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The implementation of digital transformation in the South African retail industry

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A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

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ABSTRACT

Many organisations across all industries are pressured to re-think and re-imagine their organisational structures, processes and business models in light of the digital era. This increase has disrupted organisations, as technology is changing how organisations operate, and most are pressed to move from their original business models. This transformation of business models, processes and business outcomes enabled by an organisation's ability to apply new digital technologies to transform their current business models and processes is referred to as Digital Transformation. Organisations with successful DT implementation have recorded benefits in interacting with their customers. It also results in streamlined business processes and the creation of new business models.

This study explored the current understanding, implementation drivers, and challenges of DT implementation within the SA retail sector, focusing on those in leadership positions and DT SMEs to gain insight into the current status quo and identify any misalignments within the sector. This exploratory study examines the implementation of Digital Transformation (DT) in the South African retail sector. Semi-structured interviews were used to conduct this study to explore the participants' experiences and knowledge; the study participants were individuals who were in leadership positions or were DT subject matter experts.

Some of the key research findings from the study established the understating of DT in the retail sector when participants defined DT as inclined towards process changes, process improvements, and transformation of the organisation. E-commerce emerged as a key DT trend within the retail sector.

KEYWORDS

Digital Transformation, Digital Technologies, Digitisation, Transformation

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- All participants of the study,
- My husband and 3 children for their unending and unmatched support,
- My Family, Friends and Colleagues.

Thank You!

Declaration

I, Mathandi Nkosi, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the University of Witwatersrand. It has not been submitted before for any degree or examination in this or any other university.

Name: Mathandi Nkosi Signature: 

Signed at Sandton

On the 28 February 2024

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LIST OF ACRONYMS

AI – Artificial Intelligence

BPM – Business Process Management

BA – Business Architecture

CDO – Chief Digital Officer

CEO – Chief Executive Officer

CIO – Chief Information Officer

DT – Digital Transformation

DTF – Digital Transformation Framework

IoT – Internet of Things

IS – Information Systems

IT - Information Technology

ITOT - IT-embedded Organisational transformation

RPA - Robotic Process Automation

ROI - Return on Investment

SA – South Africa

SME – Subject Matter Expert

TOE – Technology Organisation Environments

PIS - Participants Information Sheet

1. CHAPTER 1: INTRODUCTION

1.1 Statement of purpose

This is an exploratory study on the implementation of digital transformation in the South African retail industry.

1.2 Background of the study

Many organisations across all industries are pressured to re-think and re-imagine their organisational structures, processes and business models in light of the digital era (Barthel & Hess, 2019; Berghaus & Back, 2017). This increase has disrupted organisations, as technology is changing how organisations operate, and most are pressed to move from their original business models (Pagani, 2013; Barthel & Hess, 2019). This transformation of business models and business outcomes that are enabled by an organisation's ability to apply new digital technologies in order to transform their business models and processes is referred to as Digital Transformation (DT) (Wessel et al., 2020; Catlin et al., 2017), The inclined implementation of DT is also changing the competitive landscape organisations play in (Hartl & Hess, 2017).

DT changes the organisation's DNA as organisations seek to participate in the digital era (Warner & Wäger, 2019). Customers increasingly use the internet and digital platforms, and this access to the internet has changed and continues to change how most organisations engage and interact with their customers (Fitzgerald et al., 2013). Organisations with successful DT implementation have recorded benefits in how they interact with their customers, resulting in streamlined business processes and changes in the existing business models and operations (Fitzgerald et al., 2013).

1.2.1 South African Context

In the public sector, the South African government is also implementing the DT initiative to reduce the pressures of service delivery and efficiencies improvement demands placed on the government by the public (Manda, 2022)., innovativeness and competitive edge (Andriole, 2017). COVID-19 has been one of the critical drivers to most organisations embarking on DT initiatives, and the pandemic demanded that there be a change in how organisations do business

and how people do things in general (Mhlanga et al., 2022), making DT a newsworthy topic worldwide (Zaoui & Souissi, 2020). The government-imposed national shutdown in SA meant various industries were halted. Digitally enabled remote learning platforms were implemented by learning institutions to preserve national learning, human capital, and future economic activities (Mhlanga & Moloi, 2020). The South African government has also adopted technological capabilities to create an e-government strategy (Manda, 2022).

Pre-COVID, most retailers enjoyed their dominance in the market through brick-and-mortar stores housed in shopping malls and centres; the pandemic accelerated the need for these retailers, especially food retailers, to participate in the online space and provide delivery services for their customers. The transition was enabled by the investment in innovation and high technology adoption level to transform their existing operations, business models and processes. SA retailers have reported that even though most of the increased efforts in DT were driven by the pandemic, they also attribute their post-pandemic activities to being driven by the aim to attain the status of an Omni-channel retailer (Dakora & Rambe, 2022).

A study conducted by Dakora and Rambe (2022) names Shoprite, Pick n Pay, Woolworths, Spar, and Walmart as the top 5 players in SA food and grocery retailers. Table 1-1 below illustrates the technologies and innovations implemented by SA's top 5 food retailers as part of their DT journey.

Table 1-1: Summary of the Digital Technologies and Innovation in South African food retailers (Source: (Dakora & Rambe, 2022, p 72))

Organisation	Technology and Innovation
Shoprite	Mobile App, QR code payment, Virtual shopping voucher, data analytics, Website, AI, Click-and-collect. digital business unit and campus, unmanned concept store.
Woolworths	Mobile App, click-and-collect, Dark stores. e-commerce Website, home deliveries, reduced marketing waste, special loading zones for click-and-collect drive through digital skills development.
Pick n Pay	Mobile App, Social media, E-commerce Website, home delivery, click and click, e-mail shopping, partnership with TymeBank, bottles on-demand delivery App.
Massmart	E-commerce Website, click-and-collect, home delivery, digital food safety audits, use of Vada pay, Uber eats, One cart, WumDrop.
Spar	E-commerce Website, click-and-collect, Coolomat, partnership with Naveo Commerce

Like many other industries in SA and globally, the retail sector has been significantly affected by the transformation induced by the implementation of digital technologies (Nkomo & Kalisz, 2023). Research by Van Dyk and Van Belle (2019) reveals that despite the lack of literature to

assist in the implementation of DT in the SA retail sector, data analytics and cloud technology are high contributors to DT.

1.2.2 Research problem

Most business leaders desire to see their organisations transformed using new technologies (Andriole, 2017). The challenge is that most do not know how to do so, as the process is not straightforward; even though there are pockets of successful transformations, there is little research on how companies are digitally transforming (Fitzgerald et al., 2013); (Andriole, 2017), the transformation journey is not clear cut for managers (Berghaus & Back, 2017).

For some companies, it is even hard to articulate the business case for DT investment (Andriole, 2017). Berghaus and Back (2017) have defined this lack of clarity as the "Fuzyness" of the initial stages of DT. Business leaders are also faced with a challenge in understanding the digital ecosystem while under pressure to participate in DT initiatives in this so-called digital age; over and above this challenge, there are competing priorities and financial constraints as DT is a costly activity (Yucel, 2018).

Additionally, most managers find it challenging to initiate and prioritise DT initiatives due to the need for clarity on how they are implemented successfully (Berghaus & Back, 2017). This lack of consensus in the literature has also left IT professionals needing clarification on how DT differs from IT-embedded Organisational Transformation (ITOT) (Wessel et al., 2020). As a matter of survival, organisational leaders should understand the digital trends within their industries to strategically gain a competitive edge and not miss opportunities presented by the changes in the market (PÎnzaru et al., 2019). Academic literacy in the retail sector remains inadequate (Malenkov et al., 2021).

This study was conducted to explore the level of understanding, implementation drivers and challenges of DT implementation within the SA retail sector, focusing on those in leadership positions and SMEs of DT to explore the current status quo and identify any misalignments within the sector.

1.3 Research objectives

The main aim of this research was to explore the implementation of Digital Transformation in the South African retail sector, with the aim to achieve these three main objectives:

1. To determine the understanding of DT within the South African retail industry,
2. To determine the drivers for DT implementation in retail industry,
3. To understand the DT implementation challenges organisations are facing within the retail sector

1.4 Research Questions

In order to meet the set research objective the research study was conducted to answer the following research questions:

1. What I the current level of understanding of DT within the SA retail industry?
2. What are the primary drivers influencing the implementation of DT initiatives withing the retail industry in SA?
3. What are the key challenges that organisation encounter when implementing DT with the retail sector in SA?

1.5 Rationale

The covid-19 pandemic made DT implementation even more compelling for companies in all industries (Hanelt et al., 2021), increasing the pressure on organisations that have not implemented any digital initiatives as part of their customer value proposition (Musaigwa & Mutula, 2022). Even with all the pressures, some South African organisations are yet to demonstrate the effective use of technology to transform their businesses (Jeza & Lekhanya, 2022). These issues are also elevated by the limited literature on DT (Henriette et al., 2016). Musaigwa and Mutula (2022) research demonstrates that academic research on DT could be more extensive in South Africa. The completion of this exploratory research adds to the body of knowledge and covering the understating of DT and its implementation drivers and challenges in the South African retail sector. Examples of DT implementations in the sector could be used as a reference for companies in the early stages or who want to begin their DT journey.

This paper studied the implementation of DT in the South African retail sector. It explored using the Technology Organisation Environment framework (TOE) to gain the required research insights and add to the current body of knowledge. Moreover, compare how the research findings align with available literature in DT implementations.

1.6 Delimitations of the study

- This research study focused on the implementation of DT in the retail industry; emphasis was placed on the level of understanding of DT and excluded any other sector.
- The study also explored the technologies implemented as part of the different organisations' DT journeys using the Technology Organisation Environment (TOE) theoretical framework; this is the only framework included in this study.
- This study's participants only covered individuals in leadership positions within the retail sector and those who were Subject Matter Experts (SMEs) in implementing DT. Any other grouping of individuals within the organisations was not included.

1.7 Definition of terms

Digital: This term refers to an electronic technology that is powered with features to produce, store, and process data (in 0-1) (techtarget, nd)

Digitisation: This is the adaptation of data, documents, and processes from analogue to digital (TruQC, nd)

Digitalisation: Transforming business models and processes creates efficiency and potential revenue opportunities (TruQC, nd). It is also defined as altering socio-technical structures using digital technology (Osmundsen et al., 2018).

Digital technologies: These are digital tools like IoT, AI, cloud computing, and more, which are used to transform organisations' business models and processes (van Dyk & Van Belle, 2019). Digital technologies are also defined as disruptive tools (Vial, 2019)

Digital transformation: The definition of DT is captured as using digital technologies and digital resources (Bach et al., 2018) to improve an organisation's business processes, operations, customer experience and business models (Warner & Wäger, 2019).

Transformation is implementing a significant or large-scale change in an organisation or at an industry level (Tosey & Robinson, 2002).

1.8 Assumptions

This research was conducted under the following assumptions:

- The participants were available to contribute to this study for the scheduled interviews,
- The participants' inputs and insights are honest,
- That the participants' biases did not comprise the accuracy of the study outcomes and
- The assumptions made using this selected method to conduct the study do not hurt the research.

1.9 Report Outline

This research was conducted in a systematic and logical manner, the documentation of the report is divided into 6 distinct but connected.

Chapter 1: Introduction – this section of the research paper provides context and background on the topic under study.

Chapter 2: Literature review – a detailed review of literature was documented in this chapter of the report.

Chapter 3: Research Methodology – this section of the report provides the motivation for the research methodology that was followed in this study.

Chapter 4: Research Findings – this section of the paper presents the research finding from the collected data.

Chapter 5: Analysis of findings – this section provides an analysis of the research findings in colorations to the literature review and research objectives.

