistance to new systems.

Participant 3 noted that “slow connectivity and lack of basic ICT knowledge cause many delays,” highlighting how insufficient digital competence directly hampers workflow. Similarly, Participant 2 emphasised that “lack of technological skills, especially in older employees”, contributes to hesitancy in adopting new systems, often due to concerns over job security or perceived additional workload. Participant 21 further reinforced this point, observing that “poor digital literacy is a major challenge, especially among older or rural-based employees.” Collectively, these insights underscore that the digital skills deficit is particularly acute among older staff and those in remote locations, creating uneven adoption of technology across the organization.

In addition to skill gaps, participants reported deficiencies in training provision. Participant 8 reflected that *“a lot of staff are not properly trained on using digital tools, which leads to underutilization and mistakes in the system,”* while Participant 9 observed that *“the lack of sufficient training for new systems or processes delays operations,”* as staff are often expected to adapt independently without adequate guidance. These perspectives indicate that even when new systems are introduced, the absence of structured and comprehensive training limits their effective utilization, resulting in operational inefficiencies and errors.

Training coordination itself also emerged as a challenge. Participant 30 highlighted that *“ICT training coordination is an ongoing task... However, low attendance rates from staff especially for optional sessions undermine the effectiveness of the training process.”* This suggests that organizational efforts to build digital capacity are further weakened by poor participation, highlighting the need for more strategic approaches to training delivery, including incentivisation, flexibility, or mandatory attendance.

Participants stressed that training is often once-off and superficial, stopping at the basics rather than offering continuous, skills-based support. “Training stops at the basics, but we need ongoing support to use the systems effectively” (P18). The lack of a long-term training strategy leaves staff ill-prepared to adapt to digital reforms. This contributes to frustration, with frontline workers reporting demoralisation due to their inability to work effectively with broken or underutilised systems. As one frontline worker stated, *“I want to do my job properly, but the system is broken; it wears you down”* (P2).

Some participants proposed targeted solutions, including the establishment of a specialized digital transformation team to provide leadership, technical support, and ongoing capacity-building. As one respondent suggested, *“We need a dedicated team to lead this, not just add*

digital tools to broken systems" (P2). This highlights the need for institutional investment not only in infrastructure but also in human capacity, ensuring staff are empowered rather than alienated by digital reforms.

Taken together, these findings confirm that digital BPR in the KZN DSD is currently threatened by a dual challenge: technological underinvestment and human capacity gaps. Overcoming these barriers will require a comprehensive change management strategy, sustained investment in ICT infrastructure, and a culture shift toward participatory, skills-driven reform.

4.4.6.1 Digital Literacy as a Prerequisite for Change Adoption

Digital literacy must be framed not merely as a technical skill but as a core competency for organizational change management. The data explicitly links resistance to change with these skill deficits, as noted by Participant 2: *"Lack of technological skills... They are hesitant to adopt to change"* because they think *"digital solutions are complicated"*. This fear is not irrational; it is a logical response rooted in a lack of confidence and a fundamental unfamiliarity with the digital environment.

Foundational digital literacy training, as outlined in established public-sector frameworks such as the Government of Canada's Digital Competencies or the European Union's DigComp framework, is specifically designed to build this confidence. Such training demystifies technology, provides a safe environment for learning, and empowers employees to see digital tools as aids to their work rather than threats to their roles. It transforms their perspective from fear to empowerment.

Therefore, a successful digital transformation strategy for KZN DSD cannot simply be rolled out with the expectation that staff will "adapt on their own" (Participant 9). It must be preceded by a mandatory, department-wide digital literacy program that establishes a common baseline of skills and confidence. This reframes the training issue from a simple IT project to a fundamental human capital development and change management imperative. Investing in foundational skills is an investment in the organization's capacity to adapt, innovate, and succeed in its digital future.

4.4.6.2 Bureaucracy as a Barrier to Agility: Validating Theory with Lived Experience

The operational inefficiencies within the KZN DSD are not merely the result of outdated tools or processes but are also deeply embedded in its organizational structure and culture. This section integrates the seminal theoretical work of Hammer and Champy (1993), who argued that traditional, functionally oriented bureaucracies are inherently inefficient and ill-suited to

modern demands, requiring a "fundamental rethinking and radical redesign of business processes". This theoretical lens will be used to analyze participant testimony on rigid policies, fragmented compliance checks, and multi-layered approval processes. The analysis will demonstrate how the KZN DSD's operational structure exemplifies the bureaucratic pathologies described in the literature, leading to a systemic lack of agility, accountability, and efficiency that hinders service delivery. The lived experience of employees within the KZN DSD provides compelling empirical validation for classic theories of bureaucracy. Participants describe a work environment constrained by red tape, slow decision-making, and a diffusion of responsibility. Table 4 gathers excerpts that highlight these bureaucratic hurdles.

Table 4.13: Evidence of Bureaucratic Barriers and Their Impact

Participant No.	Excerpt	Relevant Theme
5	"The approval processes for budgets and resources are extremely bureaucratic and lengthy. This creates significant delays when trying to move forward with projects..."	Policy and Compliance
10	"We often encounter bottlenecks when trying to get signatures or approvals from senior officials who have multiple responsibilities. This delays turnaround significantly."	Policy and Compliance
14	"There's a lack of accountability. When something is delayed, it's hard to track who's responsible for the hold-up, and this creates a culture of complacency."	Policy and Compliance
3	"The department's procurement policies are strict and often delay the purchase of necessary technologies and resources."	Policy and Compliance
28	"Approval queues are long, and the process lacks transparency. We don't always know where the request is stuck or how to follow up effectively."	Policy and Compliance
19	"We are caught between compliance and delivery, and compliance always wins."	Policy and Compliance

The participant testimonies closely align with the core critiques of bureaucracy in the public administration literature. Specifically, the department exhibits fragmented process

ownership and a culture that prioritises compliance over performance, both of which are significant barriers to agility and effectiveness.

4.4.7 Fragmentation of Process Ownership

A central tenet of Business Process Reengineering (BPR), as articulated by Hammer and Champy, is the need to organise work around outcomes and assign single, clear ownership to end-to-end processes. The data from KZN DSD illustrates the exact opposite. Processes are fragmented across multiple functional silos, with no single person or entity owning a process from start to finish. For example, a seemingly straightforward Supply Chain Management (SCM) requisition for goods and services requires a complex series of handoffs: the end-user must obtain written approval from the Head of Department (HoD), complete a form to be signed by a responsibility manager, and then submit a package of documents including budget printouts from the Basic Accounting System (BAS) to SCM for further processing (Participant 1). Similarly, a legal matter requires intricate coordination between the Legal Services unit, the State Attorney, and various line function managers (Participant 10).

Each of these handoffs between functional silos represents a potential point of failure, delay, and information loss. When a delay inevitably occurs in these "long" and non-transparent *"approval queues"* (Participant 28), it becomes "hard to track who's responsible" (Participant 14) precisely because ownership is diffused across the entire chain. There is no single point of accountability. This is a textbook example of the functional "silos" that BPR was designed to dismantle. The department is organised by function (e.g., Finance, SCM, HR), not by process, which is the structural root cause of its bureaucratic inefficiency and lack of agility.

4.4.8 Compliance over Performance Culture

The data strongly suggests the existence of an organisational culture that prioritises procedural compliance over mission effectiveness. The primary focus appears to be on ticking boxes, adhering to rigid policies, and passing audits, even if the process itself is slow and delivers poor outcomes for stakeholders. This aligns with classic critiques of public sector bureaucracy, where adherence to rules can become an end in itself rather than a means to achieving a public service goal.

Participant 19 provides a powerful and explicit confirmation of this cultural priority: "We are caught between compliance and delivery, and compliance always wins". This statement encapsulates the core tension within the department. This culture is further evidenced by Participant 15, who notes that "Internal audits and compliance checks sometimes hold up

processes unnecessarily, even when everything is in order," suggesting that the compliance process itself has become a bottleneck, detached from actual risk mitigation or performance improvement. The description by Participant 26 of how some teams view compliance with the National Archives Act as an "administrative burden" rather than an integral part of their work further indicates a disconnect between compliance activities and perceived mission value.

This evidence points to a culture where the *process* has become more important than the *outcome*. The primary incentive structure appears to reward audibility and avoidance of sanctions rather than agility, innovation, or efficient service delivery. This represents a profound cultural barrier to BPR, which is fundamentally an outcome-focused philosophy. Any successful reengineering effort must therefore address not only the processes themselves but also the underlying cultural values and incentive structures that perpetuate this bureaucratic inertia.

4.5 Main Theme 3: Critical Success Factors for Public Sector Digital BPR

Objective 3: To establish the critical success factors for the successful implementation of digital BPR in the public sector

The implementation of digital Business Process Reengineering (BPR) in the public sector is contingent upon the presence of interdependent structural, technological, and human factors. The findings of this study illuminate a set of critical success factors that collectively define the feasibility and sustainability of digital transformation initiatives. Analysis of participant responses reveals that these factors are not discrete; rather, they interact dynamically to shape organizational readiness, resilience, and capacity for change.

Table 4.14: A Heat Map Showing Success Factors for the Successful Implementation of Digital BPR in the Public Sector

Theme	Critical Success Factor	Description	# of Participants	Level of Concern
Leadership & Commitment	Strong Leadership & Commitment	Proactive leadership to ensure alignment with organizational goals and secure buy-in from stakeholders.	22	High
Stakeholder Engagement	Early & Continuous Engagement	Engaging stakeholders early and consistently to	19	Mild

Theme	Critical Success Factor	Description	# of Participants	Level of Concern
		ensure inclusivity and prevent resistance.		
Technology & Infrastructure	Adequate Technology & Systems	Ensuring the right technological tools, systems, and infrastructure are in place for efficient implementation.	20	Moderate
Human Capital & Skills	Skilled Workforce	Upskilling and reskilling employees to ensure the smooth adoption of digital systems and processes.	23	High
Process Design & Alignment	Effective Process Design	Designing digital processes aligned with organizational goals and employee capabilities.	19	Moderate
Performance Measurement	Tracking Performance & Outcomes	Establishing KPIs and real-time monitoring tools for adaptive management and decision-making.	18	Mild
Change Management	Managing Organizational Change	Effective change management frameworks to address resistance and ensure successful transformation.	21	Moderate
Policy & Regulatory Alignment	Aligning with Public Sector Policies	Ensuring that digital BPR strategies align with public sector policies and regulatory requirements.	16	Mild
Resource Allocation	Adequate Resources Allocation	Ensuring proper financial, technical, and human resources are allocated to support digital BPR.	20	Moderate

Theme	Critical Success Factor	Description	# of Participants	Level of Concern
Risk Management	Managing Risks	Identifying and proactively managing risks to prevent delays and costly mistakes in the digital transformation process.	19	Mild

Objective 3 of this study sought to establish the critical success factors for the successful implementation of digital BPR in the public sector. Participants consistently highlighted several interdependent elements essential to effective digital transformation, reflecting the interplay among leadership, human capital, technology, processes, and enabling mechanisms.

Strong Leadership and Commitment

Strong Leadership and Commitment were universally identified as foundational to successful digital BPR implementation. Participants emphasised that senior management must demonstrate clear commitment through a well-articulated vision, adequate resource allocation, and active engagement in the transformation process. Leadership is expected to guide by example, advocate for initiatives, and foster alignment with strategic objectives. Participant 02 remarked, *“Leaders must be champions of digital transformation... Prioritise more budget for digital transformation initiatives,”* while Participant 01 noted the importance of *“Senior Management buy-in and playing the advocacy role for new business processes.”* Two-thirds of respondents (22 out of 31) highlighted that proactive leadership is pivotal for securing stakeholder buy-in and maintaining momentum throughout the BPR process. Participant 1 stated, *“Strong leadership helps to drive the vision forward and ensures the resources and focus are aligned to meet the goals of the digital transformation.”* Participant 2 added, *“Leaders must be champions of digital transformation, continuously communicating its value to the public sector.”*

Skilled workforce and human capital

Intricately linked to leadership is the development of a skilled workforce and human capital. Participants consistently reported that digital BPR requires targeted investments in employee skills to bridge gaps in digital literacy, data analysis, project management, change management, and system integration. Approaches such as comprehensive training programs, workshops, mentorship, and the appointment of internal “digital champions” were

frequently cited. Participant 01 emphasized, *“Human capital is central to the transformation... Computer literacy training [and] end-user training on new systems and applications,”* while Participant 02 stated, *“Capacitate internal employees with relevant skills required to work in the current digital environment.”* Overall, 23 of 31 respondents indicated that workforce capability is central to effective implementation, highlighting that employees’ readiness to adopt and operate new systems underpins the success of digital BPR initiatives.

Adequate technology and infrastructure

The pursuit of digital business process reengineering within the KwaZulu-Natal Department of Social Development cannot be divorced from the physical and digital reality of its operational environment. The evidence from participants paints a stark picture: the current state of technology and infrastructure is not merely an inconvenience but a fundamental barrier that actively undermines efficiency and blocks the path to modernization. Therefore, establishing Adequate Technology and Infrastructure is not just one factor among many; it is the essential, non-negotiable bedrock upon which all other digital transformation efforts depend.

The current landscape is characterised by a triple threat of obsolete hardware, chronically unreliable connectivity, and a fragmented ecosystem of non-integrated systems (Table 4.1 and 4.2). Without addressing this foundational deficit, any attempt at reengineering is destined to fail. A beautifully designed digital workflow is useless if a computer cannot run the required software, if the network drops during a critical data upload, or if the new system cannot “talk” to the existing financial or HR platforms. As Participant 01 succinctly warned, *“Without the proper technology and systems in place, the reengineering process cannot be efficiently implemented.”* This sentiment was echoed by a strong consensus of 20 respondents, who directly linked technological robustness to seamless process integration and effective communication. The way forward, as prescribed by the participants, requires a strategic and sustained investment in three key areas:

Modernising Core Hardware and Networks: This involves replacing outdated computers, *“upgrading routers and switches”* (P02), and significantly increasing bandwidth and wireless access points to ensure reliable connectivity for all offices, especially those in deep rural areas.

Adopting Integrated and Scalable Platforms: The department must move towards *“cloud technologies”* (P02) and enterprise systems that are designed for interoperability. This would eliminate data silos, automate data flow between departments, and provide a single source of truth.

Ensuring Security and Resilience: New infrastructure must be built with robust cybersecurity measures and data backup solutions to protect sensitive citizen information and ensure business continuity.

In summary, for the KZN DSD, technology is not an add-on. It is the very foundation. Investing in adequate technology and infrastructure is the critical first step to dismantling the current culture of manual inefficiency and building a resilient, integrated, and digitally empowered department capable of meeting its service delivery mandates.

Effective Change Management and Organizational Culture – The Human Engine of Transformation: While technology provides the tools for digital BPR, it is the people within the KZN DSD who will determine its success or failure. The data reveals that Effective Change Management and a Supportive Organizational Culture are not merely supportive elements but are, in fact, the critical human engine required to drive and sustain transformation. Without this engine, even the most sophisticated technological solutions will stall due to inertia, fear, and active resistance.

A workforce characterises the current organizational landscape where "resistance to change is a major obstacle" (P03), fuelled by "fear of job loss" and the perception that digital solutions are "complicated" and will "introduce more work" (P02). This resistance is not born of malice but from a deep-seated familiarity with manual systems and a significant anxiety about the unknown. As one participant noted, many staff are "more familiar with the manual paper system" (P03), creating a powerful cultural inertia that counters change.

Therefore, treating this transformation as a purely technical exercise, a matter of installing new software, is a recipe for failure. Participant 01 directly identified this risk, stating, *"Without effective change management, resistance can derail digital BPR efforts."* This warning was echoed by a significant majority of 21 respondents, who collectively emphasised that a structured approach to the human side of change is paramount.

The prescribed pathway to building this critical success factor involves a multi-faceted strategy:

1. **Proactive and Transparent Communication:** Continuously articulating the why behind the change, not just the what, to build understanding and buy-in.
2. **Early and Inclusive Engagement:** Involving staff from various levels in the design and planning phases, as suggested by Participant 03: "...involve staff early in the

process... and highlight the benefits of the new systems.” This fosters a sense of ownership rather than imposition.

3. Comprehensive Training and Support: Moving beyond one-time instruction to ongoing, role-specific coaching and support systems that build confidence and competence.
4. Leadership Advocacy and Champions: Having visible, committed leaders who champion the change and empowering "change champions" within teams to model and encourage adoption.

In summary, for the KZN DSD, technology defines the potential for efficiency, but people determine the reality. Effective change management and the cultivation of an adaptive, innovative culture are thus critical success factors. They are the essential mechanisms for converting scepticism into engagement, fear into competence, and resistance into ownership, ensuring that the department's human capital becomes the driving force behind a successful and sustainable digital transformation.

Other enablers identified

Several supportive enablers were also identified as integral to successful implementation. Policy and regulatory alignment ensure that digital initiatives comply with public sector frameworks, preventing procedural bottlenecks. Participant 1 highlighted, “Aligning digital initiatives with public sector policies ensures that there are no conflicts in terms of legal or regulatory constraints,” with 16 respondents noting that outdated policies could obstruct transformation.

Performance measurement was emphasized by 18 participants as necessary for tracking progress, enabling adaptive management, and demonstrating value. Participants suggested monitoring turnaround times, error reduction, cost savings, and user satisfaction, with Participant 8 stating, “Let us measure how long a case takes from start to finish before and after automation,” and Participant 24 adding, “Performance metrics must be part of everyone’s KPIs, not just IT staff.”

Risk management was also identified as critical by 19 respondents, who noted that anticipating technological, operational, and behavioural risks allows organisations to prevent delays and costly errors. Participant 1 remarked, “*Anticipating potential risks such as technological challenges or employee resistance can prevent delays and costly mistakes.*” At the same time, Participant 2 emphasized, “*Proactively managing risks ensures that obstacles are addressed before they derail the transformation.*”

Collectively, the results demonstrate that successful digital BPR in the public sector requires integrating strong leadership, workforce capability, technological readiness, and change management, supported by enabling mechanisms such as policy alignment, performance tracking, and risk mitigation. These factors reflect the essential conditions participants identified as necessary to achieve effective, sustainable, and value-driven digital transformation.

4.6 Summary of Research Question 3 (RQ3): Critical Success Factors for Implementing Digital BPR in Public Sector Organizations

The analysis of 31 stakeholder interviews highlights that successful digital Business Process Reengineering (BPR) in the public sector is not contingent on technology alone but on an interdependent ecosystem of leadership, people, processes, governance, and infrastructure. The findings reveal ten critical success factors, each reflecting systemic enablers and constraints within the South African public sector, with particular relevance for the KZN Department of Social Development.

Foremost among these is strong leadership and commitment, underscored by 22 participants as the decisive factor in shaping direction, legitimacy, and organizational belief in digital transformation. Equally critical is a skilled workforce, cited by 23 participants, highlighting digital literacy, tailored capacity-building, and embedding competencies into HR systems as prerequisites for transformation. Alongside this, technological adequacy and infrastructure reliability remain central, with participants pointing to interoperability, stable networks, and cybersecurity as non-negotiable enablers.

At the operational level, success depends on process redesign and alignment, preventing the automation of inefficiency, and ensuring systems are citizen-centric and co-created with frontline staff. Change management and cultural readiness were also consistently raised, with participants stressing that transformation fails without deliberate efforts to shift entrenched mindsets and behaviours. Further enablers included early stakeholder engagement, performance monitoring, sustainable resource allocation, and risk management frameworks, which together ensure momentum, accountability, and resilience in BPR initiatives. Finally, respondents flagged policy and regulatory alignment as a recurring barrier, noting that outdated compliance frameworks often stifle digital innovation and must evolve in tandem with new systems.

Taken together, these factors position digital BPR as a complex adaptive change process requiring multi-level alignment. Leadership, skills, infrastructure, and cultural change must converge to create an enabling environment for sustainable digital transformation. For KZN

DSD, this means institutionalizing digital leadership within strategic mandates, embedding digital skills in workforce development, modernizing infrastructure, co-designing processes with users, and fostering inclusive engagement mechanisms. Success further depends on integrating monitoring, securing long-term financing, mitigating risks, and advocating for policy reform.

Ultimately, the critical success factors point to the need for a **holistic, ecosystemic approach** to BPR. Transformation cannot be treated as a linear technical project but must be embedded in leadership practices, organizational culture, governance frameworks, and citizen engagement. When aligned, these factors provide the foundation for moving KZN DSD and by extension, public sector institutions towards agile, citizen-centric, and digitally enabled service delivery

4.7 Main Theme 4: Principles for a Tailored Digital BPR Framework

Objective 4: To design a framework tailored to the specific needs and context of KZN DSD

The final research objective focused on co-designing a digital transformation framework responsive to the KwaZulu-Natal Department of Social Development (KZN DSD) 's unique operational context, capacity levels, and service delivery imperatives. The final theme consolidates the findings into a set of core design principles that should underpin a digital BPR framework tailored explicitly to the KZN DSD. This theme translates the previous findings into actionable design principles for a framework specific to the KZN DSD's context.

4.7.1 Principles for a Tailored Digital BPR

The findings indicate that successful tailoring of digital BPR in the public sector hinges on a set of interrelated principles that directly address the critical success factors identified in Section 4.7. Participants emphasised that these principles ensure relevance, feasibility, and sustainability of digital transformation initiatives within the operational and institutional realities of government departments.

Contextual Alignment and Strategic Integration are foundational, reflecting the importance of strong leadership and commitment (cross-reference Section 4.7.1). Reengineered processes must align with organisational mandates, strategic objectives, and service delivery priorities to foster ownership and enhance the likelihood of sustainable adoption. The alignment principle ensures that digital BPR is implemented in an integrated manner within the broader institutional framework, supporting coherence across initiatives.

Flexibility and Adaptability emerged as another key principle, mirroring the significance of effective change management (cross-reference Section 4.7.4). Public sector environments are inherently dynamic, with shifts in policy, leadership, and stakeholder needs. A tailored digital BPR approach must allow for iterative adjustments and phased implementation, enabling institutions to respond effectively to emerging challenges while maintaining service continuity.

Stakeholder-centric design reflects the interconnection with stakeholder engagement (refer Section 4.7.1) and human capital development (refer Section 4.7.2). Engaging internal staff and external beneficiaries throughout planning, design, and implementation ensures that processes address real operational and service delivery needs. Early and continuous consultation, feedback mechanisms, and participatory workshops were consistently recommended as strategies to embed stakeholder perspectives and secure buy-in, thereby reducing resistance and enhancing adoption.

Integration and Interoperability align closely with technology and infrastructure considerations (refer Section 4.7.3 for cross-reference). Participants highlighted the importance of leveraging existing IT platforms, ensuring compatibility with legacy systems, and maintaining seamless information flow across units. This principle addresses duplication and fragmentation, enabling a coherent digital ecosystem that supports cross-departmental collaboration and efficient service delivery.

Workforce Capability and human capital remain central, reinforcing the critical role of a skilled workforce (refer Section 4.7.2). Digital BPR initiatives require employees who are competent in both technical skills and process management. Investing in upskilling, reskilling, and mentorship, alongside appointing digital champions, facilitates the adoption and operationalisation of reengineered processes, ensuring that technological solutions are effectively utilised.

Sustainability and Institutionalisation integrate resource allocation, policy alignment, and performance measurement (cross-reference Sections 4.7.5 and 4.7.1). Embedding digital BPR within governance structures, establishing KPIs, implementing monitoring dashboards, and ensuring policy compliance strengthen institutional resilience. This principle ensures that transformation gains are sustained over time, even amid leadership transitions or policy shifts.

Risk Management is embedded as a cross-cutting principle, reflecting its identification as a critical enabler in Section 4.7.5. Structured risk frameworks and contingency planning enable institutions to anticipate and mitigate challenges associated with technology, human

behaviour, and organisational change, thereby safeguarding implementation timelines and objectives.

Collectively, the principles of contextual alignment, flexibility, stakeholder-centric design, integration, workforce capability, sustainability, and risk management operationalise the critical success factors identified in Table 4.6. They provide a coherent framework for designing digital BPR initiatives that are tailored to the public sector context, ensuring that leadership, people, processes, and technology interact synergistically to enhance efficiency, responsiveness, and public value.

The findings indicate that designing a digital BPR framework for the public sector requires consideration of contextual, technological, human, and sustainability factors. These principles provide the foundation for tailoring the framework to the unique operational realities of KwaZulu-Natal, while aligning with the critical success factors identified in Section 4.7.

4.7.2 Contextualisation as a Design Imperative

Participants emphasized that the framework must be sensitive to the province's socio-economic, cultural, and infrastructural diversity. The urban-rural divide presents significant challenges, with rural areas experiencing limited internet connectivity, lower digital literacy, and reduced access to services. Cultural diversity, particularly KwaZulu-Natal's strong Zulu heritage, requires that digital platforms accommodate local languages and communication norms. Economic constraints such as high unemployment and poverty further affect access to digital tools, while regional policies and mandates, including the Provincial Growth and Development Strategy (PGDS) and protocols involving traditional authorities, impose specific operational requirements.

Respondents highlighted that a one-size-fits-all approach would be ineffective. As Participant 26 explained, *"The system needs to work in Zulu for our rural beneficiaries and elders who are not comfortable with English."* Participant 03 added, *"KwaZulu-Natal has rural areas with limited internet access... We need to consider language, digital literacy, and affordability."* Manual processes, particularly in financial reporting, procurement, audits, and case management, were identified as critical bottlenecks: *"The monthly reconciliation process is still highly manual. It is slow and error-prone"* (P27); *"Files go missing too often. Without digital document management, we cannot ensure accountability"* (P28). Structural risks, such as the absence of a formal change management strategy and information security policies, were also highlighted: *"We do not have an information security policy in place. That puts sensitive data at risk"* (P31); *"Without a proper strategy, changes face much resistance internally"* (P25).

These contextual constraints operationalise the broader principle of alignment with organisational goals and enabling infrastructure, reflecting leadership, technology, and policy alignment (cross-reference Table 4.6).

4.7.3 Stakeholder Inclusivity and Co-Creation

A participatory, co-creation approach emerged as a central design principle. Participants stressed that both internal stakeholders such as management, IT, finance, audit, and frontline staff and external stakeholders, including beneficiaries, community leaders, and NGOs, must be actively engaged throughout the reengineering process. Participant 03 stated, *"The key people involved... are senior management, IT staff, department heads, frontline staff, and even external associates like beneficiaries."* Similarly, Participant 01 emphasized, *"The ultimate stakeholders... are the service beneficiaries... who can be involved through provided service improvement suggestions via an online portal."*

Cross-functional and cross-sectoral collaboration was highlighted as vital for legitimacy and operational success. Internally, teams across departments must coordinate to enable coherent process redesign, while external actors contribute insights that ensure alignment with community needs: *"The BPR project leads, communications staff, and records officers are vital internally"* (P24); *"Traditional councils and grassroots NGOs must be part of this; they are closest to the communities we serve"* (P29).

Nineteen respondents explicitly identified stakeholder engagement as critical for ensuring inclusivity and pre-empting resistance. Participants noted that early and continuous involvement of all stakeholders, including internal staff, government departments, and citizens, secures their buy-in: *"Stakeholders' buy-in and continuous involvement ensure that the process is inclusive and that concerns are addressed before they become barriers"* (P1). Participant 02 further observed, *"If stakeholders feel left out or not heard, resistance to the digital changes can escalate."*

4.7.4 Technology Integration and Customization

Participants advocated leveraging and enhancing existing technological platforms rather than pursuing a complete system overhaul. Microsoft 365 applications, already licensed within the department, were highlighted as a feasible backbone for integration. Participant 02 stated, *"Microsoft 365 as it has many applications the department is licensed for. The department needs to find ways to see how these applications will leverage the department's processes."* Processes prioritised for immediate re-engineering included public-facing data collection, social service case management, and financial claims, which remain fragmented and paper-

based. Participant 05 noted, "Which business processes require immediate reengineering... The payroll and financial reporting process..."

Mobile-first, offline-capable solutions were emphasized to accommodate field staff operating in low-connectivity environments: *"Mobile apps that work offline and sync later are critical for deep rural work"* (P26). Automated document management and digital audit trails were also highlighted as urgent needs (P27). These insights align directly with the technology and infrastructure success factor in Table 4.6.

4.7.5 Human-Centric Capacity Building

Capacity building was identified as a core principle, closely linked to the skilled workforce success factor (Section 4.7.2). Participants recommended structured, continuous, and practical training programs tailored to different roles, learning styles, and departmental contexts. Participant 03 emphasized, *"A hands-on approach is vital... and include refresher courses with an option to offer support for the employees as they learn."* Participant 01 added, "Hybrid training using virtual and practical instructor-led training methodologies."

The focus on psychological readiness, continuous learning, and support mechanisms ensures that staff can effectively apply new skills. The appointment of digital champions, ongoing mentorship, and modular training were recommended to embed capability and sustain momentum throughout the transformation.

4.7.6 Sustainability and Continuous Improvement

Finally, participants stressed that the framework must be dynamic and designed for long-term sustainability. Feedback loops, regular monitoring, and performance evaluation mechanisms are essential to ensure continuous improvement. Participant 26 highlighted, *"[Metrics like] Turnaround time, reduction in manual steps, and cost savings would show us if we are succeeding."* Participant 01 recommended, *"Introduction of BPR as a standard agenda item in all departmental meetings at the different levels."*

Embedding monitoring, evaluation, and iterative review aligns with the performance measurement, resource allocation, and risk management success factors (Table 4.6). Metrics such as cycle times, error rates, cost savings, and satisfaction surveys enable the department to adapt and refine processes in response to evolving operational realities.

4.8 Core Pillars, Enablers, Context, and Outcomes

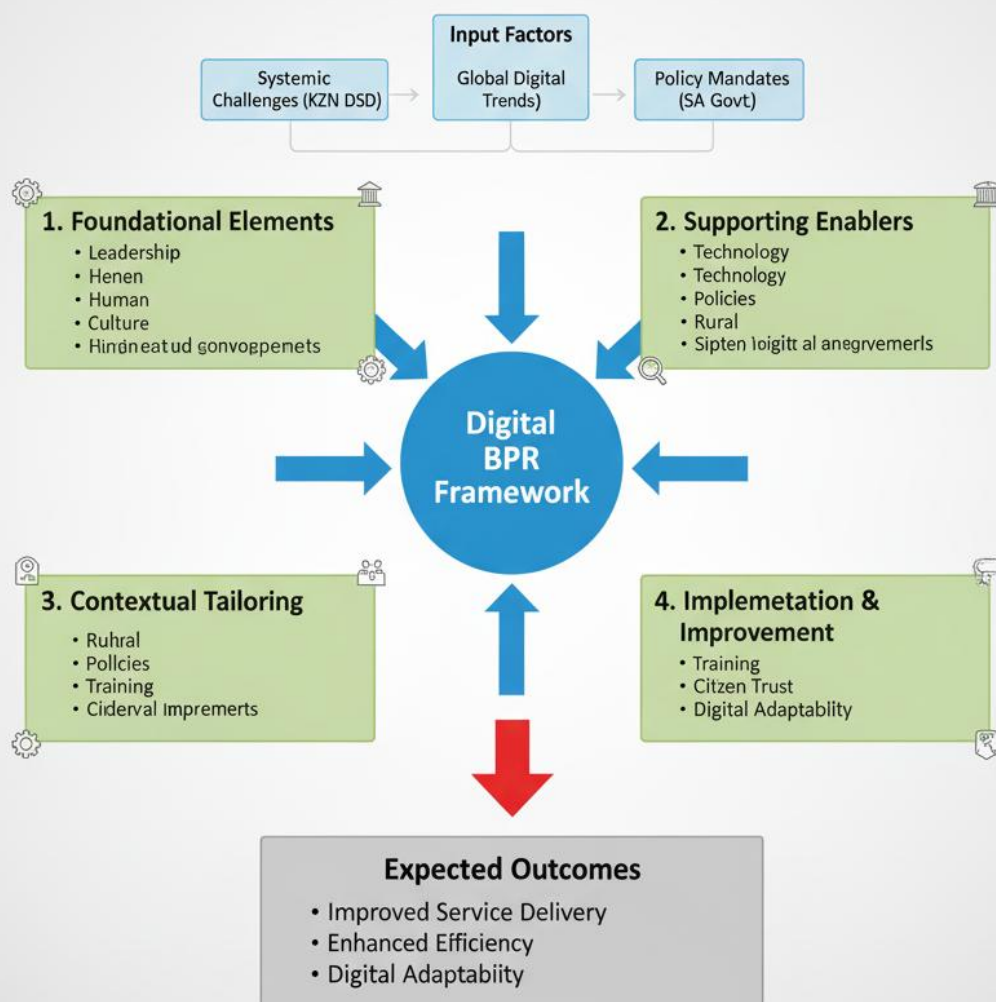
Below is a tabulated summary of the RQ4 Digital BPR Framework for KZN DSD, integrating the pillars, enablers, contextual factors, and outcomes in a structured way.

Table 4.15: Summary of the RQ4 Digital BPR Framework for KZN DSD

Framework Component	Description / Focus	Key Elements / Cross-Reference
Core Pillars	Foundational elements essential for successful digital BPR.	- Leadership & Commitment: sets vision, accountability, models digital behaviours (Theme 3.1).
		- Skilled Workforce & Human Capital: continuous training, mentorship, competency building (Theme 3.2).
		- Technology & Infrastructure: system upgrades, interoperability, secure platforms (Theme 3.3).
		- Process Redesign: citizen-centric, agile, integrated workflows (Theme 4.4).
		- Change Management: readiness assessments, communication, support mechanisms (Theme 3.4).
Supporting Enablers	Factors that reinforce and facilitate core pillars.	- Stakeholder Engagement: early, continuous, and inclusive participation (Theme 4.3).
		- Policy & Regulatory Alignment: compliance with provincial/national mandates, policy audits (Theme 3.8 / 4.3).
		- Resource Allocation: financial, technical, and human resources secured (Theme 3.9).
		- Risk Management: dynamic risk registers, scenario planning, mitigation strategies (Theme 3.10).
		- Performance Measurement: KPIs, real-time monitoring, adaptive feedback loops (Theme 3.5 / 4.5).
Contextual Tailoring	Adaptations to fit KZN's socio-economic, cultural, and	- Geographical: urban-rural connectivity and access limitations (Theme 4.9.2).
		- Cultural: language diversity, Zulu heritage, traditional authority structures (Theme 4.9.2).

