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2023

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The Role of Leadership

in Driving Digital Transformation

in the South African Financial Services Sector

by

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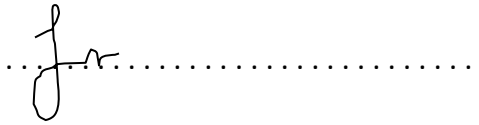
CERTIFICATION

The undersigned certifies that Dr Jenika Gobind has read and hereby recommends acceptance by the Wits Business School, Johannesburg, of the thesis titled “The Role of Leadership in Driving Digital Transformation in the South African Financial Services Sector” in fulfilling the requirements of Doctor of Philosophy (Business Management) of the University of Witwatersrand, Johannesburg.



Dr Jenika Gobind

Date: June 2023

DECLARATION AND COPYRIGHT

I, Nomonde Nyameka Ngxola, declare that this thesis is my original work that has not been presented and will not be presented at any other university for a similar or any other degree award.

. . . . . .

Signature

Date: June 2023

DEDICATION

This thesis is dedicated to firstly my God who boldly drove me to the awareness of the importance of this degree, not only to me and my family but also to the women in the ICT industry that look like me, who for which ever reason felt Digital and Tech cannot be woman-charted territories. This is for us and the frontiers I hope to reach through this body of work.

I dedicate this also to my precious sons who have been my source of inspiration through all the advancing decisions I make in my life. I hope they are inspired and will go on to achieve and do far greater than what Mummy has done.

Finally, my parents: my late father who was rooting for me and that red gown from inception, you may have passed but I felt your heavenly support; I love and thank you and Mum for believing in me. To my wonderful Mum whose persistence and continuous push when getting through some sections of this paper was almost impossible, I appreciate your unwavering support and encouragement through it all.

I would like to also acknowledge and thank my supervisor, Dr Jenika Gobind, who absolutely was a beacon of light throughout my journey. You have been supportive and encouraging from the beginning, I thank and appreciate you immensely.

ABSTRACT

The purpose of the research is to provide an all-encompassing definition of Digital Transformation (DT) amid a sea of definitions and propose drivers that leaders operating in the South African Financial Services Sector can use to drive Digital Transformation within their respective organisations, not only as a mere project but also being mindful of the personal influence their role as leaders has on the success of a DT process (Bordeaux, 2019). From a systematic review of 100 peer-reviewed articles, the literature suggests there are seven common and key drivers of the Digital Transformation process. These were identified as digital business strategy, a review or augmentation of the organisations business model, big data-driven processes, process automation, customer centricity, digital competency, and culture (Bhardwaj et al., 2013).

The literature also reflects the influential role that leaders play in the DT process through their traits and abilities (Kaidalova, Sandkuhl & Seigerroth, 2018). A close examination was made of the evolution of leadership theories: The Great Man Theory being the starting point, was premised on the leader's abilities resting solely upon leader themself, believed to be born with a set of traits and behaviour that automatically deemed them leadership worthy (Cherry, 2019). During this era, the notion of leader development and training was not given thought (Hartl & Hess, 2017). The leader was according to this theory born and carried their own innate talents and capabilities to lead devoid any form of development and advancing. The paper seeks to explore the evolution of leadership theories that evolved from the trait and behavioural theories to that of transformational leadership, which looks specifically at leaders in relation to their subordinates to the latest DT theories to test for similarities, plus outliers when considered with respect to the methodological findings.

Additionally, the research incorporated notable barriers to the digital transformation process as noted by the leaders that were interviewed in the study. Themes of digital denialism, deflation and discomfort surfaced and were explored at length.

The study adopted an exploratory sequential mixed methods approach compromising of qualitative content analysis and thematic analysis of semi-structured interviews using creative methods of extraction. The population sampled consisted of a group of Chief Information Officers, Chief Technology Officers, and Digital Heads of Business.

The results of the findings demonstrated that DT is defined in accordance with the context and the role within which the leader will occupy. Although a unanimous definition was partially achieved with a consensus of attributes shared by participants, the results showed a level of commonality in understanding and interpretation of DT based on a leader's role, context, and tenure within the organisation. The literature defined DT drivers against the interview-derived drivers, demonstrated an expected delta arising from the variance in role and organisational context. The findings also demonstrated that leaders believed model leadership within a DT context was driven largely by the leader's competence, experience, and traits, which touched on all areas of the leadership theories. The traits, the relationship with subordinates or the team, and possessing competence, are key for leaders driving a DT process. Relating to digital transformation barriers, what was clear was the importance of having a leadership team that is in of itself competent and understanding of DT, the value of involvement and succinct organisation wide communication of the impact of DT became very clear non-negotiable areas for circumventing the actualizing of DT barriers.

A few key limitations of the study were access to C-Suite leaders as the study was undertaken during COVID, interviewer fatigue in the form of having to accept available times shared by participants and the back-to-back stacking of some of the interviews. Parametrizing the research as a range of themes surfaced during the data collection process and finally conducting interviews with strangers in an unconventional setting presented elements of slight social awkwardness.

Some recommendations for future studies include a deep dive on the individual DT drivers in relation to the broader topic of DT. Evaluating the topic of DT in relation to DT products such as applications, platforms, and services. Also, research worthy is the assessing of the gender parity present in the field of DT as the sample demonstrated a strong bias towards males in their forties and perhaps also expanding undertaking a multi sector focus research.