Chapter 6: Conclusion and Recommendation – this chapter outlines the final remarks and conclusions from the study and also provides recommendations for future research.

2. CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK:

2.1 Introduction

This research report section aims to present a detailed literature review on implementing DT in organisations. This chapter of the report is divided into two sections: firstly, the empirical review, which links literature to the research objectives, and secondly, the theoretical review, which provides a detailed and critical review of how DT is implemented with a focus on frameworks available for companies to utilise. At the end of the chapter, all aspects of the literature review were connected to provide a conclusion.

2.1.1. Background discussion

Several researchers show that there needs to be more agreement in understanding DT and its definitions. Some scholars have defined DT as using digital technology to improve business models and outcomes (Wessel et al., 2020; Catlin et al., 2017). DT is also defined as follows:

a) The transformation of business models and business outcomes is enabled by an organisation's ability to apply new digital technologies to its business models and processes (Wessel et al., 2020; Catlin et al., 2017),
b) A multidisciplinary phenomenon (Verhoef, et al., 2021),
c) The employment of digital technologies is a common thread in all the above definitions (Mhlanga et al., 2022),
d) Andriole (2017) defines DT as a deliberate digital disruption to business processes. The employment of digital technologies is a common thread in all the above definitions (Mhlanga et al., 2022).

DT is not an event; it requires thorough groundwork and guidance (Zaoui & Souissi, 2020).

Figure 2-1 below tables some real world examples of the different DT phases and compares key elements for the implementation. The table shows that key resourcess, organisationals structure, digital growth strategies, metrics and goal for each of the phases on DT

implementation.

Type	Examples	Digital Resources	Organizational Structure	Digital Growth Strategies	Metrics	Goal
Digitization	Automated routines and tasks; Conversion of analog into digital information	Digital assets	Standard top-down hierarchy	Market penetration, (product-based) Market development, Product development	Traditional KPIs: Cost-to-serve, ROI, ROA	Cost savings: More efficient deployment of resources for existing activities.
Digitalization	Use of robots in production; Addition of digital components to product or service offering; Introduction of digital distribution and communication channels.	[Above] + Digital agility, Digital networking capability	Separate, agile units	[Above] + Platform-based market penetration, Co-creation platform	Traditional and Digital KPIs: User experience, Unique customers/users, active customers/users	Cost savings & increased revenues: More efficient production via business process re-engineering; Enhanced customer experience.
Digital transformation	Introduction of new business models like 'product-as-a-service', digital platforms, and pure data-driven business models	[Above] + Big data analytics capability	Separate units with flexible organizational forms, internalization of IT and analytical functional areas	[Above] + Platform diversification	Digital KPIs: Digital share, magnitude and momentum, co-creator sentiment	New cost-revenue model: Reconfiguration of assets to develop new business models.

Figure 2-1: Strategic Imperatives according to Phases of Digital Transformation (source: (Verhoef, et al., 2021, p 892))

2.1.1 Importance of DT implementation

For most organisations, DT is strategically important and an enabler to gain a competitive advantage (Hanelt et al., 2021) and a way to maintain their relevance (Musaigwa & Mutula, 2022). It has become a top-priority item for most business executives (Hyvönen, 2018) and the board of directors (Andriole, 2017).

2.1.2 How DT compares to IT

The difference between DT and IT? Vail (2019) compares DT to IT-enabled transformation. The analysis concluded that DT is a progression of IT transformation and argues that DT is more complex to IT implementation. The fundamental difference is that DT has internal and external triggers, as its implementation is driven by societal and industry trends and the organisational decisions by leadership, while IT initiatives are implemented because of an internal organisational decision. DT project implementation is also significantly different from IT projects, as it requires a holistic view of technology and business, which requires additional capabilities for successful implementation (Barthel & Hess, 2019).

Table 1-2 below details how IT compares with DT with some examples by Vail (2019), using key implementation properties i.e. Target entity, scope etc.

Table 2-1: Comparing IT-enabled transformation and digital transformation (source: (Vial, 2019, p132))

Property	IT-enabled organizational transformation	Digital transformation
Impetus	Organizational decision.	Society and industry trends; organizational decision.
Target entity	Single organization or, less frequently, an organization along with its immediate value network.	Organization, platform, ecosystem, industry, society.
Scope	The transformation can, in some instances, be profound but is typically limited to an organization's processes and its immediate value network (e.g., suppliers).	The transformation can be profound and has implications beyond the organization's immediate value network (e.g., society, customers).
Means	Single IT artifact primarily focused on operations (e.g., ERP).	Combinations of digital technologies (e.g., analytics and mobile apps).
Expected outcome	Business processes are optimized and efficiency gains are realized; in some instances the business model of the focal organization is altered. Existing institutions remain unchanged.	Business processes are transformed and the business model of the focal organization is altered; in some instances business processes are optimized. Because of its ramifications at higher levels, the transformation raises important questions with regards to the relevance of current institutions (e.g., regulatory framework, ethics).
Locus of uncertainty	Internal: located inside the organization.	External (first): located outside of the organization. Internal (second): located inside the organization.
Illustrative example	A firm purchases an ERP and reengineers its business processes according to industry best practices as well as institutionalized accounting principles. The ERP implementation also enables increased coupling between the firm and its supply chain partners.	As consumers increasingly rely on mobile devices to purchase goods and services, a firm decides to capitalize on this trend by developing a mobile application to engage with customers. In doing so, it also captures and analyzes the data generated through customer interactions with their mobile application to increase customer proximity and enhance customer experience.

2.1.3 Growing Interest in DT

The question of where DT differs from IT is a question that still harbours in organisations (Barthel & Hess, 2019). In answering the question of what it is, there has been an overwhelming increase in the number of resources published on this topic. This shows that the topic has gained interest among scholars over the past few years (Hanelt et al., 2021). This trend was evident even before the COVID-19 pandemic. Figure 2-2 below illustrates the growth in published articles between 2000 and 2018.

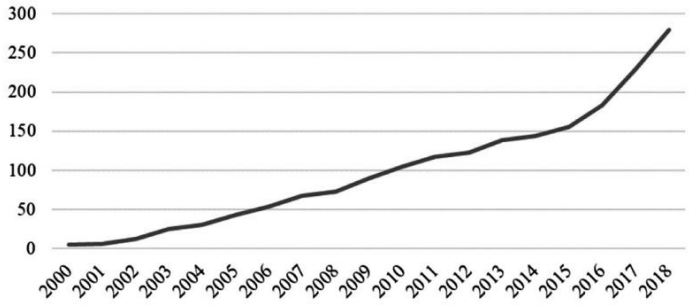


Figure 2-2: Articles on digital transformation published over time (source: Hanelt et al., 2021, p 1165).

The increased penetration rate in internet use also drives the growing interest in DT. SA has already achieved more than 80% in its population's internet penetration in 2022 and is projected to experience a growth into the 90% penetration rate in 2027 (Statista.com, 2023). Figure 2-3 below depicts the forecasted growth between the years 2018 and 2027, illustrating the expected growth in the penetration rate:

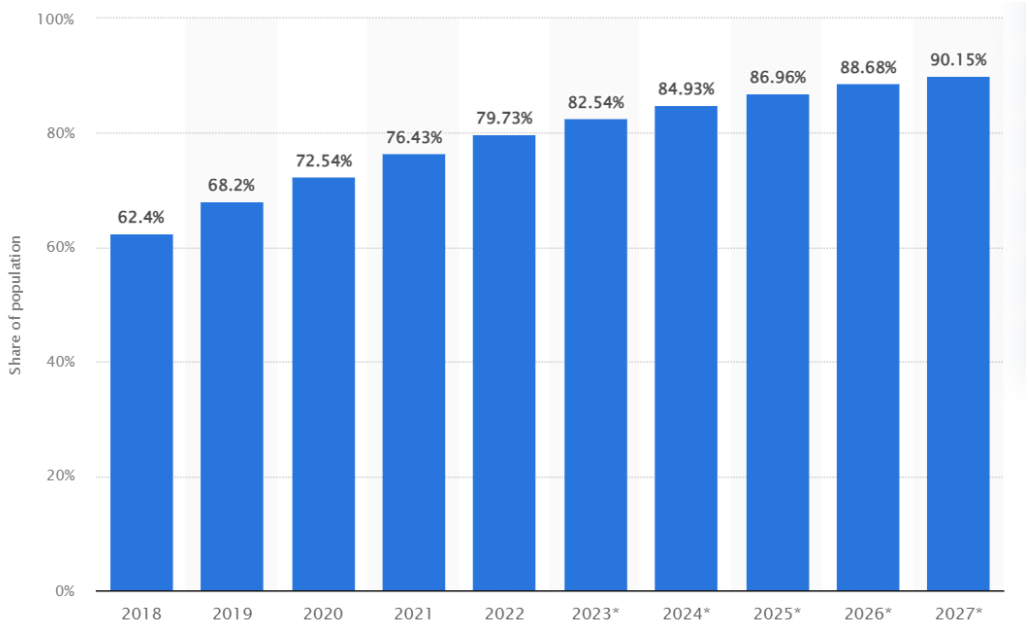


Figure 2-3: Internet user penetration in SA from 2018 to 2027 (source: (Statista.com, 2023))

2.2 The understanding of DT

2.2.1 Strategic alignment of DT to other functions

Corporations are also grappling with the balance between IT and DT. In some cases, including in literature, DT has been seen as part of IT (Segaetsho, 2019). Information Technology (IT) strategy is functional; it focuses on managing infrastructure and the current and future operational activities and is system-focused. DT strategy is business-centric, focusing on the transformations of products, processes, and the entire organisation; its implementation cuts across many organisational functions (Matt et al., 2015).

Research conducted by Wessel et al. (2020) argues that there are two main distinctions between DT and ITOT: (a) while they both make use of digital technology, DT initiatives re-define the

organisational value proposition, and ITOT supports the value proposition, (b) DT may result in the creation of a newly formed organisational identity, while ITOT, on the other hand, is focused on the improvement of the currently defined organisational identity.

Figure 2-4 below demonstrates that DT strategies cut across the whole organisation and should be implemented in alignment with all of them (Matt et al., 2015); it is holistic (Musaigwa & Mutula, 2022):

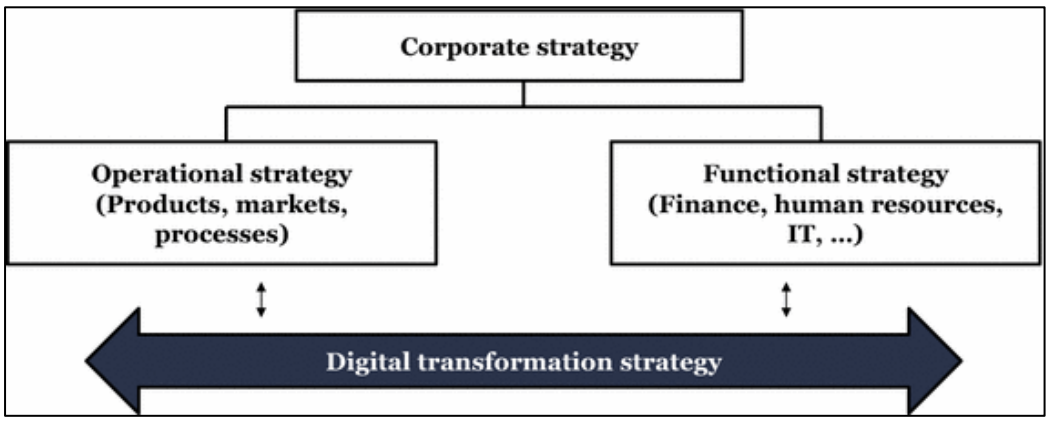


Figure 2-4: Relation between digital transformation strategy and other corporate strategies, (source: (Matt, Hess, & Benlian, 2015, p 340))

2.2.1.1 DT strategy to DT implementation

The rapid implementation of technologies comes with several challenges, which make having a clear DT strategy an essential part of the implementation of the DT in any organisation (Bach et al., 2018). A digital strategy enables business leaders to derive the maximum value from their investment in digital technologies and engage in DT (Ross et al., 2017). A digital strategy is put together to provide business leaders with clear direction on how DT is achieved; it also provides a clarity of purpose (Brown & Brown, 2019). The DT strategy is a platform for crafting a shared vision of DT; the strategy development depends on each company's specific needs and level of maturity in DT (Ivancic et al., 2019).