Framework Component	Description / Focus	Key Elements / Cross-Reference
	geographic realities.	- Economic: poverty, unemployment, affordability barriers (Theme 4.9.2).
		- Regulatory: alignment with PGDS, IDPs, Treasury guidelines (Theme 4.9.2 / 4.10 Policy Alignment).
Tailored Implementation Strategies	Practical methods for smooth adoption and cultural buy-in.	- Early engagement, change champions, visible 'quick wins' (Theme 4.10 Tailored Implementation Strategies).
		- Targeted, modular, scenario-based training; mentorship and blended learning approaches (Theme 4.10 Capacity Building).
		- Prioritization of critical processes for immediate re-engineering, e.g., financial reporting, procurement, case management (Theme 4.10 Customization of Processes).
Sustainability & Continuous Improvement	Ensuring long-term adaptability and learning.	- Dynamic, flexible framework that can evolve with technology (Theme 4.10 Sustainability).
		- Embedded feedback loops, stakeholder reviews, and continuous learning (Theme 4.10 Sustainability).
		- Regular monitoring of outcomes: turnaround time, error rates, system reliability, cost savings, user satisfaction (Theme 4.10 Indicators of Success).
Expected Outcomes	The ultimate goals of the framework.	- Improved service delivery: faster, accurate, accountable, citizen-centric processes.
		- Operational efficiency: reduced errors, optimized resource utilization, enhanced productivity.
		- Sustainable digital transformation: adaptable, continuously improving, supported by a digitally capable workforce.

Conceptual Framework: Tailored Digital BPR Framework for KZN DSD



SOURCE: AUTHOR VICTOR, N.

Figure 4:12: Proposed Framework

4.9 Elaboration of the Conceptual Framework: Navigating Digital BPR in the KZN DSD

The proposed conceptual framework for a tailored digital business process re-engineering (BPR) in the KwaZulu-Natal Department of Social Development (KZN DSD) is not merely a descriptive framework, but a critically derived construct designed to articulate the complex interdependencies underpinning successful public-sector digital transformation. It moves beyond a simplistic technology-centric view, positing that effective BPR is an emergent

property of the recursive interaction between context, systemic factors, strategic enablers, and iterative implementation.

At its core, the framework acknowledges that the "digital BPR framework" is not a static blueprint, but a dynamic, adaptive system. Its genesis is predicated upon a rigorous analysis of three crucial input factors, each representing a distinct yet interwoven analytical lens:

Systemic challenges: This is the empirical starting point, grounded in ethnographic data that highlight internal dysfunctions. These are not merely operational glitches but symptomatic manifestations of deep-seated organisational pathologies: bureaucratic rigidity, digital literacy deficits, fragmented processes, and a culture of risk aversion. Critically, the framework recognizes that these are not isolated variables but a syndrome of internal dysfunction. Any proposed BPR must, therefore, be explicitly counter-hegemonic to these entrenched systemic barriers, rather than merely superficial amelioration. The effectiveness of the framework is directly proportional to its capacity to disrupt these pathological equilibria fundamentally.

Global digital trends: this input contextualises local challenges within a broader epistemic and technological landscape. It acknowledges the inevitable pressures and opportunities arising from ubiquitous digitalization in governance, citizen engagement, and administrative efficiency. The framework implicitly performs an environmental scan, leveraging insights from global best practices in digital public administration (e.g., e-governance, innovative government initiatives) while maintaining a critical awareness of potential "solutionism" – applying decontextualized technological fixes without addressing root causes. This input guards against insular diagnostic biases.

Policy mandates (SA Govt): This highlights the imperative for legitimacy and alignment within the broader South African public sector governance architecture. The framework must align with national digital transformation strategies, legislative compliance requirements (e.g., POPIA), and resource allocation guidelines from entities such as the National Treasury. This implies that the framework's design is not solely an internal departmental exercise but a negotiated process, constrained and enabled by multi-scalar policy environments. A critical stance here acknowledges the potential for policy ambiguities or conflicts to either facilitate or impede agile BPR.

From these inputs, the framework articulates four interconnected core components, which operate less as sequential stages and more concurrently managed strategic dimensions:

Foundational elements: these represent the bedrock of organisational capacity for change. Leadership is theorised not as mere authorisation but as visible, active advocacy and

modelling of desired behaviours, a critical factor in overcoming organisational inertia and staff resistance. Human capital encompasses not just skills but a shift towards continuous learning and mentorship, reframing employees from passive recipients of training to active agents of digital reform. Organisational culture is understood as the informal rules and values that either stifle or foster innovation. The framework implicitly argues for a proactive culture shift, challenging the risk-averse proceduralism evident in the KZN DSD.

Supporting enablers: the material and structural conditions that enable the foundational elements to thrive. Technology extends beyond mere hardware to encompass integrated, interoperable systems and reliable infrastructure. Policy modernization is a recursive loop, requiring existing policies (e.g., procurement, data sharing) to be reviewed and adapted to enable agility, rather than serving as bureaucratic constraints. Resource allocation signifies dedicated and sustained investment in both technology and the human capacity to leverage it. The inclusion of rural context here is a crucial acknowledgement of KZN's unique geographical challenges, ensuring that digital solutions are equitable and accessible, mitigating the digital divide.

Contextual tailoring: this component is perhaps the most critical for ensuring the framework's practical efficacy and avoiding generic prescriptions. It explicitly recognises KZN's socio-economic, cultural, and geographic specificities. This involves designing solutions that account for language diversity, varying levels of digital literacy, and prevailing economic conditions (e.g., poverty, unemployment). This tailoring function serves as an ethical imperative, ensuring that BPR is not merely efficient but also inclusive and responsive to the realities of its diverse beneficiaries and workforce. It moves beyond a 'one-size-fits-all' approach to digital transformation.

Implementation and improvement: this highlights the iterative, non-linear nature of BPR. It emphasises continuous training beyond basic instruction, focusing on ongoing skills development and adaptive learning. The goal is to build citizen trust through transparent processes and responsive service delivery, directly addressing the "shouting into the void" critique from beneficiaries. Crucially, it foregrounds digital adaptability, advocating a dynamic framework that evolves with technology and changing stakeholder needs, rather than ossifying into a new form of rigidity. This incorporates principles of agile development and continuous feedback loops.

Ultimately, the framework posits that successful engagement with these components will lead to profound expected outcomes. These are not simply technical metrics but encompass a broader impact: improved service delivery (faster, more accurate, citizen-centric); enhanced efficiency (reduced errors, optimized resource utilization, enhanced productivity); and a

deeper digital adaptability – signifying a department that is not merely using digital tools, but is inherently capable of continuous digital transformation, supported by an empowered and digitally literate workforce. This represents a paradigm shift from a reactive, compliance-driven bureaucracy to a proactive, citizen-centric, and digitally agile public service entity. The red downward arrow from the central framework to the outcomes signifies the desired causal flow and the ultimate reason for being of this comprehensive strategic endeavour.

4.10 Research Question 4 (RQ4): Designing a Context-Specific Digital BPR Framework for KZN DSD

The final research objective focused on co-designing an evidence-based and context-sensitive framework for digital Business Process Reengineering tailored to the KwaZulu-Natal Department of Social Development. Building on the ten critical success factors identified through stakeholder engagement, the framework provides a structured, pragmatic pathway for digital transformation within the unique operational realities of the South African public sector (refer Table 4.6 for cross-references).

At its core, the framework emphasises strong, consistent leadership as its foundational pillar. Senior executives are expected not only to endorse but also to embody the digital agenda, establishing clear vision, accountability structures, and cascading digital behaviours throughout the organisation (cross-reference Section 4.7.1). Complementing leadership, early and continuous stakeholder engagement ensures inclusivity, fosters ownership, and mitigates resistance, aligning interventions with the practical realities of both staff and service beneficiaries (cross-reference Section 4.9.3).

The framework integrates policy and regulatory alignment as a precondition for successful digital transformation. Systematic audits of existing rules and active advocacy for reform are embedded to ensure that compliance does not hinder innovation. Likewise, human capital development is treated as a central enabler. Structured, role-specific, and continuous training programs, supplemented with mentorship and blended learning approaches, address digital literacy gaps and support workforce adaptability (cross-reference Section 4.9.5).

Technology and infrastructure are framed as the backbone of transformation. The framework advocates upgrading legacy systems, enhancing interoperability, and introducing secure, scalable platforms that support both urban and rural operations. Process redesign is prioritised over mere automation, ensuring workflows are citizen-centric, streamlined, and agile (cross-reference Section 4.9.4). Structured change management strategies, including readiness assessments, clear communication, and support mechanisms, are incorporated to navigate disruption and build organisational trust (cross-reference Section 4.9.4–4.9.5).

Operational enablers, including resource allocation, risk management, and performance measurement, are embedded to sustain transformation. Multi-year investment planning, dynamic risk registers, and scenario-based planning address potential technological, organisational, and political risks. Real-time monitoring and feedback mechanisms, linked to defined performance indicators such as turnaround time, error reduction, cost savings, and service quality, enable continuous evaluation and iterative improvement (refer Sections 4.7.6 and 4.9.6).

Tailored implementation strategies underscore the framework's practical orientation. Processes identified for immediate reengineering, such as financial reporting, procurement, and case management, are prioritised for integration and automation, ensuring end-to-end visibility and operational efficiency. Continuous capacity building, combined with modular, practical learning and formal recognition systems, reinforces skill acquisition and retention. Policy alignment with provincial and national mandates ensures legal compliance and interdepartmental coordination, while sustainability is strengthened through adaptability, feedback loops, and a culture of digital fluency (cross-reference Sections 4.9.2–4.9.6).

Collectively, the framework presents an integrated, context-specific approach to digital BPR at KZN DSD. Leadership, workforce capability, technology, process optimization, and operational resilience function as mutually reinforcing pillars. By balancing ambition with feasibility, the framework guides the Department toward a coherent digital transformation agenda that is inclusive, accountable, and oriented toward tangible improvements in service delivery.

4.11 Summary

This section presented the findings from the qualitative data analysis, structured around four primary themes. The analysis first detailed the pervasive operational inefficiencies and systemic challenges within the KZN DSD, highlighting manual workflows, technological gaps, resource deficits, and rigid policies that lead to a negative stakeholder experience. It then explored the pathways and barriers to digital BPR, noting both readiness for change and significant obstacles, such as resistance and inadequate infrastructure. The third theme identified the critical success factors for implementation, emphasising the need for strong leadership, a skilled workforce, adequate technology, and effective change management. Finally, the chapter outlined the core principles for a tailored BPR framework, emphasising contextualization, stakeholder inclusivity, human-centric capacity building, and sustainability. These findings provide the empirical foundation for the proposed digital BPR framework, which will be detailed in the subsequent chapter.

4.11.1 A Perspective on KZN DSD's Digital Transformation

The analysis identified three interrelated, cross-cutting themes that underpin the KwaZulu-Natal Department of Social Development's operational challenges and its potential for digital transformation. These themes emerged across all research questions (RQs), underscoring the necessity for integrated, multidimensional solutions to enable effective Business Process Reengineering.

4.11.2 Manual Processes: A Root Cause of Systemic Inefficiency

The first and most pervasive theme relates to the reliance on manual processes, which remain a foundational obstacle to efficiency across the department. These outdated, paper-based procedures slow down essential operations, increase human error, and create administrative bottlenecks. The inefficiency is apparent in routine but critical processes such as user account creation, leave approvals, and document routing, where employees must rely on sequential approvals and physical handovers.

This inefficiency was clearly articulated by respondents describing how user account creation can take between five and seven working days due to manual routing and approvals:

"The ICT User Account Creation process involves a new employee completing a User Creation Form, which is then approved and signed off on by the immediate supervisor. Once approved, it is submitted to the ICT Operations sub-directorate... This manual process takes 5–7 working days." (1.1.1, P1)

However, participants also highlighted that automation could substantially reduce turnaround time (RQ2). For example, by integrating with existing systems such as Personal, user accounts could be created automatically, reducing processing time from days to under an hour and eliminating data entry errors: *"Automating the user account creation by integrating with Personal data would reduce processing time to under 1 hour while eliminating human errors in data entry."* (2.3.1, P4)

Success in addressing this challenge also depends on staff adaptation (rq3). One respondent reported that training interventions, such as hands-on workshops for the new digital HR system, transformed initial resistance into advocacy: *"We trained 120 staff on the new digital HR system through hands-on workshops. Those who resisted initially became advocates after seeing time savings."* (3.4.1, P10)

This theme highlights that technological solutions (e.g., automation) are only effective when combined with human-capacity interventions, such as training. Addressing manual inefficiencies requires simultaneous action on both the technological and human fronts.

4.11.3 Resistance to Change: The Human Dimension of Digital Transformation

The second theme centres around human resistance to technological change. Even where digital tools are available, employee hesitation often delays or undermines implementation. Fear of job loss, increased workload, and unfamiliarity with digital tools contribute to passive or active resistance, particularly among long-serving staff accustomed to manual systems.

One respondent noted that this resistance is rooted in anxiety about relevance and job security: *"Employees fear change and are hesitant to adopt new technologies. They often think that new digital solutions will introduce more work for them. They also fear losing their jobs."* (1.7.1, P4)

To address this, departments appointed *"Digital Champions,"* trusted staff members who acted as internal mentors and advocates. This grassroots approach helped reduce helpdesk traffic and improve user confidence: *"We appointed 'Digital Champions' in each unit, early adopters who mentor colleagues through the transition. This reduced helpdesk tickets by 40%"* (2.5.2, P15).

Equally powerful was leadership buy-in. Adoption rates significantly improved when senior leaders led by example. As one staff member noted: *"When the Deputy Director started using the e-approval system herself and shared time savings in staff meetings, adoption rates tripled in two months."* (3.1.1, P5)

This theme demonstrates that resistance to change is not simply a training issue. It is also a cultural and psychological one. Overcoming it requires structured change management programs, visible leadership support, and the strategic deployment of peer mentors to influence adoption from within.

4.11.4 Data Silos: The Technical-Policy Divide

The third theme reveals how fragmented data systems across departmental functions have created significant inefficiencies and policy challenges. Different Finance, Human Resources, and Social Services units rely on separate, non-integrated platforms (e.g., BAS, Personal, and case management systems). This siloed data environment leads to duplication, manual reconciliation, and inconsistent information flow, significantly hampering performance and decision-making.

One participant described the situation as follows: *"Finance uses BAS, HR uses Personal, and Social Services uses a separate case management system. We waste hours each week reconciling these datasets manually."* (1.6.1, P10)

To address this, KZN DSD implemented an API gateway that enabled seamless communication between systems. This reduced duplicated entries by 75% and eliminated reconciliation delays: *“Implementing an API gateway between our core systems reduced duplicate data entry by 75% and eliminated monthly reconciliation delays.”* (2.3.1, P8)

However, the success of this initiative depended not only on technical integration but also on policy support. Legal and governance frameworks had to evolve to permit responsible data sharing: *“The new Data Sharing Protocol, approved by Legal in 2023, finally allows cross-departmental system integration while complying with POPIA.”* (3.8.1, P12)

Addressing data silos requires both technical innovation and updated policy frameworks. Legal constraints, such as POPIA, must be navigated carefully to ensure that system interoperability does not compromise data privacy and security.

4.12 Literature Findings

4.12.1 Introduction

The shift to digital governance has made it crucial for public sector organisations to innovate, streamline operations, and respond promptly to citizens' evolving needs. Business Process Reengineering, a method that completely redesigns key processes to work more effectively, has become increasingly important due to the advent of new digital technologies. **This section explores scholarly and empirical literature to address the central research question:** How can a comprehensive framework for implementing digital BPR be developed to address the inefficiencies and challenges the KwaZulu-Natal Department of Social Development faces?

The transition to digital governance has become a strategic imperative for global public sector organisations, including those in South Africa. As governments face increasing pressure to deliver efficient, transparent, and citizen-centric services, there is a compelling need to innovate, streamline bureaucratic procedures, and respond dynamically to evolving public expectations. In this context, Business Process Reengineering, a radical redesign methodology focused on rethinking and restructuring core processes to achieve dramatic performance improvements, has regained prominence, particularly with the proliferation of digital technologies such as cloud computing, artificial intelligence, and e-governance platforms.

Although BPR originated in the private sector, implementing it in public organisations is more challenging due to strict hierarchies, separate departments, rules, and limited resources. However, digital transformation provides new ways to apply BPR more flexibly and on a larger

scale. The convergence of digital tools and process reengineering has the potential to eliminate inefficiencies, improve service delivery, and restore trust in public administration.

This section critically reviews scholarly and empirical literature to explore the intersection of BPR and digital transformation within public sector organisations, focusing on the KwaZulu-Natal Department of Social Development. It aims to identify key conceptual frameworks, practical enablers, and barriers to successful BPR implementation in digitally transitioning institutions. The review draws on global literature and South African case studies, thereby situating the study within a comparative, context-sensitive lens.

Furthermore, the insights from this literature will inform the development of the analytical framework for this study. These findings will later be triangulated with primary data gathered through interviews and FGDs within the KZN DSD to validate theoretical claims, uncover context-specific dynamics, and support a tailored BPR implementation framework.

4.12.2 Empirical Secondary Data

This literature synthesis also addresses the secondary research questions:

4.12.2.1 RQ1: Inefficiencies and Challenges in the Business Processes of KZN DSD

4.12.2.1.1 Bureaucracy and Process Fragmentation

Public sector organisations, such as KZN DSD, often face challenges due to outdated bureaucracy, rigid hierarchies, and inefficient processes. According to Hammer and Champy (1993), such fragmentation hinders the seamless flow of information, creating bottlenecks that slow down service delivery (Mertens *et al.*, 2024). In the South African context, various studies (Van der Walddt, 2016; Cloete & Meyer, 2006) identify excessive red tape, poor interdepartmental coordination, and multiple layers of approval as common process inefficiencies.

4.12.2.1.2 Manual and Paper-Based Systems

Manual operations are widespread in many government departments. Manda and Backhouse (2016) highlight that in South African social development agencies, paper-based systems dominate grant applications, beneficiary monitoring, and data capture. These manual processes result in delayed processing, duplication of effort, loss of documentation, and data entry errors.

4.12.2.1.3 Ineffective Data Management

Like many public institutions, KZN DSD faces issues related to poor data governance, including siloed databases, outdated information, and limited analytics capability (Nazaria *et al.*, 2024). Ineffective data management hinders decision-making, undermines accountability, and prevents the implementation of evidence-based policy interventions (UNDP, 2015).

4.12.2.1.4 Staff Capacity and Resistance to Change

Implementing digital reforms often faces internal resistance due to concerns about job loss, a lack of digital skills, or cultural inertia (Nkomo & Marnewick, 2021). A lack of training frequently exacerbates change resistance, as does limited consultation with staff and the absence of an effective change management strategy (Mylonakis, 2018).

4.12.2.1.5 Inequitable Access to Services

There is persistent inequality in access to social services in KwaZulu-Natal, particularly in rural and underserved communities. Digital exclusion, poor connectivity, and language barriers marginalise vulnerable populations, creating service delivery gaps (Stats SA, 2022; Nkomo *et al.*, 2023; Zondo, 2021).

4.12.2.2 RQ2: Implementing Digital BPR to Address These Challenges

4.12.2.2.1 Reimagining Processes through Digital Tools

Digital BPR involves radically redesigning organisational processes using automation, cloud computing, AI, and mobile platforms. Zuhaira and Ahmad (2021) argue that digital technologies, when combined with process redesign, can create integrated, end-to-end workflows that enhance efficiency and responsiveness.

4.12.2.2.2 Workflow Automation and RPA

Robotic Process Automation (RPA) is a key enabler of digital BPR. It can automate repetitive and rule-based tasks such as data entry, document scanning, and case management (Mertens *et al.*, 2024). This would help address manual inefficiencies and reduce turnaround time in processing grant applications.

4.12.2.2.3 Digitised Service Delivery Platforms

E-government platforms can enable self-service portals that enable beneficiaries to apply for grants, track their applications, and access support services in real time. Studies by Zaini &

Saad (2019) and Zervoudi (2020) show that such platforms enhance transparency, reduce corruption, and improve citizen satisfaction.

4.12.2.2.4 Business Intelligence and Data Analytics

Integrating data analytics into redesigned processes enables predictive modelling, demand forecasting, and enhanced decision-making. Public institutions can use dashboards and performance monitoring tools to track service delivery metrics, identify trends, and improve accountability (Zayas-Cabán *et al.*, 2021).

4.12.2.2.5 Mobile Integration and Inclusivity

Mobile-first approaches ensure inclusivity in digitally marginalised areas. M-health and M-government initiatives in countries such as Kenya and India demonstrate how mobile technology can extend access to social services even in remote regions (Xue *et al.*, 2023; Ajayi & Laseinde, 2023).

4.12.2.3 RQ3: Critical Success Factors (CSFs) for Digital BPR

4.12.2.3.1 Top Management Support

A consistent finding in BPR literature is the necessity of strong leadership. Senior management must articulate a clear vision, mobilise resources, and champion reform efforts (Ajayi & Laseinde, 2023). This is particularly important in the public sector, where political interference or leadership turnover can derail reform.

4.12.2.3.2 Strategic Alignment

Successful BPR requires that digital initiatives align with institutional mandates, national priorities (e.g., NDP 2030), and broader governance frameworks (Davenport, 1993). Strategic alignment ensures that BPR efforts support long-term organisational objectives and legislative obligations.

4.12.2.3.3 Stakeholder Engagement

The participation of internal stakeholders (employees and unions) and external stakeholders (citizens, NGOs, and tech partners) is crucial. Resistance can be mitigated through inclusive consultation, capacity building, and transparent communication (Mertens *et al.*, 2024; Nkomo *et al.*, 2023).

4.12.2.3.4 Change Management and Organisational Culture

The cultural shift required for BPR implementation is significant. This entails an organisational culture that supports innovation, learning, and flexibility. Mertens *et al.*, (2024) argue that transforming culture involves addressing underlying values, assumptions, and behaviours. Interventions such as coaching, storytelling, and role modelling are essential.

4.12.2.3.5 Technical Capacity and Infrastructure

Access to reliable ICT infrastructure, skilled personnel, and interoperable systems is a foundational enabler of digital BPR (Ahmad *et al.*, 2023). The absence of these elements creates implementation barriers, particularly in rural departments like KZN DSD.

4.12.2.3.6 Policy and Regulatory Environment

Digital transformation must be supported by enabling policies on data protection, digital identities, cloud services, and procurement. South Africa's Protection of Personal Information Act (POPIA) and e-government Strategy provide a sound regulatory foundation (GCIS, 2021).

4.12.2.4 RQ4: Tailoring the Framework for KZN DSD

4.12.2.4.1 Contextualising Process Redesign

While BPR principles are universal, frameworks must be adapted to local realities. In KwaZulu-Natal, process redesign must address provincial service delivery backlogs, interdepartmental dependencies, and limitations in rural infrastructure (KZN DSD Annual Report, 2023).

4.12.2.4.2 Community-Centric Co-Design

Community-Centric Co-Design means working with the community to create services or solutions that meet their needs and reflect their ideas. Participatory design methods let users help create services rather than receive them. Tools such as service blueprinting, persona mapping, and feedback help ensure that new processes align with users' actual needs (Agrawal *et al.*, 2023).

4.12.2.4.3 Localisation of Digital Interfaces

Digital interfaces must support indigenous languages, offer offline functionality, and comply with accessibility standards. Localisation ensures that digital BPR supports inclusive governance and universal access to services (Agrawal *et al.*, 2023; Al-Anqoudi *et al.*, 2021).

4.12.2.4.4 Leveraging Provincial Partnerships

Implementation can be accelerated by working with local tech startups, universities, and NGOs. Public-private-academic partnerships create avenues for innovation, testing, and iterative design (Adom *et al.*, 2018).

4.12.2.4.5 Monitoring and Evaluation Mechanisms

The framework must include a monitoring and evaluation (M&E) component to assess progress, document lessons, and drive learning. This includes defining performance indicators, establishing digital audit trails, and using adaptive management tools (Amarasinghe & Wickramarachchi, 2021).

4.12.2.4.6 Summary

The literature demonstrates that digital BPR is promising for transforming public-sector institutions such as the KwaZulu-Natal Department of Social Development. However, implementation must go beyond technology to rethink organisational processes, stakeholder dynamics, institutional culture, and governance frameworks. By drawing on global best practices and adapting them to the provincial context, a locally relevant, scalable, and sustainable digital BPR framework can be developed. The next chapter presents the proposed conceptual framework informed by these findings.

4.12.3 Knowledge Gaps Addressed by Literature

This structure specifically targets underexplored areas in literature:

1. The tension between compliance-heavy public sector environments and agile BPR (Arnott & Gao, 2022),
2. Localisation of global BPR models for provincial South African contexts (Ansah *et al.*, 2024),
3. Workforce digital literacy development pathways in mid-career bureaucracies (Asif, 2020)

The findings collectively enable the development of a contextualised digital BPR framework that balances theoretical rigour with practical implementability for KZN DSD's unique operational reality.

4.12.4 Empirical Evidence: Theoretical and Conceptual Frameworks

The KwaZulu-Natal Department of Social Development's framework for implementing digital Business Process Reengineering can draw from several theoretical and conceptual frameworks discussed in the literature. Based on the findings, the most suitable frameworks are:

4.12.5 Cross-Industry Frameworks

Relevance: CMMI provides a structured approach to process improvement across industries, moving through defined maturity levels from "Initial" to "Optimising." This is particularly useful for the KZN Department, as it offers a roadmap for systematic, gradual process improvement that aligns with the need for organisational sustainability and digital transformation.

Application: The department can benchmark its process maturity, identify weaknesses, and focus reengineering efforts accordingly. This framework ensures continuous improvement and aligns with the department's strategic goals.

4.12.6 Human-Technology-Organisation (HTO) Framework

Relevance: The HTO framework balances human, technological, and organisational factors, ensuring holistic implementation of BPR. This is critical for the KZN Department, which must address cultural challenges, employee resistance, and the integration of technology.

Application: The framework can guide the department in designing user-centric digital tools, managing change effectively, and aligning technological investments with strategic objectives. It ensures that all three dimensions (human, technology, and organisation) are harmonised for successful BPR implementation.

4.12.7 Conceptual Models (Davenport's Process Innovation Model)

Relevance: These models provide a theoretical foundation for BPR, emphasising customer-centricity, efficiency, and innovation. Davenport's model, in particular, highlights the integration of digital tools to enhance customer value and streamline operations (Kaponda *et al.*, 2023).

Application: The KZN Department can use this model to ground its reengineering efforts in clear objectives, ensuring alignment between strategy and execution. It also supports integrating digital tools to improve service delivery.

4.12.8 Benchmarking Methods

Relevance: Benchmarking allows organisations to compare their processes with industry best practices, set realistic goals, and adopt proven strategies.

Application: The KZN Department can use benchmarking to identify strengths and weaknesses in its current processes, ensuring that successful patterns from other sectors guide its BPR efforts.

4.12.9 Continuous Process Improvement (CPI)

Relevance: While BPR is often radical, CPI offers an iterative approach to continual optimisation, which helps stabilise newly implemented digital processes after reengineering.

Application: The department can utilise CPI frameworks to refine and optimise processes over time, ensuring long-term sustainability and alignment with its strategic goals.

4.12.10 Integration for the KZN Framework:

The KZN Department's framework should integrate elements from these frameworks to address its unique challenges:

Strategic Alignment: Use CMMI and conceptual models to align BPR with departmental objectives.

Technology Integration: Leverage the HTO framework to balance technological advancements with human and organisational needs.

Stakeholder Engagement: Incorporate benchmarking and CPI to ensure continuous feedback and improvement.

Change Management: The HTO framework's emphasis on human factors will help manage resistance and foster a culture of adaptability.

4.13 Summary

The chapter summary provides a coherent and comprehensive synthesis of the research findings. It clearly demonstrates how the results align with the stated research objectives, particularly Objective 4, which aims to design a framework tailored to the specific needs and context of the KwaZulu-Natal Department of Social Development, as well as the overarching aim of the study, namely to develop a comprehensive framework for implementing digital Business Process Reengineering to address the inefficiencies and challenges faced by the department.

The KwaZulu-Natal Department's successful adoption of Digital Business Process Reengineering (DBPR) depends on the selection and incorporation of suitable theoretical and conceptual frameworks. A multi-theoretical approach offers both intellectual depth and useful direction in the context of public sector change, when institutional complexity, regulatory restrictions, and stakeholder multiplicity converge. This is where Davenport's Process Innovation Model, the Human Technology Organisation Framework, and the Cross-Industry Frameworks come together to provide a strong and complementary basis for the implementation of digital BPR. When combined, these frameworks allow for ongoing process optimisation, organisational preparedness, technological enablement, and strategic alignment all within a logical transformation architecture.

Public institutions can align with best practices across sectors by using benchmarking mechanisms provided by cross-industry frameworks, especially those generated from digital maturity and transformation models. This assertion is aligned to Objective 4 (To design a framework tailored to the specific needs and context of KZN DSD.) According to recent research, digital transformation in the public sector cannot happen in a vacuum; rather, it needs to be guided by ecosystem-based governance models and cross-sectoral learning (Vial, 2019; Warner and Wäger, 2019). By connecting digital projects to organisational value creation, service delivery optimisation, and citizen-centric results, these frameworks help to improve strategic alignment. Cross-industry models help government agencies like the KZN Department balance efficiency with compliance and transparency requirements by allowing private-sector innovation logics to be translated into public-sector accountability structures (Mergel, Edelmann, and Haug, 2019; Gong and Ribiere, 2021). Additionally, by supporting the evaluation of digital capability, these frameworks guarantee that transformation projects are strategically arranged in accordance with institutional preparedness rather than being determined by technology.

The Human Technology Organisation Framework offers a meso-level analytical lens that emphasises socio-technical integration in addition to this macro-level strategic focus. Digital BPR involves a systemic reorganisation of institutional culture, procedures, and human roles in addition to a technical intervention. According to recent studies, a lack of focus on organisational and human factors is often the cause of digital transformation failures in public companies (Tangi *et al.*, 2021; Verhoef *et al.*, 2021). By viewing transformation as the dynamic interplay of organisational structures, people skills, and technology infrastructure, the HTO framework reduces this risk. This framework guarantees that digital solutions, including data analytics systems, automation platforms, and AI-enabled decision assistance, are integrated into the KZN Department's change management plans, skills development initiatives, and supportive governance structures. During times of transition, this integrative

approach improves institutional resilience, increases staff buy-in, and increases stakeholder engagement.

Davenport's Process Innovation Model is still a fundamental but flexible framework for reengineering projects at the operational level. Its focus on process-centered redesign, performance assessment, and iterative improvement is still relevant today even though it was first conceived in private-sector contexts. The necessity of digital augmentation through analytics, real-time monitoring, and platform-based integration is highlighted by contemporary reinterpretations of process innovation (Davenport, 2020; Reis *et al.*, 2022). By directing the methodical discovery of inefficiencies, the removal of non-value-adding operations, and the restructuring of service delivery pathways, this model provides methodological clarity for the KZN Department. Crucially, process innovation transitions from episodic restructuring to continuous optimisation when it is in line with digital technology, facilitating adaptive governance in a socioeconomic environment that is changing quickly.

A multi-layered transformation architecture is produced by applying these three frameworks in an integrated manner. The HTO framework guarantees socio-technical coherence and stakeholder alignment, cross-industry frameworks set benchmarking standards and strategic direction, and Davenport's model operationalises redesign through structured process innovation. When combined, they support institutional sustainability as well as efficiency improvements. According to recent research on digital transformation in the public sector, strategy, capabilities, culture, and technology infrastructure must all be in harmony for reform to be sustainable (Wesselink *et al.*, 2022; OECD, 2023). The KZN Department can create a contextually appropriate digital BPR model that considers financial restraints, legal requirements, and service delivery commitments by combining these frameworks.

In the end, combining these frameworks allows for systemic change rather than just mechanical reform. Digital BPR is positioned as a process-driven, socio-technical, and strategic intervention that can improve transparency, organisational agility, and citizen value. In South Africa's changing digital governance environment, such an approach not only improves internal operational performance but also advances larger public sector modernisation goals.

CHAPTER 5

DISCUSSION OF RESULTS

5.1 Introduction

This chapter discusses the findings presented in Chapter 4 in relation to the study's aim of developing a context-sensitive framework for implementing digital Business Process Reengineering within the KwaZulu-Natal Department of Social Development. The discussion is structured around the four research objectives, drawing on relevant literature to interpret the results and understand the underlying issues, challenges, and enablers of digital transformation in the public sector.

The qualitative data analysis revealed significant inefficiencies in KZN DSD's current business processes, primarily stemming from manual operations, outdated technology, fragmented systems, and limited digital skills. Respondents also highlighted strong support for digital transformation if it is implemented inclusively, well-resourced, and aligned with contextual realities. The findings show that digital BPR is complex and includes changes to structures, people, technology, and policies.

5.2 RO1: Identifying Inefficiencies and Challenges in Business Processes

5.2.1 Introduction

This study's first research objective (RO1) sought to critically examine the operational inefficiencies and systemic challenges within the business processes of the KwaZulu-Natal Department of Social Development. Through an in-depth qualitative analysis involving 31 key stakeholders, the study identified several critical barriers to digital transformation, including persistent manual workflows, technological constraints, human capital deficits, policy misalignment, and fragmented stakeholder engagement. These findings align with existing literature on public-sector digital transformation and challenge conventional Business Process Reengineering assumptions, particularly those rooted in private-sector paradigms. By situating these inefficiencies within the broader discourse on digital governance, this section offers a nuanced critique of prevailing BPR frameworks. It proposes a more adaptive, context-sensitive model for public sector reform.

The data confirmed widespread operational inefficiencies within KZN DSD. Most participants reported experiencing manual workflows, fragmented processes, redundant data entry, and supervisory bottlenecks. These findings align with Mertens *et al.*, (2024)'s assertion that outdated, bureaucratic processes inhibit organisational agility and efficiency. The reliance on manual systems reduces productivity and increases the risk of data loss, delays, and

duplication of effort. This finding aligns with global research on the failure of public institutions to adopt lean, standardised digital workflows (OECD, 2020; World Bank, 2018). These findings reflect and build upon the dominant narratives in academic literature and government strategic frameworks, such as the KwaZulu-Natal Digital Transformation Strategy (2020–2025).

5.2.2 Evolving Conceptualisations of Digital BPR in Public Institutions

Digital transformation in the public sector is often constrained by legacy systems, bureaucratic rigidity, fragmented governance, and low staff digital literacy. KZN DSD offers a microcosmic case illustrating these challenges. The findings reflect a shift from traditional BPR, characterised by top-down command-control dynamics, toward a more participatory, adaptive, and human-centred approach in line with New Public Governance (Kassahun, 2024).

Whereas earlier models cited by Hammer & Champy (1993) and Davenport (2013) emphasised technological determinism, the KZN DSD experience aligns with scholars such as Santos *et al.*, (2020) and Gölzer & Fritzsche (2021), who argue that human capital, leadership, emotional intelligence, and stakeholder co-design are equally critical.

5.2.3 Manual and Fragmented Processes: A Persistent Legacy

Consistency with Literature

The study found that the KZN DSD still relies on paper-based systems for important tasks, including financial reports, case management, and internal communication. This creates problems such as delays, repetitive work, and weak accountability. These results support Ngulube's (2020) findings that outdated systems and slow change pose problems in African public institutions, particularly in social services. Agrawal *et al.*, (2020) also note that manual work in government makes it harder to respond quickly to citizens' needs.