DEFINITIONS OF TERMS

Digital Transformation (DT)	A framework that includes the networking of actors such as businesses and customers across all value-added chain segments (Bowersox, Closs & Stank, 2005) and the application of new technologies in business, in order to increase the performance and reach of an organisation.
Business Models	Emerging new unit of analysis that seeks to emphasise a system-level, holistic approach to explaining how firms "do business;" business models seek to explain how value is created, not just how it is captured (Chesbrough, 2010).
Customer centricity	Deep knowledge of customer needs, behaviour, and preferences plus awareness of ways in which services delivered create value for them, then stimulate their retention and loyalty (Minvielle & Riedel, 2021).
Process Transformation	Comprehensive redesign and restructuring of business processes to achieve significant improvements in operational efficiency and agility (Dias, Maris & Ravesteyn, 2022).
Business Intelligence	Process of taking large amounts of data, analyzing that data, and presenting a high-level set of reports that condense the essence of that data into the basis of business actions, enabling management to make fundamental daily business decisions (Cui & Wu, 2007).
Digital Business Strategy	An organisational strategy that brings about distinctive business value through the utilisation of digital technologies based on the merging of business and Information Systems strategies that are

	both inspired by technology and centred on business value (Chan & Reich, 2007).
Gartner's Pyramid of Powerful Experiences	A framework for building effective experiences that lift satisfaction, loyalty and advocacy and start to chip away at the chasm between expectation and reality (Gartner, 2015).
Digital Convergence	The emergence of myriad digital devices ranging from phones, tablets and training pods to home appliances has forced the concept of the IoT to move from being an enterprise term to being one that is individual consumer-associated (Gartner, 2015).
Big Data-Driven Processes	Big data processing is a set of techniques or programming models to access large-scale data to extract useful information for supporting and providing decisions (Gartner, 2020).
Digital Competence	The set of skills, knowledge and attitudes required when using technology and digital platforms to perform tasks and activities. It is the ability to use the technologies and digital platforms to solve problems through the use of applications and devices, to communicate across various digital platforms; the ability to create, share and distribute content; building knowledge on or using these platforms creatively, autonomously, ethically, and critically (Ferrari, 2012).
Culture	Can be understood as acquired patterns and hidden rules that were developed and approved by groups within the firm. They are the unwritten rules, the unspoken expectations and norms formulated in the workplace that are endorsed or frowned upon by organisational leadership (Hartl & Hess, 2017).
Chief Information Officer (CIO)	Responsible for setting strategies and objectives for the organisation's Information Technology departments, using suitable

	technologies to streamline all internal operations and to design and customise technological systems and platforms (MIT Sloan, 2019).
Chief Financial Officer (CFO)	Responsible for overseeing the organisation's finances and financial reporting. This includes overseeing fiscal activity (budgeting, reporting, auditing), viewing ways to reduce costs and optimise profits and to monitor legal and regulatory compliance (MIT Sloan, 2019).
Digital Transformation Head of Department (DTHOD)	Responsible for driving the Digital Transformation process. What the literature review demonstrates is that the approach many organisations seem to adopt is either the centralisation of the Digital Transformation Process, where there is a central division within the organisation that is driving organisation-wide Digital Transformation that cuts across divisions, or that the function is decentralised and each business division drives its own Digital Transformation process (Westermann, Bonnet & McAfee, 2012).
Urbanisation	Transformation of an existing industry or economy with the help of computing platforms, especially mobile applications, and temporary employment schemes (Zhang, Markus, Lee-Kelley & Melville, 2019).
Value Creation	Process of using digital technologies to create new, or modify existing, business processes, culture, and customer experiences to meet changing business and market requirements. This reimagining of business in the digital age is Digital Transformation (Davis, 2016).
Qual-Qual Method	Mixed methodology that is qualitative in nature but draws from differing methods to provide for richer qualitative insights.
Creative Methods of Extraction	Methodological approach that creates an environment where participants are not weighed by the pressure of their title or environment to respond in a set and regurgitating manner but are able to be more natural and authentic in their responses. This is

	achieved through conducting the interview in relaxed, non-formal environments (Gauntlett, 2007).

CONTENTS

CERTIFICATION ..... **ii**

DECLARATION AND COPYRIGHT ..... **iii**

DEDICATION ..... **iv**

ABSTRACT ..... **v**

DEFINITIONS OF TERMS ..... **vii**

FIGURES ..... **xiii**

TABLES ..... **xiv**

CHAPTER 1 – INTRODUCTION

1.1 Introduction **1**

1.2. Context of Study **4**

1.3. Research Problem **6**

1.4. Research Objectives **8**

1.5. Research Questions **8**

1.6. Significance of Study **9**

1.7. Contribution of Study **9**

1.8. Triangulation **10**

1.9. Validity and Reliability **11**

1.10. Definition of Study **12**

1.11. Additional Definitions **12**

1.12. Assumptions **13**

CHAPTER 2 – LITERATURE REVIEW

2.1 Theoretical Framework **14**

2.2 Digital Transformation and the Business Model **15**

2.3 Digital Transformation and Platform Platform-Based Businesses **18**

2.4 Digital Transformation and Customer Centricity 20
2.5 Digital Transformation and Big Data-Driven Processes 22
2.6 Digital Transformation Business Strategy 24
2.7 Digital Transformation and Digital Competence 27
2.8 Digital Transformation and Culture 31
2.9 Digital Transformation and Leadership 33
2.9.1 Great Man Theory 34
2.9.2 Theory of Transformational Leadership 35
2.9.3 Key Digital leadership Attributes 36
2.10 Barriers to Digital Transformation 40
2.10.1 Uncertainty 40
2.10.2 Resistance 40
2.10.3 Internal and External Barriers 42
2.11 Summary 44

CHAPTER 3 – METHODOLOGY

3.1. Methodological Framework 45
3.2. Research Design 46
3.3. Research Instrument 50
3.3.1 Research Population 50
3.3.2 Research Sample 50
3.4. Pilot Study 52
3.5 Data Analysis 53
3.6 Qualitative Content Analysis 53
3.7 Semi-structured Interview Data Analysis 54
3.8 Triangulation 54
3.9 Ethical considerations 55
3.10 Summary 55

CHAPTER 4 – PRESENTATION OF FINDINGS

4.1 Introduction 56

4.2 Summary of Participant Profiles 58

4.3 Interview Process 59

4.4 Triangulation 76

4.5 Summary 77

CHAPTER 5 – DATA ANALYSIS AND DISCUSSION

5.1 Discussion of Findings 78

5.2 Sequence 1: Defining Digital Transformation in a Sea of Definitions 78

5.3 Sequence 1.1: Defining Digital Transformation in a Sea of Definitions 82

5.7 Summary 108

CHAPTER 6 – CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Research Implications 111

6.2 Theoretical Implications 113

6.3 Practical Implications 115

6.4 Key Considerations 115

6.5 Recommendations 118

CHAPTER 7 – Researcher's Reflections 121

REFERENCES 125

ANNEXURES

Annexure A: Letter of Invitation and Informed Consent Form 146

Annexure B: Interview Schedule, Chief Information Officer (CIO) 148

Annexure C: Interview Schedule, Chief Financial Officer (CFO) 149

Annexure D: Interview Schedule, Digital Transformation Head of Department (DTHOD): . 150