2.2.1.2 Digital Business Strategy

DT's pace and its impact continue to fundamentally impact organisations, fostering reworking and reshaping organisations to move from traditional models to technological ones (PÎnzaru et al., 2019). The implementation of DT is set to bring changes within an organisation; this includes changes to organisational strategy, structures, processes and culture (Margiono,

2021); changes to business strategy are inevitable (Gomes et al., 2019); DT is also viewed as a strategic intervention (Mhlungu et al., 2019), DT strategy is the link between DT and a digital business strategy (Brown & Brown, 2019). A *digital business strategy* is defined as a business strategy that highly relies on digital technologies to deliver value to its customers (Grover & Kohli, 2013). The study results by PÎnzaru, Zbuchea, and Vitelar (2019), when interviewing CEOs of companies, concluded that there is value in a digital strategy. One of the CEOs stated that the formulation of a digital strategy should cover the following two key elements: new technologies to be adopted and how their old business models are transformed.

2.2.2 The key elements of DT

The critical elements of DT implementation are technology utilisation, change in value formation, organisational structural changes, and any monetary elements. These elements create more value when implemented as a framework, and organisations can identify implementation gaps and craft their digital strategy (Matt et al., 2015).

Figure 2-5 below depicts how a balance between the four transformational dimensions as part of DTF can be attained:

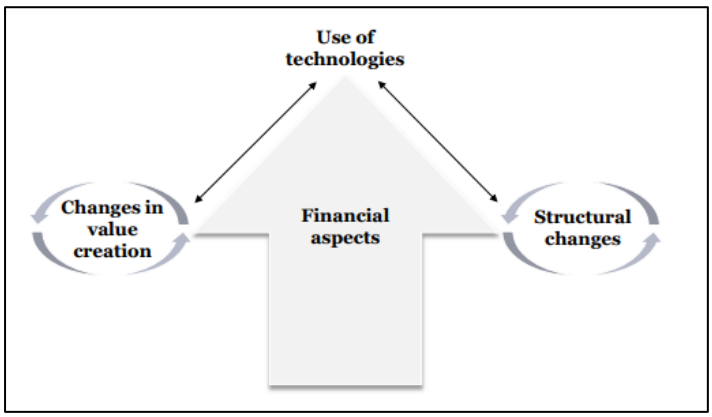


Figure 2-5: Digital Transformation: balancing four transformational dimensions (source: (Matt et al., 2015, p 341))

2.2.2.1 Technology

Use of technology refers to the extent to which a company utilises new technology and the approach it chooses when using technologies. Are they aiming to be industry leaders and create

standards in technology, or are they content with using technology as an enabler for them to achieve their operational target (Matt et al., 2015).

2.2.2.2 Value Creation

New technologies often lead to business benefits and more value created through the improvements or changes in the companies' value chains. This means doing away with the old ways or moving from the core business to new digital products or offerings; this may also necessitate new capabilities and open the company to the risk of possessing the required competencies to perform at the desired levels (Matt et al., 2015)..

2.2.2.3 Structure

Structural changes are necessary changes to how the organisation is structurally set up in support of its new operations; the level of the new structure is dependent on the extent of change in the products and processes, and minor changes may require the current resources to be reused. In contrast, significant changes may necessitate a new structure to be set up altogether (Matt et al., 2015).

2.2.2.4 Finances

Matt et al. (2015) emphasise that the above dimensions can only be transformed if the financial aspects are considered. Financial aspects are the driver of DT, but the current financial constraints in most organisations might result in difficulty funding the transformation.

2.2.3 DT implementation framework

Research work produced by Catlin et al. (2017) provides a three-stage framework with guiding principles for implementing DT, with the proscribed steps to be completed in each stage. Figure 2-6 below illustrates the ten guiding principles within the three-stage framework for a successful DT implementation (Catlin et al., 2017):

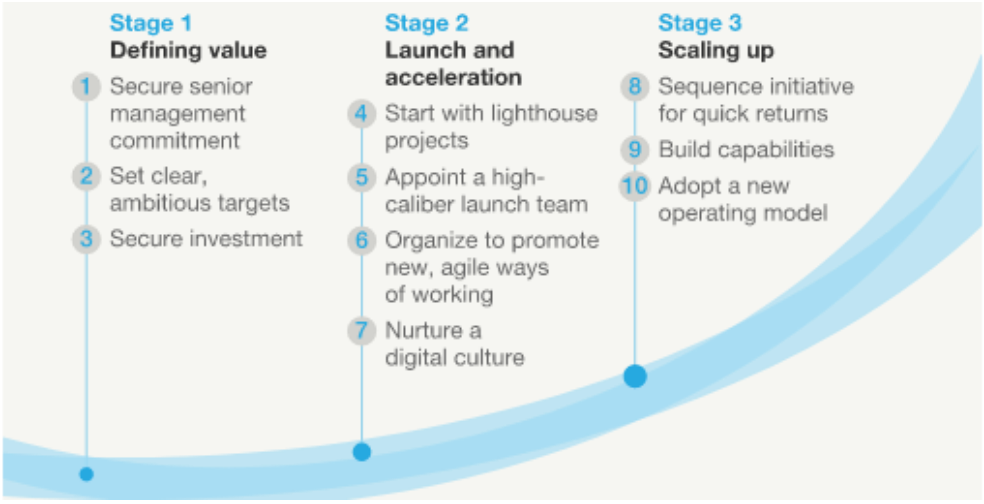


Figure 2-6: Ten guiding principles of digital transformation, source (Catlin, et al., 2017, p)

Stage 1: Defining value

Firstly, management commitment and clear targets should provide a clear picture of the journey ahead and what needs to be done. It also ensures everyone is kept in check and ensures project implementation is aligned with the end goal (Catlin et al., 2017). Thirdly, secure investments and the availability of finances are critical drivers of the success of any DT implementation (Matt et al., 2015).

Stage 2: Launch and accelerate

The next step is to start with lighthouse projects. These projects should have high returns and a high impact on customers. The appointment of a high-calibre team is the fifth principle to be considered. As a sixth principle, leadership should organise to promote new agile ways of working by setting up a new digital team fast and rack the new agile ways of working. Foster digital culture – there is a need for culture changes; the adoption of digital ways of working and thinking should be seen beyond the newly appointed digital team. For transformation to occur, the whole organisation needs to be more innovative in working and thinking (Catlin et al., 2017).

Stage 3: Scaling up

Then, sequencing and organising projects for quick return initiative prioritisation is essential to ensure DT becomes self-funding quickly. The ninth principle to be considered is building

the capabilities required for the new ways of work. Organisations must invest in upskilling their teams. The tenth and final principle is to adopt the new operating model; this requires change management to ensure that the whole organisation accepts the change (Catlin et al., 2017).

1.1 The drivers for DT implementation

Liere-Netheler et al. (2018) state that the implementation of DT in manufacturing is (a) process and quality improvement, (b) cost reduction, and (c) customer demand as more and more customers are demanding are utilising digital platforms. In the retail sector, there are additional triggers, like the need to move to Omni-channel retailing, enabling retailers to provide seamless customer service (Verhoef et al., 2015).

The case analysis conducted by Berghaus and Back (2017) highlighted that companies engage in DT to achieve the following internal objectives to improve: digital readiness, digital offerings, business models and digital channels. Berghaus and Back (2017) goes on to further explain that DT is also triggered by multiple external sources, highlighting the critical drivers for DT as follows:

Customer behaviour and expectations: Due to the increased adoption of digital technology by the end users and customers and interest in new technologies amongst customers inclined to technologies like artificial intelligence (AI), blockchain, and the Internet of things (IoT) (Verhoef et al., 2021). These technologies are disruptive (Manda, 2022; Vial, 2019) and drive organisations to transform digitally (Margiono, 2021).

Industry shift: The changes and transformations in many industries are compelling most organisations to adapt and transform as a matter of survival (Berghaus & Back, 2017). There is also an increase in new technologies in the market and digital customer behaviour, which changes customer expectations as a response to the available digital technologies (Verhoef et al., 2021) (Jeza & Lekhanya, 2022).

Regulatory requirements: In some cases, for example, the insurance sector regulative changes trigger DT initiatives in a product landscape (Berghaus & Back, 2017).

2.3 The DT implementation challenges

2.3.1 Key Implementation Challenges

In the study conducted by Van Dyk and Van Jean-Paul (2019), the critical barriers to DT adoption were reported as follows: lack of a clear digital strategy, digital talent management, company cultures, leadership, IT function transformation and Omni-channel. An article by Catlinet et al. (2017) notes that some organisations agree that the first few months (0-18 months) of DT implementation presents some challenges. In the research conducted by Pagani (2013), it was claimed that literature studies need more consensus on how technology has evolved over the years across different industries. DT literature also highlights that DT is not immune to the same challenge, as some studies have noted that there is no standard view among scholars on what DT is (Warner & Wäger, 2019) with no holistic view (Hyvönen, 2018). There are some challenges in the implementation of DT; the list below highlights some institutionally embedded challenges that hinder the success of DT in most organisations (Fitzgerald et al., 2013).

Older workers' attitudes are resistant to change; the older workforce shows a different excitement and euthanasian for technology than the younger generation does; one of the challenges is that most managers are 55 and above (Fitzgerald et al., 2013).

Legacy technology – unlike the stereotype stated above regarding the older workforce, the issue of legacy systems or old systems is legitimate. Research shows that this is one of the top barriers to implementing DT; they are complex and do not easily integrate with new technologies (Fitzgerald et al., 2013).

Innovation fatigue – too many changes taking place and no time to absorb the new ways of doing this is one of the reasons DT initiatives fail.

Politics – most organisations are infested with internal politics and power plays. This can be between individuals or even departments; unfortunately, in most cases, this is to the organisation's detriment (Fitzgerald et al., 2013).

2.4 Critical success factors for DT implementation

Schwertner (2017) states that leadership and organisational culture are integral to the success of DT implementation. In their paper, PÎnzaru, Zbuchea and Vitelar (2019) indicate that the 2016 World Economic Forum report cited that companies with a global competitive edge are enabled by their organisational culture, strategy, and operations. The change in organisational culture is an essecitial element for successful DT completions (Catlin et al., 2017); the culture changes should be managed by the organisational leaders (Berghaus & Back, 2017); culture has often contributed to some of the failures in DT (Hartl & Hess, 2017). The ability to leverage external and internal knowledge, leadership support and employee engagement (Piccinini et al., 2015), and the intentional management of the transformation journey (Berghaus & Back, 2017).

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2.5 ANALYTICAL FRAMEWORK

2.5.1 The Technology Organisation Environment (TOE) Theoretical framework

The TOE framework focuses on an organisational level, citing three elements (technology, organisation, and environment) within an organisational context (Dwivedi et al., 2011), detailing the impact and influence these elements have on implementing technology and innovation. A study by Awa et al. (2017) confirmed that the TOE framework has a more significant impact on adopting technological changes than individual factors.

Figures 2-7 below depict the key variables relevant to the TOE elements that affect the technology innovation decision-making process.