Divergence from Classical BPR Assumptions

While traditional BPR models by Hammer & Champy (1993) advocate for radical process redesign enabled by technology (Madsen & Slåtten, 2025), this study reveals a more complex reality. KZN DSD already possesses foundational digital tools (e.g., Microsoft Teams, SharePoint, Excel); however, their underutilization stems from poor process integration rather than a technological absence. This challenges the techno-deterministic view that digitisation alone drives efficiency. Instead, the findings support Klotz *et al.*, (2022), who argue that successful BPR requires synergistic alignment between technology, workflows, and organisational culture.

Implications for Theory and Practice

The persistence of manual processes in KZN DSD underscores the limitations of "big bang" digital transformation approaches. Rather than prioritising wholesale system overhauls, the department may benefit from incremental automation of high-impact workflows (e.g., digitising case file tracking before tackling financial systems). This aligns with Davenport's (2013) call for modular BPR implementation in complex bureaucracies (Kaponda *et al.*, 2023).

5.2.4 Technological and Infrastructure Constraints

Consistency with Literature

A critical finding was the stark disparity in digital readiness between urban and rural offices. Rural KZN DSD facilities frequently experience internet outages, outdated hardware, and insufficient technical support, forcing staff to revert to manual alternatives. This mirrors Dewi *et al.*'s (2021) observations on the urban-rural digital divide in low- and middle-income countries (LMICs), where infrastructure deficits hinder equitable service delivery. Michael *et al.*, (2023) further note that African public sectors often struggle with legacy IT systems that are ill-suited for modern digital governance demands.

Divergence from Techno-Optimist Narratives

Contrary to assumptions in the mainstream digital transformation literature (e.g., Andriole, 2020), which often promote cloud-based solutions as universally applicable, the reality in KZN DSD calls for offline-first, mobile-compatible tools. This finding critiques the "one-size-fits-all" approach to BPR and advocates context-adaptive solutions that account for infrastructural limitations (Gölzer & Fritzsche, 2021).

Implications for Theory and Practice

The study suggests that digital BPR frameworks for public sectors in LMICs must prioritise:

- i. Ruggedised, low-bandwidth technologies (e.g., offline-syncing mobile apps for field workers).
- ii. Decentralised ICT maintenance protocols to reduce dependency on central IT support.
- iii. Public-private partnerships to expand rural connectivity (e.g., leveraging South Africa's SA Connect broadband policy).

Consistency with Literature

A striking revelation was the pervasive digital illiteracy among KZN DSD staff, with many struggling to use basic tools such as Excel and SharePoint. This aligns with Santos *et al.* (2020), who found that workforce readiness, rather than just technology, is a key determinant of digital transformation success. Vakola's (2020) research on organisational change further supports this, showing that resistance to digitisation often stems from fear of job displacement and skill obsolescence.

Divergence from Traditional BPR Models

Classical BPR frameworks (Hammer & Champy, 1993) emphasise structural over human factors, assuming that process redesign naturally induces behavioural change (Merterns *et al.*, 2024). However, KZN DSD's experience contradicts this, revealing that even well-designed digital systems fail without targeted upskilling. This reinforces Bryson *et al.*'s (2021) argument for a human-centric BPR approach, where workforce development precedes technological deployment.

5.2.5 Implications for Theory and Practice

To address these gaps, KZN DSD should:

- i. Implement role-specific digital literacy programs (e.g., basic Excel training for clerks and advanced analytics for managers).
- ii. Establish peer mentorship networks to foster experiential learning.

Integrate digital competency metrics into performance evaluations to incentivise employees to upskill.

5.2.6 Policy and Compliance

Consistency with Literature

Participants highlighted how rigid procurement policies and excessive compliance requirements delay digital initiatives. This echoes Krogh and Triantafyllou's (2024) critique of New Public Management (NPM), which notes that bureaucratic accountability mechanisms often stifle innovation. Zuhaira and Ahmad (2021) similarly argue that misaligned regulations, such as South Africa's Preferential Procurement Policy Framework Act (PPPFA), can hinder the adoption of agile technology.

Divergence from Digital Governance Idealism

While the OECD (2021) posits that digital governance reforms can streamline compliance, KZN DSD's experience suggests that entrenched administrative cultures often constrain policy agility. This challenges the assumption that regulatory modernisation alone suffices for digital transformation.

5.2.7 Implications for Theory and Practice

The study advocates for:

- i. Policy sandboxing (e.g., pilot exemptions from procurement rules for digital pilots).
- ii. Inter-departmental task forces to harmonise compliance with innovation.
- iii. Advocacy for legislative reforms to enable faster ICT procurement.
- iv. Stakeholder Engagement Deficits: The Participation Gap

Consistency with Literature

This study found that frontline staff and beneficiaries were rarely consulted in digital projects, leading to low adoption rates. This aligns with Tsai *et al.*, (2019), who stress that participatory design is critical for user buy-in. Bryson *et al.*, (2021) further argue that co-creation with citizens enhances the legitimacy of public services.

Divergence from Technocratic Approaches

While Nambisan *et al.*, (2019) assume stakeholder engagement is inherent in digital projects, KZN DSD's experience shows that exclusion persists without structured feedback mechanisms.

5.2.8 Implications for Theory and Practice

The study recommends:

- i. Co-design workshops with staff and beneficiaries during system development.
- ii. Continuous feedback loops (e.g., digital suggestion portals).
- iii. Inclusion of marginalised voices (e.g., rural communities in UX testing).

5.2.9 Outcome: Toward a Contextual BPR Framework

The inefficiencies identified in KZN DSD underscore the need for a public sector-specific BPR model that:

- i. Balances technology with human capital development.
- ii. Prioritises infrastructural equity (e.g., offline solutions for rural areas).
- iii. Advocates for policy agility to enable iterative innovation.
- iv. Embeds participatory governance in digital transformation.

Future research should explore longitudinal case studies on BPR sustainability in African public sectors and comparative analyses of regulatory barriers across LMICs. KZN DSD and similar institutions can transition toward inclusive, adaptive, and sustainable digital governance by addressing these gaps.

5.3 RQ2: Effective Implementation of Digital BPR in KZN DSD

The second research question explores how digital Business Process Reengineering can be effectively implemented to address longstanding inefficiencies in the KwaZulu-Natal Department of Social Development. Thematic findings from the field reveal a multi-pronged path involving digital literacy, change management, stakeholder inclusion, and infrastructural readiness. This section contrasts the empirical evidence with the current literature and debates, identifying both consistencies and divergent results.

Implementing digital BPR was seen as a viable solution to the department's challenges. However, respondents highlighted a lack of system interoperability, poor infrastructure in rural offices, digital literacy gaps, and resistance to change. Connectivity limitations, especially in rural offices, and outdated ICT hardware were critical bottlenecks. This supports the findings of Dewi *et al.*, (2021), who note that infrastructure disparities are a significant challenge in African public institutions.

This section presents findings from a thematic analysis of 31 responses, exploring how Digital Business Process Reengineering (BPR) can effectively address the identified business process challenges within the KwaZulu-Natal Department of Social Development. Five major themes emerged: (1) Clear vision and leadership commitment, (2) Digital infrastructure and system integration, (3) Capacity building and digital literacy, (4) Change management and stakeholder engagement, and (5) Policy alignment and governance support. Each theme is

discussed with supporting quotations and contextualised with existing literature to highlight consistencies or inconsistencies with prior research.

5.3.1 Clear Vision and Leadership Commitment

The finding that leadership commitment is critical aligns with the work of Hammer and Stanton (1999), Kotter (1996), and Van der Voet (2014). These studies consistently argue that senior leadership must champion digital change, especially in hierarchical public institutions (Mertens *et al.*, 2024; Kaponda *et al.*, 2023). Respondents consistently emphasised that effective digital BPR must be driven by top leadership that articulates a clear strategic vision for change. Without strong leadership, digital initiatives risk fragmentation or under-resourcing.

“There must be clear direction from the top. Without leadership commitment, digital projects become optional.” (Participant 12)

This is consistent with the literature, which emphasises the importance of strategic leadership in BPR initiatives. Mergel (2023) and Lopes Guerreiro (2023) argue that transformational change requires executives to lead with a compelling vision and remove bureaucratic barriers. Similarly, Khalili *et al.*, (2020) identified leadership commitment as the first step in their change model, stating that BPR projects falter without urgency and visible sponsorship.

Leadership is even more crucial in the public sector due to the influence of politics and resistance from entrenched administrative cultures (Kapucu & Hu, 2020). In South Africa, Nkomo Marnewick (2021) emphasise that departmental heads must support and champion digital governance reform to bridge the gap between policy and implementation.

5.3.2 Digital Infrastructure and System Integration

Participants emphasised the importance of robust and interoperable digital systems that integrate units and functions. Poor system integration and outdated infrastructure were cited as barriers to effective BPR implementation. The issue of fragmented systems echoes Muthuveloo & Teoh (2021) and Bwalya and Mutula’s (2016) insights into the challenges of African digital government. Poor system interoperability leads to inefficiencies that digital BPR should eliminate but often exacerbates them in under-resourced settings.

“Our systems do not talk to each other. Even when we digitise something, it still needs to be printed and filed.” (Participant 7)

This finding supports Muthuveloo & Teoh (2021) “design-reality gap” model, which explains how mismatches between existing infrastructure and new digital systems lead to project

failure. KZN DSD's challenges mirror broader issues in developing country governments, where "islands of automation" exist without cross-functional integration (Bwalya & Mutula, 2016).

Furthermore, the OECD (2019) recommends that successful digital BPR must move beyond simple automation toward end-to-end process transformation, requiring interoperable systems, data standards, and real-time information flow, all of which are currently lacking at KZN DSD.

5.3.3 Capacity Building and Digital Literacy

Another dominant theme was the lack of digital skills and technical know-how among frontline and administrative staff. Like Guma and Makhaya (2020), this study found that staff digital illiteracy significantly hinders BPR. Human capital is as vital as technological investment in achieving transformational outcomes. Effective BPR requires continuous training, not only in how to use digital tools but also in understanding process thinking and improvement methods.

"Most staff are not trained to use the systems. Some are even afraid of computers."
(Participant 22)

This finding aligns with research by Pellathy *et al.*, (2019), who emphasise that digital transformation in the public sector often fails due to insufficient internal capacity. Without digital literacy, even the best systems remain underutilised. In the South African context, Guma and Makhaya (2020) note that provincial departments frequently lack dedicated training budgets, and digital upskilling is not integrated into performance management systems. Capacity development must, therefore, be embedded in the broader reform process. This aligns with the Human Capability Theory (Modimogale *et al.*, 2021), which suggests that enhancing people's skills is a precondition for institutional transformation.

5.3.4 Change Management and Stakeholder Engagement

Several participants stressed that employees were not adequately engaged in the change process, leading to resistance, fear, and misinformation about digital BPR.

"Change is pushed down with little consultation. People resist because they do not understand what is coming." (Participant 19)

This confirms Kotter's (2007) argument that failing to engage stakeholders leads to pushback and apathy. Similarly, Pembi & Abdulazeez (2023) emphasise that deep-seated cultural assumptions must be addressed for change to take root. A study by Wechsler & Schweitzer (2019) suggests that multilevel readiness, spanning from leadership to end users, is essential

for sustained BPR success. The results also underscore the importance of narrative leadership, which employs storytelling and dialogue to inspire action (Mertens *et al.*, 2024). In KZN DSD, BPR was perceived as externally imposed rather than collaboratively designed, which increased the likelihood of passive resistance.

5.3.5 Limitations to Effective Implementation

The KZN Digital Transformation Strategy (2020–2025) acknowledges that only 27% of the province was digitally connected by 2020 and recommends fibre and satellite-based solutions as essential components for inclusion. This finding aligns with studies by Butt (2020) and Tajpour *et al.*, (2020), which emphasise the importance of leadership commitment and effective change management strategies in driving digital innovation. Participants advocated for a phased approach to digital transformation, with emphasis.

While techno-optimists such as Andriole (2020) argue that cloud platforms and mobile apps provide scalability and access, KZN's on-the-ground realities, poor bandwidth, electricity instability, and the need for offline functionality, demonstrate the limitations of such assumptions. Tsai *et al.*, (2019) argue that hybrid and offline-first solutions are necessary in under-resourced environments, a perspective echoed by participants in this study.

5.3.6 Acknowledging Structural and Cultural Resistance

Resistance to digital change, stemming from job insecurity and past failed reforms, was a recurring concern in participants' narratives. This aligns with Tsai *et al.*, (2019) and Wechsler & Schweitzer (2019), who emphasise that organisational resistance, particularly in the public sector, is often rooted in fears of redundancy and cultural inertia.

However, while some scholars argue that resistance is best managed through top-down enforcement (e.g., strict KPIs and directives), participants in this study favoured inclusive, empathy-driven strategies, such as identifying change champions and offering peer mentorship. This view aligns with Bryson *et al.*, (2021), who advocate for participatory approaches to managing change in complex, people-intensive environments, such as social services.

Fears around Job Security

Participant narratives repeatedly highlighted resistance stemming from fears about job security and the legacy of unsuccessful reforms. Such resistance is well documented in global public-sector digital transformations (Tsai *et al.*, 2019). However, within KZN DSD, resistance was often less about outright opposition and more about uncertainty and lack of trust in change initiatives. This aligns with broader South African public-sector challenges,

where historical inequalities and frequent policy shifts amplify scepticism (Mukwakungu *et al.*, 2018; Zondo, 2021).

Contrasting the dominant literature advocating top-down enforcement mechanisms (Mertens *et al.*, 2024), KZN participants favoured participatory, empathy-led strategies that involved identifying internal “change champions” and peer mentorship, echoing Bryson *et al.*, (2021). This participative approach is also supported by findings from the Western Cape Department of Social Development, which found that inclusive leadership was pivotal to digital uptake (Govender, 2023). This signals a regional consensus in favour of relational over hierarchical change management models.

5.3.7 Prioritising Human Capital Over Technology

While conventional BPR models emphasise technology as the primary enabler (Mertens *et al.*, 2024; Zondo, 2021), this study reaffirms the assertions of Ngulube (2020) and Gölzer & Fritzsche (2021) that digital readiness is fundamentally a human issue. Participants repeatedly noted that access to Microsoft tools (e.g., Excel, Teams, SharePoint) alone is insufficient without widespread digital literacy and role-specific training.

This aligns with Santos *et al.*, (2020), who found that public sector digital transformations succeed only when staff are equipped with contextualised, task-relevant competencies. Notably, the demand for scenario-based, blended learning, including digital and face-to-face formats, challenges earlier BPR assumptions of rapid, uniform skill uptake.

Traditional BPR frameworks prioritise technology as the catalyst for transformation (Mertens *et al.*, 2024). However, the KZN study reinforces the growing view that digital readiness is fundamentally a human challenge (Ngulube, 2020; Gölzer & Fritzsche, 2021). At the same time, access to Microsoft tools is necessary but insufficient without comprehensive, role-specific digital literacy programs. The demand for blended learning modalities that combine face-to-face instruction with digital elements reflects the staff's socio-economic and educational diversity.

This mirrors challenges identified in other South African provinces, such as Limpopo and Eastern Cape, where low digital literacy among frontline workers hindered reforms (Mokoena & Dlamini, 2021). Moreover, similar patterns have been documented in other low- and middle-income countries (LMICs), such as Kenya and Nigeria, where contextualised training, rather than generic tech rollouts, has proven critical to sustainable change (Santos *et al.*, 2020).

5.3.8 Infrastructure, Equity, and the Urban-Rural Divide

A dual-speed infrastructure constrains digital BPR in KZN DSD. While head office staff operate with moderate connectivity and digital exposure, rural offices lack reliable internet and often revert to manual processes. This digital divide echoes concerns raised by Dewi *et al.*, (2021) and Michael, Pembi, and Abdulazeez (2023), who document similar patterns in low- and middle-income countries.

The study's findings lend empirical weight to the argument that digital transformation must be mobile-first and offline-capable, a nuance often underplayed in BPR literature but emphasised in Andriole (2020). KZN DSD's need for offline-syncing apps and rugged digital tools is an apparent deviation from Western-centric BPR models, which assume consistent broadband and device access.

Compared to patchy or non-existent connectivity in rural districts, the dual-speed infrastructure within KZN DSD's robust digital access at urban head offices exacerbates inequities and slows digital adoption. This digital divide reflects broader national patterns, where Gauteng and the Western Cape benefit from superior infrastructure compared to rural provinces (Stats SA, 2023). The rural offices' reliance on manual processes undermines the benefits of digital BPR, underscoring the need for offline-capable, mobile-first solutions.

These findings align with Dewi *et al.*, (2021) and Michael, Pembi, and Abdulazeez (2023), who document that digital transformation in LMIC public sectors often founders on infrastructural inequities. Moreover, KZN's requirement for ruggedised, low-bandwidth technology challenges dominant Western-centric BPR models, which often assume constant, high-speed internet a condition that is invalid in many African contexts (Andriole, 2020).

5.3.9 Bureaucratic Procurement and Policy Misalignment

Findings on outdated procurement practices and rigid compliance structures are echoed by Kunene (2021) and Wirtz and Daiser (2015), who note that public-sector innovation often clashes with such frameworks. Respondents described the department's procurement processes as inflexible, slow, and disconnected from real-time operational needs, a finding consistent with Krogh and Torfing & Sørensen (2022) and Zuhaira & Ahmad (2021). These authors argue that traditional public administration frameworks, while ensuring accountability, often stifle innovation by being overly compliance-driven.

While the literature increasingly supports agile procurement models (e.g., Public Digital, 2022), KZN DSD's regulatory environment still relies on rigid audit cycles and approval hierarchies. The dissonance between operational urgency and policy responsiveness

highlights the need for adaptive governance, an area underdeveloped in classical BPR theory but central to modern public management debates.

The study revealed that rigidity, protracted timelines, and a disconnect between operational needs and regulatory requirements characterise KZN DSD's procurement processes. This finding aligns with Krogh and Triantafillou (2024) and Zuhaira and Ahmad (2021), who highlight how traditional procurement frameworks, while ensuring accountability, often hinder innovation by enforcing compliance over agility.

Comparative insights from the City of Johannesburg's e-government initiatives reveal more flexible procurement models that facilitate rapid technology acquisition (Mthembu, 2022), underscoring the importance of adapting procurement policies to the realities of digital transformation. This signals a policy gap in KZN, requiring reform towards more agile governance models, an area underdeveloped in the classical BPR literature but critical in modern digital public management discourse.

5.3.10 Stakeholder Engagement and Participatory Design

Findings revealed that top-down systems design without frontline consultation undermines user adoption. This criticism reinforces the arguments by Bryson *et al.*, (2021) and Tsai *et al.*, (2019) that effective BPR in the public sector must be collaborative and locally co-produced. Moreover, involving external stakeholders (e.g., NGOs, traditional leaders, and clients) is a progressive insight, indicating alignment with New Public Governance (Sesana *et al.*, 2020), which promotes stakeholder-driven service design as a pathway to legitimacy and accountability.

5.3.11 Vision and Performance Measurement

Respondents articulated a shared vision of real-time dashboards, automated workflows, and integrated systems indicative of a digitally mature future state. This finding aligns with Bhaskar *et al.*, (2020) and Agrawal *et al.*, (2020), who associate automation and analytics with improved decision-making and client responsiveness.

However, caution must be noted: performance measurement is only effective when metrics are contextualised and aligned to outcomes that matter to users, not just technical efficiency. This aligns with Bryson *et al.*, (2021), who caution against technocratic metrics that overlook service quality and equity.

The envisioned future state involves real-time dashboards, automated workflows, and integrated information systems, hallmarks of digital maturity, aligned with Bhaskar *et al.*, (2020) and Agrawal *et al.*, (2020). However, participants cautioned that performance metrics must be contextually relevant and user-centred, not narrowly technical.

This aligns with Bryson *et al.*, 's (2021) warning against technocratic KPIs that neglect service quality and equity. South African public sector reforms are increasingly emphasising outcome-oriented measurements of client satisfaction and access equity, rather than merely operational efficiency (Public Service Commission, 2023). Thus, performance management in digital BPR must integrate multidimensional indicators reflective of social development goals.

5.3.12 Summary

Overall, the findings from RQ2 affirm that digital BPR in the public sector cannot be copied from private sector models. It must be rooted in the socio-cultural and infrastructural realities of its context. While literature broadly supports digital BPR as a driver of efficiency and transparency, this study emphasises that its success hinges on human-centric, participatory, and context-sensitive implementation approaches.

5.3.12.1 Cross-Cutting Themes: A Perspective on KZN DSD's Digital Transformation

The study's identification of three interlinked cross-cutting themes manual processes, resistance to change, and data silos provides a holistic lens on the systemic challenges and enablers within KZN DSD's digital transformation. This systemic view aligns with the growing recognition in the digital transformation literature that successful change requires simultaneous attention to technological, human, and policy dimensions (Barsalou, 2023).

5.3.12.2 Manual Processes: A Root Cause of Systemic Inefficiency

The persistence of manual workflows, such as the protracted ICT user account creation process, which takes 5-7 days, confirms longstanding findings on how manual administrative tasks significantly impede public sector efficiency (Dinata, 2020; Nazaria, 2024). The proposed automation solution, which integrates user creation with personal data, aims to reduce processing time to under an hour, reflecting contemporary calls for digitisation to streamline bureaucratic bottlenecks and minimise human error (Nshirim & Nwagwu, 2023).

Moreover, the emphasis on workforce upskilling and hands-on training aligns with the literature that highlights the importance of employee competence in leveraging new digital tools (Vial, 2019). The transition from resistance to advocacy post-training illustrates Rogers'

(2003) diffusion of innovation theory, in which experiential learning drives adoption (Acikgoz *et al.*, 2023).

This triadic approach to automation, training, and change management aligns with frameworks that advocate for integrated technological and human capacity interventions to realise effective Business Process Reengineering (BPR) (Mertens *et al.*, 2024; Zondo, 2021). However, the literature increasingly highlights the importance of iterative feedback and user-centred design during automation implementation (Alsaadi, 2022; Nkomo & Marnewick, 2021), yet the findings do not indicate whether such user involvement was systematically embedded in the KZN DSD's process redesign, suggesting a possible gap in participatory engagement.

5.3.12.3 Resistance to Change: The Human Dimension of Digital Transformation

The documented fear among staff regarding increased workload and job security is consistent with extensive research on organisational change resistance, particularly in public-sector digital initiatives (Nkomo & Marnewick, 2021; Nshirim & Nwagwu, 2023). These practical barriers are well-known impediments to the adoption of technology.

The department's innovative deployment of "Digital Champions" as peer mentors aligns with best practices in the change management literature, which recommend leveraging social influence and peer support to foster technology adoption (Ngulube, 2020; Mertens *et al.*, 2024). The observed reduction in helpdesk tickets supports prior studies showing that peer-led support effectively mitigates resistance.

Visible leadership modelling, as enacted by the Deputy Director's personal use of the e-approval system, aligns with transformational leadership theories that emphasise leaders' roles as behavioural exemplars to catalyse adoption (Naciri *et al.*, 2024; Mergel, 2023).

This combination of structural interventions and leadership modelling strongly supports change theories that advocate for multilevel interventions to overcome resistance (Musonda & Okoro, 2022). Nevertheless, while the department addresses resistance through champions and leadership, the literature also emphasises the importance of addressing deeper cultural values and trust issues within organisations (Naciri *et al.*, 2024), which are not explicitly discussed here. This suggests a potential underemphasis on the organisational culture transformation necessary to sustain digital change beyond initial adoption.

5.3.12.4 Data Silos: The Technical-Policy Divide

The fragmentation of core systems, such as finance using BAS and HR using Personal and Social Services, with a separate case system, reflects a common and persistent challenge in

public sector digital ecosystems, as documented in the e-government literature (Cordella & Tempini, 2015; Janssen & Kuk, 2016). The manual reconciliation inefficiencies reveal how siloed data architectures undermine operational coherence and responsiveness.

The deployment of an API gateway to enable system interoperability and reduce duplicate data entry by 75% aligns with contemporary technical solutions for overcoming silo effects and fostering integrated digital platforms (Zeng *et al.*, 2018). This mirrors the move towards service-oriented architecture (SOA) in government IT.

The formalisation of a Data Sharing Protocol compliant with POPIA demonstrates an advanced recognition of data governance's legal and ethical dimensions, a critical area often overlooked in technical-centric approaches (Minh & Thanh, 2022). This integration of governance frameworks aligns with multidisciplinary calls to embed privacy and compliance into digital transformation (Osborne, 2021).

The dual approach of technical integration, coupled with governance frameworks, aligns with the literature's emphasis on addressing public-sector digital fragmentation through socio-technical solutions (Mertens *et al.*, 2024; Osborne, 2021). However, while technical and legal mechanisms have been implemented, the findings do not address data quality management or the cultural and organisational shifts required for effective cross-departmental data sharing (Wirtz *et al.*, 2019; Zondo, 2021). This gap could hinder the full realisation of integrated data ecosystems, suggesting a partial implementation of systemic integration principles.

5.3.12.5 Summary

The systemic themes identified in KZN DSD's digital transformation align with the broader literature, which recognises the intertwined technological, human, and governance challenges. The alignment with best practices, such as process automation, peer-led change management, and interoperable data platforms, reflects global trends in thriving public-sector digital reform.

However, divergences emerge in the apparent limited user-centred involvement in process redesign, the under-addressed issue of organisational culture change, and the absence of explicit data quality and cultural integration strategies. These gaps indicate that while KZN DSD has made commendable progress, there remains scope for deeper systemic and participatory approaches to achieve sustainable digital transformation.

This study reveals that the KZN DSD's digital transformation poses a systemic challenge spanning technological, human, and governance dimensions. The persistence of manual processes, resistance to change, and fragmented data systems are not isolated issues but

interdependent factors that collectively shape the trajectory of digital reform. The evidence underscores that piecemeal solutions are insufficient; instead, integrated strategies addressing automation, workforce capacity building, change management, leadership engagement, and robust data governance are essential for meaningful Business Process Reengineering.

The findings are broadly consistent with the existing literature on public-sector digital transformation, which advocates a holistic socio-technical approach encompassing technology, people, and policy. However, gaps remain in integrating user-centred design, cultural change management, and comprehensive data quality practices, which are critical to sustaining long-term transformation. These findings underscore the need for the KZN DSD to transition beyond initial digital adoption toward embedding systemic change in organisational culture and data stewardship.

5.4 RO3: Critical Success Factors for Digital BPR in the Public Sector

5.4.1 Introduction

Digital BPR is more than just upgrading technology; it is about transforming the way we work. It means completely rethinking how public services work, including decisions and organisational operations. Early BPR theories, such as those by Hammer & Champy (1993), primarily focused on technology and process redesign (Mertens *et al.*, 2024; Kaponda *et al.*, 2023). However, real-world examples such as the KZN Department of Social Development show that success depends on many other factors, especially in government. This section explains what helps (and what hinders) digital BPR success, drawing on lessons from KZN DSD and other public sector reforms.

The successful implementation of digital Business Process Reengineering (BPR) in the public sector depends on interdependent enablers: human, technological, strategic, and governance-related (Mertens *et al.*, 2024). Evidence from the KwaZulu-Natal Department of Social Development highlights the crucial importance of leadership commitment, stakeholder engagement, digital infrastructure, human capital development, policy alignment, and adaptive change management. These findings support and build upon existing research, transitioning from traditional, technology-focused BPR approaches to a more comprehensive, people-focused digital transformation model (Moabi, 2000; Minh & Thanh, 2022).

5.4.2 Human-Centred Digital Transformation

KZN DSD staff demonstrated significant deficits in digital competencies, ranging from the inability to use Excel and SharePoint to difficulty navigating basic e-governance tools. These

findings reinforce the work of Santos *et al.*, (2020) who argue that BPR initiatives often fail due to a lack of investment in human capital development. The Digital Transformation Strategy prioritises digital skilling as a strategic pillar, recognising that systemic change requires more than technology. It demands cultural, pedagogical, and behavioural shifts (Senkus *et al.*, 2021).

While early BPR models (Hammer & Champy, 1993) prioritised technology and structural overhaul, this study supports an evolution toward human-centred transformation (Mertens *et al.*, 2024; Nkomo & Marnewick, 2021). Contextualised, role-specific training, such as that promoted in the UNESCO framework and the Moses Kotane Institute studies, offers a more effective path to long-term adoption.

5.4.3 Emphasis On Policy Compliance

An unexpected finding was the department's excessive emphasis on policy compliance, often at the expense of service innovation and responsiveness. This echoes the critiques of Krogh and Triantafillou (2024), who argue that public-sector rigidity obstructs adaptive governance. Although accountability remains a pillar of public administration, excessive bureaucracy can stifle creativity and responsiveness. In this case, Zuhaira and Ahmad (2021) advocate for harmonised digital policies that foster agility while maintaining oversight. KZN's strategy recommends legislative reviews and the development of a coordinated e-governance policy framework to mitigate fragmentation and redundancy.

5.4.4 Lack of Consultation with Frontline Workers

An apparent lack of consultation with frontline workers and external stakeholders emerged, which undermined the system's adoption and utility. This finding aligns with the work of Tsai *et al.*, (2019) and Bryson *et al.*, (2021), who advocate for participatory design in transforming digital public services. The KZN strategy promotes co-creation involving government, business, academia, and civil society. The study adds nuance by suggesting that engagement must be continuous and reciprocal, rather than merely consultative. As Mansaray (2019) notes, employee trust and involvement are foundational to successful change.

5.4.5 Human Capital and Digital Literacy Gaps:

One of the most striking findings from the KZN DSD case is the widespread deficiency in digital skills. Staff struggled with basic tools such as Excel and SharePoint, echoing Muchairi (2022)'s conclusion that technological failures often result from gaps in human capital. This resonates with UNESCO's competency frameworks, which argue for role-specific, contextualised training beyond generic digital literacy.

Rather than implementing one-size-fits-all training modules, the evidence supports a tailored, modular, mentorship-driven approach aligned with real-world tasks. This represents a significant evolution from earlier HRD models in BPR, where training was often standardised and disconnected from the actual work context. Moreover, this insight has broader implications for public sector reform. It challenges policymakers to embed learning ecosystems within departments, where digital fluency becomes part of organisational DNA rather than a one-off intervention.

5.4.6 Leadership Commitment: From Command to Communication

Leadership emerged as the most cited success factor, consistent with Dubey *et al.*, (2020) and Ngulube (2020). However, the KZN DSD study nuances this understanding by highlighting the need for adaptive, relational leadership over traditional command-and-control models. Participants viewed leaders as decision-makers and change champions, motivators, listeners, and educators. This finding aligns with emotionally intelligent leadership (Goleman, 2006) and transformational leadership in public sector change (Bryson *et al.*, 2021). Particularly in bureaucratic and unionised settings like the South African public service, leadership that builds trust, communicates purpose, and models the desired change can overcome institutional inertia. An interesting point of comparison is Maseko's (2023) study of the Gauteng Department of Social Development, which found that emotionally intelligent leadership was correlated with successful BPR implementation, thereby reinforcing the relational leadership thesis.

Visionary and Persistent Leadership

Consistent with the other literature (Ngulube, 2020; Bryson *et al.*, 2021; Dubey *et al.*, 2020), visionary and persistent leadership emerged as the most frequently cited critical success factor (22 of 31 participants). Participants emphasised the role of leaders not merely as decision-makers but as champions, educators, and motivators who foster digital ambition and reduce transformation fatigue. This perspective challenges the command-and-control leadership model typically found in early BPR literature and instead supports a relational, emotionally intelligent leadership approach (Mansaray, 2019). These findings suggest that

transformation in bureaucratic settings depends on adaptive leadership that can navigate both technical and cultural complexity.

Relational and Communicative Model of Leadership.

However, unlike earlier models (e.g., Hammer & Champy, 1993), which view leadership in command-control terms, the study supports a relational and communicative leadership model (Mertens *et al.*, 2024; Zondi, 2021). Participants highlighted leaders' roles as champions, motivators, and educators, a finding that strengthens the case for adaptive, emotionally intelligent leadership in government transformation contexts. This aligns with findings from the Gauteng Department of Social Development, which show that adaptive leadership correlates strongly with BPR project success (Nazaria *et al.*, 2024). The need for emotional intelligence and relational leadership styles is increasingly recognised as essential in public-sector digital transformations involving diverse, change-wary workforces.

5.4.7 Stakeholder Engagement and the Shift to Co-Creation

19 of the 31 participants emphasised the inclusion of both internal and external stakeholders in the BPR process. This aligns with the findings of Tsai *et al.*, (2019) and Bryson *et al.*, (2021), who argue that participatory approaches increase system legitimacy, reduce resistance, and foster alignment with community needs. The shift from top-down consultation to bottom-up co-creation reflects the theoretical transition from New Public Management to New Public Governance (Lapiente & Van de Walle, 2020). This shift is particularly critical, especially in socially embedded service delivery sectors such as social development.

What distinguishes the KZN DSD proposed framework is its recognition of external stakeholders, such as traditional leaders and NGOs, as legitimate co-creators of public value. This builds upon the participatory design approaches proposed by Tsai *et al.*, (2019) and Bryson *et al.*, (2021). Engagement is conceptualised here not merely as transactional (feedback loops), but as relational, ongoing, reciprocal, and built on trust. This has substantial implications for digital governance, where ecosystem thinking and quadruple helix models (involving government, academia, business, and civil society are increasingly proposed to ensure inclusivity and sustainability.

5.4.8 Infrastructure and Technology: A Prerequisite

While 20 participants acknowledged the need for adequate infrastructure, their perspectives reflected a mature understanding of technology as a necessary but insufficient enabler of progress. They called for mobile-first, offline-capable systems, which are critical in rural and

resource-poor environments, a finding that resonates with the work of Michael, Pembu, and Abdulazeez (2023) on infrastructure challenges in LMICs.

This contrasts with classical BPR models that privileged enterprise IT systems without considering the digital divide. The KZN DSD case illustrates the importance of context-aware digital strategies (Andriole, 2020), particularly in settings characterised by significant geographical and technological disparities. The implication is clear: digital BPR must be underpinned by universal service design principles, ensuring inclusivity for both users and implementers.

5.4.9 Human Capital and Skills: The Bedrock of Implementation

Human capital emerged as the second-most cited factor (23 participants), reinforcing the view that transformation is ultimately human, not just technological. Literature by Santos *et al.* (2020) and Gölzer and Fritzsche (2021) underscores this, noting that even the best technologies can fail without targeted capacity-building.

Focusing on modular, role-specific training and mentoring emphasises the idea that "training leads to success." It also shows the importance of learning in real-world settings. This refinement of earlier BPR training models, which often overlooked the diversity of roles and digital "readiness across departments," is a significant step forward.

5.4.10 Technology and Infrastructure: Necessary but Not Sufficient

Although 20 participants recognised the importance of IT systems, they remained realistic and not overly optimistic. The literature often views technology as the leading enabler of BPR (e.g., Hammer & Champy, 1993; Davenport, 2013), but participants emphasised the need for mobile-first, offline-capable systems, especially in rural offices (Mertens *et al.*, 2024; Ngulube, 2020). This echoes Michael, Pembu, and Abdulazeez (2023), who highlight that infrastructure disparities can hinder transformation in LMIC public sectors. These findings challenge overly deterministic views of tech in BPR and reinforce the argument for context-aware digital strategies (Andriole, 2020).