Annexure E: Interview Transcripts 152

FIGURES

Figure 1.1: Conceptual Framework 3

Figure 2.1: Theoretical Framework of the Study 15

Figure 2.2: Elements of the Business Model Canvas 17

Figure 2.3: Digital Convergence for Customer 21

Figure 2.4: Gartner's Pyramid of Powerful Experiences 22

Figure 2.5: Digital Transformation Strategy Contents 25

Figure 2.6: External Model Considerations 27

Figure 2.7: Internal Model Considerations 27

Figure 2.8: Celot and Pérez Tornero Framework of Competence 29

Figure 2.9: Initial Drivers of Digital Transformation 32

Figure 2.10: Evolution of Leadership Theories 33

Figure 2.11: Barriers to Digital Transformation 43

Figure 3.1: Methodology Framework 47

Figure 3.2: Marying's Content Analysis Procedure 48

Figure 4.1: Non-probabilistic Purposive Snowball sampling approach used 57

Figure 4.2: Extending Barriers to Digital Transformation 75

Figure 4.3: Methodology Framework 76

Figure 5.1: Legend of Leader Segmentation..... 79

Figure 5.2.1: Common Digital Transformation Descriptors as articulated by Participants..... 80

Figure 5.2.2 Common Digital Transformation Descriptors as articulated by Participants 80

Figure 5.2.3: Common Digital Transformation Descriptors as articulated by Participants..... 81

Figure 5.2.4: Common Digital Transformation Descriptors as articulated by Participants..... 81

Figure 5.3.1: Common Digital Transformation Drivers as articulated by Participants……. 90

Figure 5.3.2: Common Digital Transformation Drivers as articulated by Participants…….. 90

Figure 5.3.3: Common Digital Transformation Drivers as articulated by Participants…….. 91

Figure 5.4.1: Common DT Leader Traits as articulated by Participants…… 96

Figure 5.4.2: Common DT Leader Traits as articulated by Participants……96

Figure 5.4.3: Common DT Leader Traits as articulated by Participants……... 97

Figure 5.5.1 Thematic Barriers to Digital Transformation……..104

Figure 5.5.2: Thematic Barriers to Digital Transformation…… 104

Figure 5.5.3: Thematic Barriers to Digital Transformation…… 105

TABLES

Table 4.1: Demographic Profiles of Interview Participants ……. 58

Table 4.2: Research Participants Response to Defining DT ……. 63

Table 4. 3: Research Participants Response to the Drivers of DT…….. 67

Table 4.4: Research Participants Response to DT Leadership…….. 69

Table 4.5: Research Participants Response to the Barriers to DT……. 73

Table 4.6: Triangulation on Digital Barriers Responses…….. 75

CHAPTER 1 – INTRODUCTION

1.1 Introduction

Big Data, Block Chain, Artificial Intelligence (AI) and Platform-based businesses have forced organisations to strategize more intently about how they will continue to operate, compete, and remain profitable in the digital context where the proliferation of information and technology has completely changed the landscape (Khan, 2015). Digital Transformation (DT) is a term often labelled with myriad definitions and has been a key reference area for many businesses wishing to compete and remain profitable within the digital economy (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013).

As a topic, Digital Transformation is significant because it specifically describes what needs to be done by leaders within organisations to remain successful in the digital context (Kaufman & Horton, 2015). Suffice it to say, the starting point for this study was to define what Digital Transformation is. Digital Transformation can be described as a framework that includes the networking of actors such as businesses and customers across all value-added chain segments (Bowersox et al., 2005), and the application of new technologies in business, in order to increase the performance and reach of an organisation (Schallmo, Van de Ven & Shirazi, 2017).

An alternate school of thought presents Digital Transformation as a fundamental rethinking of the doing, thinking and being of corporations to thrive in the digital age (Matt, Hess & Benlian, 2015). Digital change starts with a client-driven approach, a cloud-enabled technology fabric, big data, analytics-driven operations and decision-making, and Omni channel optimisation and engagement across the social media spectrum, while adopting a mobile-first paradigm (Matt et al., 2015).

The Massachusetts Institute of Technology (MIT) Center for Digital Business categorises Digital Transformation into three areas. The first being *Customer Experience* that

encompasses customer intimacy (gaining in-depth insights and understanding of customer segments, geographies, and social media to understand what makes customers happy) (Gerald, 2015). Next is *Operational Processes* (a cloud-enabled infrastructure, analytics-driven decision-making, and Omni-channel optimisation) (Ravesteijn, 2018) and finally the *Changing of Existing Business Models* (specifically digitising the existing business model, defining digital business and platform business considerations) (Gerald, 2015).

Leadership is a critical part of driving a successful Digital Transformation process (Matt et al., 2015). The strategic and operational execution mandate will in many instances come from the organisation's leadership team (Sullivan, 2017). Digital leadership is a combination of a transformational leadership including the skilful use of digital technology to create market competitiveness, capture market share and increase the organisation's top line (De Waal, Gurd & Mohamed (2017). The research will be evaluating the leadership theories that have emanated over time from assessing leaders purely from their traits (drawing from the Great Man Theory), to assessing leaders according to their ability to perform through their subordinates by referencing the Theory of Transformational Leadership and finally seeking to frame attributes of Digital Leadership as referenced from the literature.

While DT and Leadership form an important part of the paper, of equal importance is the issue of barriers to DT that organizational leaders are confronted with when on the path to DT. One of the biggest barriers to digital transformation is resistance to change (Coad, Herzfeldt, & Kramer, 2016) from varying levels within the organisation. Executive ignorance, in the form of digital denialism, deflation and discomfort that surfaced during the course of the interviews, which in essence translate into to a lack of understanding or awareness of the importance of digital technologies, the potential benefits they can offer, and how to effectively implement them (Livingstone, 2008). The ignorance breeds superficial awareness of DT, but no contextual understanding of the value of implementing this DT awareness within the organisation. (Peter & Richard ,2009)

The next layer of resistance came from employees who were comfortable with the way things were done, and when uncertain of the impact of the change on their roles, were hesitant to embrace new technologies and processes (Gronn,2008). This resistance and hesitance to embrace change creates a culture of inertia that would make it difficult for organizations to

adopt new digital tools and strategies (Lichtenthaler & Singh, 2010). DT barriers also stem from the issue of organisations being unclear of the exact skills and knowledge required to drive an effective DT process (Madrid-Guijarro,2009).