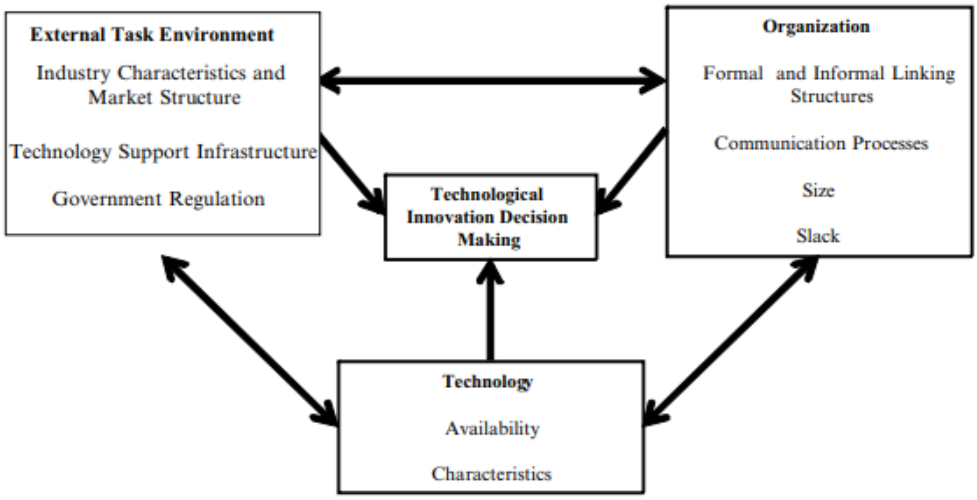


Figure 2-7: The technology–organization–environment framework (source: Van Dyk & Van Belle, 2019, p521))

2.5.1.1 Technology

Technology refers to the existing technologies an organisation uses as part of its innovation and technological implementations and other technologies new or relevant to an organisation (Modiba & Kekwaletswe, 2020). Including the technologies and innovations not yet in use within an organisation is vital as they depict the limitations and opportunities available to the firm to evolve in its DT journey. Organisations are to assess and understand the impact of new technologies technologies on their organisation (Dwivedi et al., 2011).

2.5.1.2 Organisation

The organisational context refers to the organisation's unique characteristics, like the structures, size and resources, and communication processes, as it may enable or inhibit the desired adoption of innovation within an organisation (Dwivedi et al., 2011). Top management support is also identified as a critical organisational factor in adopting technological changes, as it influences the availability of resources and other organisational factors (Bhattacharya & Wamba, 2015).

2.5.1.3 Environment

The environmental context refers to the environment in terms of the business environment, market and industry in which the organisation operates (Nguyen et al., 2022). The

environmental factors include the competitors and the pressures they present in the industry; even though they are external to the organisation, they may affect an organisation's strategy and how it operates (Bhattacharya & Wamba, 2015). Government regulations also greatly influence industries and organisations (Dwivedi et al., 2011).

2.5.2 Conceptual Framework

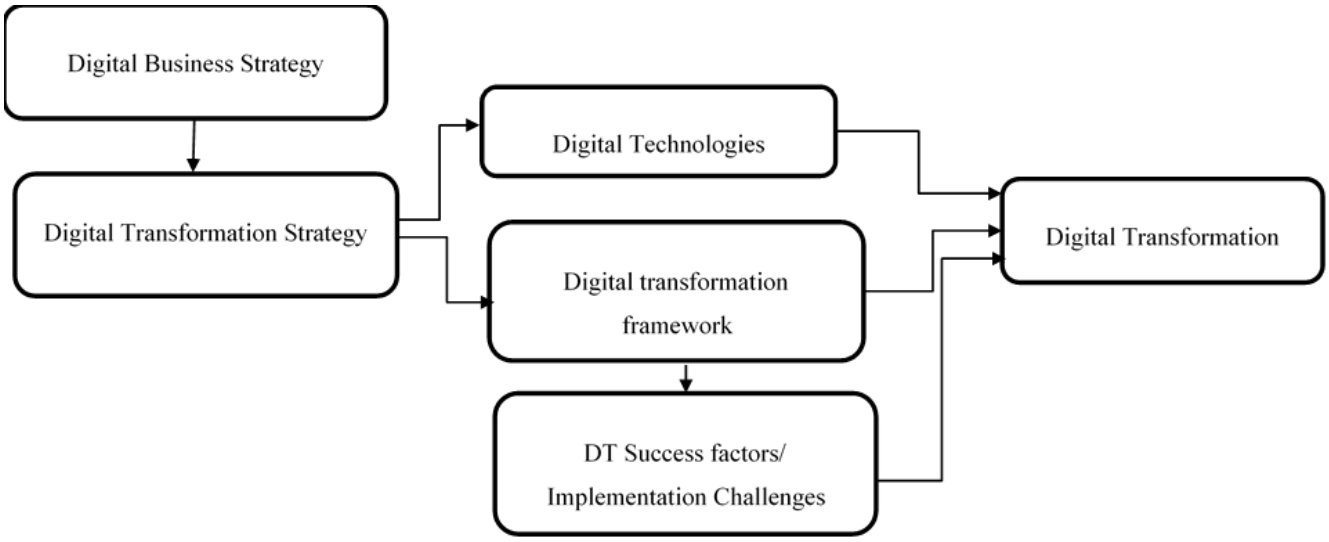


Figure 2-8: The Digital Transformation Conceptual framework

2.6 Conclusion of Literature Review

Despite the differences in the definitions of DT, digital technology is a common theme across all. The common themes go beyond just the digital technology; it shows that irrespective of industry, the implementation of DT initiatives comprises the same elements: increased technology utilisation, change in value formation, organisational structural changes, and any monetary elements; they have inherent dependencies. These four transformational dimensions are essential in successfully implementing DT; their implementation in collaboration forms a Digital Transformation Framework (DTF).

3. CHAPTER 3: RESEARCH METHODOLOGY

Research is an investigative process that is scientific and aimed at gaining knowledge in a specific field or topic (Kothari, 2004). Research methodology in this context does not refer to a method but a systematic or theoretical analysis of the methods; it is also defined as the research strategy (Igwenagu, 2016). This study was exploratory; it examined the implementation of DT to determine the understanding within a group of professionals leading or involved in its implementation in different retail organisations. This study was conducted using a qualitative research methodology, and the research findings were not quantified or analysed through any statistical analysis (Rahman, 2017; Baškarada, 2014). Qualitative research presents its findings in a non-numerical format, providing an overview of the unfamiliar topic in a descriptive form (Polit & Beck, 2010). This chapter covers the following elements of the research methodology: the research paradigm, approach and design, and how the data will be collected and analysed.

3.1 Research paradigm

According to Saunders et al. (2016), several philosophies influence business research: critical realism, interpretivism, positivism, postmodernism and pragmatism. The interpretivism paradigm is the most appropriate for this study, as it explores the knowledge and experiences of participants (Saunders et al., 2016).

3.2 Research approach

The qualitative research method was chosen as the study seeks to collect information from participants to gather their thoughts, experiences and understating of the topic under study (Starman, 2013). Out of the numerous methods available for qualitative studies, semi-structured interviews were conducted with the identified participants who are leaders of the transformation or SMEs in the field of DT. This method is also relevant for this study because qualitative studies seek to avoid generalisations of findings and instead gather responses to gain a deeper understanding of the topic (Naderifar et al., 2017). Qualitative research is most applicable when there are no pre-determined hypothesis theories about the topic, and it fits best because this study seeks to gain an understanding and increase knowledge about the topic based on how DT is implemented in organisations (Marshall, 1996).

3.3 Research design

There are three theoretical frameworks relevant to the design of qualitative research, namely phenomenology, hermeneutics and ethnography (Zireva, 2013); this study, the researcher adopted phenomenology as an approach, as the data in this research will be founded on the words of the research contributors as per their own knowledge and experiences (Zireva, 2013). This method in qualitative research preferred by the researcher as it works best in exploratory research and gain insights or understanding from individuals or groups about a particular problem (Creswell & Poth, 2016). After the data gathering, the researcher followed the systematic transcription, coding, and analysis procedures described below.

3.4 Data collection methods

The semi-structured interview was the chosen method to engage participants in exploring how DT is implemented and managed in their current or past organisations. Interview guides were used a the research instruments essential questions that provide structure but allow for exploring other areas during the interview during the semi-structured interviews (Gill et al., 2008). For a copy of the interview guide, refer to Appendix B. It was used to guide the interview proceedings and to ensure focus and structure in the engagement. However, the conversation was not limited to the questions in the guide, allowing the interviewee the flexibility to share additional knowledge and experience they have on the topic. The length of the interviews was set at 1 hour, and follow-up sessions were scheduled should there be a need. The sessions were recorded, and voice-to-speech transcripts were generated utilising software and then reviewed to ensure accuracy. Manual notes were also taken on a Microsoft Word document during the interview.

3.4.1 Population and Sample

3.4.1.1 Population

The population is the entire group of people with the same characteristics or qualities; from a logistics and cost point of view, researchers can only conduct a study covering some of the population (Edmonds & Kennedy, 2016).

Figure 3-1 below illustrates how a sample is derived from a population using Astronauts as a population and sample being NASA Astronauts.

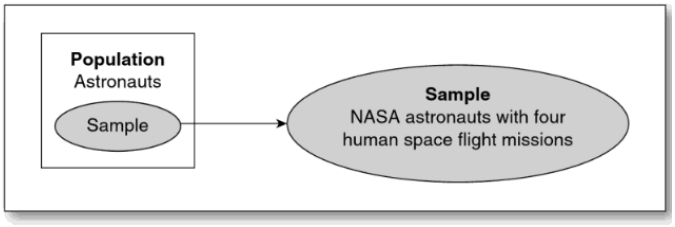


Figure 3-1: Example of how a sample is extracted from a population (source: (Edmonds & Kennedy, 2016, p19))

3.4.1.2 Industries

This research was conducted on different organisations within the South African retail sector.

3.4.1.3 Participants

This includes leaders involved in strategy and decision-making in DT implementation and possible DT preferential who are responsible for DT implementations through identifying roles.

3.4.2 Sample and sampling method

3.4.2.1 Size:

A sample represents the overall population (Edmonds & Kennedy, 2016). The study targets to interview a sample size of 10 participants who are in leadership positions and those who are SMEs. This final number depends on the saturation point of the research; the principle of between 4 and 12 participants was applied for this research as the non-probability method was adopted (Saunders & Townsend, 2018).

3.4.2.2 Sampling method:

Because this is a qualitative study, a non-probability sampling method was applied as it is generally the standard method used in this type of study (Naderifar et al., 2017). According to Naderifar et al. (2017), the knowledge of those who form part of the sample is one of the

characteristics of a non-probability method; a definite list of participants was created (Saunders & Townsend, 2018), and the research knew the participants prior to the study.

A judgemental sample and snowball method were adopted to complete the study. Judgement is considered a standard sampling method; it is also known as a purposeful method; snowballing came into effect when the first set of participants recommended other SMEs in the field to contribute to the study. The framework to be applied in this case is a critical case sample (Marshall, 1996).

3.5 The research instruments:

To complete this study, semi-structured interviews were conducted utilising an interview guide with a set of questions which were structured using the TOE elements, section A Environment which entails the industry, market and competitive landscape; section B Technology, which refers to the technologies which are adopted and those not adopted and section C Organisation this talks to the internal setup, the structure, resourcing, processes and culture. Appendix B depicts the interview guide with the questions asked in this study.

3.6 Procedure for data collection

The first set of participants were contacted directly to request participation in the study and confirm interview logistics. Once the interview was confirmed, then one-on-one, face-to-face 1-hour session were held. The participants were requested permission to record the sessions for the active interview session. If participants do consent, the interviews continue with the recordings of the proceedings. If no consent to record were given, the interview would only be recorded by physical notes. Copies of the interview documents are saved for five years in an access-controlled cloud folder belonging to the researcher.