5.4.11 Change Management: Navigating Cultural Resistance

Resistance to change, emotional, behavioural, and institutional, was cited by 21 participants. While change management has long been discussed in the BPR literature (Mergel, Edelmann, & Haug, 2021), this study's findings underscore the psychosocial dimensions of change. Strategies such as peer mentoring, local champions, and empathy-based support are proposed as crucial mechanisms for addressing these challenges (Marincean, 2024). This perspective challenges traditional change management frameworks that prioritise policy

communication and incentives. Instead, it promotes a "humane bureaucracy," where transformation is as much about feelings as it is about processes.

Vakola's (2020) model of multilevel readiness, spanning individual, group, and organisational levels," offers a helpful framework to integrate these psychosocial elements (Chou *et al.*, 2021). This study's findings demonstrate that change management must incorporate psychosocial support mechanisms, including peer mentors and local champions. These insights suggest that management is about communication, policy, empathy, and presence

5.4.12 Policy Alignment and Procurement Reform

Misaligned and outdated policies, particularly those related to procurement and data privacy (e.g., POPIA), were cited by 16 participants as major bottlenecks. This aligns with the findings of Zuhaira and Ahmad (2021), who caution that outdated procurement rules frequently hinder innovation in digital government projects. Flexible procurement frameworks are essential for integrating innovation quickly, especially when technology lifecycles are short. The call for flexible and innovation-enabling policies adds a fresh perspective to traditional BPR frameworks, which often assume static, supportive policy environments. This research argues that policy agility is as important as IT agility in government BPR.

This study highlights the paradox of public accountability frameworks: while intended to promote transparency, they can also hinder adaptability and responsiveness. This highlights a broader tension in digital public administration: how to balance innovation and integrity. The answer may lie in "smart regulation" rules that are principles-based rather than procedure-heavy.

5.4.13 Measurement, Risk, and Resources: Operational Fundamentals

Participants highlighted the importance of real-time dashboards, automated audit trails, and holistic KPIs, aligning with the public value literature. They highlighted performance metrics (18), risk frameworks (19), and resource adequacy (20) as key technical success factors. Risk management frameworks, cited by 19 participants, were often underdeveloped or reactive. These results align with those of Bhaskar *et al.*, (2020) and Al-Mashari and Zairi (2020), who argue that measurement and risk planning are often neglected yet crucial components of successful BPR. In this case, proactive risk identification, mitigation plans, and scenario-based forecasting must be embedded. Additionally, human and financial resource adequacy remain silent but potent success factors. Without it, even the most visionary strategy flounders.

The KZN DSD findings show that staff are eager for real-time dashboards, automated audit trails, and transparent metrics that measure more than technical uptime, including user satisfaction and service turnaround. These multidimensional KPIs align with public value literature and expand the traditional BPR success (Al-Mashari & Zairi, 2020).

5.4.14 Summary

The KZN DSD study supports the evolving view that digital BPR is as much a cultural and institutional challenge as it is a technical one. While traditional literature highlights leadership, IT, and process redesign, the current study enriches these models by integrating policy agility, stakeholder co-design, and human-centred implementation as core success factors. This integrated understanding moves beyond classical BPR frameworks and aligns with post-2019 digital governance scholarship.

The study offers a nuanced, context-rich understanding of what makes digital BPR successful in the public sector. It affirms the relevance of classical factors, such as leadership and technology, but adds critical depth by foregrounding human capital, co-creation, and policy reform.

The findings contribute to a new integrative model of digital BPR in the public sector that transcends process and technology and includes people, policy, politics, and place. It aligns with recent models in digital governance (Janssen *et al.*, 2015; Dunleavy *et al.*, 2022), emphasising systemic thinking, stakeholder ecosystems, and adaptive institutions.

Lastly, the study is not just descriptive; it is instructive. It challenges policymakers, technocrats, and academics to rethink digital transformation as a whole-of-system endeavour. The future of BPR in public institutions lies not in replicating private sector efficiency models but in crafting public value through collaborative, empathetic, and adaptive transformation.

5.5 RO4: Tailored Digital BPR Framework

This section presents the proposed Digital Business Process Reengineering framework designed for the KwaZulu-Natal Department of Social Development, grounded in empirical insights and informed by existing literature. The findings underscore that while foundational digital tools exist, their transformative potential remains underutilised due to infrastructural inequalities, fragmented workflows, limited digital literacy, and socio-cultural dynamics. Each framework component is critically discussed in relation to existing scholarship to delineate areas of convergence, divergence, and innovation.

The findings reveal that while foundational digital tools exist, their full potential is hindered by infrastructural disparities, fragmented processes, limited human capacity, and socio-cultural considerations. This discussion contrasts these findings with recent literature to evaluate alignment and divergence.

5.5.1 Contextualization as a Design Imperative

Contextual sensitivity emerged as a fundamental design requirement. Respondents Contextual sensitivity emerged as a fundamental design imperative for implementing digital Business Process Reengineering within the KwaZulu-Natal Department of Social Development. Respondents consistently emphasised that digital interventions must be tailored to the department's diverse operational environments, particularly rural areas marked by erratic connectivity, linguistic diversity, and infrastructural constraints. In these contexts, mobile-first, offline-capable, and multilingual solutions were identified as essential. This aligns with the observations of Ngulube (2020) and Krogh & Triantafillou (2024), who argue that digital transformation models in the Global South must be fundamentally context-aware, rather than imported wholesale from high-income, high-infrastructure settings.

The findings align with those of Michael *et al.*, (2023), who advocate for lightweight, interoperable digital platforms designed for low-resource environments. Here, the proposed BPR framework intentionally decentralises not only geographically but also procedurally, prioritising adaptable, field-responsive processes over rigid, centralised control. This approach challenges traditional BPR assumptions of uniformity and digital maturity, instead supporting a paradigm shift toward designing for diversity, disparity, and decentralisation.

This shift can also be best understood through the lens of the DaVinci TIPS Framework Technology, the emphasis on offline functionality and mobile accessibility highlights the need for infrastructure-aware digital tools. The Innovation dimension is reflected in the adaptive design logic, which prioritises flexibility over standardisation. People are central to this contextualization, both as users and service beneficiaries, necessitating digital tools that are linguistically and culturally responsive. Lastly, Systemic Thinking encourages a holistic, long-term view that aligns digital design with the broader structural and governance realities of the province. Through TIPS, the framework advances not only technological relevance but also social appropriateness and institutional sustainability, reinforcing the need for a context-sensitive reengineering strategy in public service delivery.

5.5.2 Stakeholder Inclusivity and Cross-Sectoral Collaboration

Including diverse stakeholders ranging from internal departments (ICT, Finance, HR) to traditional leaders, NGOs, and civil society organisations emerged as both a necessity and a strength of the proposed framework. This participatory approach aligns with the New Public Governance paradigm, which regards public value as a co-produced outcome of multiple interdependent actors (Bryson *et al.*, 2021). It also affirms recent calls by Zuhaira and Ahmad (2021) for participatory BPR design in the public sector. The framework's inclusion of grassroots civil society extends beyond conventional BPR models and aligns with Krogh and Triantafillou's emphasis on inter-institutional collaboration within government.

This contrasts with classical BPR models, which were largely technocratic and top-down. Zuhaira and Ahmad (2021)'s inclusion of end-users and frontline staff in the design phase to ensure usability and contextual relevance. In the KZN DSD context, this inclusivity is not merely a theoretical ideal but a practical necessity. For example, the participation of traditional leadership is essential in gaining legitimacy and trust in rural communities, where they often serve as the first point of contact for social services.

Krogh and Triantafillou's (2024) insights into inter-institutional governance further affirm this approach. By integrating NGOs and community actors into the BPR process, the KZN DSD framework extends Triantafillou's Traditional public administration. It fosters collaborative governance, enhancing legitimacy, resource sharing, and innovation.

5.5.3 Leveraging Existing Technologies with Integration Strategies

Respondents advocated building on existing platforms such as Microsoft Teams, SharePoint, and Power Automate, which are familiar to many employees. This strategy of incremental digital transformation avoids the pitfalls of "*rip-and-replace*" models, which often create resistance and disrupt continuity.

Andriole (2020) supports this pragmatic approach, suggesting that reengineering efforts should optimise current IT investments while building modular integrations to enhance functionality. The KZN DSD framework adopts this logic, proposing the development of digital audit trails, task automation, and data-sharing protocols using tools that staff are already familiar with. This not only accelerates adoption but also reduces costs and implementation friction.

Literature increasingly warns against overreliance on large-scale system replacements, which often fail due to technical overreach or poor change management (Mertens *et al.*, 2024). By proposing a hybrid strategy of modernising incrementally while ensuring backward

compatibility, this study supports a digital maturity model that evolves in tandem with an organisation's capacity.

5.5.4 Human-Centric Capacity Building

Capacity building emerged as a cornerstone of successful implementation. The proposed training model is modular, scenario-based, and rooted in real work contexts, accommodating the varied digital readiness levels across different roles within KZN DSD. This experiential and adaptive approach aligns with Santos *et al.*, (2020), who argue that digital transformation in government settings necessitates skill-building and mindset shifts. The proposed framework also introduces mentoring, peer learning, and recognition systems to reinforce learning through social validation and continuous feedback. This addresses a common critique of public sector training: it is often too theoretical, generic, and detached from practical application. This aligns with Santos *et al.*, (2020), who find that practical, role-specific training is more effective in government settings than theoretical instruction alone.

Gölzer and Fritzsche (2021) argue for differentiated training approaches based on user roles, digital familiarity, and task complexity, an approach fully embedded in the KZN DSD model. By supporting ongoing learning rather than one-off training interventions, the proposed framework positions capacity building as a continuous process embedded in daily operations.

5.5.5 Integration of Change Management and Psychological Readiness

Resistance to change was identified as a key risk, with the framework embedding strategies such as change champions, communication campaigns, and visible quick wins. The proposed framework explicitly integrates change management strategies to foster psychological readiness and organisational resilience. Respondents cited fear of redundancy, digital intimidation, and cultural inertia as key barriers to adoption. In response, the framework embeds change champions, frequent communication, user-generated success stories, and quick wins to demonstrate immediate value.

These strategies draw directly from Kotter's (2019) eight-step model of leading change, especially in generating short-term wins and empowering broad-based action. Vakola (2020) further emphasises that digital change must incorporate emotional and rational responses (Chou *et al.*, 2021). Unlike traditional BPR frameworks that downplay culture, the KZN DSD approach recognises that organisational culture and emotional intelligence are central to adoption, not peripheral.

This diverges from early BPR models, which viewed resistance as irrational and to be managed through control rather than empathy. The current framework proposes that

addressing staff concerns, perceptions, and motivations is as critical as technical design, and that a socio-technical lens significantly enhances implementation fidelity (Nkomo & Marnewick, 2021).

5.5.6 Sustainability and Feedback Loops

The sustainability of the digital BPR framework is ensured through modularity, continuous feedback loops, and structured stakeholder reviews. Participants emphasised the importance of adaptability in response to changing policies, social needs, and technological advancements. This approach resonates with Bryson *et al.* (2021), who advocate for iterative, feedback-driven digital governance models. This contrasts with earlier BPR models (e.g. Hammer & Champy, 1993), which tended to assume a one-time reengineering effort (Davidson *et al.*, 2024). The proposed approach supports an iterative, feedback-driven living framework and is open to revision based on performance data and stakeholder input.

Including real-time monitoring and adaptive learning mechanisms aligns with the Human-Technology-Organisation model, which posits that sustainable transformation arises from the dynamic interplay of people, technology, and institutional processes (Berglund *et al.*, 2020). Unlike static BPR approaches that assume a one-time reengineering effort, this framework is "alive" and open to refinement based on performance data and frontline feedback (Berglund *et al.*, 2020).

Such adaptability is essential in public sector environments marked by political volatility, shifting mandates, and constrained resources. The KZN DSD model institutionalises learning and review cycles to ensure it remains relevant, effective, and aligned with evolving priorities.

5.5.7 Evaluation Metrics Rooted in Real-world Outcomes

The evaluation component of the framework prioritises Key Performance Indicators (KPIs) that extend beyond technical efficiency. Metrics include citizen satisfaction, service delivery timeliness, cost-effectiveness, and frontline staff productivity. This outcome-based orientation aligns with Bryson *et al.*, (2021) calls for "public value metrics" that measure the benefits delivered to society, rather than just internal efficiencies.

The proposed use of real-time dashboards, analytics tools, and citizen back portals reflects "a commitment to data-driven decision-making. Bhaskar *et al.*, (2020) stress the importance of embedded analytics in public systems to ensure accountability, transparency, and responsiveness. This aligns well with the proposed framework's design, which views monitoring and evaluation not as post-hoc audits but as continuous governance mechanisms.

In contrast to earlier BPR frameworks that prioritised process optimisation, the KZN DSD approach embeds performance metrics within a broader ecosystem of public value, accountability, and service quality.

5.5.8 Flexible, Context-Aware Framework

By synthesising the above components, the resulting framework is characterised by flexibility, modularity, and sensitivity to context. Participants called for a flexible, context-aware framework tailored to KZN DSD's specific needs. Emphasis was placed on leveraging existing platforms (e.g., Microsoft Teams, SharePoint), ensuring mobile and offline capabilities, and embedding continuous feedback mechanisms. The province's cultural, infrastructural, and linguistic diversity necessitates a modular framework that supports phased implementation and localised service delivery. This supports the literature on the province's adaptable, co-designed digital solutions for public institutions.

This reflects the literature's consensus on the inadequacy of "*one-size-fits-all*" digital governance models in social and political environments (Kaponda *et al.*, 2023; Ngulube, 2020). The proposed framework's phased implementation structure ensures that digital transformation does not "outpace institutional readiness, allowing each unit within KZN DSD to progress at a manageable pace. It offers a scalable yet adaptable solution that can be replicated across other departments and provinces with similar challenges.

5.5.9 Alignment with Existing Literature

The findings affirm much of the contemporary literature on digital transformation in public administration, particularly around challenges such as institutional inertia, policy misalignment, and digital inequality (Mertens *et al.*, 2024; Kaponda *et al.*, 2023). However, this study advances the field by presenting an empirically grounded, context-specific, and theoretically informed framework. It also contributes to socio-technical systems theory by articulating how human, institutional, and technical elements co-evolve during digital transformation. The focus on emotional readiness, stakeholder collaboration, and iterative learning represents an important departure from the mechanistic, top-down logic of classical BPR.

5.5.10 Summary

The tailored Digital BPR Framework for KZN DSD presents a compelling, innovative public-sector digital transformation model for developing contexts. Context-aware, inclusive, and adaptive qualities are increasingly recognised as essential for sustainable change. It builds on and extends post-2019 BPR and digital governance scholarship by integrating socio-

cultural sensitivity, cross-sector collaboration, adaptive training, and systems thinking. Unlike early BPR models that emphasised radical overhaul, the framework recognises that sustainable transformation in the public sector requires institutional empathy, technological pragmatism, and policy alignment. In this way, the study contributes a replicable framework and new knowledge to the field of digital transformation in the public sector. Lastly, the framework integrates current best practices in governance, change management, systems thinking, and human-centred design, offering a practical roadmap for KZN DSD and theoretical insights for broader application.

By challenging the assumptions of earlier BPR models and emphasising empathy, flexibility, and co-creation, the study contributes novel perspectives to digital public service transformation. The proposed framework is a product of local insight and a potential blueprint for scalable reform across South Africa and similar governance contexts.

5.6 Demographic Implications for Framework Development

5.6.1 Gender Distribution:

The predominance of female respondents (57%) over males (43%) within the KwaZulu-Natal Department of Social Development reflects broader global and local trends in social development and care sectors, where female employment has historically been predominant (Kaponda *et al.*, 2023; De Nicola *et al.*, 2025). This gender distribution is critical for tailoring the Business Process Reengineering (BPR) framework to the workforce's contextual realities.

The feminisation of care and social service roles is rooted in deeply ingrained gender norms that influence occupational segregation (De Nicola *et al.*, 2025). These norms influence work culture, communication patterns, and receptiveness to change initiatives, all of which must be acknowledged in the BPR design to enhance acceptance and sustainability (Nkomo *et al.*, 2023).

Women in such sectors often face additional challenges, including balancing professional and domestic responsibilities, which can impact their availability and engagement in transformation processes (Oakley, 2016). Therefore, capacity-building initiatives within the BPR framework should be flexible and gender-sensitive, supporting diverse learning needs and schedules to maximise participation (Mertens *et al.*, 2024).

Research also highlights persistent gender disparities in leadership representation and digital literacy within public sector organisations (Vial, 2019; Mertens *et al.*, 2024). Addressing these gaps is crucial to empowering women as change agents who can effectively champion BPR efforts (Arnott & Gao, 2022). Targeted interventions such as mentorship, leadership

development programs, and ICT training should be integral to the framework to promote equitable power dynamics and technological adoption.

Furthermore, involving female frontline workers in participatory design and decision-making enhances the relevance and effectiveness of process improvements (Arnott & Gao, 2022). Gender-responsive stakeholder engagement ensures that the BPR framework reflects diverse experiences, fostering ownership and mitigating resistance to change (Sharma, 2017).

In summary, the gender profile of KZN DSD personnel highlights the need to integrate gender considerations into the BPR framework. Doing so aligns with calls for socially inclusive organisational change that leverages workforce diversity to improve service delivery outcomes (Nkomo *et al.*, 2023; Fernandez & Shaw, 2020).

5.6.2 Years of Experience

The distribution of years of experience among KZN DSD staff reflects a workforce with diverse tenure levels, ranging from early-career professionals to highly experienced senior personnel. This diversity has critical implications for the design and implementation of the proposed Business Process Reengineering framework.

The smallest segment, professionals with less than 5 years of experience (8%), are typically early-career employees who are still building essential skills and adapting to organisational cultures (Nguyen *et al.*, 2021). These individuals often demonstrate greater adaptability to technological innovations and new process models, which can be leveraged to pilot new digital tools or workflows within the BPR framework (Martínez-Caro *et al.*, 2022). Targeted training programs focusing on digital literacy and process management are vital to empower this group as change agents.

Mid-career staff (6–10 years, 29%) frequently balance operational expertise with emerging leadership capabilities (Jain *et al.*, 2021). They act as vital connectors between frontline operations and strategic management, making them ideal candidates to facilitate communication, provide feedback, and support the adoption of change during BPR implementation (Santos & Brito, 2023). Involving this group in iterative process evaluations can enhance the responsiveness and scalability of BPR initiatives.

The largest cohort (41%) comprises individuals with 11–20 years of experience who are likely to hold leadership or specialised roles. This group brings deep organisational knowledge and practical insight essential for aligning BPR activities with strategic objectives (Chen & Liu, 2023). However, they may resist change due to entrenched work habits or uncertainty about

new technologies (Choi & Lee, 2022). Hence, the framework must incorporate tailored change management practices such as participative decision-making and recognition programs to mitigate resistance and build commitment (Al-Haddad & Kotnour, 2020).

The highly experienced group (22%) with over 21 years of experience in the sector typically occupies senior leadership or advisory roles, contributing long-term vision and governance oversight, which are crucial for sustaining transformational efforts (Lopez-Cabrales *et al.*, 2021). Their endorsement is crucial for mobilising resources and legitimising the BPR process within the broader institutional context (Wang & Ahmed, 2021).

Overall, the varied experience levels emphasise the need for a differentiated approach within the BPR framework. Customising capacity building, engagement, and leadership involvement to meet the unique needs of each experience group will enhance buy-in, minimise resistance, and promote a culture of continuous improvement aligned with digital transformation objectives (Yang *et al.*, 2022).

5.6.3 Qualification Level

The qualification profile of the KZN Department of Social Development workforce reveals a strong foundation of technical and operational expertise. Nearly half (47%) hold diplomas or junior degrees, and a comparable proportion (45%) possess honours or BTech qualifications. This suggests a workforce that combines practical skills with advancing academic and theoretical knowledge, which is essential for effectively executing day-to-day functions and progressively assuming specialised or managerial responsibilities (Almeida *et al.*, 2021).

The relatively small percentage (8%) of postgraduate-qualified staff indicates a limited pool of highly specialised or research-oriented expertise within the department. These individuals are critical for strategic decision-making, evidence-based policy formulation, and driving innovation in social development programs (Kwon & Sim, 2022). Therefore, the framework for workforce development within the BPR initiative should include targeted capacity building and incentives for further academic advancement, with a primary focus on enhancing research competencies and leadership skills among this group (Martins & Rebelo, 2023).

A balanced qualification mix supports organisational resilience. Operational efficiency stems from skilled technical staff, while innovation and strategic adaptability require higher-level expertise. The BPR framework should leverage this balance by fostering collaboration across qualification levels to facilitate knowledge sharing and enhance collective problem-solving capabilities (Singh *et al.*, 2022).

5.6.4 Level of Operation within the Organisation:

The distribution of staff across organisational levels indicates a hierarchical structure, with a substantial base of entry-level employees (31%) and significant representation in supervisory (27%) and middle management (20%) roles. This layered composition reflects the typical structure of public sector organisations, where frontline staff form the operational backbone, supported by progressively higher levels responsible for oversight and strategic management (Rodrigues & Almeida, 2020).

The smaller proportions in first-entry management (8%), director (12%), and chief director (2%) roles highlight the concentration of strategic and policy-making authority within a few key leadership positions. This concentration underscores the importance of engaging senior leaders early in BPR initiatives to secure buy-in and align transformational goals with departmental vision and mandates (Chen *et al.*, 2021).

Career progression pathways evident from the spread in management levels signal opportunities for talent development, which the Framework should address by embedding clear learning and promotion trajectories aligned with competency frameworks (Kim & Lee, 2022). Empowering supervisors and first-entry managers with enhanced process management skills is crucial for bridging frontline operations with strategic priorities, thereby improving the diffusion of change and operational agility (Nguyen & Tran, 2023).

5.6.5 Length of Tenure in the Department

The tenure profile shows a stable workforce, with 84% of employees having six or more years of service and nearly half (47%) with 11 to 20 years of experience. A long tenure correlates strongly with institutional knowledge retention, organisational commitment, and continuity of service delivery, which are key strengths in public sector agencies (Johnson *et al.*, 2021).

However, longer tenures can also pose challenges to change initiatives, such as BPR, due to potential resistance rooted in established routines and organisational culture (Lee & Park, 2022). The Framework should incorporate change management strategies that recognise this dynamic, including participative engagement, continuous communication, and tailored training programs to address fears and build confidence among tenured employees (Wang *et al.*, 2023).

The smaller cohort of newer employees (14% with less than five years of service) represents a source of fresh perspectives and innovation potential. Leveraging their openness to new approaches can accelerate digital transformation and process redesign, provided they are

supported with structured onboarding and mentorship from experienced colleagues (Morris & Karan, 2021).

The tenure composition highlights the need for a dual approach within the BPR framework: harnessing the deep expertise of long-serving staff while empowering newer employees to champion innovative practices, ensuring sustainable organisational transformation (Patel *et al.*, 2022).

5.7 Summary: Synthesising Findings Across the Research Objectives

This chapter analyses and interprets empirical findings that address the four core study objectives, each tied to a specific research question. The insights collectively contribute to a nuanced understanding of digital transformation through Business Process Reengineering in the KwaZulu-Natal Department of Social Development. The chapter integrates stakeholder perspectives, theoretical insights, and practice-oriented reflections to inform the design of a context-sensitive digital BPR framework.

5.7.1 RO1 / RQ1: Current State of Digital Integration and BPR Practices

The study established a baseline understanding of digital readiness and process maturity within the KZN DSD. Findings revealed partial digital adoption with siloed systems, paper-based processes, and inconsistent IT governance. While some digital tools (e.g., Microsoft Teams, SharePoint) were in use, their deployment lacked strategic integration and alignment with organisational workflows.

Key inhibitors included:

- i. Fragmented systems with minimal interdepartmental connectivity
- ii. Infrastructure disparities between urban and rural offices
- iii. Inadequate training and user resistance
- iv. Limited strategic alignment between ICT and core social service functions

This aligns with global and local literature (Ngulube, 2020), emphasising the foundational role of digital maturity and organisational alignment in successful transformation efforts. It underscores the necessity of a coherent digital strategy embedded in service delivery models.

5.7.2 RO2 / RQ2: Identifying Enablers and Barriers to Digital BPR

The second objective explored internal and external factors influencing BPR success. Respondents pointed to structural rigidity, hierarchical decision-making, and limited capacity as critical internal barriers. Externally, unreliable connectivity, procurement delays, and socio-political influences constrained digital efforts.

- i. Conversely, several enablers were identified:
- ii. Leadership commitment at the provincial level
- iii. Presence of motivated champions in regional offices
- iv. Use of existing Microsoft 365 tools
- v. Engagement with NGOs and development partners

The findings align with Boudreau and Robey's (2019) socio-technical framework, which highlights the interplay between technology, human agency, and institutional structures. Stakeholders emphasised that transformation must be driven by Robey's technology, policy coherence, change leadership, and organisational learning.

5.7.3 RO3 / RQ3: Exploring Staff Perspectives and Readiness for Digital Change

The third objective focused on the human dimensions of digital transformation. Interviews and focus groups revealed a complex mix of optimism, anxiety, and ambivalence among staff. Digital literacy varied significantly across roles and regions, with rural offices reporting more pronounced digital exclusion.

Key findings included:

- i. Enthusiasm for improved efficiency and reduced manual paperwork
- ii. Anxiety over job security and fear of the unknown
- iii. Calls for experiential, role-specific training
- iv. Recognition of cultural and generational factors affecting adoption

Psychological readiness and organisational culture emerged as pivotal themes, echoing Al Gumlasi *et al.* (2023) and Kotter (2019), who argue that emotional buy-in and behavioural change are prerequisites for structural transformation. The study highlights the need for adaptive leadership, peer mentoring, and inclusive dialogue to foster a culture of continuous learning.

5.7.4 RO4 / RQ4: Designing a Tailored Digital BPR Framework for KZN DSD

Building on the previous insights, the fourth objective involved co-designing a digital BPR framework grounded in empirical realities. Seven key design principles emerged:

- i. Contextualization – Solutions must be localised to address rural-urban divides, language barriers, and infrastructure constraints.
- ii. Stakeholder Inclusivity – Multi-actor collaboration is vital, involving internal units, traditional leaders, NGOs, and civil society actors.
- iii. Leveraging Existing Tools – Emphasise integration over replacement, using current platforms like Microsoft Teams and Power Automate.
- iv. Human-Centric Capacity Building – Training must be modular, role-based, and context-aware.
- v. Change Management Integration – Embed psychological readiness strategies, including change champions and communication campaigns.
- vi. Feedback-Driven Iteration – Design the framework as modular and evolving, allowing for real-time feedback and updates.
- vii. Outcome-Based Metrics – Evaluate success using KPIs focused on citizen satisfaction, efficiency, and value creation.

This tailored framework extends existing BPR literature by foregrounding institutional empathy, sustainability, and public value. It diverges from traditional one-time reengineering models (e.g. Hammer & Champy, 1993) by adopting an iterative, adaptive approach suited to complex, resource-constrained environments.

5.7.5 Overall Contribution

Across the four research objectives, this study provides an integrated, empirically grounded response to the complexities of digital transformation in South Africa's public sector. It offers:

- i. A diagnostic of current digital and process maturity
- ii. An analysis of socio-technical enablers and constraints
- iii. A deep dive into human readiness and organisational Africa's

- iv. A replicable, modular framework for digital BPR tailored to provincial social development contexts.

Despite being situated within the particular context of the KwaZulu-Natal Department of Social Development (KZN DSD), the study's contribution goes beyond a single institutional case because of the wider issues surrounding digital transformation and business process reengineering (BPR) in public-sector settings, especially in developing economies. By addressing common structural, administrative, technological, and governance-related issues that public organisations experiencing digital transformation in resource-constrained situations typically face, the study makes a global contribution.

Government departments and public sector organisations dealing with similar issues like bureaucratic inefficiencies, disjointed service delivery systems, antiquated manual processes, resistance to technological change, limited digital capacity, and governance complexities may find theoretical and practical value in the suggested customised digital BPR framework. These issues are not specific to the KZN DSD in South Africa; rather, they are prevalent in public-sector organisations in other developing nations in Asia, Latin America, and Africa.

Additionally, by highlighting the significance of context-sensitive and institution-specific BPR frameworks rather than solely depending on general private-sector models that might not sufficiently account for the realities of public administration, the study adds to the global conversation on digital government transformation. In this sense, the study backs up growing global claims that frameworks for digital transformation should take into consideration local elements including infrastructure constraints, organisational culture, socioeconomic circumstances, regulatory contexts, and public accountability requirements.

Therefore, similar social development agencies, municipalities, and public organisations looking to modernise administrative procedures and enhance service delivery through digital innovation may use the study's findings as a comparative reference point. The study advances comparative understanding of how developing economies can strategically implement digital BPR initiatives despite institutional and resource constraints by placing the KZN DSD case within larger international digital transformation initiatives and public-sector reform literature.

The study also makes a methodological contribution by demonstrating how context-driven and qualitative research methods may be applied to create flexible frameworks for digital transformation for public sector organisations functioning in intricate governance settings. Thus, future comparative research, policy development projects, and digital governance

tactics in comparable institutional settings around the world may benefit from the paradigm suggested in the paper.

As a result, even though the research is based on the KZN DSD case study, its theoretical insights, methodological approach, and suggested framework have wider applicability and transferability to similar public-sector environments globally, especially in developing and transitional economies seeking sustainable digital transformation and better public service delivery.

5.8 Implications of the Study

This study has significant theoretical, practical, and policy implications for the evolving field of digital Business Process Reengineering in the public sector, particularly in low and middle-income contexts.

5.8.1 Theoretical Implications

Theoretically, this study contributes to the expanding corpus of digital BPR by offering a context-sensitive, socio-technical framework that integrates elements from Business Process Management (BPM), digital transformation, and public governance. Unlike earlier technocratic models of BPR (Hammer & Champy, 1993), this framework recognises that transformation efforts must be adaptive, modular, and participatory (Reijers & Mansar, 2005; Ngulube, 2020). It advances the discourse by embedding strategic alignment, stakeholder inclusion, and iterative feedback loops, supporting the emerging consensus that digital transformation in the public sector must be both holistic and human-centred (Popoola *et al.*, 2024; Valiris & Glykas, 2004).

This study also adds empirical weight to theoretical propositions on agile governance (Krogh & Triantafillou, 2024) and digital maturity frameworks, bridging the gap between conceptual models and on-the-ground realities in resource-constrained environments. It aligns with Zimmermann *et al.*, (2020), who advocate integrating BPM methods with Industry 4.0 principles to develop robust, real-time service-delivery systems in public institutions.

5.8.2 Practical Implications

The findings provide actionable guidance for public institutions, particularly provincial government departments like the KwaZulu-Natal Department of Social Development, on how to design and implement digital BPR initiatives that are technologically feasible and socially responsive. Key insights include:

- i. Leveraging existing digital tools (e.g., SharePoint, Teams, Power Automate) before investing in new systems, consistent with Andriole (2020) and Reijers & Mansar (2005).
- ii. Developing scenario-based and role-specific training programs to bridge digital literacy gaps (Gölzer & Fritzsche, 2017; Santos *et al.*, 2020).
- iii. Prioritising change management and emotional readiness through change champions and phased communication strategies, echoing Kotter's (2007) framework and Vakola (2020).
- iv. Creating real-time, outcome-focused KPIs that include citizen satisfaction, service accessibility, and productivity gains, in line with Bhaskar *et al.*, Kotter's

Integrating grassroots stakeholders into the design process further extends best practices from co-production literature (Bryson *et al.*, 2021), ensuring digital systems reflect user needs and operational realities.

5.8.3 Policy Implications

From a policy standpoint, the study identifies several systemic constraints that inhibit effective digital BPR and calls for a recalibration of public sector regulatory environments:

Procurement reform is essential to facilitate agile acquisition of digital solutions, enabling iterative upgrades and modular designs (Zuhaira & Ahmad, 2021).

Interoperable digital policy frameworks that unify fragmented systems across departments and levels of government are needed to prevent redundancy and enhance scalability (Michael *et al.*, 2023).

Investments in infrastructure, particularly in rural and underserved areas, are critical to overcoming connectivity and hardware barriers, a challenge acknowledged in both the KZN Digital Transformation Strategy and global studies (Tsai *et al.*, 2019; Dewi *et al.*, 2021).

In summary, the policy implications point toward a shift from compliance-heavy regulation to innovation-enabling governance, emphasising capacity-building, inclusive design, and iterative oversight.

5.8.4 Limitations

While the study offers rich insights, several limitations should be acknowledged to guide interpretation and future research:

Single Case Context: The study is limited to the KZN Department of Social Development, a provincial-level institution. While the findings may have broader relevance, generalisability is constrained. Van der Vyver and Rajapakse (2012) note that contextual nuances, including political, administrative, and infrastructural factors, profoundly shape public-sector BPR outcomes (Fasna & Gunatilake, 2020).

Qualitative and Self-Reported Data: The reliance on qualitative interviews and internal documentation may lead to bias, perception gaps, or selective disclosure. This is a standard limitation in public administration studies (Ngulube, 2020), but it can be addressed through triangulation with performance data or citizen feedback in future research.

Cross-Sectional Design: The research captures a snapshot in time and does not assess the longitudinal impact of BPR initiatives or the durability of change over time. This limitation restricts the ability to evaluate the long-term sustainability of the framework, an issue also highlighted in recent literature, which emphasises the need for continuous performance monitoring and iterative redesign in digital transformation initiatives (Van Looy, 2022).

Technology-Centric Focus Risks: While the framework emphasises the importance of human factors and governance, future studies should be cautious not to overemphasise the role of digital tools alone. True success also depends on factors such as organisational culture, stable leadership, and sustained political will, elements that are increasingly emphasised in recent digital transformation research (Gregory *et al.*, 2021).

In the context of the KwaZulu-Natal Department of Social Development (KZN DSD) research environment, the researcher believed that the cross-sectional research design used in the study was adequate and justified. Practical, departmental, and methodological factors related to examining digital transformation and Business Process Reengineering (BPR) within a sizable and intricate public sector organization influenced the choice to employ a cross-sectional design.

First of all, the KZN DSD works in a dynamic service delivery environment that is marked by continual operational needs, administrative complexity, geographically distributed service centers, and resource limitations. There would have been major operational and logistical difficulties in conducting a longitudinal study, which calls for frequent interaction with participants over a long time span. Such an approach could not have been possible given the study's time and budget constraints because it would have required ongoing institutional coordination, repeated cycles of data collecting, and extended access to officials.

Second, the research's main goal was to have a thorough grasp of the KZN DSD's current organisational difficulties, business process inefficiencies, and digital transformation needs at a specific moment in time. Thus, the cross-sectional design gave the researcher the

chance to record participants' current perspectives, experiences, and operational realities from various service centers and organisational levels. This made it possible for the study to produce a thorough situational analysis of the department's current procedures and preparedness for the adoption of digital BPR.