In a sea of definitions, it would appear that there is an absence of an all-encompassing definition outlining the drivers for Digital Transformation. This study therefore intends to firstly seek a definition that outlines the drivers for Digital Transformation which will then inform the second phase of the study, which seeks to understand the role of leadership in driving DT in the South African Financial Services Sector and also understand the barriers that may prohibit the advancement of the DT process.

In order to achieve this, the study undertook an exploratory sequential qualitative mixed methods approach (qual-qual) (Morse, 2010), by way of first undertaking a qualitative content analysis that addressed the first problem statement, which involved arriving at an all-encompassing definition of DT. The second phase of the study was followed by a semi-structured interview with key participants operating in the financial services sector in order to address this phase of the study and the problem statement which examined the role of leadership in driving DT and the barriers that thwart these efforts (Morse, 2010).

Figure 1 below is a diagrammatic expression of the conceptual framework of the topic. It depicts a set of perceptions that leaders have regarding the role a digital leader needs to assume in order to drive a Digital Transformation process. This Digital Transformation process is premised by the drivers of Digital Transformation that the leaders believe to be the cornerstone of Digital Transformation efforts. The red rectangle represents the barriers that Digital Heads of Business have come to experience as impediments to the transformation process. This is the first sequence that the literature review seeks to investigate.

The drivers and the perceptions unearthed in the literature will be tested against the interviews from the sample population of leaders. The research will use a triangulation process to validate the findings presented in the literature through the interviews.

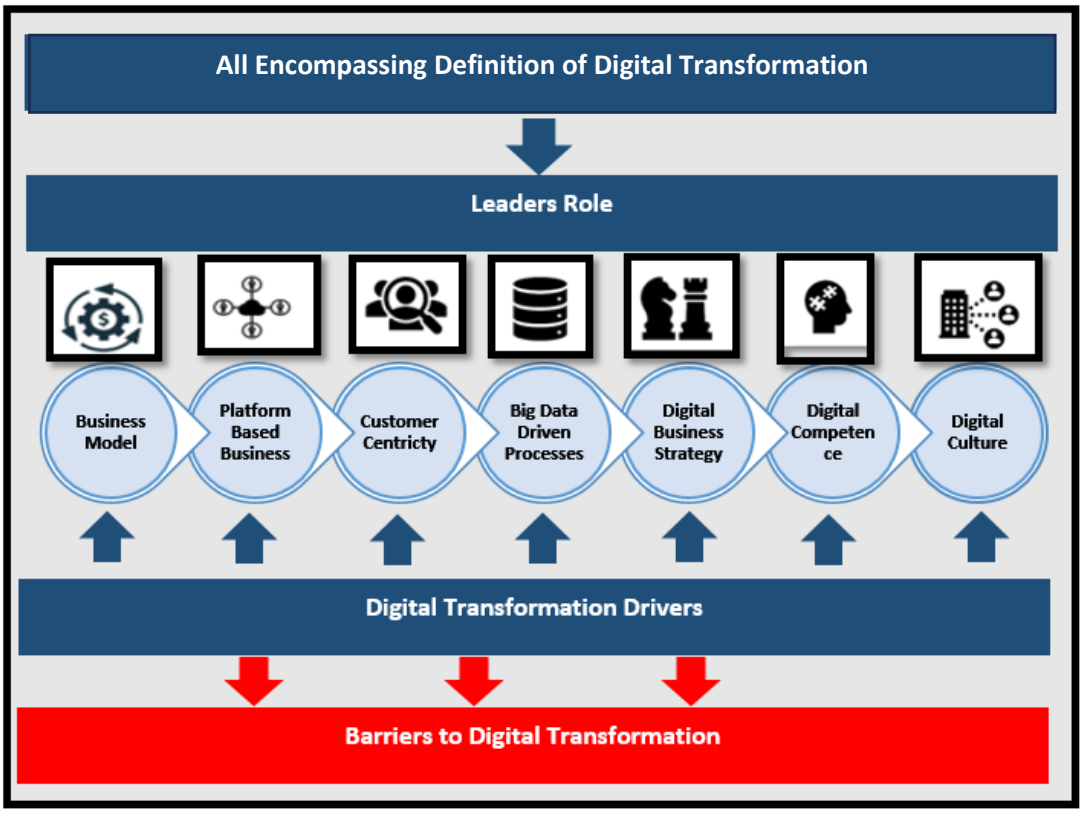


Figure 1.1: Conceptual Framework (Author's Own).



Figure 2.9: Initial Drivers of Digital Transformation (researcher's own).

- Driver 1: Pictorial representation of Digital Transformation and ***Business Model***
- Driver 2: Pictorial representation of DT and ***Platform-Based Business***
- Driver 3: Pictorial representation of DT and ***Customer Centricity***
- Driver 4: Pictorial representation of DT and ***Big Data-Driven Processes***
- Driver 5: Pictorial representation of DT and ***Digital Business Strategy***
- Driver 6: Pictorial representation of DT and ***Digital Competence***
- Driver 7: Pictorial representations of DT and ***Digital Culture***

1.2 Context of Study

The geographical focus of the study will be in South Africa, specifically in Gauteng Province. The industry focus of the research is centralised around the financial services sector. This is because the advent of social networks, the availability and accessibility of data at competitive rates and the behemoth rise of mobile devices have had an astounding impact on consumer preferences and behaviour (Skinner, 2017). It is these elements that have had a substantial multiplier effect on the advent of digitalisation, stimulated by consumer demand for financial services to make available their services, online, 24/7 in a seamless, natural, and user-friendly way that the social networks and data have afforded them (Celent, 2018). Banks that offer digital channels of engagement as a route to market have been seeing a positive impact on their market share and bottom line (Stahl, White, Davis & Ching, 2014).

Another compelling reason for the selection of the financial services sector in particular comes from the visible measurability of the Digital Transformation process in the form of the application features (biometric log-ins, consolidated view of accounts portfolio), digital banking services (e.g. e-wallets or geopayments), the in-store banking experience (e.g. e-queuing system, self-service options) and infrastructure innovation (e.g. ATM deposits and statement generation) (Skinner, 2017). During the initial qualitative content analysis phase of the research a few banks were associated with the term “Digital Transformation and Banking” in South Africa, specifically Discovery Bank, First National Bank (FNB) and Thyme Bank.