3.7 Data analysis strategies and interpretation

The data was analysed using an inductive method. Thematic analysis was conducted in this study as it is a methodology that allows the researcher to determine any themes from the collected data (Burnard et al., 2008).

The themes and patterns in the data are not the interview questions used to conduct the research but the repeated patterns of inputs from the interviewee in the form of explanations, meanings and connotations provided during the research (Maguire & Delahunt, 2017). The researcher must search the data to identify these patterns (Braun & Clarke, 2008).

The researcher followed the six steps to conduct the thematic analysis as Braun and Clarke (2008) prescribed. Table 3-1 below highlights the summary of thematic analysis steps by Braun and Clarke (2008) with guidelines of what is to be covered in each phase.

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Table 3-1: Phases of thematic analysis (source: Braun & Clarke, 2008, p87)

3.8 Quality Assurance

3.8.1 Transferability

Transferability refers to the truthfulness or rigour of the study. Truthfulness in research is critical, as qualitative studies were reported to lack truthfulness or justification in the past. To demonstrate the integrity of the study, prolonged engagement was applied to allow participants to engage with the researcher in-depth; this tactic was applied because prolonged engagements are reported to improve the rigour of qualitative study (Muhammad, 2015). Figures 3-2 below illustrate the different strategies that can be applied in qualitative research studies to obtain transferability.



Figure 3-2: Strategies for Transferability for Qualitative Research (Source: (Creswell & Poth, 2016, p260))

To ensure the quality of the research outcome, the research was conducted using some of the strategies for transferability for qualitative research by Creswell and Poth (2016). Researchers' Lens: The researcher triangulated the data through notes taken during the interview and the interview voice recording. The researcher's biases were checked and reflected upon through the peer-to-peer review. Participants' Lens: Prolong the engagements with the participant by having interview session durations set between 60 minutes and 90 minutes. This allows enough time for interaction and follow-up questions to ensure integrity. Allowing participants to review the transcript and provide feedback or amendments to the data. Readers Lens: Generations of rich and thick data descriptions were adopted to avoid ambiguity and misinterpretation of the report. The use of an editor as a method of peer review and a research supervisor was also engaged to review the research report and provide inputs and feedback

3.8.2 Dependability

To increase the accuracy of the interview outcomes, the interview transcripts were made available to the participants for validation of the captured information after the sessions; this was also done to ensure the dependability of the collected data (Burnard et al., 2008). To ensure that there is a clear audit trail, all interview recordings and transcripts are stored securely and can be accessed if required.

3.8.3 Credibility

Credibility issues in qualitative studies pertain to the confidence levels of truthful research findings (Anney, 2014). Partnering and mirroring are some of the ways research can improve the study's credibility. A partner is used to listen to the interview recording and to check for similarities or differences in interpretation (Shufutinsky, 2020). An editor was also used to confirm the transcript and recordings. Participants were given transcripts to check the credibility of the captured information (Cope, 2014).

3.8.4 Confirmability

To ensure confirmability, the information was validated and verified with participants using the tabular reflection and analysis of alternate meanings (TRAAM) model utilised during the semi-structured interviews (Shufutinsky, 2020). Follow-up questions were utilised to confirm meaning and where clarifications of responses were required. Participants were provided with a copy of their transcript after the interview sessions to validate the captured data and interpretations that the researcher made. Figures 3-3 below indicate the TRAAM model applied to ensure participants were allowed to clarify the meaning of their statements where required.

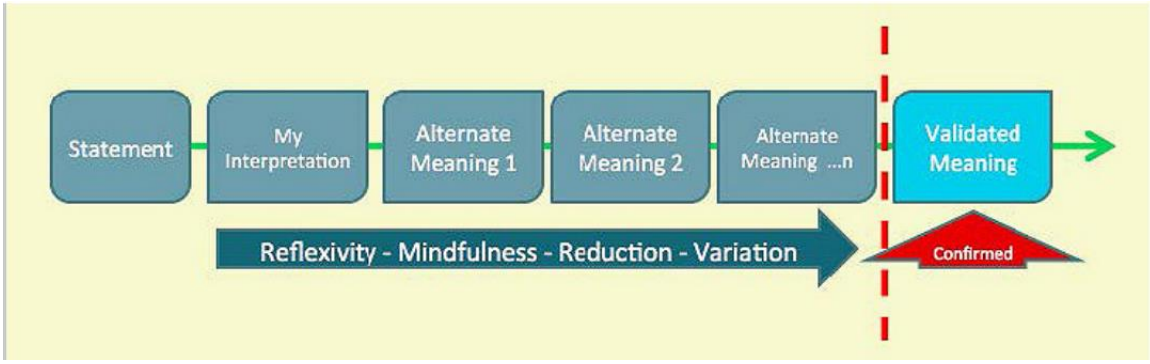


Figure 3-3: TRAAM Method Model (source: (Shufutinsky, 2020, p56))

3.9 Ethical considerations

Ethical consideration includes ensuring consent from participants is obtained, the participants are informed about the purpose of the research, the research methods and how findings were handled, and issues of anonymity and confidentiality (Rahman, 2017). It is vital that study participants clearly understand what is required of them and that they should agree to

participate voluntarily in the research. The participants' ability to provide permission is also vital in the study (Arifin, 2018). The participant was emailed a letter stating that participation in the study is confidential and anonymous and that participation should be voluntary; a copy is found in Appendix A. The participant's personal information was not recorded or shared as part of the findings of this study, and this research was conducted with high ethical consideration. The protection of the research participants remains a high priority.

The study was conducted by strictly observing the Wits Business School ethical guidelines. Ethical clearance was obtained from the WBS, and a copy is attached as Appendix C. Face-to-face semi-structured interviews were conducted in a private boardroom, and participants were also up-to-date that they are at liberty to pull out from the study at any point if they see the need to do so. The interview recordings and transcripts are also stored in a password-protected cloud-based file, which only the researcher can access as part of the research process (Arifin, 2018).

4. CHAPTER 4: RESEARCH FINDINGS

4.1 Introduction

This chapter captures the outcomes from the 6 individual face-to-face semi-structured interviews conducted with professionals in different South African retail organisations. The research is conducted with the focus of achieving the three main objectives:

- To determine the understanding of DT within the South African retail industry,
- To determine the drivers for DT implementation in the retail industry,
- To understand the DT implementation challenges organisations are facing within the sector.

An interview guide was utilised to conduct the semi-structured interviews with 19 questions clustered into 4 groups, utilising the TEO framework to create a focus for the study. 7 questions focused on the Environment, 5 on the Technology element and 6 on the organisational factor; lastly, the participants were asked if they had any final comments on the topic under study. Thematic analysis methodology was applied by identifying codes from the data and then creating themes. The researcher determined the codes and themes from the findings as illustrated in Appendix D. The interview data was processed using software to create the codes, then focused codes and themes. The selection of themes is prioritised based on the number of participants mentioned. The findings are presented through quotes from the participants'.

The following themes were emergent from the study:

- Understanding Digital Transformation
- Leadership and Strategic Alignment
- Implementation Challenges

4.2 Demographics of participants

The participants of the study were made up of a combination of participants in leadership positions and SMEs. Figure 4-1 shows that the study had 75% participation from DT SMEs and 25% from individuals in leadership positions. The participant's experience in retail was as follows: 2 participants had retail experience of between 6 – 10 years, and 4 participants had

over 10 years, as illustrated in Figure 4-2, Figure 4-3 shows that the study participants were all males 6 (100%).



Figure 4-1: Participants' level in the organisations



Figure 4-2: Participants' years of experience in retail sector

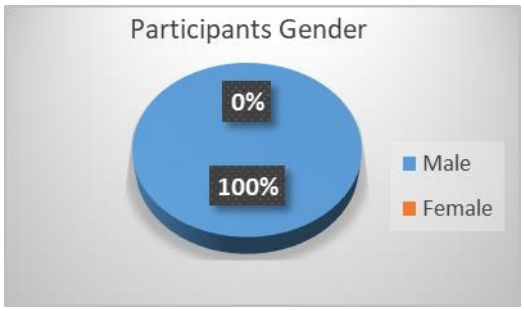


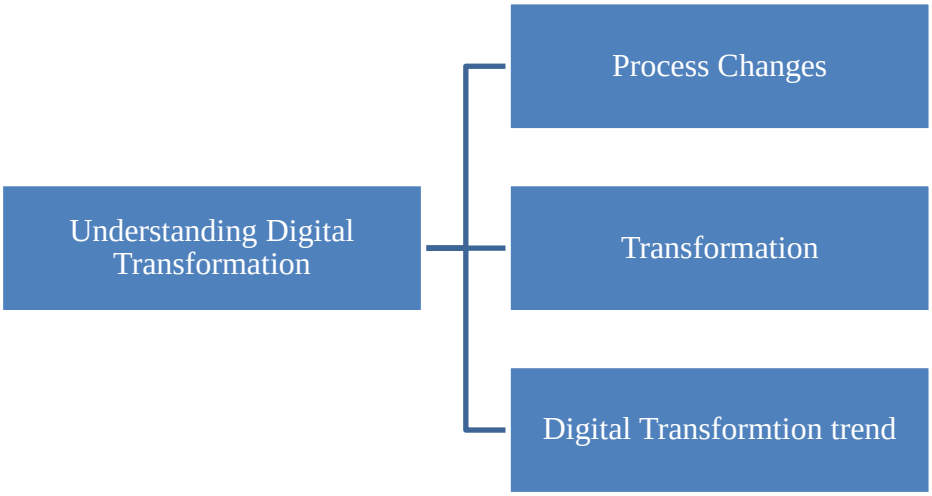
Figure 4 3: Participants' Gender representation

4.3 Objective 1: To determine the understanding of DT within the South African retail industry,

The study's first objective seeks to determine the understanding of DT amongst those who work in the retail industry. From the research results, it is clear that the understanding amongst the compatriots in the sector varies. The central theme was understanding Digital transformation with three sub-themes: (a) Process Changes, (b) Transformation, and (c) Digital Transformation trends:

4.3.1 Understanding Digital Transformation

All participants mentioned what they perceived DT to be; unexpectedly, one supplemented their response by explaining what DT is not in their definition



4.3.1.1 Processes Changes

In defining DT, all participants had their meaning of what DT is; interestingly, even with the differences in meaning, they perceived that DT had to do with changing or improving processes using technology or through digitization. Emphasis was placed on moving from manual processes to technology-enabled process execution. Below are extracts from the participants:

> *"...It's the idea that you are identifying ways to take traditional processes and traditional ways of working or serving customers. And you are applying modern technology and the latest capabilities to automate or to improve and enhance through systems, those ways of working or those processes, right? And the end goal is to be able to have true value for customers or for associates or for the business in the process."* - ***Participant 1***
>
> *Digital transformation is changing the organization or the company from their traditional way of doing things to move them to the digital environment, it's to digitize some of the functions and digitize some of the processes…"* **- Participant 2**
>
> *"My opinion digital transformation is taking manual processes or procedures and automating them or repackaging them with more efficient digitized tools, whether it be touch screens, tablets, cell phones, scanners... And also I think a large part of it I think*

is also the information piece. If you can digitize information, you can then absorb it better and show it better." **- Participant 6**

Process changes were prevalent in their examples when asked about some of their key DT initiatives. Below are extracts from the participants:

" …a final mile orchestration layer and yeah, it obviously works with other applications to figure out which courier should be given which products and all the rest of it based on the built-in logic….a digital pick – pack and dispatch system. And then we've got micro-services … which is a courier determination engine ...this are some of the process automations we have. I haven't seen, and I would doubt that we have any RPAs running in this company. And if we do, I think it's very, very basic where we probably using a chat bot or WhatsApp or something like that…" **Participant 3**