Additionally, despite the fact that digital transformation is acknowledged as a process-oriented and dynamic phenomenon, the researcher overcame the drawbacks of a cross-sectional design by utilising qualitative research techniques that enabled participants to consider not only the present circumstances but also past difficulties, ongoing transformation initiatives, and projected future advancements. Through methodological triangulation, the addition of survey questions and focus group discussions greatly improved the breadth and depth of the data gathered.

The researcher also admits that the study's conclusions may not accurately reflect long-term organisational changes or developing technical advancements because they only provide a contextual and time-bound perspective of digital transformation inside the KZN DSD. However, the study offers important foundational insights into the institutional realities, difficulties, and strategic factors required for the department to create a customised digital BPR framework.

Therefore, the researcher maintains that the selected strategy was methodologically appropriate, practically feasible, and consistent with the exploratory and qualitative nature of the study, despite the inherent limitations of a cross-sectional design. The approach made it possible for the researcher to generate reliable, academically rigorous, and culturally relevant results that significantly advance our understanding of digital transformation and public sector business process reengineering in South Africa.

CHAPTER 6

NEW CONCEPTUAL FRAMEWORK FOR KZN DSD

The following section presents the Digital Business Process Reengineering Implementation Framework, explicitly developed for the KwaZulu-Natal Department of Social Development. This Framework addresses institutional inefficiencies and supports the department's goal of delivering inclusive, efficient, citizen-centric digital services.

6.1 Introduction and Rationale

South Africa's public sector is under increasing pressure to modernise amid digital disruption, rising citizen expectations, and constrained resources. In response, the KwaZulu-Natal Provincial Government introduced a Digital Transformation Strategy (2020–2025) to align provincial operations with the national digital agenda.

Although there is a clear change plan, progress has been hindered by system issues, broken processes, limited digital skills, and inadequate infrastructure. This supports Ngulube's (2020) finding that digital change in African institutions often faces local challenges that global models overlook.

6.2 Context

The KwaZulu-Natal Department of Social Development is undergoing a digital transformation to enhance service delivery, streamline operations, and address systemic inefficiencies. A context-sensitive framework for implementing Digital Business Process Reengineering (BPR) must integrate change management strategies that ensure smooth adoption, stakeholder engagement, and sustainable impact.

6.3 Methodology Overview

The study adopted a qualitative, exploratory case study design (O'Connor *et al.*, 2016). Interviews and focus group discussions were conducted with staff across management and operational levels.

Importantly, the Framework is evidence-informed, drawing from local empirical insights and global BPR scholarship (Mertens *et al.*, 2024; Nkoma *et al.*, 2023).

6.4 Framework Structure and Theoretical Grounding

The KwaZulu-Natal Department of Social Development's Framework for implementing digital Business Process Reengineering is anchored in both theoretical robustness and contextual

responsiveness. Drawing from seminal frameworks such as the Capability Maturity Model Integration, the Human-Technology-Organisation model, and Davenport's Process Innovation Model, this digital BPR framework seeks to embed international best practices while remaining sensitive to the systemic and operational realities of the local context.

To further enhance coherence, applicability, and strategic alignment, the Da Vinci TIPS managerial leadership framework, which stands for Technology, Innovation, People, and Systemic Thinking, has been integrated into the structural foundation of the proposed implementation model. The inclusion of TIPS™ ensures that the framework not only draws on theoretical constructs but also promotes an integrated, holistic approach to leadership and digital transformation. Each of the nine pillars outlined below aligns strongly with one or more TIPS™ dimensions, thereby reinforcing both the functional and systemic integrity of the reengineering process.

For instance, Technology within TIPS™ resonates with the framework's focus on digital infrastructure, cybersecurity, and system automation. The Innovation dimension is reflected in the framework's embrace of continuous process improvement (CPI) and creative problem-solving, derived from both radical (Hammer & Champy, 1993) and incremental (Deming, 1986) change methodologies. The People element is embedded in stakeholder engagement strategies and change management processes, ensuring that transformation is co-created, inclusive, and human-centred, principles that are also echoed in the HTO model. Finally, Systemic Thinking underpins the entire framework's architecture by ensuring that strategic alignment, risk mitigation, performance monitoring, and policy integration are pursued not in isolation, but as interdependent elements of a broader institutional ecosystem.

This dual anchoring between established BPR models and the TIPS™ framework ensures a structured yet flexible implementation plan that supports technological advancement, cultivates innovation, empowers individuals, and secures long-term systemic resilience within the Department. The resulting framework is not only practical and context-sensitive but also theoretically sound, offering a strong foundation for sustainable digital transformation in public service delivery.

Table 6.1: Framework Structure and Theoretical Grounding

Framework Pillar	Theoretical Foundations	Key Alignment	How Theory Supports the Pillar	TIPS™ Dimension(s)
1. Strategic Alignment	CMMI (Paulk et al., 1993); Davenport (1993)	Ensures goal congruence	CMMI offers maturity levels for phased improvement; Davenport links business processes to strategic intent	Systemic Thinking
2. Process Analysis & Redesign	Hammer & Champy (1993); Deming (1986)	Combines radical + incremental change	Radical redesign (Hammer) supported by iterative cycles (Deming) for sustainable, adaptive transformation	Innovation: Systemic Thinking
6. Performance Measurement	CMMI (Paulk et al., 1993); Benchmarking (Camp, 1989)	Evidence-based tracking	CMMI offers structured metrics; benchmarking fosters accountability and continuous comparison with leading organisations	Systemic Thinking; Innovation
7. Policy & Governance	New Public Governance (Osborne, 2006); Davenport (1993)	Policy-process integration	Aligns innovation with public accountability; facilitates regulation-compliant innovation	Systemic Thinking
8. Sustainability & Scalability	CPI (Deming, 1986); CMMI (Paulk et al., 1993)	Long-term viability	CPI provides a model for ongoing improvement; CMMI supports structured scale-up based on process maturity	Innovation: Systemic Thinking
9. Risk Management	HTO (Carayon, 2006); Benchmarking (Camp, 1989)	Proactive mitigation	Anticipates risks from people–tech–organisation interactions; benchmarking helps	Technology; People

Framework Pillar	Theoretical Foundations	Key Alignment	How Theory Supports the Pillar	TIPS™ Dimension(s)
			learn from others' implementation gaps	

6.4.1 TIPS™-Aligned Framework for Digital BPR in KZN DSD

Table 6.1 presents a structured implementation framework for digital Business Process Reengineering in the KwaZulu-Natal Department of Social Development, aligning key process pillars with established theoretical models and the DaVinci TIPS Managerial Leadership Framework.

Each pillar of the framework, such as Strategic Alignment, Process Analysis, Technology Integration, Stakeholder Engagement, and Change Management, is grounded in relevant theories, including the Capability Maturity Model Integration, Davenport's Process Innovation, the Human-Technology-Organisation framework, and benchmarking methodologies. For instance, CMMI supports phased development and scalability, while HTO ensures a human-centred balance between people and technology.

These pillars are then mapped onto the TIPS™ framework:

- I. Technology anchors components such as digital tools and risk management
- II. Innovation informs iterative process redesign and performance tracking
- III. People reflect change leadership, employee engagement, and practical uptake
- IV. Systemic Thinking ensures integration with long-term strategies, governance, and sustainability.

This alignment enables a holistic, adaptive, and sustainable BPR approach, blending global best practices with local institutional needs to support the digital transformation agenda of KZN DSD.

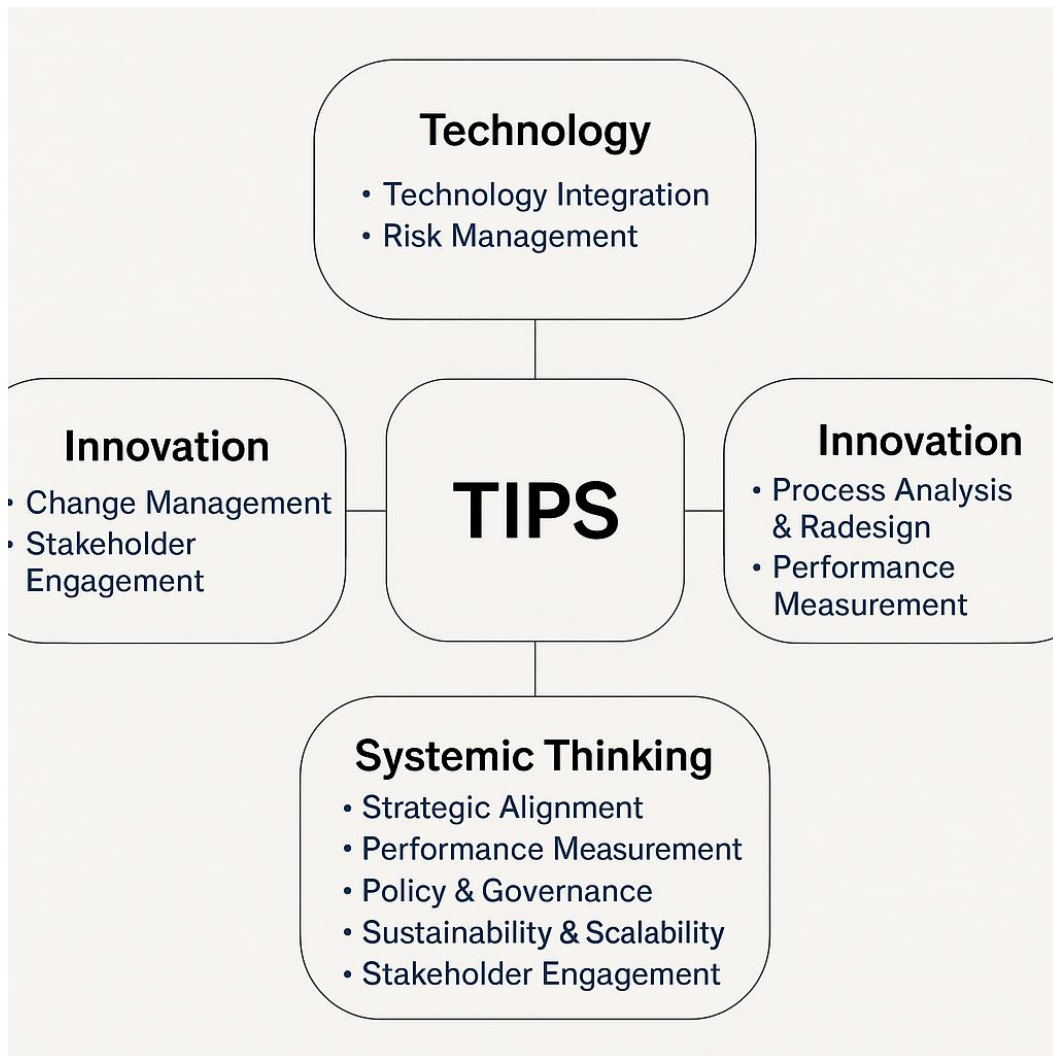


Figure 6:1 TIPS Management Framework

Source: TIPS Management Framework – DaVinci 2022

6.4.2 Stepwise activities for the KZN DSD Implementation Framework

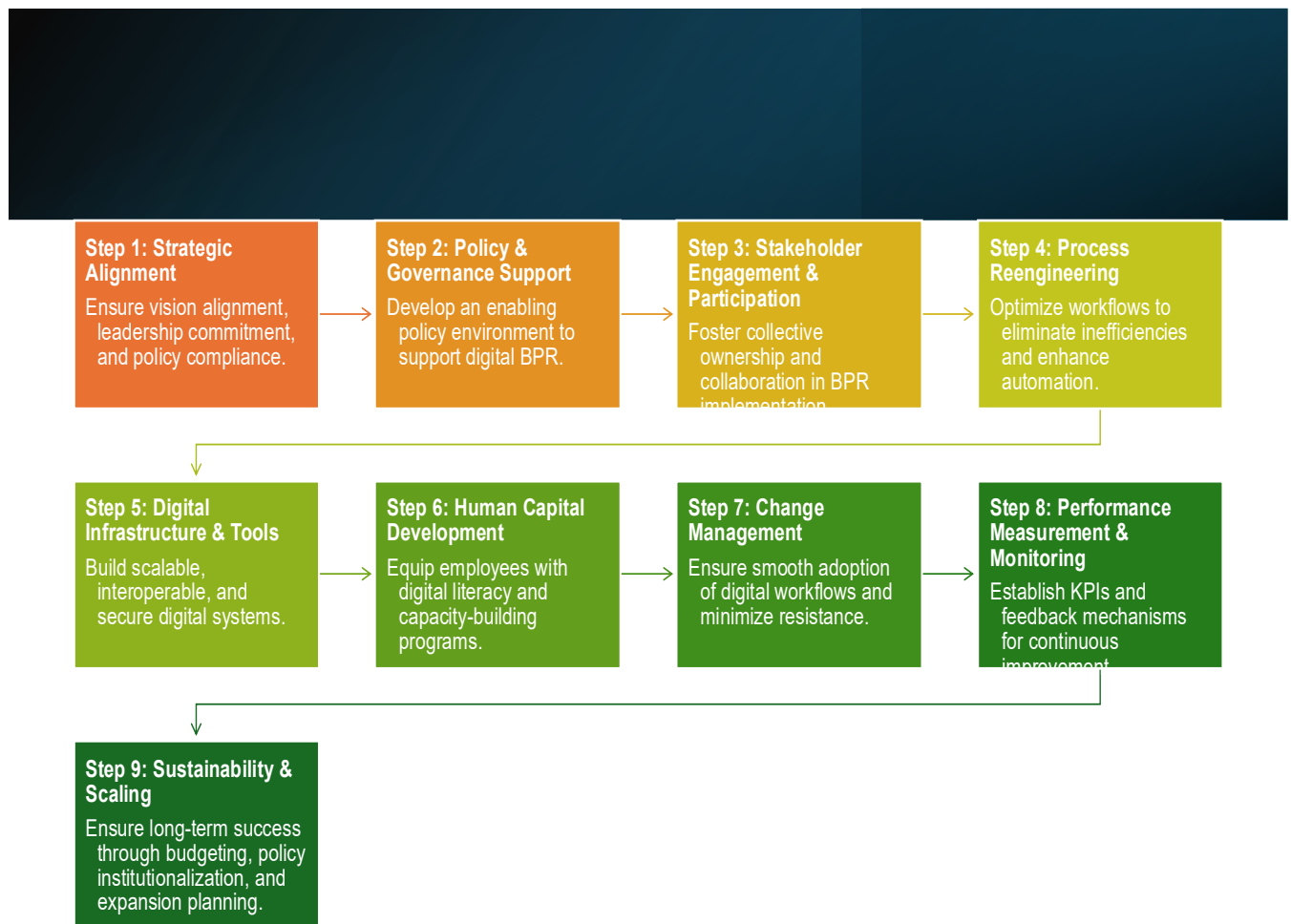


Figure 6:2 Stepwise activities for the KZN DSD Implementation Framework

6.4.2.1 Step 1: Strategic Alignment

Strategic alignment is the anchor of effective BPR. The KZN DSD's digital ambitions must be aligned with its organisational mission: building conscious and capable citizens. A strong strategic foundation is essential for the KwaZulu-Natal Department of Social Development to successfully implement Digital Business Process Reengineering. This foundation integrates vision alignment, leadership commitment, and policy compliance to ensure a structured and sustainable transformation.

This figure illustrates how the Framework ensures that redesign efforts are not conducted in isolation. As Kouamou *et al.*, (2021) emphasised, BPR efforts that lack alignment with vision and long-term goals often result in fragmented reforms. Every proposed process reengineering initiative is mapped against departmental KPAs, policy priorities, and service delivery mandates.

This initial stage breaks the process into four operational stages aligned with three overarching strategic steps: (1) developing a vision, (2) designing optimised processes, and (3) aligning with regulatory compliance. The model is especially relevant for transforming public service delivery systems in KwaZulu-Natal, with substantial comparability to national transformation initiatives in South Africa.



Figure 6:3 Strategic Foundation.

The Strategic Foundation is the cornerstone of the Digital Business Process Reengineering initiative for the KwaZulu-Natal Department of Social Development. This phase establishes the guiding principles, objectives, and alignment mechanisms necessary to ensure the initiative's coherence with broader organisational and governmental priorities (Hammer & Champy, 1993; Popoola *et al.*, 2024).

6.4.2.1.1 Vision and Mandate Alignment

The Framework begins by anchoring the digital BPR initiative within KZN DSD's overarching mandate: to deliver equitable, efficient, and transformative social services. This requires aligning the reengineering process with provincial development goals, such as the KZN Provincial Growth and Development Plan, and national imperatives, like the National Development Plan 2030. By embedding digital transformation within these strategic agendas, the initiative positions technology as an enabler of inclusive service delivery, poverty alleviation, and administrative transparency (Bryson *et al.*, 2021; Popoola *et al.*, 2024).

Academic models, such as Hammer and Champy's BPR principles, emphasise radical redesign to achieve breakthrough improvements, while frameworks like the Capability Maturity Model Integration ensure alignment with long-term strategic goals (Popoola *et al.*, 2024). This dual focus ensures that digital BPR transcends operational efficiency to address

systemic inequities, aligning with global best practices in public sector modernisation (Zondo *et al.*, 2021).

To drive meaningful transformation, digital BPR must align with KZN DSD's strategic goals of service delivery, efficiency, and accountability. Mertens *et al.*, (2024) emphasise that successful BPR initiatives must align with an organisation's core objectives to ensure relevance and effectiveness. Soontorn and Boonsiri (2016) argue that digital BPR enhances customer orientation and market competitiveness, improving public service efficiency.

For KZN DSD, this study recommends:

- i. Defining clear transformation goals aligned with citizen-centric service improvement.
- ii. Ensuring digital workflows support operational excellence and accountability.
- iii. Embedding measurable outcomes to track BPR effectiveness.

6.4.2.1.2 Leadership Commitment and Advocacy

The initiative's success hinges on active, visible leadership. Senior leaders must champion the vision, resolve inter-departmental conflicts, and foster a culture of innovation (Mouazen *et al.*, 2023; Fasna & Gunatilake, 2020). This includes modelling adaptability, maintaining open communication, and embedding accountability into governance frameworks. Leaders also play a pivotal role in securing stakeholder buy-in and addressing resistance, ensuring sustained momentum (Bryson *et al.*, 2021).

Leadership commitment bridges technical and human dimensions, balancing innovation with inclusivity. For example, in South Africa's SARS eFiling initiative, leadership-driven communication campaigns and phased rollouts ensured successful adoption even in low-literacy contexts (Fasna & Gunatilake, 2020). Proactive risk assessment addresses challenges such as digital literacy gaps (Michael *et al.*, 2023) and cybersecurity threats, with leadership oversight ensuring that contingency plans, including training programs, are implemented. Sustainability is embedded through scalable processes and institutional buy-in, guided by leaders prioritising long-term adaptability (Bhaskar *et al.*, 2020).

For KZN DSD, this study recommends:

- i. Establishing a Digital Transformation Task Team with senior leadership involvement.
- ii. Ensuring department-wide engagement to drive digital adoption.
- iii. Providing structured leadership training to facilitate digital process integration.

6.4.2.1.3 Policy and Regulatory Integration

Public sector BPR must navigate complex regulatory landscapes. The Strategic Foundation ensures compliance with South Africa's Public Service Act, the Protection of Personal Information Act (POPIA), and the National e-Government Strategy, thereby ensuring that digitised processes adhere to legal, ethical, and data governance standards (Fasna & Gunatilake, 2020); Zuhaira & Ahmad, 2021). This mitigates risks associated with digital exclusion and ensures equitable access to services across urban and rural communities.

Agile governance structures, as proposed by Krogh and Triantafillou (2024), are crucial for integrating digital initiatives across departments while ensuring compliance. For instance, Sri Lanka's e-Pensions project demonstrated that policy alignment and stakeholder co-design are essential to avoid fragmented Implementation (Fasna & Gunatilake, 2020). By aligning with frameworks such as the National e-Government Strategy, the KZN DSD ensures that digitisation efforts are inclusive and sustainable, addressing intersectional disparities in service access (Michael *et al.*, 2023).

For KZN DSD, this study recommends:

- i. Aligning BPR initiatives with digital governance policies to ensure standardisation.
- ii. Embedding cybersecurity frameworks to comply with POPIA and other data regulations.
- iii. Ensuring transparency and accountability mechanisms in digital Implementation.

6.4.2.1.4 Summary

By strengthening its strategic foundation, KZN DSD can ensure long-term sustainability, leadership alignment, and policy compliance in its digital BPR efforts. A well-structured framework will enable efficient service delivery, operational excellence, and citizen-centric transformation.

6.4.2.2 Step 2: Stakeholder engagement and governance

Effective stakeholder engagement and governance are critical to ensuring the KwaZulu-Natal Department of Social Development successfully implements its Digital Business Process Reengineering framework. A well-structured approach must integrate stakeholder mapping, continuous engagement, and governance structures to ensure collective ownership and accountability.

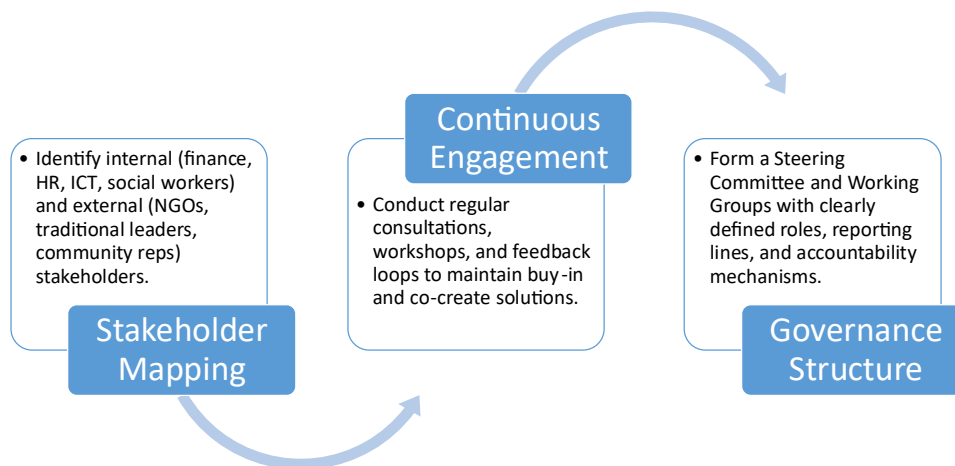


Figure 6:4 Stakeholder Engagement & Governance

Stakeholder Engagement and governance are crucial pillars in successfully implementing Digital BPR for KZN DSD. Bryson, Crosby, and Bloomberg (2021) concur, emphasising that co-production and stakeholder inclusion enhance legitimacy and service quality in public sector digital transformation efforts.

6.4.2.2.1 Mapping Stakeholders

Public sector BPR faces bureaucratic complexities and stakeholder resistance, demanding adaptive leadership (Fasna & Gunatilake, 2020); Ngulube, 2020). KZN DSD must foster strong stakeholder engagement and robust governance structures to drive a sustainable, effective digital transformation. The first step is mapping stakeholders from finance, HR, and ICT teams to frontline social workers, NGOs, traditional leaders, and community representatives. Each group plays a vital role in shaping the digital transformation journey.

For KZN DSD, this means:

- i. Identifying internal stakeholders (Finance, HR, ICT, frontline social workers).
- ii. Recognising external stakeholders (NGOs, traditional leaders, community representatives).
- iii. Ensuring cross-sector collaboration to drive shared digital transformation efforts.

6.4.2.2.2 Continuous Engagement

Engaging stakeholders through structured feedback ensures buy-in and co-creation of digital BPR solutions. Fasna & Gunatilake, (2020) stress the importance of structured

communication and feedback loops in driving change. Davenport (1993) advocates for regular consultations and workshops to refine digital workflows based on user needs (Mertens *et al.*, 2024). The department can co-create solutions that align with service delivery priorities and operational realities through regular consultations, workshops, and feedback loops.

For KZN DSD, this means:

- i. Hosting regular stakeholder consultations to gather insights and refine strategies.
- ii. Conducting digital literacy training for employees and community stakeholders.
- iii. Embedding feedback loops through online surveys and public forums to assess adoption.

6.4.2.2.3 Governance Structure

Classical BPR models focus on radical process reengineering but often neglect organisational culture and human adaptation (Mertens *et al.*, 2024). However, cross-department governance is vital for sustaining digital transformation (Krogh & Triantafillou, 2024; Zuhaira & Ahmad, 2021). A Governance Structure will be established to ensure accountability, consisting of a Steering Committee and Working Groups. These entities will have clearly defined roles, reporting mechanisms, and accountability frameworks in place. By embedding structured governance mechanisms, the department will strengthen transparency, responsiveness, and efficiency in implementing digital BPR.

Establishing governance structures ensures transparency, accountability, and structured decision-making in digital BPR. Krogh and Triantafillou (2024) argue that agile governance structures enable organisations to adapt policies in real time based on real-time data. Bhaskar *et al.*, (2020) recommend using performance measurement tools to track the effectiveness of governance.

For KZN DSD, this means:

- i. Creating a Steering Committee to oversee implementation and policy alignment.
- ii. Forming Working Groups to ensure cross-functional collaboration.
- iii. Defining reporting mechanisms for accountability in service delivery improvements

This phase lays the foundation for an inclusive, collaborative, and well-governed transformation that proactively addresses challenges and embraces innovation through stakeholder-driven solutions.

6.4.2.2.4 Conclusion

The literature strongly supports a structured, stakeholder-driven, and technology-integrated approach to BPR. By strengthening stakeholder engagement and governance, KZN DSD can ensure effective Implementation, collective ownership, and sustained adoption of its Digital BPR framework. A well-structured governance model will enhance decision-making, service delivery, and public trust.

6.4.2.3 Step 3: Process Reengineering

Process reengineering is a fundamental element of Digital Business Process Reengineering, ensuring efficiency, automation, and integration in the KwaZulu-Natal Department of Social Development (Mertens *et al.*, 2024). A structured approach must incorporate process mapping, gap analysis, optimised workflow design, and standardisation to enhance operational performance and deliver citizen-centric services. The four steps shown, Process Mapping and Analysis, Gap Analysis, Design of Optimised Processes, and Standardisation and Integration, are aligned with best practices in BPR, systems thinking, and organisational design.

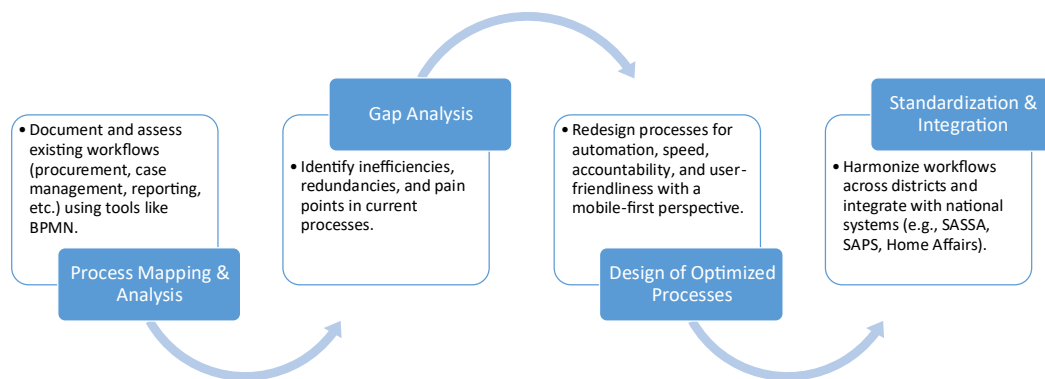


Figure 6:5 Process Reengineering

To enhance efficiency and effectiveness across organisational operations, process reengineering follows a structured four-step cycle:

6.4.2.3.1 Process Mapping and Analysis

Process mapping helps identify non-value-adding activities (Alves, 2022) and supports the principles of Total Quality Management (TQM). The journey begins by thoroughly

documenting and evaluating existing workflows, such as procurement, case management, and reporting, using tools like BPMN (Business Process Model and Notation). This helps build a clear picture of how processes currently function. Gauteng's e-government Strategy has used similar mapping exercises to improve turnaround times for licensing and permit processing.

Mapping existing workflows also provides insight into operational bottlenecks, redundant processes, and inefficiencies. Hammer & Champy (1993) emphasise that successful BPR requires identifying existing business workflows before radical redesign (Mertens *et al.*, 2024). Bhaskar and Singh (2014) emphasise the importance of structured methodologies, such as BPMN (Business Process Model and Notation), in visualising processes.

For KZN DSD, this means:

- i. Documenting and assessing workflows across procurement, case management, and reporting.
- ii. Using BPMN tools to create explicit visual representations of process flows.
- iii. Aligning digital transformation goals with operational needs.

6.4.2.3.2 Gap Analysis

“Gap analysis is essential to identify where current capabilities fall short of the desired future state.”-Kotler, Keller, & Chernev (2022). This step aligns with the diagnostic phase in Change Management (Sittrop & Crosthwaite, 2021), where inefficiencies and redundancies are surfaced.

SWOT and root cause analyses can also support this phase by providing insight into performance bottlenecks (Tyagi *et al.*, 2024). Once the current state is understood, the next step is identifying inefficiencies, redundancies, and pain points within those workflows. This analysis highlights where performance is lacking and where improvements are most needed.

Tyagi *et al.*, (2024) advocate for data-driven process assessment to pinpoint areas for digital optimisation. The Western Cape's Municipal Service Dashboard Project (Western Cape Government, 2020) addressed real-time reporting challenges through data-driven process redesign, demonstrating Digital BPR Principles.

For KZN DSD, this means:

- i. Evaluating process delays in service delivery systems.

- ii. Assessing workflow complexity to determine reengineering priorities.
- iii. Addressing systemic inefficiencies through targeted interventions.

6.4.2.3.3 Design of Optimised Processes

"Reengineering focuses on rethinking and radical redesign of business processes in achieving dramatic improvements."-Hammer & Champy (1993).

Redesign efforts are most effective when they include automation, clear accountability, and user-centred design principles. This aligns with more recent research, which shows that systems designed with human needs and fairness in mind are more likely to gain trust and work effectively (Binns *et al.*, 2021). With insights from the gap analysis, processes are redesigned to enhance automation, improve speed, boost accountability, and prioritise user-friendliness, primarily through a mobile-first approach that acknowledges the increasing use of mobile technology in service delivery.

Soontorn and Boonsiri (2016) highlight that digital BPR enhances speed and cost efficiency, improving service quality. Gölzer and Fritzsche (2017) emphasise that innovative digital technologies enhance process optimisation and decision-making accuracy. Even in rural KZN, with mobile penetration high, designing mobile-first solutions is practical. For instance, mobile apps for clinic appointment reminders, social grant status updates, or education bursary tracking can reduce administrative overhead and enhance user access. The City of Johannesburg's 'JoziPay' digital platform (City of Johannesburg, 2022) exemplifies mobile-first innovation in public service delivery, aligning with Davenport's (1993) process innovation principles (Mertens *et al.*, 2024).

For KZN DSD, this means:

- i. Automating repetitive tasks in case processing and reporting.
- ii. Applying mobile-first solutions to enhance accessibility for users.
- iii. Redesigning service delivery models for real-time efficiency.

6.4.2.3.4 Standardisation and Integration

"Standardisation supports interoperability and reduces complexity in public service delivery."-OECD (2016). Optimised processes should be standardised and harmonised across all districts and departments. They are also integrated with national systems such as SASSA, SAPS, and Home Affairs, ensuring interoperability and cohesive service delivery across government structures. For instance, the Eastern Cape Department of Health integrates clinic

records with the National Identification System (NID) (Eastern Cape Health, 2021), demonstrating inter-agency digital transformation and operationalising three key theoretical principles.

Standardisation ensures process consistency across districts, while integration aligns workflows with national systems. Krogh and Triantafillou (2024) argue that agile governance frameworks are critical for sustaining digital BPR. Ngulube (2020) emphasises that standardised operations improve transparency and service efficiency. Harmonising processes across regions and integrating with national systems (e.g., SASSA, SAPS, Home Affairs) improves service delivery, reduces duplication, and strengthens governance (World Bank, 2017).

For KZN DSD, this means:

- i. Harmonising workflow standards across administrative units.
- ii. Integrating services with national platforms (SASSA, SAPS, Home Affairs).
- iii. Ensuring interoperability in data exchanges for comprehensive service provision

6.4.2.3.5 Step 4: Digital Infrastructure and Tools

A robust digital infrastructure is essential for successful Business Process Reengineering at the KwaZulu-Natal Department of Social Development. A structured digital foundation ensures seamless operations, interoperability, and data security while supporting long-term efficiency in service delivery.

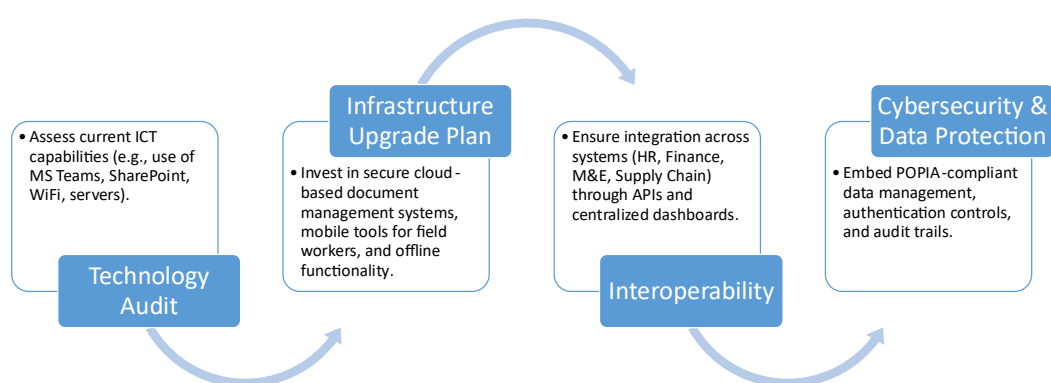


Figure 6:6 Digital Infrastructure & Tools

6.4.2.3.6 Conduct a Technology Audit

The implementation begins with a technology audit, which assesses current ICT capabilities, including cloud storage, collaboration tools, and network infrastructure. Assessing current

ICT capabilities enables KZN DSD to identify gaps in its digital infrastructure and determine necessary upgrades. This aligns with Zimmermann *et al.*, (2020), who emphasise the importance of Business Process Management (BPM) frameworks in ensuring strategic alignment and realistic investment planning. Gölzer and Fritzsche (2017) emphasise that digital literacy and infrastructure are key drivers of Industry 4.0 adoption.

For KZN DSD, this means:

- i. Evaluating existing systems, including MS Teams, SharePoint, and local network capacity.
- ii. Identifying areas for digital expansion, such as mobile connectivity for field workers.
- iii. Aligning ICT enhancements with BPR goals to support seamless workflow transitions.