First National Bank, according to a consumer survey (Satisfaction Survey, 2020) reportedly has been named the most innovative bank for several years (2018-2020). The consumer satisfaction survey was issued to the public regarding their digital banking experiences both online and via the banks’ mobile banking applications. Consumers repeatedly and consistently rated FNB high on innovative product and service offerings, security features, seamless user experience and intuitive user interface. First National Bank has also led the banking space with innovative products and services that the other retail banks often replicated at a later stage, i.e., cash MACHINE deposits, e-wallets, geopayments and e-bucks (Moodle, 2020).

Another bank that appeared in the list of articles and was worthy of exploration purely from the innovation of the business model that it deployed was Discovery Bank**.** Discovery Bank

has used a Behavioural Banking concept that stemmed from its Vitality business: this was based on the common behavioural mistakes that South Africans make regarding their health – it was this core system that was used to build the insurance companies' banking business (Dowra, 2019). The behavioural bank has five principals of application in its approach to banking, namely it asks if the customer:

- Spends more than they earn.
- Has insurance.
- Saves for emergencies.
- Saves for retirement; and
- How well does the consumer manage secured debt?

The bank has innovatively encouraged positive behaviours by awarding a higher status to clients who meet the above five criteria – in an income-agnostic environment. This approach to banking, using the Discovery Application as the digital platform to drive the entire value proposition, makes for interesting discussion with the executive and management team from the bank (Stahl et al., 2014; Zhao, Li & Zhang, 2020).

In the South African context, Thyme Bank is the first bank to offer its entire value proposition of everyday integrated banking, at cost-effective rates, online (Sawuthana, 2018). The absence of physical branches and legacy infrastructure has enabled this strictly digital bank to go to market with competitive service rates, as it does not need to capitalise the operations of traditional banks. It passes on this benefit to its customers, making it a compelling offering to digital cost-sensitive consumers.

While there were more banks to reference in South Africa, the aforementioned organisations provided a diversity of perspectives on how Digital Transformation can translate into in different settings, from product differentiation (in the form of the applications the bank has created, the banking services, etc.) to the business model innovation, as observed with Discovery Bank (Stahl et al., 2014; Zhao et al., 2020) and being digitally native (as in the case of Thyme Bank). As such, the participants in the semi-structured interviews for this study will be selected from one of the listed organisations or any other financial services institution that can contribute effectively to the research.

1.3 Research Problem

The definition for Digital Transformation, which comprises of several drivers , are unclear and create uncertainty- particularly for leaders who are appointed to drive Digital Transformation within organisations in the financial services sector (Khan, 2015). The digital context requires a new leadership paradigm. Uncertain times call for leadership that is decisive, experimental and embodies the ability to mobilise both the organisation and its workforce to uncharted territory (WEF, 2017). The Internet of Things, Artificial Intelligence and Platform-based businesses have forced organisations to think more extensively about how they will continue to compete and remain profitable in a digital world where proliferation of information and technology has completely changed the landscape (Khan, 2015).

Success in Digital Transformation is a function of the leadership team driving the transformation, the organisation being clear on its Digital Transformations objectives and organizing its workforce to achieve the desired outcome (Adam, 2003). Primary in the journey of Digital Transformation is the leadership competence required to drive this objective. In light of this issue, the study intends to embark on a two-pronged approach that deliberately sub-divides the problem statement into two sequences.

Sequence 1: Defining Digital Transformation in a Sea of Definitions

The first problem statement will examine the volume of definitions that articulate the drivers for Digital Transformation. Arriving at a succinct definition that outlines the drivers for DT, specifically in the context of the Financial Services Sector, will provide a tool for leaders who intend to/are tasked with driving the DT agenda/project in their respective organisations. It is therefore essential to wade through the sea of definitions in order to inform leaders who look to drive DT as the path, from a definitional stand point is otherwise unclear. Digital Transformation has been a topic of discussion for researchers and practitioners for several years, yet a clear and unanimous definition is still not found (Schallmo et al., 2017).

Technology is but one aspect of DT: to ring fence the topic to just the technological aspect is to significantly understate the other critical driving areas that contribute to a Digital Transformation initiative (Selander, 2016). Carlo et al. (2012) state that the path to value creation for organisations with an ambition for Digital Transformation includes engaging with

elements such as the strategy, organisational structure, business processes and culture (Karimi, 2015). Although much has been written on the definition of Digital Transformation, there remains confusion as to the definition, organisational implications, and implementation of the DT process (Gray, 2015).

Sequence 2: The Role of Leadership in Driving Digital Transformation

The second problem statement explores the role of leaders in driving Digital Transformation using a definition that contextually outlines the drivers for DT in the South African Financial Services Sector. A successful Digital Transformation initiative is reliant on a leader who is sufficiently equipped to make the correct set of decisions and drive the correct set of priorities to realise the organisation's DT ambition (Kane, 2016). Leadership is a critical part of driving a successful DT process (Matt et al., 2015). The strategic and operational execution mandate will in many instances come from the organisation's leadership team (Sullivan, 2017). Digital leadership is a combination of a transformational leadership style, plus the skilful use of digital technology to create market competitiveness, capture market share and increase the organisation's top line (De Waal et al., 2017).

This research seeks to arrive at an all-encompassing definition of Digital Transformation with the aim of forming a succinct view as to what the key drivers for DT within the South African Financial Services Sector are. With this in place, leaders will be equipped on how to navigate the DT path with greater coordination. The intention of this study is thus to investigate the role of leadership in driving Digital Transformation with a focus on the South African Financial Services Sector.

Sequence 2.1: Barriers to Digital Transformation

This section of the study seeks to explore some of the key challenges and barriers organisational leaders face when embarking on a DT process Organizations starting their DT journey face a variety of difficulties. Boston Consulting Group (BCG) investigates in its "New Ways of Working" series how the digital society is quickening the pace of business (Ustaoglu & Ustandag, 2018) and pressuring established organizations and leaders to act quickly (Thierry, 2016) by adopting completely new methods of customer engagement, revenue generation, modernizing their technology value proposition, and remaining competitive with

the digital economy. For the executives and employees involved in the transition, this extends beyond changing the underlying behaviors and culture (Solis, 2017); it entails challenging the existing functional structures of the business (Vey, 2017) and introduces a need for catalytic leaders who transform, guide, encourage and instil a sense of purpose and direction for the business (Thierry, 2016).