"…from a fulfilment point of view, we have systems that give us multiple ways in which we can service the customer from multiple locations so it's not just a store… we have done some process changes … to be able to fulfil from a distribution centre where there's large amounts of stock, we don't have walking customers that are interrupting and it's a far smoother and cost effective way in terms of servicing the customer." **- Participant 4**

"So from an automation perspective, the business is moving to automated workforce management, moving from the point where rosters used to be done manually on an Excel spreadsheet… We've got a workforce management tool now that's been adopted and that's going to automate scheduling of resources." **- Participant 5**

4.3.1.2 Transformation:

In defining DT, all participants had their meaning of what DT is; interestingly, even with the differences in meaning, they perceived that DT had to do with changing or improving processes using technology or through digitisation. Emphasis was placed on moving from manual processes to technology-enabled process execution. Below are extracts from the participants:

"And I always frame it that way because I think serious transformation comes with three things. Firstly it comes with financial investments that needs to be sustained over a long period of time,…It comes with Executive committee level sponsorship starting

with the CEO….And then the third is that it comes with a certain level of expertise in not just what technology can do, but also change management, which tends to be the missing piece in the puzzle. And that's also a skill in terms of how an organization can drive the change management component of transformation." **- Participant 1**

"…yeah, so basically it's moving or transforming the organization from its traditional functions to a digitally enabled environment" **- Participant 2**

"So I think digital transformation for me is generally always a fairly large program because I mean, it's implied I suppose in the word transformation, and it's about how do you take your organization from where it is almost into the future if you think about it...I think it's a more holistic approach to customer accessibility both ways." **- Participant 3**

One of the participants mentioned that their organisation is implementing a digitally enabled programme, but they are not necessarily transforming. The extract below is what the participant said:

"…the organization is digitizing. There is budget for digitization and digitization programs, but it's not necessarily a digital transformation agenda that we have as an organization." **Participant 3**

4.3.1.3 Digital Transformation trend

When asked about the leading sector of DT in South Africa, the participants were generally aligned, with 3 of them routing for the Banking Sector as a leader in the South African DT evolution, 2 for the Telecoms, and 1 for the Retail Sector.

Below are some of the extracts from the participants with the motivations for their choices:

*"…they introduce the digital way of banking where you no longer have to do the deposit slip if you're familiar with it. …they're the first one who introduced the prompt comment to at *1 1 2# to get your balance…Even this year 2023, I've never been in the bank, but I've done a lot of transactions that involved the bank…"* **- Participant 2**

I would say the banks are really good. If you think about it from banking apps and stuff and even some of their platforms, you'd be shocked, I don't know if you've done the research, but some of other simple things like instant pay and we take for granted, I believe in

America, they still deal with checks for example at times. So I do think our banking sector is quite good from an app's perspective and digitization of the banking experience." **- Participant 6**

It was exciting to find 1 participant indicating that the retail sector is a leading sector, referring to the e-commerce and on-demand grocery strides made in this sector

"So I think in digital transformation point of view...he grocery sector has led the change in how people perceive e-commerce and what it can do for them. So the developments and the changes that happen in that sector, particularly by one brand was hugely transformational in the way people saw e-commerce and how they saw what digital transformation could do for their lives and making things simpler, easier, and more accessible than ever before" **- Participant 4**

When the focus was directed to the retail sector, some 4 participants aligned; 3 of the participants mentioned that their organisations need to catch up compared to other players in the sector, and 1 participant highlighted that the SA retail sector needs to be faster in the use of DT. Below are some of the extracts from the participants:

"..DT is taking over the markets in a lot of sectors, but retail is slow and if the organization don't capitalize on DT now there will be fullback in the future. For instance, in my organization we still investing in old systems… there's a lot of tools that have been built that are supporting AI that will make the consumer experience more better…" **- Participant 2**

"I think certainly one of the things we are known for is a good customer experience of a customer shopping in our brick and mortar stores. From an Omni-channel point of view, we are behind the curve in terms of having product digitally available to the customer..." **– Participant 4**

" ..We've digitized some of our receiving from our DCs, I believe we're very similar in a lot of what has been done to our normal retail competitors. I think maybe where we are behind from the "Pure Play" companies in the retail sector" **– Participant 6**

When defining DT for the retail sector it was directly linked or defined as e-commerce by 4 of the participants. Below are some of the mentions made with reference to e-commerce:

"…e-commerce, which is the main digital transformation of the organization…" - **Participant 2**

....so I think e-commerce, certainly the on demand piece is the main shift within the retail sector… **- Participant 4**

"Yeah, look, the one thing I've come to note is that there's a big move towards e-commerce platforms. So traditional brick and mortar retailing will continue to exist for a long time because everyone likes the look and feel, but there's that emerging customer that says, I know what I want. I don't necessarily have to drive anywhere to get it" **- Participant 5**

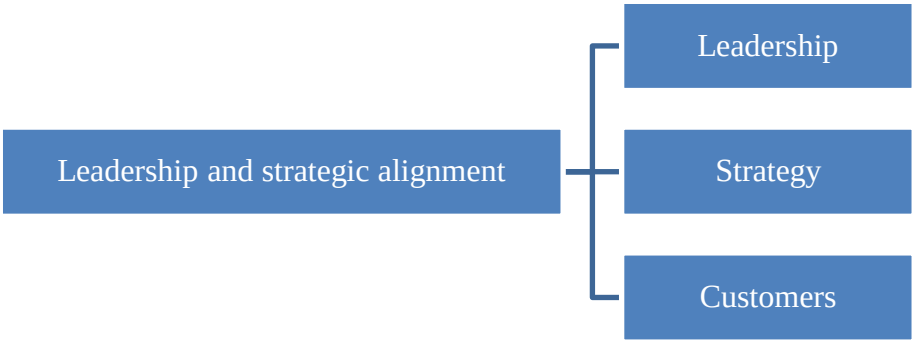
The extract below is for the 1 participant who started the definition of DT with what it is not by saying it is not e-commerce, stating that in the retail sector, DT is usually used to refer to E-commerce. The participant further explained that the beneficiaries of DT are employees, customers and the organisation.

"Well first of all, I mean I think that the term Digital Transformation is used a lot these days to speak to e-commerce, but I don't know, if it has to do with e-comm..." - **Participant 1**

4.4 Objective 2: To determine the drivers for DT implementation in the retail industry,

The second objective is concerned with determining the drivers for DT in the South African retail industry. There was remarkable consensus amongst the participants that Leadership and strategy are critical drivers for DT. The Leadership and strategic alignment theme had the following three sub-themes: (a) Leadership, (b) Strategy, and (c) Customers emerged from the participants' responses.

4.4.1 Leadership and Strategic Alignment



4.4.1.1 Leadership

All 6 participants expressed the importance of leadership in implementing DT in any organisation, and 4 went further to identify leadership as a critical driver to implementing DT as they provide direction.

> *"It comes with executive committee level sponsorship starting with the CEO, which therefore means that with that type of sponsorship, it means it must be built into people's performance expectations and priorities and evaluations so that it can consistently sustain."* **- Participant 1**

> *"I think it's a top down approach and I think it is therefore first and foremost senior leadership to make that decision. You can't at the bottom decide you're going to go digital. It doesn't work like that. So I think, yeah, it's the c-suite… I think is just a little bit more work that the leadership needs to do to get everybody comfortable, say, okay, this is what we're doing, and then go from there…"* **- Participant 3**

> *"... previously we had digital transformation director that reported into the then CEO, but that changed when the CEO changed…"* - **Participant 5**

4.4.1.2 Strategy

The strategy also featured as one of the main drivers in the retail sector DT implementations, with 5 participants stating that the DT journey starts with the organisational strategy. The extract below are some of the explanations provided by the participants:

> *"I think first of all it starts with strategy. So starts with enterprise strategy. And so to the degree that a company in the sector is clear about its enterprise strategy and what*

it's seeking to accomplish over a five year period or a 10 year period, then the secondary question then becomes what are ways that it can achieve that? And to the degree that applying modern technology to enhance its solutions, to the degree that that will help accelerate that strategy, then that builds a case for transformation. And I always frame it that way because." **- Participant 1**

"Well, again, I think if I understood this question correctly, one trigger could be that it's part of your strategy. So we are making this decision to do this because we can't achieve our strategy without a higher degree of technology enablement and things like that." **- Participant 3**

"I think historically people wanted to do it as part of their journey. So it was a strategic decision and you would then step through the strategic decision to say, okay, I want to be an online player and map-out how would it look and how do I do that? So I think strategically that was kind of the way it was. The problem is that very quickly there were disruptors within the industry, in each of the sectors there's somebody that disrupted and once that disruption happened you had to respond." **- Participant 4**

4.4.1.3 Customer

4 participants mentioned another strongly agreed upon driver of DT. The extract from the participants below highlights how the participants narrated the customer as a critical driver:

"…the fact that you want to go after certain customer segments and those segments you can only reach through some kind of a digital process. So it could be how you enable growth in your company through very specific channels. It could also be digitizing your customer experience, which is driving a retention strategy and a good experience in that box because you know that you'll always have some customer issues…" **- Participant 3**

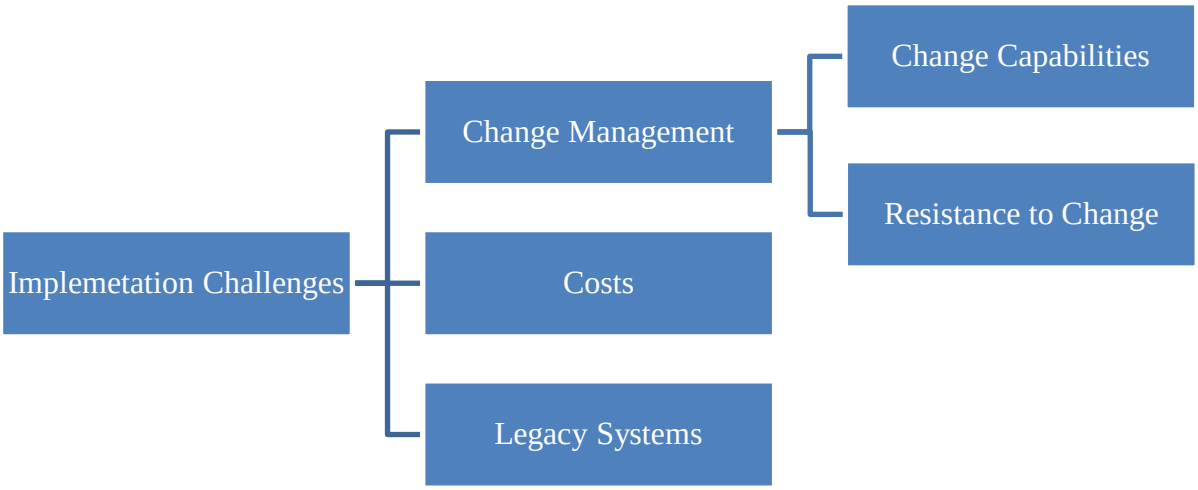
"…on top of that it's also driven out of the aim to offer an Omni-channel experience for the customer…whatever way is convenient … because the Omni experience is now more and more developed and available to customers out there…" **- Participant 4**

"Customer, customer, customer, hundred percent customer. I think a lot of the companies now they're only doing it because a lot of our competitors are become more customer

centric… and customers are also getting exposed with digitization through channels like social media…" - **Participant 6**

4.5 Objective 3: To determine the implementation Challenges organisations are faced with,

The implementation challenges were highlighted as areas of concern as well as focus areas for leadership to address as part of the journey. The theme implementation challenges emerged had the following sub-themes: (a) Change management, (b) Costs, (c) Legacy systems emerged as prevalent challenges from the participants' responses.