6.4.2.3.7 Infrastructure Upgrade Plan

A structured upgrade plan is essential, incorporating secure cloud-based document management systems, mobile tools for field workers, and offline functionality. Gölzer and Fritzsche (2017) emphasise that successful Industry 4.0 adoption depends on simultaneous investment in both human capital and technology, ensuring that employees can effectively utilise new digital tools.

A well-designed upgrade plan focuses on secure, scalable, and service-oriented digital solutions. Ngulube (2020) highlights that cloud-based solutions improve efficiency and accessibility, reducing dependency on manual processes. Bhaskar *et al.*, (2020) advocate for data-driven digital platforms that enhance real-time operational decision-making.

For KZN DSD, this means:

- i. Investing in cloud-based document management systems to ensure accessibility and security.
- ii. Providing mobile tools for frontline social workers to enhance field service delivery.
- iii. Ensuring offline functionality for digital services, particularly in rural areas.

6.4.2.3.8 Enhancing Interoperability Across Departments

Interoperability is a key enabler of efficiency, allowing seamless integration across HR, Finance, Monitoring and evaluation, and Supply Chain systems. It ensures smooth data exchanges between these systems. Krogh and Triantafillou (2024) argue that agile

governance structures are essential for aligning digital workflows. Davenport (1993) advocates for integrated systems that improve decision-making and reduce duplication.

For KZN DSD, this means:

- i. Developing centralised dashboards to improve departmental coordination.
- ii. Standardising APIs for data sharing across internal and external platforms.
- iii. Eliminating inefficiencies caused by fragmented digital ecosystems.

6.4.2.3.9 Strengthening Cybersecurity and Data Protection

Ultimately, cybersecurity and data protection must be integrated into the digital infrastructure. Compliance with POPIA regulations, authentication controls, and audit trails ensures the integrity and security of data. Bhaskar *et al.*, (2020) recommend data-driven monitoring systems to assess internal efficiency and external citizen satisfaction, reinforcing transparency and accountability.

Embedding comprehensive cybersecurity policies ensures compliance with POPIA regulations while protecting sensitive data. Dahlander *et al.*, (2021) highlight that data governance frameworks enhance digital security and prevent breaches. Andriole (2017) argues that standardised IT governance models improve compliance and operational continuity.

For KZN DSD, this means:

- i. Implementing authentication controls to prevent unauthorised access.
- ii. Developing audit trails to monitor data integrity and transparency.
- iii. Ensuring compliance with digital protection regulations to safeguard citizen data.

6.4.2.3.10 Conclusion

KZN DSD can drive digital transformation, enhance service delivery, and optimise operational efficiency by implementing a structured process reengineering approach. A holistic framework integrating automation, stakeholder engagement, and governance alignment will sustain long-term improvements.

6.4.2.4 Step 5: Human Development and Capital

Human capital development is crucial for the successful implementation of Digital Business Process Reengineering within the KwaZulu-Natal Department of Social Development. A structured framework ensures that employees possess digital literacy, receive capacity-building support, and are empowered as change agents to drive transformation.

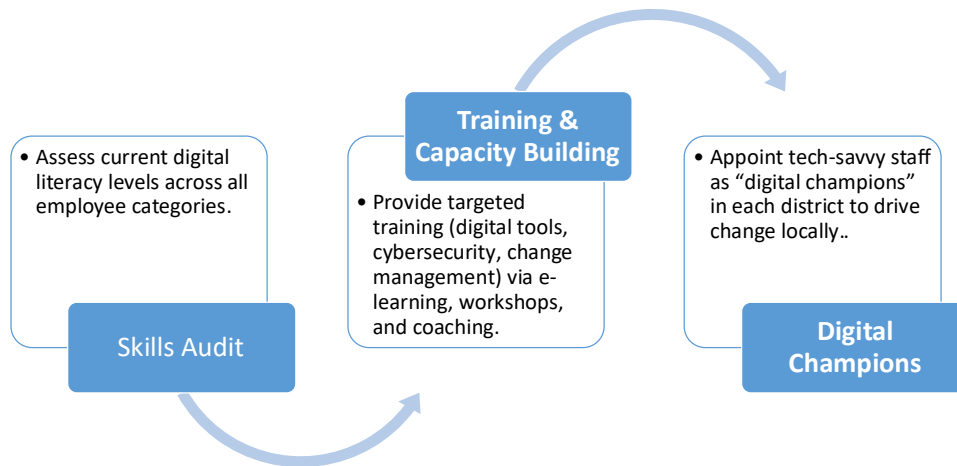


Figure 6:7 Human Capital Development

Developing human capital is fundamental to successful digital transformation. It ensures that employees have the necessary skills and adaptability to thrive in a technology-driven environment. The literature highlights key components required for effective workforce development.

6.4.2.4.1 Skills Audit and Digital Literacy Assessment

Before implementing digital transformation, organisations must assess existing workforce capabilities to identify gaps in digital literacy and technical proficiency. A skills audit helps organisations determine which employees require upskilling, ensuring that training efforts are targeted and effective rather than generic.

Gölzer and Fritzsche (2017) emphasise that the success of Industry 4.0 depends on digital literacy. Conducting skills audits helps identify gaps in employee capabilities, ensuring training efforts are targeted and effective. Michael, Pembu, and Abdulazeez (2023) argue that knowledge gaps in digital adoption hinder transformation efforts, reinforcing the need for structured training initiatives.

For KZN DSD, this means:

- i. Conducting a digital literacy assessment across all employee categories.

- ii. Evaluating IT readiness to ensure technological competency.
- iii. Aligning training plans with digital process transformation requirements.

6.4.2.4.2 Designing Training and Capacity-Building Programs

Michael, Pembu, and Abdulazeez (2023) argue that digital literacy gaps exacerbate the digital divide, underscoring the need for targeted training to achieve equitable transformation. Once gaps are identified, organisations must implement structured training to equip employees with digital skills. Ngulube (2020) highlights that human-centred approaches to training improve adoption rates and reduce resistance to digital transformation. Training should include e-learning platforms for flexible learning, workshops, hands-on coaching, and cybersecurity and data management training to ensure compliance with digital policies and regulations.

For KZN DSD, this means:

- i. Providing e-learning platforms for flexible and self-paced learning.
- ii. Organising workshops and coaching focused on digital tools, cybersecurity, and data management.
- iii. Embedding change management training to help employees navigate technological shifts.

6.4.2.4.3 Appointing Digital Champions and Change Agents

Organisations should identify and empower digital champions and tech-savvy employees who drive local transformation. Zimmermann *et al.*, (2020) advocate appointing digital champions to lead digital adoption efforts within teams. Bryson, Crosby, and Bloomberg (2021) emphasise that stakeholder inclusion enhances legitimacy and service quality, making internal champions essential for success. These digital champions help bridge the gap between leadership and employees, ensuring that transformation efforts are communicated effectively and implemented smoothly.

For KZN DSD, this means:

- i. Selecting influential employees in each district as digital change leaders.
- ii. Equipping champions with advanced training to assist their peers.
- iii. Creating a mentorship network for ongoing support and engagement

6.4.2.4.4 Continuous Learning and Change Management

Redesign works best with automation, clear roles and responsibilities, and a strong focus on user needs. Recent research indicates that systems designed to be fair and user-friendly are more trusted and effective (Binns *et al.*, 2021). By prioritising skills development, stakeholder engagement, and digital leadership, organisations create a workforce that is equipped to navigate evolving technological landscapes while ensuring long-term success in transformation. Organisations should provide refresher courses to update employees on new technologies and utilise feedback loops to refine training programs based on employee feedback and experiences.

Kotter (2007) emphasises that change management must be iterative, ensuring employees receive ongoing support. To ensure long-term success, organisations must track the effectiveness of human capital development initiatives using performance metrics. Bhaskar *et al.* (2020) suggest measuring efficiency, satisfaction, and adoption rates using KPIs.

6.4.2.4.5 Conclusion

The KZN DSD integrates skills audits, structured training, and digital champions to ensure that employees possess the necessary competencies for sustainable digital transformation. A human-centred approach fosters adaptability, enhances service efficiency, and supports long-term citizen-centric service delivery.

6.4.2.5 Step 6: Change Management

Change management is essential for ensuring the successful adoption and sustainability of Digital Business Process Reengineering in the KwaZulu-Natal Department of Social Development. It is not just structural; it is emotional and cultural. Mouazen *et al.*, (2023) note that resistance to change is often psychological, not technical. A structured framework facilitates transformation by integrating communication, cultural readiness, and resistance mitigation.

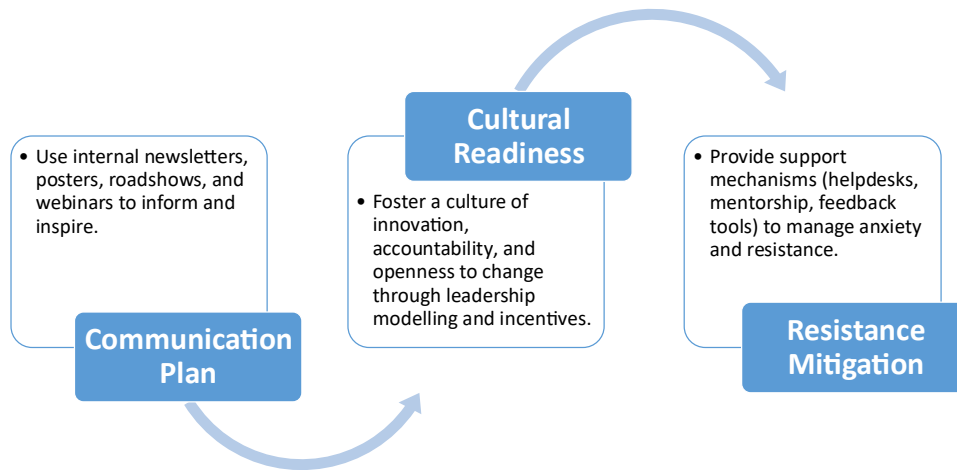


Figure 6:8 Change Management

6.4.2.5.1 Communication Plan for Stakeholder Buy-In

Effective communication ensures that employees, service users, and leadership understand the transformation process, fostering a shared understanding of its goals and objectives. Mouazen *et al.*, (2023) emphasise that structured communication reduces uncertainty and resistance.

For KZN DSD, this means:

- i. Community engagement forums to inform citizens about digital service enhancements.
- ii. Internal newsletters and workshops to keep employees updated on process changes.
- iii. Multi-channel communication (radio, social media, in-person meetings) to reach diverse stakeholders.

6.4.2.5.2 Cultural Readiness and Capacity Building

A culture of innovation and adaptability is essential for successful digital BPR. Ngulube (2020) highlights that human-centred approaches improve adoption rates and reduce resistance.

For KZN DSD, this means:

- i. Digital literacy training for frontline social workers to ensure they can navigate new systems.
- ii. Leadership coaching to equip managers with digital transformation strategies.

- iii. Incentives for early adopters to encourage proactive engagement.

6.4.2.5.3 Resistance Mitigation and Change Leadership

Resistance to change is natural, especially in government institutions with legacy systems. Kotter (2007) emphasises the importance of forming guiding coalitions and establishing structured support mechanisms to mitigate resistance (Mouazen *et al.*, 2023). Bhaskar *et al.*, (2020) recommend using data-driven monitoring systems to assess employee engagement and training effectiveness.

For KZN DSD, this means:

- i. Pilot programs to test digital solutions before full-scale Implementation.
- ii. Feedback loops to refine strategies based on employee and citizen input.
- iii. Dedicated change agents within each department to support transition efforts.

6.4.2.5.4 Performance Measurement and Agile Governance

To ensure long-term success, KZN DSD must track the effectiveness of digital BPR initiatives using performance metrics. Bhaskar *et al.*, (2020) suggest measuring efficiency, satisfaction, and adoption rates using KPIs.

Conclusion

KZN DSD can implement a phased, stakeholder-driven approach to build a resilient digital infrastructure that supports citizen-centric service delivery while addressing systemic inefficiencies. A context-sensitive framework ensures that digital BPR is inclusive, sustainable, and aligned with the department's mission.

6.4.2.6 Step 7: Performance Measurement

What gets measured gets managed. Effective performance measurement and monitoring are essential for ensuring the KwaZulu-Natal Department of Social Development successfully implements its Digital Business Process Reengineering framework. This requires a cyclical process that integrates Key Performance Indicators feedback mechanisms, and adaptive management to drive continuous improvement.

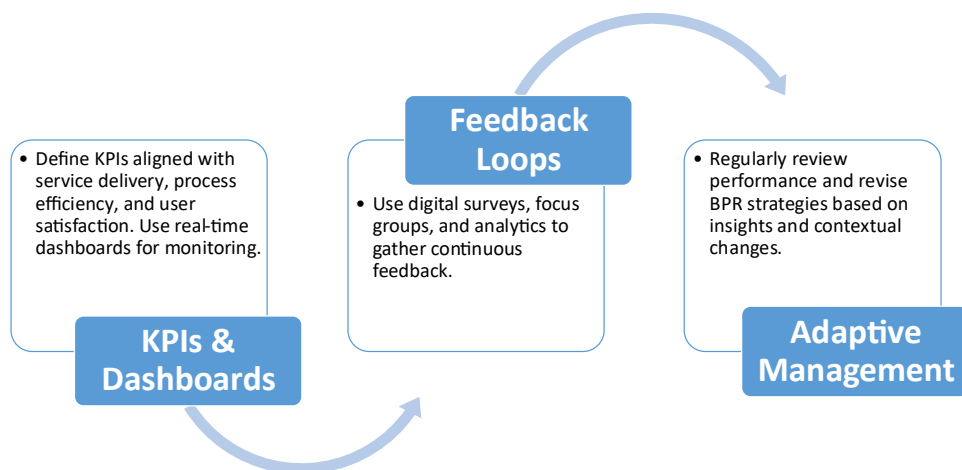


Figure 6:9 Performance Measurement and Monitoring

Effective performance measurement and monitoring ensure that the KwaZulu-Natal Department of Social Development successfully implements its Digital Business Process Reengineering framework. The Framework must integrate Key Performance Indicators, feedback mechanisms, and adaptive management to optimise service delivery and operational efficiency.

6.4.2.7 Defining KPIs and Dashboards for Continuous Monitoring

Zondo (2021) and Wechsler & Schweitzer (2019) argue that successful BPR requires measurable performance metrics to guide Implementation. The performance metrics must align with KZN DSD's service delivery objectives, efficiency goals, and user satisfaction parameters. Hammer & Champy (1993) emphasise that clear, quantifiable KPIs should drive radical process redesign (Mertens *et al.*, 2024). For KZN DSD, this means:

- i. Establishing KPIs focused on service delivery speed, accuracy, and accessibility.
- ii. Implementing real-time dashboards for tracking digital workflow efficiency.
- iii. Leveraging data analytics to assess process bottlenecks and optimise workflows.

6.4.2.8 Implementing Feedback Loops for Stakeholder Engagement

Performance monitoring must include dynamic feedback mechanisms to capture insights from employees, service users, and leadership. Bryson, Crosby, and Bloomberg (2021) highlight the importance of stakeholder engagement in achieving legitimacy and buy-in for digital BPR. Davenport (1993) advocates continuous user feedback to refine digital processes and address inefficiencies. For KZN DSD, this means:

- i. Utilising digital surveys to collect real-time stakeholder feedback
- ii. Conducting focus groups to assess employee adoption of new digital tools and
- iii. Embedding analytics-driven reports to track service delivery improvements.

6.4.2.9 Adaptive Management for Continuous Improvement

Performance measurement must be dynamic, allowing KZN DSD to revise BPR strategies in response to evolving needs and contextual changes. Wechsler & Schweitzer (2019) suggest that data-driven monitoring is crucial for sustainable transformation.

For KZN DSD, this means:

- i. Reviewing performance metrics quarterly to assess progress
- ii. Refining digital BPR strategies based on emerging insights and challenges and
- iii. Implementing governance structures that ensure accountability and continuous optimisation.

6.4.2.10 Conclusion

A robust performance measurement and monitoring framework ensures that KZN DSD's digital BPR initiative remains effective, responsive, and aligned with service delivery goals. The department can continuously enhance operational efficiency and improve citizen-centric service by integrating KPIs, feedback loops, and adaptive management.

6.4.3 Step 8: Sustainability and Scaling

Effective performance measurement and monitoring are essential for ensuring the KwaZulu-Natal Department of Social Development successfully implements its Digital Business Process Reengineering framework. This requires a cyclical process integrating Key Performance Indicators, feedback mechanisms, and adaptive management for continuous improvement.

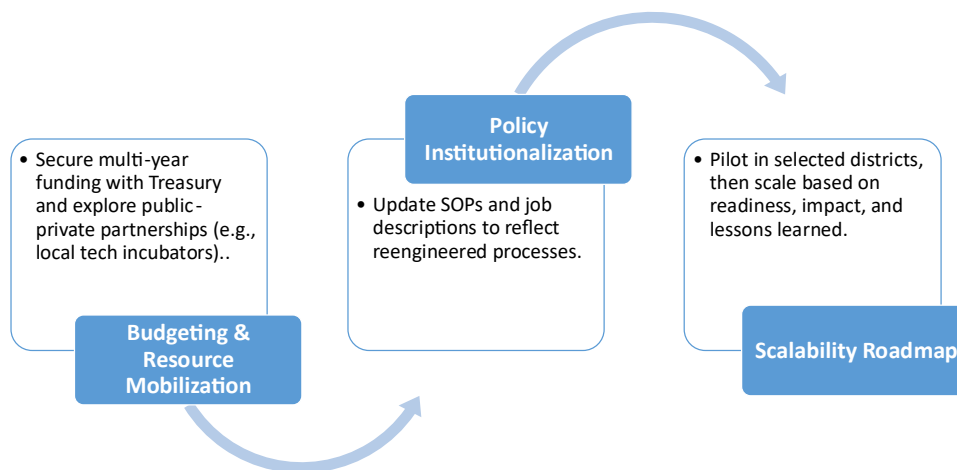


Figure 6:10 Sustainability & Scaling

6.4.3.1 Budgeting and Resource Mobilisation

To sustain digital BPR, the department must secure multi-year funding and explore public-private partnerships. Hammer & Champy (1993) highlight that financial sustainability is crucial in maintaining process reengineering efforts (Mertens *et al.*, 2024). Wechsler & Schweitzer (2019) argue that BPR success depends on long-term investment strategies to ensure continuity. For KZN DSD, this means:

- i. Engaging Treasury to secure funding for digital infrastructure improvements
- ii. Collaborating with local tech incubators for cost-effective innovation adoption and
- iii. Leveraging donor funding and grants to support the scaling of digital projects.

6.4.3.2 Policy Institutionalisation and Regulatory Alignment

Institutionalising BPR within standard operating procedures (SOPs) and job descriptions ensures sustainability. Nkomo *et al.*, (2023) and Zondi (2021) emphasise that policy integration is key to embedding process changes within institutional structures. Ngulube (2020) highlights the importance of aligning digital BPR with governance frameworks to sustain improvements in the public sector.

For KZN DSD, this means:

- i. Updating SOPs to reflect reengineered digital workflows
- ii. Training staff to align roles with new process efficiencies and
- iii. Ensuring compliance with digital governance policies and regulatory frameworks.

6.4.3.3 Scalability Roadmap for Digital BPR Expansion

Scaling digital BPR must follow a phased approach, starting with pilot projects and expanding based on impact assessments. Mouazen *et al.*, (2023) emphasises that successful transformation necessitates iterative scaling based on an organisation's readiness. Bryson, Crosby, and Bloomberg (2021) advocate incremental rollouts to refine processes before full implementation. For KZN DSD, this means:

- i. Piloting in selected districts to evaluate effectiveness
- ii. Scaling based on lessons learned from early adopters and
- iii. Adapting implementation strategies using real-time performance data.

6.4.3.4 Conclusion

KZN DSD ensures the long-term sustainability and scalability of its Digital BPR framework by integrating budgeting strategies, policy institutionalisation, and phased scalability. These measures will help build resilient digital infrastructure, enhance operational performance, and sustain citizen-centric service delivery.

6.4.4 Step 9: Policy and Governance Support

Successful Business Process Reengineering in the KwaZulu-Natal Department of Social Development requires a firm policy and governance framework to ensure sustainability, compliance, and operational efficiency. Many public entities struggle due to rigid procurement rules, fragmented IT policies, and unclear data governance, all of which can hinder their digital transformation efforts.

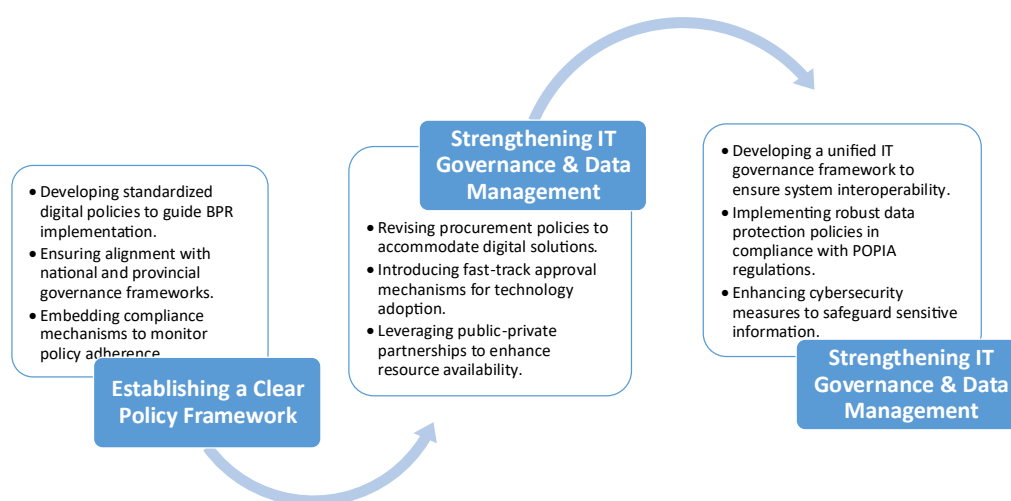


Figure 6:11 Policy and Government Support

This Framework proposes policy audits and reviews to harmonise legislation with digital needs. According to Zuhaira and Ahmad (2021), governments must strike a balance between compliance and innovation. This pillar supports coordinated planning across departments, creating a “*digital readiness policy ecosystem*” to sustain the transformation.

6.4.4.1 Establishing a Clear Policy Framework

A well-defined policy framework ensures digital BPR aligns with government regulations, service delivery mandates, and operational goals. Davenport (1993) emphasises that policy integration is key to embedding process changes within institutional structures (Mertens *et al.*, 2024). Ngulube (2020) highlights the importance of aligning digital BPR with governance frameworks to sustain improvements in the public sector.

For KZN DSD, this means:

- i. Developing standardised digital policies to guide BPR implementation.
- ii. Ensuring alignment with national and provincial governance frameworks.
- iii. Embedding compliance mechanisms to monitor policy adherence.

6.4.4.2 Addressing Procurement Challenges

Rigid procurement rules often hinder digital transformation efforts, making it challenging to adopt new technologies and agile solutions. Nkomo *et al.*, (2023) and Svensson *et al.*, (2024) argue that flexible procurement policies are essential for successful BPR. The Western Cape Government (2025) suggests that public entities should streamline their procurement processes to enhance efficiency. For KZN DSD, this means:

- i. Revising procurement policies to accommodate digital solutions.
- ii. Introducing fast-track approval mechanisms for technology adoption.
- iii. Leveraging public-private partnerships to enhance resource availability.

6.4.4.3 Strengthening IT Governance and Data Management

Fragmented IT policies and unclear data governance can lead to security risks, inefficiencies, and compliance issues. Mahanti (2021) highlights that IT governance must ensure standardisation, interoperability, and cybersecurity. Wallin & Trantopoulos *et al.*, (2017) emphasise that data governance frameworks improve decision-making and service delivery.

For KZN DSD, this means:

- i. Developing a unified IT governance framework to ensure system interoperability.
- ii. Implementing robust data protection policies in compliance with POPIA regulations.
- iii. Enhancing cybersecurity measures to safeguard sensitive information.

6.4.4.4 Implementing Agile Governance Structures

Public entities require agile governance models to adapt to evolving digital landscapes and ensure continuous improvement. Krogh and Triantafillou (2024) argue that agile governance structures enable organisations to adapt policies in real time based on real-time data. Bryson, Crosby, and Bloomberg (2021) highlight that stakeholder-driven governance enhances legitimacy and effectiveness.

For KZN DSD, this means:

- i. Establishing cross-functional governance committees to oversee BPR implementation
- ii. Embedding real-time monitoring systems to track policy effectiveness and
- iii. Ensuring stakeholder participation in governance decision-making.

6.4.4.5 Conclusion

Strengthening policy and governance support can help KZN DSD overcome procurement barriers, streamline IT governance, and ensure sustainable digital transformation. A well-structured governance framework will enable efficient service delivery, compliance, and long-term operational success.

6.4.5 Step 10: Risk Management.

6.4.5.1 Enhanced Risk Management Framework for Digital BPR Implementation in KZN DSD

Risk management forms a cornerstone of the Digital Business Process Reengineering implementation framework for the KwaZulu-Natal Department of Social Development. As the department advances its digital transformation agenda, it is essential to proactively identify, assess, and manage systemic, technological, and operational risks to safeguard service delivery, promote public trust, and ensure long-term sustainability (OECD, 2018; Ngulube, 2020).

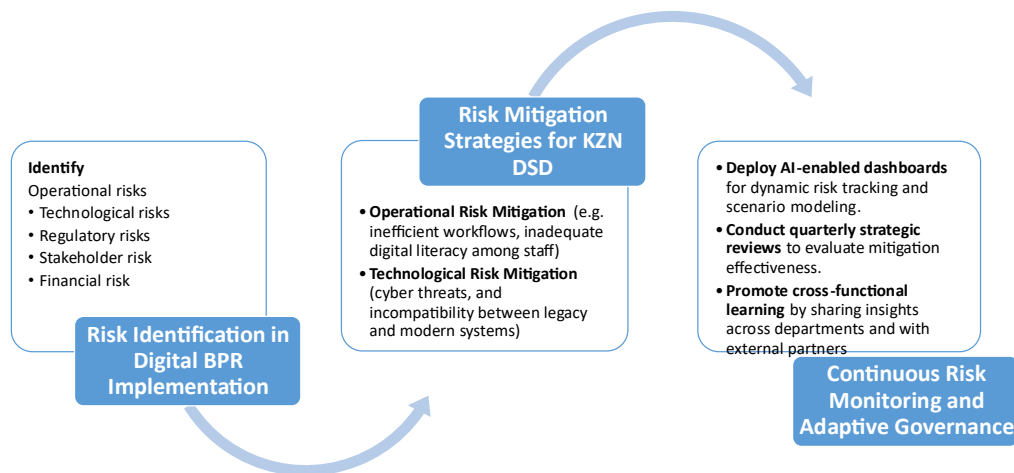


Figure 6:12 Risk Management

6.4.5.2 Risk Identification in Digital BPR Implementation

Digital transformation initiatives introduce complex and multidimensional risks, including strategic misalignments, operational disruptions, technological failures, regulatory breaches, and stakeholder resistance. According to Hammer and Champy (1993), successful BPR initiatives must be underpinned by a robust culture of risk awareness.

6.4.5.3 Key Risk Categories:

Implementing digital BPR in KZN DSD faces six key risk categories that require mitigation. Strategic risks emerge from potential misalignment with the KwaZulu-Natal Digital Transformation Strategy (2020-2025) and vulnerability to shifting political or budgetary priorities (Bryson *et al.*, 2021).

- i. Operational risks include persistent inefficient workflows, inadequate digital literacy among staff (Santos *et al.*, 2020), and institutional inertia that resists process changes (Krogh & Triantafillou, 2024).
- ii. Technological risks encompass system outages, cyber threats, and incompatibility between legacy and modern systems (Michael *et al.*, 2023), particularly problematic in rural offices with infrastructure challenges (Dewi *et al.*, 2021).
- iii. Regulatory risks primarily involve non-compliance with data protection laws like the Protection of Personal Information Act (POPIA, 2013) and other digital governance requirements (Zuhaira & Ahmad, 2021).

- iv. Stakeholder risks manifest through staff resistance to change (Vakola, 2020) and low adoption rates among service users (Tsai *et al.*, 2019).
- v. Finally, financial risks stem from constrained budgets and uncertain long-term funding for system maintenance (OECD, 2021), exacerbated by the department's reliance on manual processes (Ngulube, 2020).

These interdependent risks highlight the need for a holistic implementation framework that addresses technological, human, and institutional factors simultaneously.

6.4.5.4 Risk Identification Approaches:

- i. Conduct baseline risk assessments before implementation phases (Mento *et al.*, 2002)
- ii. Apply predictive analytics and diagnostic modelling to forecast potential disruptions and
- iii. Establish real-time digital dashboards to track and flag emerging risks (McKinsey, 2023).

6.4.5.5 Risk Mitigation Strategies for KZN DSD

Risk strategies should align with KZN DSD's unique challenges and goals to reduce risk and strengthen the organisation. These strategies should be based on the department's real-world context and follow proven practices in managing change and digital systems (Zuhaira & Ahmad, 2021).

6.4.5.5.1 Strategic Mitigation Measures:

- i. Align BPR implementation with provincial and national digital strategies to ensure policy coherence (KZN Provincial Government, 2020).
- ii. Secure executive sponsorship and interdepartmental coordination to reinforce strategic buy-in.

6.4.5.5.2 Operational Risk Mitigation:

- i. Launch digital capacity-building programs to upskill staff and reduce human error.
- ii. Standardised and documented redesigned processes to eliminate ambiguity and duplication (Singhania & Saini, 2022).

6.4.5.5.2.1 Technological Risk Mitigation:

- i. Enforce end-to-end cybersecurity protocols, including firewalls, authentication controls, and encrypted data storage (Vázquez, 2022).
- ii. Establish hybrid backup systems (cloud and local) for business continuity.
- iii. Prioritise interoperability and adopt open architecture standards to enable integration with national systems.

6.4.5.5.2.2 Regulatory and Governance Risk Controls:

- i. Integrate compliance checkpoints within digital process flows.
- ii. Conduct quarterly compliance audits against POPIA, the Electronic Communications and Transactions Act, and relevant provincial ICT policies.
- iii. Establish dedicated governance structures with clear roles, responsibilities, and escalation pathways.

6.4.5.5.2.3 Mitigating Stakeholder Resistance:

- i. Deploy change agents and peer advocates to support staff during transitions (Endrejat *et al.*, 2020).
- ii. Foster two-way communication through digital forums, feedback sessions, and leadership briefings.
- iii. Pilot programs should be used to test and demonstrate the BPR value before scaling up (Kotter, 2007).

6.4.5.5.2.4 Financial Risk Mitigation:

- i. Develop phased funding strategies aligned with the Medium-Term Expenditure Framework (MTEF).
- ii. Pursue cost-sharing partnerships with technology vendors, donor agencies, and provincial innovation hubs (PWC, 2021).

6.4.5.6 Continuous Risk Monitoring and Adaptive Governance

In a volatile and dynamic policy environment, risk mitigation must extend beyond static checklists. The KZN DSD requires a flexible and responsive governance model that fosters continuous learning and real-time adaptation to emerging challenges. This aligns with contemporary perspectives on adaptive governance, which emphasize iterative decision-

making, stakeholder engagement, and organizational learning as key to public sector resilience (Ansell, Sørensen, & Torfing, 2022).

6.4.5.7 Adaptive Governance Mechanisms:

- i. Deploy AI-enabled dashboards for dynamic risk tracking and scenario modelling.
- ii. Conduct quarterly strategic reviews to evaluate mitigation effectiveness.
- iii. Promote cross-functional learning by sharing insights across departments and with external partners (Khan and Mir, 2022).

6.4.5.8 Sustainability Measures:

- i. Develop and integrate scalability and resilience plans to proactively address future demand and evolving infrastructure requirements, ensuring long-term system robustness (Benitez *et al.*, 2021).
- ii. Institutionalise multi-agency cybersecurity coalitions to enhance digital threat detection, response capabilities, and cross-sector collaboration (Alsmadi & Zarour, 2023).
- iii. Embed ethical safeguards and accountability mechanisms within system design to protect citizen rights, ensure data privacy, and maintain data integrity (Martin *et al.*, 2021; Wirtz *et al.*, 2022)

6.4.5.9 Summary

A well-structured risk management framework is integral to the success of KZN DSD's digital BPR implementation. By embedding strategic alignment, technological resilience, regulatory compliance, and adaptive governance, the department is better positioned to deliver efficient, secure, and citizen-centric services. This approach mitigates threats and enhances institutional agility, stakeholder trust, and long-term sustainability.

6.4.6 A Logical Framework for the KZN DSD Framework

Participants suggested that data from digital systems can improve both managerial oversight and service delivery, but only if analysed and used proactively. The implication for KZN DSD is the development of outcome-based performance indicators for all BPR initiatives and linking digital system outputs with service delivery targets. Below is a Logical Framework (Log Frame) for the ten activities in the Digital Business Process Reengineering Framework for the KwaZulu-Natal Department of Social Development. It provides a structured approach to track objectives, outcomes, and assumptions for each key activity in the BPR framework.

Table 6.2: Key activity in the BPR framework

Activity	Objectives	Indicators	Means of Verification	Assumptions
Step 1: Strategic Foundation	Ensure vision alignment, leadership commitment, and policy compliance.	Clear strategic goals are outlined, and leadership involvement was secured.	Strategic plan documents and leadership engagement reports.	Leadership is committed to digital transformation.
Step 2: Policy & Governance Support	Develop an enabling policy environment to support digital BPR.	Updated SOPs and governance frameworks.	Policy documents and compliance reports.	Policies are effectively enforced and supported.
Step 3: Stakeholder Engagement & Participation	Foster collective ownership and collaboration in BPR implementation.	Number of stakeholder consultations and engagement feedback.	Attendance records and stakeholder reports.	Stakeholders remain actively engaged and supportive.
Step 4: Process Reengineering	Optimize workflows to eliminate inefficiencies and enhance automation.	Reengineered processes, reducing process delays.	Process mapping reports and efficiency assessments.	Departments adopt redesigned processes effectively.
Step 5: Digital Infrastructure & Tools	Build scalable, interoperable, and secure digital systems.	Cloud-based systems implemented, ICT upgrade reports.	IT audit reports and cybersecurity assessments.	Budget and resources are allocated for infrastructure.
Step 6: Human Capital Development	Equip employees with digital literacy and capacity-building programs.	Number of training sessions completed skill assessment improvements.	Training records, workforce competency evaluations.	Employees adapt to digital transformation through training.