1.4 Research Objectives

The research objectives are presented, as a two-pronged approach that deliberately sub-divides the problem statement into two sequences. The primary drivers of each sequence of this research study are articulated below:

Sequence 1:

- To define Digital Transformation; and
- To establish the drivers of DT.

Sequence 2:

- To understand what attributes leaders, need in order to drive Digital Transformation.
- To ascertain the role of leadership in influencing the drivers of DT.
- To discover the barriers to DT.

1.5 Research Questions

Similarly, the research questions are presented, as two-pronged sub-divided into two sequences. Sequence 1 has two questions and sequence 2 has three questions.

Sequence 1:

- What is Digital Transformation (definition)?
- What are the drivers of Digital Transformation?

Sequence 2:

- What attributes do leaders need to possess to drive Digital Transformation?
- How does the role of leadership influence the drivers of DT?
- What are the barriers to DT as perceived by the leaders of the organisation?

1.6 Significance of Study

The Capgemini and MIT Sloan Management Review (MIT Sloan, 2019) survey gave a clear global indication that while many organisations were aware of the importance of Digital Transformation, a number were unsure of where to begin, and many did not even know how to use digital technology to reach organisational goals. General resistance to change was problematic, and many simply did not have the correct digital leadership skills, vision or urgency needed to hasten the DT process (James, 2019).

Reflecting on the problem statement, the study rationale was to provide an all-encompassing definition that outlines the drivers for Digital Transformation in the South African Financial Services and thereby articulate the skills and abilities that leaders needed to drive DT in this context (Distel, 2017). The contextual differences induced the need to understand what dynamics would inform the successful deployment of DT within the South African Financial Services sector and also understand the contributing barriers that often stifle the seamless execution of a DT strategy (King, 2013). Furthermore, the study contributed regarding the creative use of research methodology and data collection. The mixed qual-qual methodology expanded in chapter three demonstrates the novel approach the research has undertaken in order to surface contextually richer and broader insights to the study.

1.7 Contribution of Study

The study adopted a novel sequential qual-qual mixed method approach that used creative data collection methods. The primary characteristic of a qual-qual mixed methodology is that both the core component (qualitative content analysis) and the supplementary component (thematic analysis of semi-structured interviews) have an inductive theoretical drive (Morse, 2010). The research was intended to be exploratory descriptive research, with the goal of creating rich descriptive content that builds conducive academic content that aids in

addressing the problem statement in a more exhaustive manner owing to the depth of the insights derived from the elected methodology.

The creative extraction methodologies mean that the second part of the qual method (semi-structured interviews) was aimed to use non-orthodox means of engaging with research participants as that tends to restrict the extent of information shared by participants affected by the formality of the engagement (Rainford, 2019).

The sequential nature of the data extrapolation process lent itself well to creating a rich, triangulated view of the topic under study. The cornerstone of any research is the validity, verifiability and reliability of the data collected. The study, methodologically as it is structured, proposed to inform readers with this in mind. The mixed element of the methodologies was the stewing of the analyses and the findings that informed the apex of the research, which is about the role leaders play in driving Digital Transformation in the South African Financial Services Sector. A diagrammatic presentation of this methodology is given in Chapter 3.

1.8 Triangulation

The research deployed a pragmatic constructivist approach that sought to arrive at an understanding of Digital Transformation and the associated barriers from the perceptive of the leaders. This formed part of the research project in the form of the thematic semi-structured interviews. Triangulation of the literature review and the semi-structured interviews formed a critical nexus of the validity and reliability relating to the research project (Merriam, 2009). To qualify the validity and reliability of the research project, more than one method of sourcing data in the study of phenomena (Merriam, 2009; Bryman, 2012) was deployed. It was for this reason that the qual-qual sequential method, using creative methods of extraction as specified below was used.

This study used two sources of data namely:

1) ***Literature Review*** – Covering the three main research questions by 1. Defining Digital Transformation, 2. Understanding the leadership attributes required to lead a DT Process, and 3. Understanding the common barriers to DT.
2) ***Semi-structured interviews using creative methods of extraction***

The research adopted the following methods of data analysis for the designated methodologies:

1. Qualitative content analysis
2. Thematic analysis of semi-structured Interviews:

1.9 Validity and Reliability

Validity is defined as "the degree to which items in an instrument reflect the content universe to which the instrument will be generalised" (Johnson & Cockburn, 2018). In the field of Digital Transformation, content validity was a plausible starting step for the research under study (Holland, 2016). In general, content validity involves evaluation of a new instrument in order to ensure that it includes all the items that are essential and eliminates undesirable items to a particular construct domain (Lewis, Anandarajan & Igbaria, 1995, Boudreau, Boswell & Judge, 2001). The judgmental approach to establish content validity involves literature reviews and then follow-ups involving evaluation by expert judges or panels (Engellant, Holland & Piper, 2016). The procedure of judgemental approach to content validity requires researchers to be present with experts in order to facilitate validation (Oluwatayo, 2012). The research project will make use of the semi-structured interviews from participants as a means of triangulating the literature gathered from the qualitative content analysis.

1.10 Delimitations of Study

The focus of the study will be delimited to the area of Digital Transformation, specifically within the South African Financial Services Sector. Furthermore, the study is not based on digital trends but will refer to such trends to contextualise the study in relation to the trends (Big Data, AI, Machine Learning, Cloud Computing, Block chain). Lastly, the sample is selected with the intention of supplying the niche insights of participants belonging in the South African Financial Services Sector, the sample population is purposive and not general in order to derive the highly specialized and specific views of the selected participants.

1.11 Additional Definitions

- **Digital Context:** a contemporary collective term for embracing cyber-physical systems, Internet of Things, automation, and data exchange (Hesse, 2015), also known as Industry 4.0. The trends that will form part of the study are those specific to the financial services fraternity such as digital wallets, on-demand banking, block chain, AI, and bots.