4.5.1 Change Management:

When discussing the implementation challenge, change management was a common theme throughout the study. All participants mentioned that this was a big challenge, and their responses were categorised in the following focused theme: (a) Change Management Capabilities and Resistance to Change.

4.5.1.1 Change Management Capabilities

Interestingly, change management capabilities came up as an issue when participants narrated the challenge they faced during DT implementations, highlighting that change management is not implemented as it should due to capability issues on the subject matter. Some of the

participants indicated that there needs to be more understanding of the Change Management requirements. The statements below are how the participants of the study presented the issue

> *"The other challenges we faced is the change management is underrated, and it's one of the biggest reasons of this thing not working because we don't pay enough attention to that and we just treat change management as an academic exercise just, but for me it's less about the playbook and the communications and PowerPoints"* **- Participant 1**

> *"I think some of the reasons for failure is probably more than even the cost is you don't have somebody who understands transformational implementation and execution…just hand it off to the HR…You've got to go hire people who understand what this does, what these goals are, how you organize yourself, and then I suppose you'll be quite successful"* **Participant 3**

> *"…be mindful of or just think of the associates a bit because constant change is tough and some people are more adaptable to it or more with it, but I think the majority of humans by nature are not good with change. I think maybe businesses need to just be cognizant of that piece as they go on this journey and the understand role that change management…"* **Participant 6**

4.5.1.2 Resistance to Change:

Resistance to change was mentioned as a one of the elements related to change management issue discussion, with some of the participants stating that most of their DT implementations are met with some level of resistance to change from the different stakeholders. The narratives below are what some of the participants said:

> *"So the first one is change management. Change management is always the big one because people are used to do certain things a certain way and remains. We are not robots to be easily programed to the new solution.*" **- Participant 2**

> *"I think we've had lots of challenges in the organization to try and get everybody to believe that this is the right thing to do. So adoption and progress has been hampered to a degree and it's just made things a little bit difficult, but that is definitely getting better"* **- Participant 3**

"That's probably the biggest factor with the resistance to change means that the longer you take to transform, your competitors are taking advantage." **-Participant 5**

4.5.2 Cost

The participants mentioned cost and, in some cases, cost benefits as being a challenge to the progress in DT implementations. Some participants expressed a concern that sometimes the cost of DT outweighs its benefits from a financial perspective. Extracts below are sentiments from the participants.

As far as digitization goes? Yeah, I think it's the biggest barrier for me is the cost benefit. I think if you want to just go digital for the sake of going digital, you better have deep pockets because you're just going to spend money and you might not see the return." **- Participant 3**

"…the cost of servicing through an e-commerce field. At the moment, all providers, it doesn't matter who it is in the country, are losing money...And the biggest impact on that is the delivery costs …it becomes to be competitive, you've got to offer free delivery…" **- Participant 4**

"… adds a complexity of, I would argue digitization is sometimes actually harder and more expensive because there's a lot more things that have to be accounted for, designed for, implemented…" **- Participant 6**

4.5.3 Legacy Systems

The participants noted that legacy systems, including infrastructure issues, are also an area of concern, mentioning that DT implementations are mostly affected by this element. Below are some of the things that the participants mentioned:

*"…physical infrastructure. You may have the correct system that support what you want do but not have the correct physical IT infrastructure that is required to implement the particular system"***- Participant 2**

"…and sometimes when people see how much cost it is to change legacy systems, then they turn it on and they say, no, we won't do it,..." **- Participant 3**

"…the infrastructure needed for us to leapfrog from where we are also needs to come in. So if you implement anything new in retail, there's the infrastructure element that becomes a problem because now you have to invest in the technologies." **- Participant 5**

4.6 Conclusion

In this chapter the research findings were presented in conjunction with the research objectives, highlighting the main themes and sub-themes that emerged for the semi-structured interviews using the thematic analysis methodology. The next chapter provided a detailed discussion and interpretation of the main findings from the participants.

5. CHAPTER 5: DISCUSSION OF THE FINDINGS

5.1 Introduction

The key findings from chapter four are discussed in conjunction with the TOE framework adopted as the theoretical framework for the study from the literature review. The findings will be discussed in alignment with the outcomes of the semi-structured interviews conducted with the participants employed within the retail sector. They highlighted critical insights from the participants' experiences of DT implementations within their organisations. The study's objectives were used to present the discussions of the findings. The discussions below covered the findings, the perspective from the literature and the interpretations of the findings by the researcher.

5.1.1 To determine the understanding of DT within the South African retail industry,

Questions 1, 2, and 3 from section A and question 8 from section C of the interview guides were asked to determine the participants' understanding of DT during the semi-structured interviews. The participants' responses were grouped in the following ways; theme: understating DT and the sub-themes: (a) Process Changes, (b) Transformation, and (c) Digital Transformation trends emerged from the responses based on experience and DT activities within their respective retail organisations. The main key finding gathered from the participants is that even though they align specific areas and elements, there is no common view of what DT is in the sector; some participants even referred to DT as digitisation.

5.1.1.1 Process Changes

The optimisation of processes in the context of the new digital era has become a primary agenda topic for organisational leaders across all industries as DT continues to disrupt industries, creating pressure for most leaders to introduce changes (PÎnzaru et al., 2019). In some organisations, the improvement of business processes has been at the centre of most digital innovations as the case for change rather than actual technology used (Gomes et al., 2019). The above views from the literature align with what the participants indicated, as they were almost inclined to define DT as process changes using technology. In some responses, it was defined

as the use of technology to change manual processes into digitally enabled processes or full-on automation, and digital devices are also used to execute specific activities and tasks, are some of the processes improvement examples shared by the participants as they mentioned some of the initiatives they have implemented or are implementing. In his paper, Siderska (2020) argues that RPA (robotic Process Automation) should be considered one of the key DT technologies as more attention is given to digitising business processes through software technologies to automate repetitive manual processes that humans traditionally executed. This was not conclusive from the study as the participants were not clear as to whether or not RPAs form part of the technologies they have adopted; some did mention some level of automation, with only 1 of the participants indicating that they are not sure if their organisations are using any RPA, and stating if they are it will be fundamental applications like Chabot.

5.1.1.2 Transformation

The DT is defined as a transformation process concerned with taking a holistic approach to redesigning vital elements of an organisation through digital technologies and creating value for its customers (Han & Zheng, 2022). DT is essentially changing how an organisation works, and overall culture changes with new ways of doing things in an organisation are some of the critical characteristics of DT (Schwertner, 2017). The literature view also resonates with some of the participants' responses, as they emphasised that DT is about transforming the organisations, transforming how things are done within the organisation, and creating a new environment with a holistic view. One of the participants referred to an extensive program that aims to transform the organisations, stating that it will result in the implementation of a future state of the organisation. They also mentioned that these transformations required support from leadership and an excellent level of investment for successful execution. The participants' views are in line with the literature; Schwertner (2017) states that studies show that one of the key elements to successful DT implementations is leadership commitment.

An interesting finding is that even though the participants know that DT is about transforming the organisation, they could not confirm that their organisations are on the path of transformation. Only 1 participant confirmed his organisation's position by boldly stating his organisation is digitising, but they are not on a transformation journey.

5.1.1.3 Digital Transformation trend

The South African DT landscape has become an enabler for economic growth and has also affected the competitive landscape in different industries. The financial sector has seen significant changes like Fintech solutions and the introduction and implementation of digital banking and mobile payment solutions. The retail sector has also advanced from its original business models, with growth in the e-commerce space (linkedin.com, 2023). The participants' views on the SA sector that is taking the lead in DT had an interesting spread, with the majority of the participants saying the Banking Sector was a leader, followed by the telecommunications sector, and only one participant vouched for the retail sector.

One of the critical findings from the study was that the participant's view on the retail sector's progress is pessimistic, as the majority of them gave feedback that their organisations are currently playing catch up. Their view is that the SA retail sector could be faster when compared to the global trends. Research conducted by Dakora & Rambe (2022) cited that the top 4 of the 5 food retailers in SA have e-commerce as one of the innovations implemented in their DT journey. This study aligns with the participants' views as they mentioned e-commerce as one of the trends in the industry and DT big rocks in the SA retail sector, which their respective organisations are engaged in, but that is as far as most of them are doing. To determine the drivers for DT implementation in the retail industry.

5.1.2 To determine the drivers of DT within the South African retail industry,

To determine the drivers for DT, interview questions 5, 6 and 7 from Section A and questions 10 and 12 from Section B of the interview guides were asked during the semi-structured interviews. The participants' responses were categorised in the following theme: leadership and strategic alignment and sub-themes: (a) Leadership, (b) Strategy and (c) Customers from the responses to the posed questions. All the participants referenced the importance of leadership in the DT, having a digital strategy, and alignment between the implementations and the strategy.

5.1.2.1 Leadership

Leadership support is critical to the success of any transformation initiative within an organisation; it must be advanced from the top (Hyvönen, 2018; Henriette et al., 2016). Leadership is a critical success factor in DT implementation (Hess et al., 2016). Corporate leaders are responsible for defining their digital vision (Hyvönen, 2018) and should be at the forefront of the change and communicate their vision on DT (Catlin et al., 2017; Fitzgerald et al., 2013). The criticality of leadership was echoed in the participants' responses as they identified leadership as a critical driver to the successful implementation of DT. DT was also referred to as a top-down approach type of initiative where there is a risk of failure in cases of leadership change, and new leaders are not aligned with the strategic direction formed by the previous leader. The participants echoed that leaders should champion the organisation's direction about DT. Executive support is essential in successfully implementing the transformation (Andriole et al., 2018; Hyvönen, 2018). 1 of participant also mentioned that DT implementations should form part of the organisational performance management system and processes. Including DT targets aligned with the strategic to employee goals will foster the change; this will fast-track the adoption and ensure DT and the new ways of work due to DT implementations are part of the organisation's day-to-day operations. For transformation to stick, the ways of work must change; there is a need to move from the existing teams and silos into an agile way of work (Catlin et al., 2017).

5.1.2.2 Strategy

They are developing a separate digital business strategy from the organisational and functional strategies (Leischnig et al., 2017) and the aligned business and IS (Leischnig et al., 2017). It is clear to many business leaders that a DT strategy is formulated, but how the strategy should be implemented remains the missing part of the equation (Hess et al., 2016). The participants also aligned with the literature as they emphasised that DT implementation is a strategic agenda, stating that all transformation should form part of the strategy.

The implementation of DT has enabled most organisations to endure the changes in the market, making the DT strategy a survival strategy (Bach et al., 2018). This is because the competitive landscape has also expanded as new digital entrants in some industries have overtaken and are challenging existing firms and how they do business (Verhoef et al., 2021). From the study, the participants also indicated that even though the organisational strategy drives the journey,

the disruptions in the industry also drive the DT agenda a response to the competitive landscape; this suggests that even the strategy may change due to the disruption of DT in the industry.

5.1.2.3 Customer

It has been argued that DT has transformed customer expectations and behaviours, presenting a compelling business case for organisations to change their business models through new technologies (Verhoef et al., 2021; Warner & Wäger, 2019). The consumer is proving to have a multi-channel/ Omni-channel preference in the retail sector; some take time to search for products online, make their comparisons, and then head to the physical store to acquire what they want (IONIŢĂ, 2017) while others shop online and prefer to collect in-store while others prefer to do everything online and get the order delivered. The study results indicate that customers also drive the DT activities within the sector; as they get exposed to new technologies, this changes their preference; the participants also echoed that their organisation also implement some programmes to penetrate new segments in the market. They also mentioned that the need to offer enhanced customer experience through an Omni-channel offering is also a pivotal drive to DT implementations in their organisations.