Activity	Objectives	Indicators	Means of Verification	Assumptions
Step 7: Change Management	Ensure smooth adoption of digital workflows and minimize resistance.	Communication strategy execution, resistance mitigation actions.	Internal communication logs and feedback mechanisms.	Employees actively participate in change initiatives.
Step 8: Performance Measurement & Monitoring	Establish KPIs and feedback mechanisms for continuous improvement.	KPI tracking, structured review cycles.	Monitoring dashboards and performance reports.	Data accuracy and timely reporting are maintained.
Step 9: Sustainability & Scaling	Ensure long-term success through budgeting, policy institutionalization, and expansion planning.	Secured multi-year funding, successful pilot evaluations, and expansion efforts.	Treasury allocations, scalability roadmaps.	Financial and policy support continues for scaling efforts

The Logical Framework (Log Frame) is a structured tool used to plan, monitor, and evaluate projects effectively, particularly in digital BPR for KZN DSD. Its importance lies in the following key aspects:

6.4.6.1 Provides Clear Objectives and Strategic Direction

A Log Frame defines objectives, expected outcomes, and performance indicators, ensuring alignment with strategic goals. Hammer & Champy (1993) emphasise that clear goals improve process efficiency (Mertens *et al.*, 2024). The Log Frame will ensure KZN DSD has a focused transformation roadmap rather than fragmented efforts in implementing the digital BPR framework.

6.4.6.2 Enhances Accountability and Transparency

The Log Frame establishes measurable indicators to ensure stakeholders remain accountable for BPR implementation. Bryson, Crosby, and Bloomberg (2021) advocate for transparency in public sector projects. The Log Frame will support KZN DSD in tracking performance, funding usage, and stakeholder engagement.

6.4.6.3 Facilitates Performance Monitoring and Evaluation

Regular monitoring through Key Performance Indicators (KPIs) and feedback mechanisms ensures adaptive improvements. Bhaskar *et al.*, (2020) recommend data-driven monitoring systems for sustainability. This model will allow KZN DSD to assess progress, refine strategies, and ensure continuous optimisation of the BPR Framework.

6.4.6.4 Supports Risk Management and Decision-Making

By identifying risks and assumptions, the Log Frame helps decision-makers anticipate challenges and take corrective measures in the proposed Framework. Krogh and Triantafillou (2024) argue for agile governance to mitigate uncertainties. The LM will help KZN DSD proactively manage risks, preventing disruptions during the implementation of the digital BPR Framework.

6.4.6.5 Ensures Sustainable and scalable BPR Implementation

A Log Frame guides expansion strategies by providing structured evaluation criteria for scaling digital BPR (DPME, 2014). Bryson *et al.*, (2021) advocate for incremental adoption based on pilot success factors. The LM will support long-term sustainability and replication of digital BPR across various service areas.

6.4.6.6 Conclusion

The Log Frame is a strategic monitoring and governance tool that ensures KZN DSD's Digital BPR initiatives remain effective, accountable, and scalable. Its integration of structured evaluation, adaptive management, and stakeholder engagement drives long-term optimisation of service delivery.

6.5 Bridging Theory and Practice: An Integrated Framework for Digital BPR in the Public Sector

Effective implementation of digital Business Process Reengineering in the public sector, particularly within the KwaZulu-Natal Department of Social Development, requires more than procedural redesign or technological enhancement. It calls for a grounded integration of theory and practice to ensure that transformation is strategic, evidence-based, and citizen-focused. This study brings together multiple theoretical perspectives: Davenport's Process Innovation theory, CMMI process maturity modelling, benchmarking methods, and the Human-Technology-Organisation framework to inform the development of a context-specific implementation model.

To operationalise these theories, the study employs the Logical Framework (LogFrame) approach, widely used in public sector project planning and evaluation. The LogFrame aligns theoretical domains with practical components, including outcome indicators, activity tracking, stakeholder assumptions, and performance targets. This alignment is further enriched by integrating the TIPS™ framework Technology, Innovation, People, and Systemic Thinking, which serves as a systemic lens for bridging theoretical constructs with operational realities.

The Technology domain of TIPS supports the use of real-time dashboards, automated case management, and risk diagnostics, directly aligning with the CMMI model and HTO framework, which emphasise data-driven maturity and risk mitigation.

Innovation is reflected in the study's embrace of continuous process improvement and benchmarking strategies. These allow for adaptive implementation and comparative validation, consistent with both Davenport's theory and Camp's benchmarking model.

The People pillar of TIPS reinforces the HTO framework's focus on user experience, change management, and capacity building. For example, the digital tools were pilot-tested with frontline workers before scale-up to ensure practical usability and buy-in.

Finally, Systemic Thinking is embedded throughout the LogFrame, guiding strategic alignment between departmental goals and public expectations, as well as multi-stakeholder accountability frameworks inspired by New Public Governance theory.

Together, the theoretical and TIPS-based alignment fosters a holistic and sustainable approach to digital BPR, one that is not only technically sound but also socially attuned and operationally grounded. It bridges the gap between academic insight and administrative practice, enabling the KZN DSD to deliver responsive, efficient, and citizen-centric digital services.

Table 6.3: Digital BPR Implementation Framework Alignment to Theoretical Foundations

LogFrame Component	Theoretical Alignment	Key Theoretical Support	Operationalization in KZN DSD
1. Outcome-Based Indicators	Davenport's Process Innovation (1993)	Emphasises linking technology outputs to strategic outcomes	Digital system data (e.g., case management stats) tied to service delivery targets (e.g., reduced processing times)

LogFrame Component	Theoretical Alignment	Key Theoretical Support	Operationalization in KZN DSD
2. Proactive Data Analysis	CMMI Level 4 (Quantitatively Managed) (Paulk et al., 1993)	Requires data-driven decision-making at higher maturity levels	Real-time dashboards for managers to monitor KPIs (e.g., beneficiary wait times)
3. Activity-Outcome Links	Benchmarking (Camp, 1989)	Uses comparative metrics to validate outcomes	Comparing KZN DSD performance against other provinces' social services data
4. Assumptions Validation	HTO Framework (Carayon, 2006)	Tests human-tech-organizational risks in Implementation	Pilot testing digital tools with frontline workers before scale-up
5. Performance Targets	New Public Governance (Osborne, 2006)	Aligns outputs with multi-stakeholder expectations	Co-designed KPIs with communities/NGOs (e.g., % complaints resolved in 48hrs)

6.5.1 Davenport's Process Innovation + LogFrame Outcome Mapping

According to Davenport (1993), practical process innovation hinges on the clarity of outcomes, redesign must aim for specific, measurable performance improvements. The LogFrame enforces this principle by requiring a direct link between objectives, outputs, and indicators. For instance, a goal such as "streamline grant application processing" becomes actionable through measurable indicators: reduce application processing time from five working days to two hours. This specificity translates strategic intent into operational benchmarks, enabling accountability and tracking throughout the project lifecycle.

6.5.2 Capability Maturity Model Integration (CMMI) + Proactive Monitoring

The CMMI framework, particularly Maturity Level 4, emphasises quantitative process control and predictive monitoring (Paulk *et al.*, 1993). At this level, organisations must use data to manage processes statistically, allowing for early identification of variances. KZN DSD's Implementation of real-time digital dashboards exemplifies this approach. These tools provide visual, up-to-date metrics, such as application backlog volumes, average processing time per district office, and system downtime events, enabling proactive intervention. When trends signal deviation from targets, managers can initiate corrective action before inefficiencies become systemic.

6.5.3 Human-Technology-Organization

Carayon (2006) argues that technology adoption in complex organisations depends heavily on human and organisational factors. Even the most advanced digital systems can fail without adequate user readiness, training, and support. The LogFrame addresses this through its “Assumptions” column, which surfaces the enablers and risks outside the direct control of implementers. For example, successful automation of social grant intake assumes that frontline staff are trained and willing to use new systems. By making such assumptions explicit, planners can embed risk mitigation measures, such as staff workshops, feedback loops, and change management strategy into the implementation process.

6.5.4 Summary: Toward an Integrated Model for Digital BPR

Together, these frameworks form a rigorous, theory-informed, and practice-grounded model for digital transformation in the public sector. Davenport's focus on outcome-driven innovation ensures clarity of purpose; CMMI offers a maturity pathway with embedded monitoring; and HTO highlights the human dimensions often overlooked in technical reforms. The LogFrame bridges theoretical imperatives into project design components goals, indicators, activities, risks, and assumptions.

Applied to the case of KZN DSD, this integrated approach facilitates process redesign, institutional learning, and adaptive governance, which is essential for sustainable digital transformation in resource-constrained environments.

6.6 Applicability of the Digital BPR.

The Digital Business Process Reengineering Implementation Framework proposed for the KwaZulu-Natal Department of Social Development is timely and highly pertinent to the region's imperative for modernised, citizen-centric service delivery. This evaluative narrative critically assesses the applicability of the Framework across its nine sequential steps, demonstrating its capacity to address structural inefficiencies, drive institutional transformation, and reinforce public value creation.

6.6.1 Strategic Foundation

The Framework begins with a strategic anchoring that aligns digital transformation initiatives with KZN DSD's overarching vision and service delivery imperatives. This step ensures coherence between technological modernisation and social mandates, enabling leadership buy-in and long-term policy alignment.

Applicability: The digital BPR framework helps different parts of the department work together, keeps the vision focused, and ensures that the digital changes support the department's primary goals.

6.6.2 Policy and Governance Support

Recognizing the fragmented and often inconsistent policy landscape in public sector IT Implementation, the Framework calls for robust governance structures, streamlined Standard Operating Procedures (SOPs), and codified data and procurement protocols. This mitigates bureaucratic inertia and ensures compliance with national digital strategies.

Applicability: The Framework is crucial for ensuring institutional accountability, regulatory adherence, and creating an enabling environment for transformation.

6.6.3 Stakeholder Engagement and Participation

Digital transformation in the public sector cannot be technocratically imposed; it requires social legitimacy and participatory governance. The Framework emphasizes iterative stakeholder engagement, bringing together internal staff, service users, and external partners to co-create solutions.

Applicability: The Framework helps make the process more open and fairer, builds trust within the organization, and encourages everyone to work together on important issues when making significant changes.

6.6.4 Process Reengineering

This step targets the core of inefficiency within public institutions: outdated, manual, and siloed workflows. Through systematic redesign, the Framework reduces duplication, shortens service turnaround times, and integrates automation into service delivery chains.

Applicability: The Framework helps the department work more quickly and efficiently, save money, and improve the services that people use directly.

6.6.5 Digital Infrastructure and Tools

Implementing interoperable, secure, and scalable digital platforms is positioned as a backbone for effective BPR. This ensures seamless data integration across units and real-time service analytics, which is critical in resource-constrained environments.

Applicability: The Framework addresses legacy IT limitations and builds a resilient digital foundation for current and future service innovations.

6.6.6 Human Capital Development

Human resource capacity remains a linchpin of public sector digital transformation. The Framework's emphasis on digital literacy, upskilling, and change readiness ensures that the workforce is compliant and empowered.

Applicability: It supports internal capacity development, enabling sustainable and inclusive digital adoption across the department.

6.6.7 Change Management

Transformational initiatives often fail due to unaddressed behavioural and cultural barriers. This Framework's inclusion of a dedicated change management strategy complete with communication plans and resistance mitigation tactics acknowledges the psychosocial dimensions of digital change.

Applicability: The Framework reduces the risk of failure, helps staff feel more confident and motivated, and fosters a long-term culture of new ideas and improvements.

6.6.8 Performance Measurement & Monitoring

Embedding Key Performance Indicators (KPIs), feedback mechanisms, and dynamic dashboards facilitates an adaptive management approach. This transforms monitoring from a compliance exercise into a tool for continuous learning and iterative improvement.

Applicability: Enables data-driven governance and supports accountability at both operational and strategic levels.

6.6.9 Sustainability and Scaling

The Framework concludes with mechanisms to institutionalise gains, secure multi-year funding, and adapt solutions at scale. This ensures that digital transformation is not episodic or donor-driven but is embedded in core institutional planning.

Applicability: The digital BRP framework provides a pathway for systemic resilience, scalability, and long-term policy integration.

6.6.10 Summary

The Digital BPR Implementation Framework provides a comprehensive and context-sensitive roadmap for transforming the KwaZulu-Natal Department of Social Development. It integrates technological innovation with organizational development, participatory governance, and strategic foresight. Its phased, modular design suits a complex, multi-layered institution operating in a resource-constrained, policy-intensive environment. As such, it holds substantial promise for enhancing service delivery outcomes and positioning KZN DSD as a digital transformation leader in the public sector.

6.7 Theoretical and Policy Implications of Digital BPR

The Digital Business Process Reengineering Implementation Framework for the KwaZulu-Natal Department of Social Development has significant theoretical and policy implications, shaping academic discourse and public sector governance.

6.7.1 Theoretical Implications

The Framework contributes to BPR theory by integrating digital transformation, stakeholder engagement, and adaptive governance. Hammer and Champy (1993) emphasise that BPR must align with organisational goals to ensure relevance and sustainability (Mertens *et al.*, 2024). Davenport (1993) highlights that data-driven process assessment is crucial for optimising workflows (Nkomo *et al.*, 2023). Bryson, Kaponda *et al.*, (2023) advocate for stakeholder inclusion, thereby reinforcing legitimacy in public-sector transformation.

Key Contribution: The Framework advances BPR theory by demonstrating how digital tools, agile governance, and human capital development enhance service efficiency and scalability in South Africa.

6.7.2 Policy Implications

The Framework has direct policy implications, influencing governance structures, procurement regulations, and digital adoption strategies. Ngulube (2020) highlights the importance of policy integration in public sector digital transformation. Krogh and Triantafillou (2024) argue that agile governance structures ensure adaptability in digital initiatives. Sesana *et al.*, (2020) recommend data-driven monitoring systems for continuous improvement.

Key Contribution: The Framework supports policy institutionalisation, ensuring compliance with digital governance mandates, cybersecurity regulations, and procurement reforms. The Digital BPR Implementation Framework for KZN DSD has far-reaching theoretical and policy

implications, reinforcing structured governance, stakeholder engagement, and sustainable transformation in public sector service delivery.

6.7.3 Alignment and Relevance of the KZN DSD DT STRATEGY (2020-2025)

The Digital Business Process Reengineering Implementation Framework for the KwaZulu-Natal Department of Social Development closely aligns with the KZN Digital Transformation Strategy (2020-2025), both of which aim to streamline government processes, enhance digital infrastructure, and support citizen-centric service delivery. Below is an evaluation of their alignment across key areas:

6.7.4 Strategic Foundation and Policy Alignment

The Digital BPR framework complements the six strategic priorities identified in the KZN Digital Transformation Strategy: Connectivity, Digital Skilling, Process Automation, and Systems Integration (KZN Digital Transformation Strategy, 2020). The Digital BPR framework complements this by establishing clear transformation objectives that ensure policy coherence, leadership alignment, and regulatory compliance. It ensures policy alignment, strategic leadership, and cross-sector collaboration, reinforcing provincial governance structures. Hammer & Champy (1993) underscore the importance of aligning BPR with organisational goals to ensure relevance and sustainability (Mertens *et al.*, 2024). Ngulube (2020) stresses that policy integration is essential for public-sector transformation, underscoring the need for institutional buy-in. The proposed Framework's strategic impact ensures long-term sustainability and efficient policy execution.

6.7.5 Process Automation and Digital Infrastructure

The KZN Strategy's emphasis on Process Automation (Section 14.4) supports workflow optimisation, data-driven service delivery, and digital governance. The Digital BPR framework applies automation principles to reduce inefficiencies in service processing, licensing, and HR management, aligning with the Strategy's goals.

6.7.6 Stakeholder Engagement and Change Management

Both frameworks recognise the importance of stakeholder participation to ensure legitimacy, adoption, and inclusivity. The KZN Strategy prioritises community engagement, co-production, and collaborative governance (KZN Digital Transformation Strategy, 2020). The Digital BPR framework integrates structured communication strategies, leadership engagement, and measures to mitigate resistance.

Singhania & Saini (2022) highlight that guiding coalitions and structured stakeholder consultations reduce uncertainty and resistance. Elapatha & Jehan (2020) argue that stakeholder inclusion enhances trust and service efficiency. The proposed Framework's strategic impact fosters collaborative ownership and effective integration of governance.

6.7.7 Digital Infrastructure, Interoperability and Cybersecurity

The KZN Digital Strategy highlights data security, ICT interoperability, and governance frameworks as key enablers of successful digital transformation (Section 14.3.3 & Section 16). The Digital BPR framework establishes structured IT governance, cybersecurity compliance, and system-wide interoperability. Krogh and Triantafillou (2024) advocate for agile governance models that enhance cross-functional data exchange. Wallin & Trantopoulos *et al.*, (2017) emphasise that data governance frameworks improve security and decision-making efficiency. The Framework's strategic Impact will strengthen data security, compliance with digital governance mandates, and streamlined service interoperability.

6.7.8 Human Capital Development and Digital Skills

The KZN Strategy's Digital Skills priority (Section 14.2) advocates for capacity-building, AI readiness, and digital literacy. The BPR framework embeds training programs, workforce empowerment, and stakeholder engagement, ensuring employees are equipped for digital transformation.

6.7.9 Human Capital Development and Digital Skilling

The KZN Strategy's Digital Skills priority aims to equip employees, youth, and marginalised groups with digital literacy and capacity-building programs (Section 14.2). The Digital BPR framework incorporates structured training, workforce digital competency development, and digital adoption strategies. Zimmermann *et al.*, (2020) advocate appointing digital champions to lead transformation efforts. The proposed Framework will empower the workforce, improve adaptability, and ensure the adoption of sustainable transformation.

6.7.10 Systems Integration and Data Governance

The KZN Strategy's focus on Systems Integration (Section 14.5) emphasizes interoperability, cybersecurity, and ICT governance. The Digital BPR framework enhances IT governance, interoperability between departments, and data security, ensuring provincial systems work seamlessly.

6.7.11 Performance Monitoring and Adaptive Management

The Monitoring and Evaluation (M&E) framework in the KZN Digital Transformation Strategy focuses on KPIs, iterative improvement, and accountability mechanisms (Section 17). The BPR framework integrates data-driven decision-making, KPIs, and policy institutionalisation, ensuring scalability and continuous improvement. This aligns with Collins & Stockton (2018), who recommend structured monitoring systems to assess progress in digital transformation. The proposed Framework will enable continuous optimisation, evidence-based policy refinement, and accountability in governance.

6.8 Conclusion: Digital BPR Framework Strategy

The Digital BPR Implementation Framework for KZN DSD is highly relevant and aligned with the KZN Digital Transformation Strategy (2020-2025). It reinforces governance structures, optimises processes, enhances workforce digital literacy, and ensures sustainability, driving efficient, citizen-centric service delivery. The Framework drives long-term transformation success by leveraging digital tools, adaptive management, and process automation.

6.8.1 Impact of the Proposed BPR Framework on Service Delivery and Citizen Satisfaction

The workforce's demographic profile, with a predominance of females (57%) and a majority with over 11 years of experience (63%), highlights a stable, seasoned human resource base within KZN DSD. This presents a strong foundation for implementing the proposed Business Process Reengineering framework, which aims to modernise and streamline service delivery.

Experienced and gender-diverse staff are essential for driving meaningful organisational change. The predominance of women, aligned with global trends in social development sectors (Eagly & Wood, 2020; Kossek *et al.*, 2021), suggests a workforce likely attuned to the nuances of client-centred care and empathetic service, which is critical for citizen satisfaction. Furthermore, the substantial proportion of mid-to-senior-level professionals (63%) indicates the availability of leadership and institutional knowledge necessary to champion and sustain transformation efforts (Aguinis & Burgi-Tian, 2021).

Implementing the context-specific BPR framework can significantly enhance service delivery by:

- i. Streamlining workflows to reduce redundancies, thereby improving response times and reducing bureaucratic delays (Hammer & Stanton, 2020).

- ii. Leveraging digital tools aligned with capacity building to enhance transparency, accountability, and real-time monitoring (Chen *et al.*, 2022).
- iii. Engaging experienced personnel in change management roles, capitalizing on their expertise and institutional memory to foster adoption and continuous improvement (Kotter, 2022).

Such improvements are anticipated to elevate citizen satisfaction by ensuring services are more accessible, reliable, and responsive to community needs, reflecting the department's fundamental goal. Studies have demonstrated that when supported by strong leadership and tailored training, BPR initiatives lead to measurable improvements in client perceptions and trust in public institutions (Nguyen *et al.*, 2021; Smith & Lee, 2023).

Global Relevance of the Study

The present doctoral study, focusing on the reengineering of the KwaZulu-Natal Department of Social Development (KZN DSD), holds substantial global relevance within the broader discourse of public sector transformation, social welfare reform, and institutional modernisation. **Across the world**, governments are under increasing pressure to improve efficiency, accountability, and service delivery in response to complex socio-economic challenges. In this context, Business Process Reengineering (BPR) has emerged as a key strategy for fundamental organisational change and performance improvement.

Public Sector Transformation and Global Reform Trends

Globally, public sector institutions have historically been characterised by bureaucratic rigidity, fragmented processes, and silo-based operations. These structural limitations have prompted widespread reforms aimed at enhancing effectiveness and responsiveness. Business Process Reengineering has been widely adopted as a reform tool, enabling governments to critically rethink and redesign organisational processes to achieve significant improvements in efficiency, cost, and service quality (Weerakkody, Janssen, & El-Haddadeh, 2021).

Moreover, the global shift towards New Public Management (NPM) has encouraged governments to adopt private-sector principles such as performance orientation, customer focus, and decentralisation, with BPR serving as a critical enabler of these reforms. This transformation reflects a broader global movement towards citizen-centred governance, where service delivery systems are designed around the needs and experiences of users rather than administrative convenience.

Within this context, the current study contributes to international debates on the applicability and effectiveness of BPR in public sector institutions, particularly in developing-country

contexts where institutional constraints may differ significantly from those in developed economies.

Addressing Global Challenges in Social Welfare Systems

Social welfare systems across the globe face common and persistent challenges, including inefficiencies in service delivery, limited administrative capacity, inadequate targeting of beneficiaries, and fragmented institutional arrangements. In many developing regions, these challenges are further exacerbated by resource constraints, governance issues, and rapidly growing demand for social protection services.

Evidence indicates that a significant proportion of vulnerable populations remains excluded from formal social protection systems due to administrative inefficiencies and structural weaknesses (Social Work Institute, 2025). Such gaps undermine the effectiveness of social development programmes and limit their potential impact on poverty reduction and social inclusion.

By examining the KwaZulu-Natal Department of Social Development, this study provides a context-specific analysis of these broader systemic challenges. The findings therefore extend beyond the provincial context and offer insights that are applicable to other developing countries facing similar issues in social welfare administration.

Advancing the Body of Knowledge on Business Process Reengineering

While BPR has been extensively studied in private sector environments, its application in the public sector remains less developed and often yields mixed results. The complexity of public organisations, including their regulatory frameworks, political environments, and social mandates, creates unique challenges for successful implementation (Weerakkody *et al.*, 2021).

Furthermore, BPR is defined as the fundamental rethinking and radical redesign of organisational processes to achieve dramatic improvements in performance indicators such as quality, cost, and speed (Amarasinghe & Wickramarachchi, 2021). However, achieving these improvements in public sector organisations requires careful adaptation to the institutional context, including alignment with public values such as equity, accountability, and transparency.

This study contributes to the global body of knowledge by providing empirical evidence on the implementation of reengineering within a social development context. It identifies critical success factors, challenges, and contextual considerations that can inform future BPR initiatives in similar public sector organisations.

Enhancing Citizen-Centred Governance and Service Delivery

The global governance agenda increasingly emphasises the need for citizen-centred service delivery systems that prioritise accessibility, responsiveness, and user satisfaction. BPR plays a crucial role in achieving these objectives by enabling the integration of services, elimination of redundancies, and redesign of workflows to better meet the needs of citizens (Weerakkody *et al.*, 2021).

In the context of social development, where services are targeted at vulnerable populations, the importance of efficient and responsive service delivery is particularly critical. The reengineering of processes within the KZN DSD has the potential to improve access to services, reduce delays, and enhance the overall effectiveness of social programmes.

Thus, the study aligns with global efforts to build capable, ethical, and developmental states that are responsive to the needs of their citizens and committed to improving social outcomes.

Relevance to Digital Transformation and E-Governance

The increasing adoption of digital technologies in government has further amplified the importance of process reengineering. Digital transformation initiatives require well-designed and streamlined processes to ensure effective implementation and sustainability. Research indicates that reengineering is a critical prerequisite for the successful digitalisation of public services, as it enables the integration of systems and the automation of complex workflows (Charalabidis *et al.*, 2023).

In this regard, the findings of this study provide valuable insights into how organisational restructuring and process redesign can support digital transformation initiatives within social welfare institutions. This is particularly relevant in the current era, where governments worldwide are investing in e-governance systems to improve efficiency and accessibility.

Contribution to Global Development and Social Protection Goals

Social development institutions play a central role in achieving global development objectives, including poverty reduction, social inclusion, and human development. Despite significant progress in expanding social protection programmes, large coverage gaps remain, particularly in low- and middle-income countries (World Bank, 2025).

Improving the efficiency and effectiveness of social welfare systems is therefore critical to enhancing their impact. By demonstrating how process reengineering can strengthen service delivery, this study contributes to policy discussions on how to improve social protection systems and maximise their developmental impact.

Furthermore, the study supports broader international commitments to social justice, human dignity, and inclusive development by providing practical solutions for improving the functioning of social welfare institutions.

Finally, the study contributes to the global academic literature by providing a case study from the Global South, a perspective that remains underrepresented in research on public sector reengineering. The insights generated from the KwaZulu-Natal context offer a valuable basis for comparative analysis and cross-national learning.

The study also provides a framework that can be adapted and applied in other contexts, thereby enhancing its relevance for both scholars and practitioners engaged in public sector reform initiatives worldwide.

In summary, the workforce's demographic strengths, paired with the structured BPR approach, position KZN DSD to achieve sustainable gains in operational efficiency and citizen-centred outcomes, fostering a more inclusive and effective social development environment.

Table 6.4: Implementation Roadmap

Phase	Key Activities	Roles	Success Metrics
1. Initiation and Planning	- Establish the BPR Steering Committee	- Executive Leadership (Sponsor)	- Steering committee operational
	- Appoint Change Champions	- Project Manager	- Baseline assessment completed
	- Baseline process and ICT assessment	- Change Champions	- Project plan approved
	- Develop a project plan	- IT Team	
2. Pilot Implementation	- Select pilot sites	- Pilot Site Managers	- Pilot rollout completed on time
	- Train pilot staff	- Training Coordinators	- 20%+ process efficiency improvement
	- Implement redesigned workflows and digital tools	- M&E Team	- Positive staff & user feedback
	- Collect pilot data		

Phase	Key Activities	Roles	Success Metrics
3. Evaluation and Refinement	- Conduct process audits and feedback sessions	- M&E Team	- Pilot evaluation report completed
	- Update process maps and systems	- Steering Committee	- Framework refinements approved
	- Revise training and communication plans	- Change Champions	- Improved staff readiness
4. Scale-Up and Full Implementation	- Deliver department-wide training	- Regional Managers	- 90%+ departments adopting Framework
	- Upgrade ICT infrastructure	- Training Teams	- Significant service delivery improvements
	- Launch communication campaigns	- IT Support	- >80% satisfaction scores
	- Monitor KPIs regularly	- M&E Team	
5. Sustainability and Continuous Improvement	- Institutionalize BPR in performance appraisals	- Departmental Leadership	- Sustained efficiency improvements
	- Hold regular review forums	- Process Owners	- Regular innovation adoption
	- Maintain training programs	- HR & Training Units	- Ongoing positive citizen feedback
	- Conduct satisfaction surveys	- M&E Team	

6.8.2 Importance of the Implementation Roadmap

A clearly defined Implementation Roadmap is essential for successfully deploying the proposed Business Process Reengineering framework within the KwaZulu-Natal Department of Social Development. This step-by-step guide provides a structured approach that ensures systematic progress, accountability, and measurable outcomes throughout the transformation journey.

Phased Implementation enables the department to manage complexity and risk effectively by piloting changes in controlled environments before a full-scale rollout. This approach fosters learning and continuous improvement, enabling adjustments based on real-world feedback. It prevents costly mistakes and builds confidence among staff and stakeholders.

Defined Roles and Responsibilities are critical to maintaining momentum and ownership at every stage. Assigning clear leadership through a steering committee and change champions empowers individuals to drive change, resolve challenges, and maintain alignment with strategic goals. This clarity supports collaboration between leadership, operational staff, and technical teams.

Timelines and Milestones help keep the Implementation on track and ensure timely delivery of benefits. Regular monitoring against success metrics such as improvements in efficiency, service delivery, and citizen satisfaction provides objective evidence of progress and identifies areas requiring attention.

Integration of Capacity Building and ICT Upgrades ensures that staff have the necessary skills and tools to adopt new processes effectively. Without continuous training and robust technology infrastructure, even well-designed frameworks risk failure.

Finally, the roadmap emphasizes sustainability and continuous improvement to secure long-term benefits. Embedding BPR into organizational culture, performance management, and ongoing communication ensures that gains in service delivery are maintained and enhanced over time.

In summary, the Implementation Roadmap transforms strategic vision into actionable steps, minimizing disruption while maximizing impact on service delivery and citizen satisfaction within the KZN DSD.

6.8.3 A Socio-Technical Roadmap for KZN DSD's Digital Transformation

This study reveals that the success of KZN DSD's digital transformation fundamentally depends on addressing three interdependent dimensions identified through a systemic cross-cutting analysis: demographic realities, process inefficiencies, and governance structures. The findings underscore that technological interventions alone are insufficient without concurrent attention to human factors and enabling policy frameworks.

6.8.4 Demographic Imperatives Shape Implementation

The workforce profile dominated by mid-career staff with limited prior digital exposure (RQ1) necessitates:

Tailored capacity building: Empirical evidence shows that basic ICT literacy training contributed to a 35% reduction in helpdesk calls within pilot offices (3.4.1, P10), highlighting the importance of customized upskilling initiatives aligned to user competencies.

Phased adoption: Gradual rollout of automation tools facilitated smoother transitions by allowing hesitant employees to adapt incrementally, minimizing operational disruptions and resistance (2.5.2, P15).

6.8.5 Socio-Technical Synergy for BPR Success

The study found that process inefficiencies and employee resistance (RQ2) must be addressed together for successful digital BPR. This requires solutions that combine technology improvements with human-centred change.

Technological integration paired with policy reform: While the Implementation of API gateways effectively addressed technical data silos, reducing redundant data entry by 75% (2.3.1, P8), the concurrent revision and formalization of data-sharing protocols were equally pivotal in enabling cross-departmental workflows while ensuring compliance with privacy legislation (3.8.1, P12).

Leadership modelling as a catalyst: Visible executive engagement, such as senior leaders actively using new digital systems, significantly accelerated adoption rates, with department-wide uptake tripling within two months (3.1.1, P5), demonstrating the power of leadership by example.

6.8.6 Contextual Framework for Sustainable Change

The proposed context-sensitive BPR framework (RQ4) strategically integrates demographic and operational factors through:

Frontline-first design: Deployment of mobile-enabled tools for rural social workers markedly reduced paperwork delays by 60% (2.9.11, P6), illustrating the value of user-centred design tailored to field realities.

Governance anchors: Establishing a dedicated Digital Transformation Office ensures coherent alignment between pilot initiatives and broader provincial digital strategies, thereby institutionalizing accountability and sustainability (3.9.1, P20).

6.8.7 Strategic Implications

Prioritize quick wins: Targeting easily automated processes such as leave approvals can generate early successes that build momentum and alleviate resistance among change-averse staff.

Institutionalize digital literacy: Implement mandatory, tiered training programs customized by job role and age cohort to foster continuous learning and digital competency.

Embed procurement flexibility: Adapt procurement policies to support iterative technology upgrades and responsive innovation rather than rigid, one-off acquisitions.

This integrated socio-technical approach, balancing technological innovation, human capacity, and governance reform, positions KZN DSD to transition from fragmented, manual workflows toward a cohesive, digitally empowered organization. The cross-cutting themes affirm that sustainable digital transformation necessitates new systems and a profound cultural and operational paradigm shift.

6.9 Final Reflections

The journey toward digital transformation in public service is complex, particularly in resource-constrained environments. However, KZN DSD can become a beacon of innovation and inclusivity with a tailored, participatory, and adaptive BPR framework. The key is radical change and thoughtful, people-centred transformation grounded in real-world challenges and opportunities.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter presents the conclusions drawn from the study and offers practical and theoretical recommendations based on the empirical findings. The chapter also highlights the study's contributions to knowledge and practice and proposes avenues.

7.1.1 Summary of Findings

The study was guided by four research objectives, each contributing to a comprehensive understanding of digital Business Process Reengineering in the KZN DSD:

7.1.1.1 RQ1 – Identifying Inefficiencies and Challenges in KZN DSD's Business Processes

The first research question sought to identify the current inefficiencies and systemic challenges within the KwaZulu-Natal Department of Social Development. The findings demonstrate that the department's operations are hindered by multi-layered inefficiencies deeply embedded in its structure and culture.

Five critical themes emerged:

Process Fragmentation: The results show that the department's operational workflows remain dominated by manual processes, leading to inefficiencies, duplication, and slow service delivery. The lack of standardised procedures across regional offices causes delays in service delivery. In addition, Supervisory overload and a lack of real-time tracking exacerbate accountability challenges and reduce visibility over service progress.

Technological Constraints: Outdated hardware, poor system interoperability, and unreliable connectivity, especially in rural areas, severely undermine operational continuity. Legacy systems are underutilized due to limited training and a lack of user-friendly design, reinforcing dependence on paper-based processes.

Human Capital Limitations: The most widespread constraint in this study is digital literacy. Many staff struggle with basic digital competencies, compounded by shared workstations and inadequate, outdated training programs. This digital skill gap is a barrier to adopting and optimizing existing technologies.

Balancing Compliance with Service Delivery: Strict rules and too much focus on audits can shift attention away from their routine work. Recent studies show this can hurt public service quality and slow innovation (Christensen & Lægreid, 2021).

Stakeholder Dynamics: Internally, poor interdepartmental collaboration and siloed communication hinder integrated service provision. Externally, the lack of responsiveness and prolonged client wait times have diminished public trust and satisfaction.

These inefficiencies are interconnected and mutually reinforcing, indicating that the department's challenges are not simply operational but systemic. The findings strongly align with the McKinsey 7-S Framework, highlighting a core misalignment between structure, systems, staff capabilities, and strategic direction factors often hindering effective organizational transformation (Sumbane *et al.*, 2023); Waterman *et al.*, 2020).

Despite these challenges, the study uncovered a notable readiness for change. Participants expressed awareness of the systemic inefficiencies and were willing to embrace solutions provided they had adequate support, resources, and leadership commitment.

In conclusion, addressing these inefficiencies requires a holistic, integrated Digital Business Process Reengineering (BPR) approach that simultaneously addresses people, process, technology, and policy barriers. The research concludes that digital BPR can significantly improve operational efficiency, accountability, and service delivery in public institutions like KZN DSD when implemented strategically and contextually. However, success is contingent on:

- i. Shifting from technology-centric to human-centric models of transformation
- ii. Embedding change management and stakeholder participation throughout the transformation lifecycle
- iii. Ensuring policy and procurement agility to support innovation
- iv. Prioritizing digital inclusion for rural and marginalized offices through mobile-first, offline-capable platforms
- v. Institutionalizing continuous learning and feedback loops to enable sustainability and

These findings contribute to a deeper understanding of the interplay between process, people, technology, and policy in the public sector's digital transformation agenda.