- **Digital Transformation:** the integration of digital technology into all areas of a business, fundamentally changing how organisations operate and deliver value to customers. It is also a cultural change that requires organisations to continually challenge the status quo, experiment and get comfortable with failure (King, 2013).

- **Digital Trends:** Prominent digital services and platforms that are fundamentally changing how businesses transact, process data, review data, engage their customers and create a user experience or organisational flow that allows an organisation to operate with agility, across geographies and profitably.

- **The Role:** The function assumed, activities carried out, competencies fulfilled by a person in a particular situation.

1.12 Assumptions

The assumptions of the study align with the research questions and are presented, as follows. There is a presumption of a clear definition of the term Digital Transformation (definition). Secondly, that there are specific drivers of the DT process. Thirdly, leaders have a different perception of the drivers of DT. Fourthly, that the drivers of DT. influence the role of leadership

Further assumptions include the perception that research participants will answer truthfully and base their responses on their own empirical experiences. The purposive population sample will provide broad perspectives from their respective roles and organisations selected.

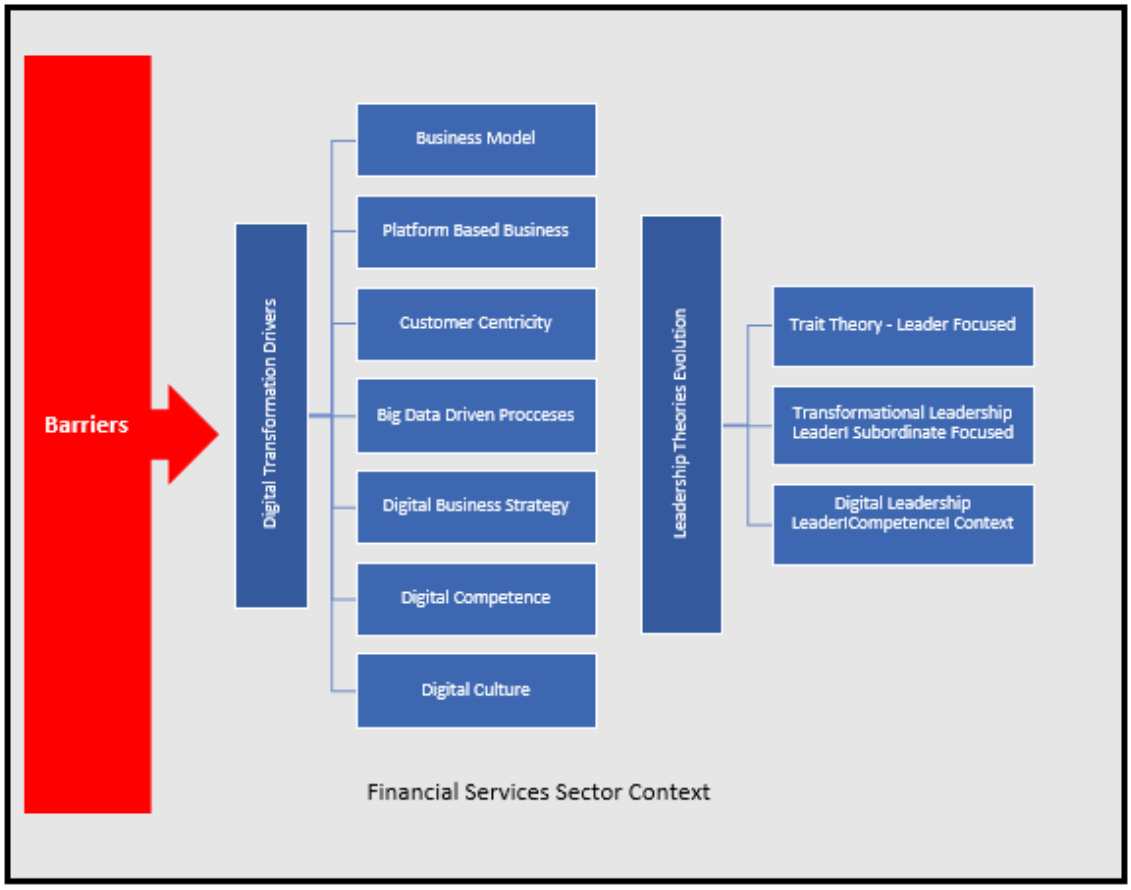
CHAPTER 2 – LITERATURE

2.1 Theoretical Framework

This section of the study explored the initial findings regarding the definition of Digital Transformation, which will contain several key DT drivers that informed the initial basis of the study. The various definitions of Digital Transformation by academic scholars were explored to demonstrate the many aspects of DT of which leaders needed to be aware in order to drive a DT process. Later in the study, the context of DT will be explored in order to understand its contextual dynamics in the South African Financial Services Sector.

In the theoretical framework depicted below, Figure 2.1 demonstrates three key points.

- The first is that specific drivers underpin Digital Transformation. The aim of the literature review is to discover the view of what those "drivers" are that would underpin/inform DT.
- The second is to depict the evolution of the leadership theories over time. Historically, leaders were defined by their traits, behaviour, and situation. These measures were used to gauge the pedigree of the leader. This then evolved and the focus was not the leader only, but rather on how leaders influenced their followers. The theory of transformational leadership was a hallmark reference of leadership during its time. The theory of transformational leadership is not a strong enough leadership theory to define what a leader in the digital context needs to do or know in order to drive Digital Transformation – and that gap drives the second aspect of the research.
- The third is to unpack the barriers thwarting Digital Transformation efforts that are often on the opposite end of the drivers intended to progress the DT process.



The ensuing section examines various definitions that have been used to describe what Digital Transformation is, as it relates to what the literature articulates. The literature suggests DT is inherently defined by its drivers. The two attributes are not in essence mutually exclusive, but are rather definitions that cascade within each other, namely DT is a function of business models, platform-based business, *customer experience, big data and analytics, DT business strategy, digital competence, and culture*. The second section of the literature review encompasses the evolution of leadership theories over time from assessing leaders *based on their innate born traits*, to *their interaction with their subordinates* and to their *capabilities and characteristics in the digital context*. Finally, barriers to DT are investigated to understand some of the impeding factors.