5.1.3 ***To understand the DT implementation challenges organizations are facing within the sector***

To gain insights on the implementation challenges, interview questions 4, from Section A, 15 and 16 from Section C of the interview guides were asked to get the participants' views, experiences and knowledge of the participants. The participants' responses were grouped in the following ways: theme: implementation challenges, and the sub-themes of change management, cost, and legacy systems were the prevailing themes from their responses.

5.1.3.1 Change Management

The greatest challenge that leadership faces in DT is the development of the DT strategy, not its implementation; the biggest challenge is ensuring that the changes are adopted within the organisation through vigorous management of the transition from the old ways to new ways (Li, 2020). The responsibility for effective change management lies with leadership; they are responsible for changing the behaviours within the organisation (Wimelius et al., 2021). The

participants shared strong views on the change management challenges; their views were categorised through the sub-theme change management, which had 2 focused themes: (a) Change Management Capabilities and Resistance to Change from the participants' experiences.

5.1.3.1.1 Change Management Capabilities

Change management plays a huge role in ensuring that the required cultural changes within the organisations are achieved (Mneney & Belle, 2016); in a research report on the implementation of DT related initiative within the SA retail sector by Mneney and Belle (2016) it was revealed that change management remains a challenge for transformation initiatives within the sector, the critical factor was the teams where not capacitated to manage the transition. The participants' responses aligned with what is found in the literature; it was clear that there is a gap in effective change management, mainly because of the lack of need for more holistic change management capability within their organisations. Some participants mentioned that change management is underrated and implemented as a tick-box exercise and that there needs to be more understanding of managing change for transactional initiatives.

There are discussions on the importance of change management and that the capabilities should be developed; the missing part of the puzzle is how these capabilities can be developed within organisations (Bux, 2002).

5.1.3.1.2 Resistance to change

Transformations are resource-intensive programmes, result in radical change, and are usually met with high resistance; DT is not different from other types of transformation (Satyanarayana, 2012). Adoption issues of new technologies within organisations and resistance to change are fuelled by several factors; firstly, lack of knowledge could be the main contributor to the resistance; it may be as a result that the new technology is costly while the existing technologies don't incur the same level of cost. Secondly, the end user may also be biased toward the old technology of the way of work as they are accustomed to them and maybe convinced of the need to change (Wimelius et al., 2021). The participants echoed similar views about resistance to change; they highlighted that it was one of the main challenges faced within their organisations. They also mentioned that resistance to change affects the market's speed and the organisation's ability to compete within the market. Failure to convince everyone in the organisation was also highlighted as a contributing factor.

5.1.3.2 Cost

DT is usually faced with a conundrum with high investment requirements for its implementation, while it affects the competitiveness of organisations due to the changing competitive landscape (Malenkov et al., 2021). The participant stressed the point that costs for DT implementations are one of the barriers faced by their organisations, as some of the investments required don't have a direct return on investment. They went further, stating that in some cases, plans are made to make specific changes, but this may be stopped once costs are known. DT implementations have been noted to be costly exercises, which, in most cases, require significant investment (Catlin et al., 2017).

5.1.3.3 Legacy Systems

In their study, Cao and Iansiti (2022) found that legacy systems are a barrier to DT, as they are on the way to implementing the best-in-class data architecture practices aligned to the digital edge. Most organisations continue utilising this system as it is still valid, carries the organisation's intellectual property (IP) in the form of processes, policies, data, and more, and requires substantial investment to change. Changing the IT landscape and infrastructure is a challenging task for large and established enterprises; there is a need for IT professionals to develop solutions compatible with current legacy systems where the new meets the old (Gebhart et al., 2016). The participants mentioned that the cost of changing the legacy system is a barrier in the DT journey, and this is also echoed in the above literature. The changes required in the physical infrastructure as part of the DT journey were also mentioned as a critical issue with their organisations.

6. CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The study was set out to explore the implementation of digital transformation within the South African retail industry. The participants of the study are individuals who are employed within the retail sector and who are either in leadership positions or are SMEs who are directly responsible for the implementation of DT.

The TEO framework was used to guide the completion of the study. It was used to categorize the research questions to which the participants responded during the semi-structured interviews. The study aimed to fulfil the following three main objectives:

- To determine the understanding of DT within the South African retail industry,
- To determine the drivers for DT implementation in the retail industry,
- To understand the DT implementation challenges organisations are facing within the sector.

This chapter provides an assimilation of the critical research findings and demonstrates how to align with the study objectives. It presents the main findings and conclusion for each objective and critical recommendations for consumption for business and academic purposes. The study's limitations and suggestions for future research conclude this report.

6.2 Conclusion

6.2.1 Conclusion on the understanding of DT within the South African retail industry,

DT is reshaping the business environment as more organisations use digital technology to change their business models, processes and strategies. These changes are fast-paced and also changing the economic landscape into a technologically driven or digital economy.

The research findings show that the understating of DT in the retail sector is inclined towards process changes and process improvements, the transformation of the organisation, and the digital trend within the retail sector. E-commerce emerged as one of the main DT trends within

the South African retail sector. The South African retail sector was also labelled as a slow adopter of DT compared to other industries in SA and global retail trends.

6.2.2 Conclusion on the drivers for DT implementation in the retail industry,

Because the DT strategy is not functional, its implementation approach requires an enterprise-wide approach. With a DT strategy, the DT implementations within organisations can achieve their objectives. The study results conclude that both internal and external factors trigger DT in the retail sector. Internally, leadership and strategy where emergent and external customers were identified as the main drivers of the implementation of DT. Leadership direction and support were highlighted as critical to the DT journey, and the importance of a DT strategy as part of the organisational strategy was also strongly echoed. Customer needs, changing preferences, and the organisation's aim to meet those needs were prevalent in the discussions.

6.2.3 Conclusion on the DT implementation challenges organisations are facing within the sector.

Success depends on an organisation's ability to implant DT in the employees' daily activities and is part of the organisational culture through robust change management efforts. Technology and its use have been identified as a critical element in DT implementations, and this digital era technology has been at the centre of the creation of new business models and markets, which make a basic business infrastructure; it is the utilisation of the digital resources (technology, tools, applications, and algorithms). The changes in technology are easily implemented in new companies as they do not have the burden of existing legacy systems that old organisations face.

In the South African retail sector context, the results of implementation challenges are confirmed as similar to other industries and global challenges. The results showed that the issues around change management, cost, and legacy systems are causing implementation barriers in retail organisations. The lack of capability to manage the transition from current to new ways is one of the leading causes of resistance to change.

6.3 Recommendations

6.3.1 For understanding of DT within the South African retail industry,

To clarify what DT is for the sector, there is a need to align the meaning of DT within the sector. The existing misalignment in meaning could result in more damaging outcomes if the disconnect continues. This could affect the DT strategy formulation and the direction retailers take. The sector must also realise that DT is transforming the organisation rather than pockets of digitally enabled solutions.

6.3.2 For drivers for DT implementation in the retail industry,

Leaders within the retail sector should actively and collectively frame the direction of DT in the sector; they should seek an understanding of the industry trends and their impact on their organisation. They should craft the vision and lead the transformation from the top. Organisational leaders should ensure that DT is part of their organisational strategy and formulate a business strategy to guide the rest of the organisation towards the end goal. Efforts to understand the customer changes in preference and behaviour should guide the DT's strategic direction; the transformation should solve customer pain points.

6.3.3 For DT implementation challenges organisations are facing within the sector.

Understanding transformations is one of the critical skills required in the sector; this, in collaboration with adopting a change management framework, is critical for the required change within the sector. Leaders should understand their role in ensuring the adoption of the strategy and implemented changes.

6.4 Suggestions for future research

The following are suggestions for future research based on the challenges that emerged

- A study on the impact of Change Management challenges on the speed to market within the retail sector

- A study on how the Legacy system can be leveraged for sustainability as part of DT strategy

6.5 Limitations and challenges of the study

This study possibility possesses the following limitations:

- The participants availability to start and conclude the interview in the given time,
- Participants may provide viewpoints are difficult to analyse due to the depth of explanations given,
- The study can reach saturation with a very small group of participants as participants are actively engaged in DT implementations in the same sector.

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Appendixes:

Appendix A: Participants Information Sheet (PIS)

Dear Sir / Madam

My name is Mathandi Nkosi. I am a Masters student in the faculty of Commerce, Law and Management at the University of the Witwatersrand, Johannesburg. My supervisor is Ms. Ayanda Magida. I am conducting a research study about Digital Transformation. The study title is Understanding the implementation of digital transformation in a South African context.

I am inviting you to take part in participating in the study, 1:1 interview face to face or online. If you decide to take part, your participation in this research study please note that no one except myself as the researcher will have access to your personal or identity information.

The interview and its outcomes will be confidential and anonymous. When I share the results of the research study, I will not include your name or any personal data that could identify you.

If you decide to take part in the research study, it should be because you want to volunteer and contribute to knowledge in this field. You are also allowed to stop your participation at any point of the study. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. Taking part in the research study will not cost you anything.

This research study will be written up in my final research report. The report will be available on the university library website. If you would like to receive a summary of this report, you can search for it in the mentioned website.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Mathandi Nkosi

Researcher:

Mathandi Elizabeth Nkosi, 519287@students.wits.ac.za, 0764029221

Supervisor:

Ms. Ayanda Magida, Ayanda.Magida@wits.ac.za, 0829071104

Appendix B: Interview Guide

Interview guide for the study in: Digital Transformation

Title: The implementation of digital transformation in a South African retail sector

Background Information

Gender: Level in organisation : Years of experience in Retail sector:

A. Environmental

1. What is your understanding of DT?
2. Which sector is leading in the implementation of DT in SA?
3. From retail sector what is your understanding and implementation?
4. What are the implementation challenges?
5. What are the triggers/factor that drive the implementation of DT?
6. What are the DT shifts/trends in the sector?
7. How is your organisation responding to the DT shifts in the sector?

B. Technology:

8. What types of technologies has your organisation implemented and why?
   8.1. (E.g. dashboards, automation of core processes, use of algorithms?
9. What the best approach CI, synthetic, radical?
10. What is the role of technology in the org DT journey?
11. Alignment and organisational readiness to the implementation?
12. Which technology have not adopted and why?

C. Organisational

13. Whose role is DT in your organisation?
14. What is the role leadership in enabling the culture of DT?
15. What initiatives have be adopted or implemented to drive DT strategy?

16. How is it implemented? Processes, budget, structures?

    16.1. How is DT resourced?

    16.2. How are the employees empowered to implement DT, (upskilling programmes)?

    16.3. Did you have to change structures to accommodate the DT journey?

17. How long does it take to implement your digital transformation initiative?

18. What is the implementation life cycle or process?

19. Any Final words?

Appendix C: Ethical Clearance Certificate

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/BA510287/508
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below)

Project title	The implementation of digital transformation in the South African retail industry
Investigator / Researcher	Mrs Mathandi Nkosi
Nature of Project	MBA (Research Article)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.
Issue Date of Certificate	2023/11/13
Expiry date	Date of submission of the project / research report
Chairperson	Dr Pius Oba +27 11 717 3976 +27 82 733 6587 pius.oba@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Mathandi Nkosi — Signature

15 November 2023 — Date:

Appendix D: Emerging Themes from the study

Themes	Sub-themes	Focused theme
Understanding Digital Transformation	Process Changes	
	Transformation	
	Digital Transformation Trend	
Leadership	Leadership	
	Strategy	
	Customer	
Implementation challenges	Change management	Change Management Capabilities
		Resistance to Change
	Cost	
	Legacy Systems	

Appendix E: Alignment of emergent themes to the TEO framework

Technology	Environment	Organisation
• Cost • Legacy systems	• Digital Transformation Trends • Customers	• Process Changes • Transformation • Leadership • Strategy • Change Management