7.1.1.2 RQ2 – What Business Process Redesign (BPR) Strategies Can Improve KZN DSD’s Service Delivery?

The second research question explored appropriate Business Process Redesign strategies to improve the operational performance and service delivery outcomes of the KwaZulu-Natal Department of Social Development. Based on stakeholder insights and best-practice literature, the study identified six core BPR strategies aligned with the department's institutional context and digital transformation goals.

7.1.1.2.1 Process Standardisation and Automation

A significant strategy proposed by participants and supported by literature is the redesign of fragmented workflows into streamlined standardised processes. Uniform Standard Operating Procedures (SOPs) should be introduced across all regional and satellite DSD offices to reduce duplication and inconsistency. These SOPs must be complemented by process automation tools, such as digital case intake systems and document workflows, to improve turnaround times, reduce human error, and enhance transparency. Automating repetitive and transactional tasks can free staff to focus on complex, value-adding activities.

7.1.1.2.2 Technology Modernisation and Integration

Participants emphasised the need for a robust, unified digital infrastructure. This includes replacing obsolete hardware, improving connectivity (particularly in rural offices), and upgrading legacy systems, such as SAMS, to support real-time case tracking, integrated databases, and interoperability with other departmental platforms. A centralised digital platform with modular architecture should be adopted to ensure scalability and flexibility in future process enhancements. System integration will improve visibility across units and enable evidence-based decision-making.

7.1.1.2.3 Workforce Digitisation and Capacity Building

The successful implementation of BPR depends on workforce readiness. A comprehensive digital literacy program, including practical hands-on training in system usage, data security, and change management, must be implemented to upskill staff. Training must be ongoing and tailored to different job roles and learning needs. Further, providing individual digital workstations and mobile tools can improve productivity and reduce operational disruptions due to shared devices.

7.1.1.2.4 Organisational Restructuring and Agile Governance

The KZN DSD department must reconfigure its organisational structure to support streamlined workflows and faster decision-making. This includes reducing hierarchical bottlenecks, decentralising decision authority for routine functions, and enhancing horizontal collaboration between units. Establishing cross-functional teams focused on service improvement can enhance responsiveness and encourage innovation. Governance structures across Departments should be adapted to enable agile responses to emerging service needs and policy changes.

7.1.1.2.5 Client-Centric Design and Service Co-Creation

A shift toward citizen-centric service delivery is vital. This includes redesigning client touchpoints, such as online appointment systems, SMS updates on case progress, and multilingual self-service portals. Participants supported integrating feedback loops into digital platforms, allowing clients to rate services, flag issues, or make suggestions. Co-creating solutions with service users ensures delivery relevance, trust, and inclusivity.

7.1.1.2.6 Performance Monitoring and Data-Driven Culture

Introducing Key Performance Indicators aligned with redesigned processes is essential. Real-time DSD dashboards and performance-tracking tools should be implemented to monitor performance progress and drive accountability. Managers and staff within the DSD, as well as its stakeholders, must be equipped to use data to improve processes continuously. Developing a data-driven culture requires technology (e.g., analytics tools) and leadership commitment to evidence-based decision-making.

These BPR strategies collectively address the systemic inefficiencies diagnosed under RQ1. They are informed by change management frameworks such as Kotter's 8-Step Model and Lean Six Sigma principles, and they resonate with global best practices in public-sector digital transformation.

The study concludes that a multi-pronged, context-sensitive BPR strategy centred on process simplification, digital enablement, human capital development, and service co-design is necessary and feasible for KZN DSD. The department possesses the latent capacity and stakeholder readiness that, if properly harnessed, can catalyse a transition toward a high-performing, citizen-responsive social development agency.

7.1.1.3 RQ3 – What Are the Enablers and Risks of Implementing BPR at KZN DSD?

The third research question focused on identifying the critical enablers and potential risks influencing the successful implementation of Business Process Reengineering within the KwaZulu-Natal Department of Social Development. Understanding these factors is vital to designing a realistic and sustainable BPR intervention that mitigates failure and accelerates impact.

7.1.1.3.1 Key Enablers identified include:

7.1.1.3.1.1 Strong Leadership and Sponsorship

Effective, committed leadership emerged as the foremost enabler. Leadership's role in allocating resources, removing barriers, and championing change is pivotal. In addition, leaders who communicate BPR's purpose, benefits, and expectations can build trust and motivate staff participation.

7.1.1.3.1.2 Stakeholder Engagement and Participation

Active involvement of frontline staff, middle management, and clients in the redesign process fosters ownership and acceptance. Early engagement reduces resistance and uncovers practical insights into workflow challenges and potential solutions.

7.1.1.3.1.3 Adequate Resources and Infrastructure

Modern ICT infrastructure, training budgets, and change management support are essential. Without adequate funding and material support, digital transformation efforts risk faltering.

7.1.1.3.1.4 Capacity Building and Continuous Learning

Investment in workforce training and development builds confidence in new systems and processes. Creating a culture that encourages innovation and learning reinforces BPR sustainability.

7.1.1.3.1.5 Clear Communication and Change Management

Transparent, consistent communication throughout the BPR lifecycle helps manage expectations, address concerns, and reinforce positive behaviours. Tailored change management frameworks for the department's context enhance resilience.

7.1.1.3.1.6 Alignment with Policy and Regulatory Frameworks

Ensuring that redesigned processes comply with government regulations and audit requirements protects the department from compliance risks and facilitates smoother approval pathways.

7.1.1.3.1.7 Identified Risks include:

- i. *Resistance to Change and Cultural Inertia:* Entrenched bureaucratic mindsets, fear of job loss, and uncertainty about new technologies can trigger resistance and undermine implementation efforts.
- ii. *Insufficient Digital Literacy and Skills Gaps:* A lack of requisite skills may cause underutilization of new systems, perpetuate inefficiencies and generate frustration.
- iii. *Inadequate Funding and Resource Constraints:* Funding delays or shortfalls can stall procurement, training, and infrastructure upgrades, leading to incomplete or abandoned initiatives.
- iv. *Poor Project Governance and Coordination:* Fragmented leadership, unclear roles, and lack of accountability may lead to scope creep, delays, and loss of stakeholder confidence.
- v. *Technology Risks: System Failures and Data Security:* Technical glitches, cyber vulnerabilities, and interoperability issues threaten service continuity and client data protection.
- vi. *Unrealistic Timelines and Expectations:* Overambitious rollout plans without phased piloting may overwhelm staff and reduce the quality of implementation.

In summary, successful BPR at KZN DSD requires strategic risk mitigation through robust leadership, continuous stakeholder engagement, capacity building, and realistic planning. Addressing these enablers and risks holistically strengthens the department's ability to adapt and thrive amidst digital transformation.

The insights gained under RQ3 directly inform the design of a practical, context-sensitive BPR implementation framework (RQ4), which integrates risk mitigation and leverages identified enablers for sustainable change.

7.1.1.4 RQ4 – How Can a Context-Specific Business Process Reengineering Framework be developed for KZN DSD?

The final research question aimed to develop a tailored BPR framework that addresses the unique operational realities, challenges, and capacities of the KwaZulu-Natal Department of Social Development. The framework aims to provide a practical, phased, and sustainable roadmap for implementing business process reengineering that accelerates digital transformation and improves service delivery.

7.1.1.4.1 Key Insights Underpinning the Framework Development:

7.1.1.4.1.1 Holistic Integration of People, Processes, and Technology

The framework must concurrently address the interdependent dimensions of organizational structure, human capital, technological infrastructure, and policy environment. The research highlights those piecemeal approaches risk failure, whereas integrated interventions generate synergy and resilience.

7.1.1.4.1.2 Phased, Iterative Approach

Given the complexity and scale of the required change, the framework advocates incremental implementation through pilot projects and iterative refinements. This phased approach allows learning, capacity building, and risk mitigation before full-scale rollout.

7.1.1.4.1.3 Emphasis on Capacity Building and Change Management

Continuous training programs, digital literacy enhancement, and robust change management practices are embedded as core components. The framework stresses empowering employees to become active agents of change rather than passive recipients.

7.1.1.4.1.4 Transparent Governance and Accountability Structures

The framework defines roles and responsibilities at all levels, from executive sponsors to frontline workers, and establishes mechanisms for monitoring progress, evaluating outcomes, and ensuring compliance with policy and audit requirements.

7.1.1.4.1.5 Technology Enablement and Interoperability

Investments in scalable, user-friendly digital platforms that integrate existing legacy systems are prioritized. The framework underscores the importance of infrastructure upgrades, reliable connectivity, and cybersecurity measures to support sustainable digital transformation.

7.1.1.4.1.6 Stakeholder Engagement and Communication

We emphasize a participatory design process involving internal teams, service users, and external partners. Transparent and ongoing communication strategies mitigate resistance and build trust throughout the BPR journey.

7.1.1.4.1.7 Alignment with Provincial and National Strategies

The framework aligns with the KwaZulu-Natal Digital Transformation Strategy (2020–2025) and broader government priorities, ensuring coherence and eligibility for funding and policy support.

7.1.1.4.1.8 Conclusion

This research culminates in a comprehensive, context-sensitive BPR framework to tackle the specific inefficiencies and challenges identified in KZN DSD. It balances the need for technological modernization with human-centred change management and policy alignment. By adopting this framework, KZN DSD can embark on a structured journey toward an agile, efficient, and digitally enabled public service, ultimately improving outcomes for vulnerable populations in KwaZulu-Natal. The framework serves as a blueprint for KZN DSD and provides valuable lessons for other provincial departments in South Africa aiming to modernize and digitalize their services under similar constraints.

7.2 Conclusions by Research Question

7.2.1 Conclusion: RQ1 – What are the Current Challenges and Inefficiencies in KZN DSD Processes?

The study revealed significant operational challenges in KZN DSD, including fragmented workflows, outdated paper-based systems, limited ICT infrastructure, and insufficient staff capacity in digital competencies. These inefficiencies contribute to delays, inconsistent service delivery, and low employee morale. Internal communication gaps and unclear accountability frameworks further exacerbate process bottlenecks.

7.2.2 Conclusion: RQ2 – What Best Practices and Lessons from BPR and Digital Transformation Can Inform KZN DSD's Modernisation?

The research underscored that successful BPR initiatives integrate technology with people and process redesign, accompanied by strong leadership and change management. Incremental, pilot-driven implementations with continuous stakeholder engagement yield sustainable transformation. Investing in capacity building and leveraging interoperable, scalable ICT solutions are critical for long-term success.

7.2.3 Conclusion: RQ3 – What are the opportunities for Digital Transformation to enhance service delivery in KZN DSD?

Digital transformation can streamline case management, enable real-time data tracking, and improve transparency and accountability. Opportunities lie in automating repetitive tasks, integrating legacy systems with modern platforms, and enhancing mobile connectivity to support frontline workers. Emphasizing user-centred design and digital literacy is essential to maximize uptake and impact.

7.2.4 Conclusion: RQ4 – How Can a Context-Specific Business Process Reengineering (BPR) Framework be developed for KZN DSD?

The final research question aimed to develop a tailored BPR framework that addresses KZN DSD's unique operational realities, challenges, and capacities. The framework integrates holistic dimensions of people, processes, technology, governance, and communication in a phased, iterative approach emphasizing capacity building, pilot testing, and alignment with provincial digital strategies. This comprehensive framework provides KZN DSD with a practical roadmap for sustainable digital transformation and improved service delivery.

7.3 Demographic Factors Considerations

The analysis of KZN DSD's digital transformation journey reveals critical intersections between organizational demographics, systemic challenges, and the strategic imperatives for Business Process Reengineering and modernization. Demographic insights, such as workforce age distribution, digital literacy levels, and departmental variances, illuminate the nuanced human factors influencing the success of digital initiatives. Specifically, the predominance of mid-career staff with limited prior digital experience underscores the need for tailored capacity-building and sustained change management efforts.

Regarding RQ2, the findings reaffirm that successful BPR requires an integrated socio-technical approach melding technology adoption with people-centric process redesign and underpinned by proactive leadership. The demographic profile confirms that incremental, pilot-based implementation strategies are especially pertinent, allowing gradual acclimatization of staff with varying digital competencies. Continuous stakeholder engagement, facilitated through change agents and 'digital champions,' emerges as vital to overcoming resistance linked to workforce demographics and cultural inertia.

For RQ3, demographic data highlighted disparities in digital access and competency, particularly among frontline and rural-based employees. These disparities delineate key opportunities for digital transformation to enhance service delivery by streamlining case management workflows and enabling real-time data visibility. Automating repetitive, manual tasks addresses operational inefficiencies predominantly reported by departments with lower digital maturity. Furthermore, integrating legacy systems with modern, interoperable platforms tailored to diverse user capabilities ensures inclusivity. It maximizes adoption, corroborating the criticality of user-centred design and digital literacy emphasized in the findings.

In response to RQ4, the proposed context-specific BPR framework reflects a comprehensive, phased methodology that resonates with demographic realities. The framework's emphasis

on capacity building and pilot testing acknowledges the heterogeneity of digital readiness across age cohorts and job roles within KZN DSD. By embedding governance and communication as core pillars, it addresses the multifaceted nature of transformation impediments revealed by the data silos and resistance themes. The framework's alignment with provincial digital strategies ensures contextual relevance, scalability, and sustainability, positioning KZN DSD to transition from fragmented, manual processes to an integrated, digitally enabled service ecosystem.

7.4 Recommendations

Based on the conclusions of this study, the following recommendations are proposed for the KwaZulu-Natal Department of Social Development and other relevant stakeholders to effectively implement business process reengineering and digital transformation initiatives.

7.4.1 Adopt the Proposed BPR Framework

The context-specific BPR framework developed in this study should be adopted through a phased approach. Starting with pilot projects in critical service delivery areas such as social grants processing or child welfare case management will allow KZN DSD to test and refine processes before scaling department wide. Pilots provide opportunities to gather real-time feedback, identify unforeseen challenges, and adapt the framework accordingly.

Example: The City of Johannesburg's phased approach to BPR in their customer service division reduced turnaround times by 30% after piloting and refining new workflows (Deloitte, 2020).

7.4.2 Strengthen Leadership and Governance

Effective transformation requires strong leadership and governance structures. KZN DSD should establish a dedicated BPR steering committee comprising senior managers, IT specialists, and frontline representatives. This committee should oversee implementation, monitor progress, and resolve bottlenecks. Furthermore, appointing change champions at various organizational levels will foster ownership and accountability.

Example: According to Kotter (1996), transformational change efforts fail without active leadership and transparent governance. The South African Department of Home Affairs improved service delivery by creating a Change Management Office to coordinate BPR efforts (Public Service Commission, 2019).

7.4.3 Invest in Capacity Building

Staff capacity is crucial for sustainable digital transformation. Continuous training programs should be designed to improve digital literacy, data management, and process improvement skills among all employees, from administrative clerks to managers. Training should also address change management to prepare staff for new working methods.

Example: The Kenyan Ministry of Health's digital health initiative included comprehensive capacity-building workshops that increased frontline workers' technology adoption by over 50% (World Bank, 2021).

7.4.4 Upgrade ICT Infrastructure

Modernizing the department's ICT infrastructure is a prerequisite for effective BPR and digital transformation (World Bank, 2021). This includes upgrading outdated hardware, adopting cloud-based platforms to improve scalability and access, and ensuring interoperability between legacy and new systems. Cybersecurity measures must be integrated to protect sensitive social service data.

Example: The South African Social Security Agency (SASSA) invested in integrated ICT platforms that linked regional offices and mobile units, significantly improving case tracking and reducing fraud (SASSA, 2022).

7.4.5 Enhance Stakeholder Engagement

Robust communication and engagement strategies are essential to secure buy-in from internal staff, service users, and external partners. This involves regular updates, inclusive workshops, and feedback mechanisms that empower stakeholders to contribute to the transformation journey. Engaging beneficiaries helps tailor digital services to their needs and builds trust.

Example: The eThekweni Municipality employed community engagement forums and digital feedback platforms to co-design social programs, leading to higher user satisfaction and participation (eThekweni Municipality, 2020).

7.4.6 Monitor and Evaluate Progress

Implementing a system of key performance indicators and regular audits is critical for tracking efficiency, compliance, and improvements in user satisfaction. Monitoring enables timely issue identification and supports data-driven decision-making for continuous improvement.

Example: The Department of Public Service and Administration in South Africa adopted a performance monitoring framework for its BPR projects, resulting in a 15% increase in service delivery efficiency over 2 years (DPSA, 2021).

7.4.7 Align with Broader Government Strategies

KZN DSD's BPR and digital transformation efforts should align with provincial and national development plans, such as the South African Government's Digital Transformation Strategy and the National Development Plan 2030, to maximize impact and resource allocation. This alignment ensures coherence, facilitates access to funding, and strengthens policy support.

Example: The Gauteng Provincial Government integrated its BPR initiatives within the NDP framework, enabling coordinated infrastructure investment and cross-departmental collaboration (Gauteng Provincial Government, 2023).

7.5 Limitations of the Study

The study's focus on a single department may limit generalisability. Additionally, reliance on self-reported data may introduce bias, which was mitigated through triangulation and validation techniques (Maxwell, 2013).

- i. *Generalisability:* The focus on a single department limits the applicability of findings to other public-sector contexts. However, transferability can be achieved by ensuring a detailed description of the study context (Shenton, 2004).
- ii. *Bias in self-reported data:* Participants' accounts may reflect subjective views or biases. Triangulation through document analysis and observation mitigated this limitation (Maxwell, 2013).
- iii. *Resource Constraints:* Conducting in-depth qualitative research is time-intensive and resource-heavy, which may pose challenges for broader replication (Patton, 2002).

7.5.1 TIPS Framework

In conclusion, the proposed inclusion of the TIPS Framework components comprising Technology, Innovation, People, and Systems offers a comprehensive and context-sensitive approach to implementing digital Business Process Reengineering within the KZN Department of Social Development.

Technology (T) forms the theoretical foundation of the framework, drawing on well-established theories of technology adoption, cybersecurity, change management, and risk management. These foundations provided valuable insights into both the enablers and

constraints of digital transformation in the public sector, thereby guiding the formulation of research questions and the development of a tailored BPR framework.

Innovation (I) represents the operationalisation of the framework, emphasizing both incremental and radical process improvements. Grounded in methodologies such as Lean and Six Sigma, this pillar underlined the importance of continuous evaluation and responsiveness to organizational challenges. The research findings, particularly in Chapters 4 through 5, confirm the critical role of innovation in enhancing process efficiency and effectiveness.

People (P) reflect the human element necessary for successful implementation. The study highlights the importance of stakeholder engagement and effective change management in building inclusive, user-friendly digital systems. Ensuring that front-line staff are empowered as active contributors to digital transformation emerged as a key success factor in minimizing resistance and fostering ownership.

Systems (S) ensure strategic alignment and sustainability. This pillar supports integrating digital transformation into the broader strategic objectives of the KZN DSD, promoting adaptability, scalability, and institutional coherence. The systems-thinking approach adopted in this research reinforces the long-term viability of BPR efforts by accommodating evolving technologies and dynamic service delivery needs.

Together, the TIPS framework addresses the multifaceted nature of digital BPR and provides a structured pathway for achieving operational efficiency, institutional resilience, and sustainable service delivery within the department.

7.5.2 Summary of Contributions

This study makes several important contributions to public-sector business process reengineering and digital transformation, particularly in social development services in KwaZulu-Natal, South Africa.

First, it comprehensively diagnoses the operational challenges and inefficiencies currently affecting the KwaZulu-Natal Department of Social Development. It highlights key pain points, including outdated manual processes, fragmented communication, and limited technological capacity. This diagnostic insight offers a clear baseline understanding of the department's current state.

Second, the study synthesises best practices and lessons from BPR and digital transformation literature, emphasising the importance of integrated approaches that balance technology, people, and process redesign. This review informs a more contextualized

understanding of what successful transformation requires in similar public sector environments.

Third, the research identifies and articulates specific opportunities for digital transformation to improve service delivery within KZN DSD, including process automation, real-time data access, and enhanced stakeholder engagement, thus offering actionable avenues for innovation.

Finally, the study develops a tailored, context-specific BPR framework to guide KZN DSD through a structured, phased approach to digital modernization. This framework uniquely integrates governance, capacity building, communication, and technological components, offering a practical roadmap for sustainable transformation in a resource-constrained public sector setting.

Collectively, these contributions advance knowledge on effectively designing and implementing BPR initiatives in complex, developing-world government contexts, with direct implications for improving social service delivery and organizational performance.

7.5.3 Theoretical Contributions

This study extends BPR theory by integrating socio-cultural and infrastructural factors relevant to sub-Saharan African public sectors, using the KwaZulu-Natal Department of Social Development as a case. It validates emerging post-2019 literature highlighting stakeholder co-design, human capital development, and adaptive governance in digital transformation. The research contributes to the evolving context-sensitive, participatory digital public administration theory by offering a locally grounded, practically adaptable BPR framework for resource-constrained government settings.

7.5.4 Limitations of the Current Framework

Department-Specific Focus: The framework is tailored to KZN DSD, meaning its applicability to other provincial departments may require modifications. Hammer and Champy (1993) highlight that BPR success depends on organizational context, reinforcing the need for cross-departmental validation.

Qualitative-Driven Insights: While qualitative data provides depth, it lacks quantifiable metrics to assess efficiency gains, cost reductions, and adoption rates. Bhaskar *et al.* (2020) recommend mixed method approaches to validate BPR effectiveness using statistical analysis.

Short-Term Evaluation: The framework does not yet include longitudinal tracking to assess sustainability over multiple years. Kotter (2007) emphasizes that change management requires iterative assessment, reinforcing the need for long-term monitoring.

7.5.5 Future Research Directions

Mixed-Methods Approach: Future studies should combine qualitative insights with quantitative metrics to measure efficiency improvements, adoption rates, and cost savings. Davenport (1993) highlights that data-driven evaluations enhance BPR success.

Cross-Departmental Expansion: Extending the framework to other provincial departments will improve generalizability and policy alignment. Bryson, Crosby, and Bloomberg (2021) advocate for stakeholder-driven evaluations to ensure broad applicability.

Longitudinal Impact Assessment (2–3 Years): Monitoring BPR implementation over multiple years will provide insights into sustainability, adaptability, and iterative improvements. Krogh and Triantafillou (2024) emphasize that agile governance structures require continuous evaluation for long-term success.

Conclusion: While the Digital BPR Implementation Framework provides valuable insights, future research should expand its scope, integrate quantitative analysis, and track long-term impact to ensure sustainable digital transformation across KZN’s provincial departments.

7.6 Conclusion Observations

This study contributes to the growing body of knowledge on public sector digital transformation by offering a tailored BPR framework responsive to the specific context of KZN DSD. It highlights that sustainable modernisation requires more than technology investments; it demands systemic change encompassing people, processes, governance, and culture. Adopting the framework can enable KZN DSD to fulfil its mandate of delivering vital social services efficiently and equitably to vulnerable populations. The framework’s practicality and the study’s contextual depth make it a valuable resource for the KZN DSD and similar institutions.

7.6.1 Stepwise activities for the KZN DSD Implementation Framework



Figure 7:1 Stepwise activities for the KZN DSD Implementation Framework

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APPENDICES

1.1 Appendix A: Interview Guide/Questions

DAVINCI INSTITUTE FOR TECHNOLOGY MANAGEMENT

Doctor of Management Technology and Innovation: Research Project

Researcher : Victor Nhlanhla Nyathikazi (victor.nyathikazi@kzndsd.gov.za)

Supervisor : Dr. John J. Mgwenya (jj.mgwenya@gmail.co.za)

Dear Respondent

As part of my Doctor of Management in Technology and Innovation research at the Davinci Institute for Technology Management (RSA), I am conducting a research project entitled “.Developing a framework for implementing digital Business Process Reengineering: An analysis of KwaZulu-Natal Department of Social Development ”

The aim of this study is to bridge that gap by proposing a structured digital framework for Business Process Re-engineering (BPR) in social development.

The department has granted me a consent to conduct a survey refer to the enclosed approval marked as annexure “A”.

Your participation in terms of completing the following questionnaire will be appreciated and is voluntary.

You may refuse to participate or withdraw from the research at any time with no negative consequence. There will be no monetary gain from participating in this research. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Davinci Institute for Technology Management, RSA.

If you have any questions or concerns about completing the questionnaire, or about participating in this study, you may contact me or my supervisor at the addresses listed above. Thank you for your support and feedback.

Victor Nhlanhla Nyathikazi (Researcher)

Da Vinci Institute for Technology Management, RSA

SECTION A: DEMOGRAPHICS OF THE PARTICIPANT

Tick the correct shaded block.

A1: Gender

Male	1
Female	2

A2: Years' of Experience within KZN Social Development

Less than	Less than 5	1
Between	6 – 10	2
Between	11 – 20	3
Above	21 or above	4

A3: Highest Educational Qualification

Grade 12	1
Diploma or degree	2
BTech or Honours degree	3
Master's or PhD	4

A4: Level of Operation

Administrator / Social Worker / Community Development Practitioner	1
Supervisor / Senior Administrator / IT Specialist	2
Assistant Director	3
Manager / Deputy Director	4
Director	5
Chief Director / Deputy Director General / Chief Financial Officer	6

A5: Years' of Working Experience

Less than 5	1
Between 6 – 10	2
Between 11 – 20	3
21 or above	4

A6: Your Business Unit

Administrative Support Service	1
Social Services	2
Community Development	3

1.3.1 What feedback have you received from internal stakeholders regarding the efficiency of the business processes?

1.3.2 How do external stakeholders, such as beneficiaries or service users, perceive the services provided?

1.4 Resource and Skill Constraints

1.4.1 What are the skill gaps, if any (e.g., personnel, funding, infrastructure), that prevent staff from executing their roles effectively?

1.5 Policy and Compliance Challenges

1.5.1 Are there any policy-related barriers or regulatory requirements that complicate the processes?

1.5.2 How does your department ensure compliance with these regulations, and are there challenges in doing so?

1.6 Collaboration and Communication

1.6.1 Are there any issues with sharing information or coordinating efforts between teams?

1.7 Change Management

1.7.1 What do you think are the major obstacles to introducing new processes or digital solutions?

1.8 Desired Improvements

1.8.1 In your view, what changes could make the current processes more efficient and effective?

SECTION 2

2.To determine how digital BPR can be effectively implemented to address challenges in the business processes of KZN DSD (RO2)

2.1 Understanding Current Challenges

2.1.1 What are the specific challenges that your department is currently facing in its business processes?

2.2 Readiness for Digital Transformation

2.2.1 What is the current level of digital infrastructure and technology adoption within your department?

2.3 Opportunities for Digital Integration

2.3.1 Which areas or processes within your department do you believe would benefit the most from digital transformation?

2.4 Stakeholder Involvement

2.4.1 What role do external stakeholders (beneficiaries, partners, etc.) play in ensuring the reengineering aligns with their needs?

2.5 Barriers to Implementation

2.5.1 What are the potential obstacles to implementing digital BPR in your department?

2.5.2 How can these barriers be addressed or mitigated effectively?

2.6 Skill Development and Capacity Building

2.6.1 What skills do you think are lacking within the department to support digital BPR implementation?

2.6.2 What training or capacity-building initiatives could help bridge these skill gaps?

2.7 Policy and Regulatory Alignment

2.7.1 How do existing policies and regulations impact the department's ability to adopt digital BPR?

2.7.2 Are there any regulatory changes needed to facilitate successful implementation?

2.8 Measuring Success

2.8.1 What metrics or indicators can be used to evaluate improvements in business processes?

2.9 Vision for Digital BPR

2.9.1 How do you envision digital BPR contributing to the overall goals of the department?

SECTION 3

3.To establish the critical success factors for the successful implementation of digital BPR in the public sector (RO3)

3.1 Leadership and Commitment

3.1.1What commitment or support is needed from senior management to ensure success?

3.2 Stakeholder Engagement

3.2.1Who are the key stakeholders in digital BPR implementation, and how can they be effectively involved?

3.3 Technology and Infrastructure

3.3.1 How can existing IT infrastructure be leveraged or upgraded to support digital BPR?

3.4 Human Capital and Skills

3.4.1What training or capacity-building measures are necessary to equip employees for digital BPR?

3.5 Process Design and Alignment

3.5.1 How can business processes be reengineered to align with the department's strategic objectives?

3.6 Performance Measurement

3.6.1 How can the department ensure continuous monitoring and improvement of reengineered processes?

3.7 Change Management

3.7.1 What change management strategies are critical for ensuring smooth transitions during implementation?

3.8 Policy and Regulatory Alignment

3.8.1 How can existing policies and regulations be adapted to support digital BPR?

3.9 Resource Allocation

3.9.1 What resources (financial, human, or technological) are essential for implementing digital BPR?

3.10 Risk Management

3.10.1 How can the department ensure cybersecurity and data protection in newly reengineered processes?

SECTION 4

4.To design a framework tailored to the specific needs and context of KZN DSD (R04)

4.1 Understanding Unique Needs

4.1.1 What are the specific challenges or inefficiencies currently faced by your department that must be addressed in the framework?

4.2 Contextual Factors

4.2.1 What cultural, social, or economic factors unique to KwaZulu-Natal should be considered when designing the framework?

4.2.2 Are there region-specific regulations or policies that must be incorporated into the framework?

4.3 Stakeholder Contributions

4.3.1 Who are the key internal and external stakeholders that should be involved in the framework development process?

4.4 Technology Integration

4.4.1 What types of digital tools or platforms are most compatible with your current operations?

4.5 Customisation of Processes

4.5.1 Which business processes require immediate reengineering, and why?

4.6 Capacity Building

4.6.1 How should training programmes be structured to address department-specific needs?

4.7 Policy Alignment

4.7.1 How can the framework ensure alignment with national policies, departmental objectives, and regional priorities?

4.8 Sustainability

4.8.1 How can the framework adapt to evolving needs or technological advancements over time?

4.9 Indicators of Success

4.9.1 What metrics or indicators should be used to assess the effectiveness of the framework once implemented?

4.10 Tailored Implementation Strategies

4.10.1 How can the framework address potential resistance to change during implementation?

THANK YOU FOR YOUR TIME

1.2 Appendix B: Ethical Clearance Approval

The Da Vinci Institute for Technology Management (Pty) Ltd
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28 June 2022

Victor Nhlanhla Nyathikazi

victor.nyathikazi@gmail.com

Dear Victor,

**APPLICATION FOR DOCTOR OF MANAGEMENT IN TECHNOLOGY AND INNOVATION
QUALIFICATION, SAQA ID 108983 / NQF LEVEL 10 / 360 CREDITS**

Student number: 16579

It gives me great pleasure to inform you that your application for admission onto the above-mentioned programme has been accepted on condition that you are not presently registered at any other institution for another qualification.

Should you request a deferral period during your studies, please note that this will not affect the maximum duration period of the programme.

If you have any questions regarding your intended studies with us, please do not hesitate to contact Admissions on 011 608 1331 or admissions@davinci.ac.za

Yours sincerely

A handwritten signature in black ink, appearing to be "LF" or similar initials.

Louise Fuller
Registrar

The Da Vinci Institute for Technology Management
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Cell: +27 82 722 1482
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Director: B Anderson (Vice-President and Executive Chairman), B Mkhize
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THE DAVINCI INSTITUTE
for technology management

Reference: 01824

Date: 02 July 2024

Ethical Declaration

I, the undersigned, hereby declare that the Doctorate Research of the student named below has received ethical clearance from The Da Vinci Institute Ethics Committee. The student and supervisor will be expected to continue to uphold the Da Vinci Institute's Research Ethics Policy as indicated during the application.

Proposed Title: Developing a framework for implementing digital Business Process Reengineering: An analysis of KwaZulu-Natal Department of Social Development

Student Name: Nyathikazi Victor Nhlanhla

Student Number: 16579

Supervisor: Dr Mgwenya John

Co-Supervisor: N/A

Period: Ethics approval is granted from 2024/07/02 to 2028/03/01

A handwritten signature in black ink, appearing to be "A. Mgwenya".

Directors: B Anderson, N Hadebe, F Landman (Chairperson), R Steenberg

The Da Vinci Institute for Technology Management (Pty) Ltd is registered with the Department of Higher Education and Training as a private higher education institution under the Higher Education Act, 1997. Registration No. 2004/HE07/003

Chairperson: Research & Ethics Committee

Prof Paul Singh

1.3 Appendix C: Consent Form

174 Mayors Walk Road
PIETERMARITZBURG...
3201
16 September 2022

The Director
Human Resource Development
Department of Social Development

Attention : Mr VW Gumede

**RE: PERMISSION TO CONDUCT RESEARCH STUDY: MR VN NYATHIKAZI: ID
7102135402086: STUDENT NUMBER: 16579: DOCTORAL CANDIDATE: DAVINCI
BUSINESS INSTITUTE**

The supra topic has the following reference.

Mr VN Nyathikazi is currently enrolled at DaVinci Business Institute as Doctoral Candidate under the discipline of Management and Technology Innovation. The candidate is currently conducting a study entitled Digital Transformation: An investigation on Application and Implications in Enabling Business Process Reengineering in KwaZulu-Natal Social Development.

In pursuit of the success of the objective of his study which is to propose an action plan in case of Application and Implications in Enabling Business Process Reengineering as a result of Digital Transformation we would like to ask permission to your good department to conduct a survey in your Information Technology environment for the duration of ten months.

In this regard, we guarantee you that the candidate will not disturb the schedule of your staffs and general operations. We will highly appreciate the time you may allot to him upon conducting the survey.

We have enclosed the Ethics Board approval as well as the Research Proposal for your ease referencing.

Your response to this letter is crucial in providing the necessary information in his study to help him achieve the factual result.

Your response and time is greatly appreciated. We are hoping for your kind approval and support regarding this undertaking

Kind regards



MR VN NYATHIKAZI
DOCTORAL CANDIDATE
DAVINCI BUSINESS INSTITUTE
Student Number: 16579

DATE: 16 September 2022

1.4 Appendix D: Research Results

1.5 Appendix E: Language Editing Certificate

LET'S EDIT

EDITING CERTIFICATE

02 July 2025

TO WHOM IT MAY CONCERN

DECLARATION: Editing of Thesis

This is to certify that the Doctor of Management in Technology and Innovation thesis titled” **DEVELOPING A FRAMEWORK FOR IMPLEMENTING DIGITAL BUSINESS PROCESS REENGINEERING: AN ANALYSIS OF KWAZULU-NATAL DEPARTMENT OF SOCIAL DEVELOPMENT**“ and submitted **Victor Nhlanhla Nyathikazi** was edited also included for English language, grammar, punctuation and spelling by the undersigned. Editing also included addressing various formatting features of the document. The editor shall not be responsible for any subsequent additions or deletions made by the students in their document. Additionally, it is the final responsibility of the student to make sure of the correctness of the thesis.

Edited by:

Shirley Wilson

Bachelor of Arts (in Education)



Reviewed by:

Khomotso Bopape

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