2.2 Digital Transformation and the Business Model

Digital technology has played a significant role in business model innovation, leading to the establishment of novel value creation and value capture processes, exchange mechanisms, transaction architectures, and boundary-spanning organizational forms. (Al-Debei, Al-Lozi & Papazafeiropoulou, 2009). These three main categories—automation, extension, and transformation—can be used to classify changes in business model constructions (AET) (Li, Tan & Xie, 2012). Automation refers to instances where a business uses digital technologies to streamline or improve ongoing operations, like displaying data or facilitating communications. Extension provides examples of situations in which businesses employ digital technologies to support innovative business practices, enhancing but without changing current operations and procedures. The term "transformation" describes situations in which new business models can replace established ones by utilizing digital technologies.

An organization's vision and strategy are reflected in a business model's Value Proposition, which includes its product offering, target market segment, and revenue model. (Hansen,2017). Value sensing, generation, distribution, and capture are all part of the Value Architecture, which supports the value proposition. The Functional Architecture, which includes infrastructure to support manufacturing and distribution as well as infrastructure to support product innovation and commercialization, as well as customer-relations management, supports the value architecture.

In the case of the business model, Osterwalder and Pigneur (2014) provided the most widely used framework in the form of a "business model canvas" (BMC), which was pushed via the strategyzer.com platform. To compile all of a business model's essential components into a single view, the authors collaborated with 470 practitioners across 45 nations. The resulting "canvas" is made up of the following elements: significant partners, significant activities, significant resources, value propositions, significant customer relationships, significant channels, significant customer segments, and significant cost structure and revenues. (Osterwalder, 2010).

The BMC's relative simplicity supports quick and effective content documentation when identifying important organizational components. For example, in the "customer segments" section, it is vital to clarify who the objective of organizational value creation is, how we identify the most significant consumers, or how we segment our client base. Each area has a unique set of issues that must be addressed.

The act of filling out the canvas is anticipated to assemble not just the explicit knowledge of operations and numbers but also its implicit resources. The latter offer insightful information about what makes the model new, distinctive, and competitive (or not). In particular at the level of sectors or between direct rivals in highly established marketplaces, the canvas built by different organizations may show a lot of similar aspects. An outline of potential building blocks for a company model is produced by the sum of shared and exclusive elements, which ultimately contribute to the construction of the business model.

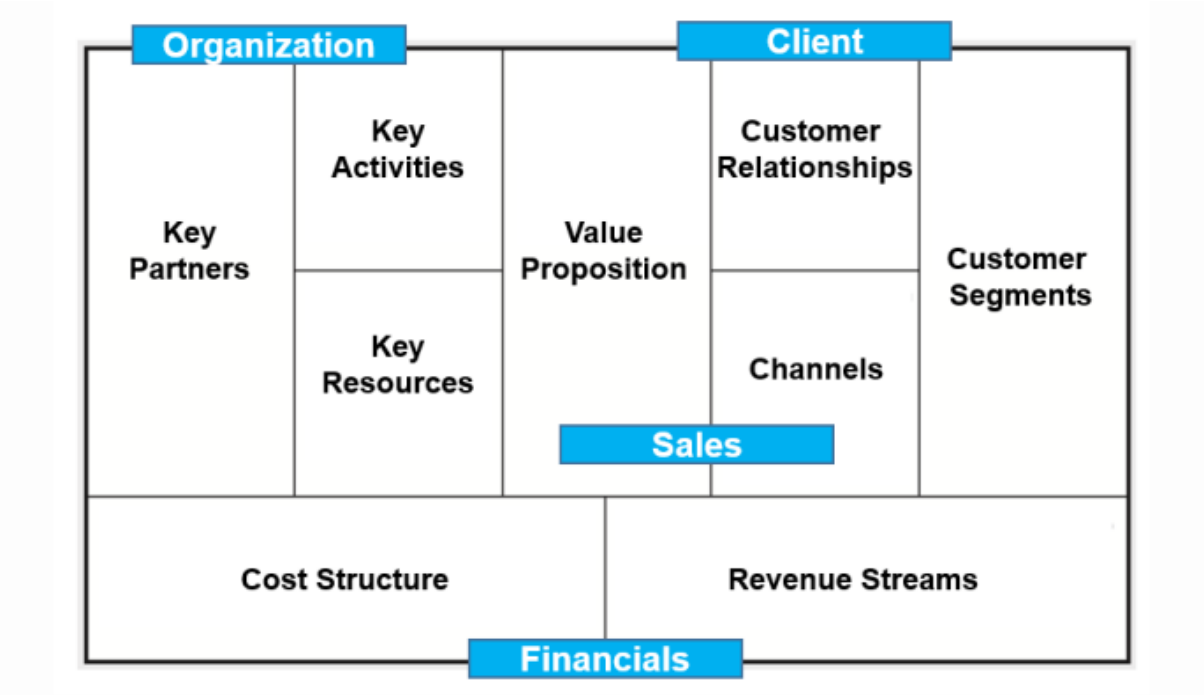


Figure 2.2: Elements of the Business Model Canvas.

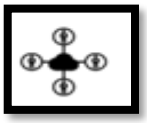
The above diagram gives a detailed account of the elements of the BMC as per Osterwalder (2010). The approach is to analyse the diagram according to the segments and sub-sections contained within these segments. Beginning at the top are three key words – Organisation, Client, and Sales – defined below.

(i) ***Organisation*** – this contains the foundational elements of the organisation's construct, being the *Key Partners* or Shareholders, the *Key Activities* that define the operations of the business and the *Key Resources* denoting the workforce and capital investment used to run the business.

(ii) ***Client*** – this contains elements of how Customer Relationships are managed, and the various systems used to manage the customer: The Value Proposition for the Client, the Organisation, and the Sales team at large, and the Channel of Engagement for customers that is best suited to the Customer Segments selected.

(Iii) ***Sales*** – this entails a view of how the organisation goes to market in the form of its Value Proposition and the Sales Channel it will use to engage and reach its audience.

Finally, there are the ***Financials*** – encompassing the Cost Structure of operating the business in totality and the Revenue Streams the organisation is able to generate as a result.



2.3. Digital Transformation and Platform-Based Businesses

Digital platforms, along with the tools and features they support, have become crucial enablers for businesses to use distributed knowledge (Seder, Lokuge, & Ranganath, 2016). This is because they give organizations new ways to collaborate with the outside world for ideas, technologies, and knowledge. Afuah (2012), Frey, Filatotchev, Gospel, and Jackson (2011), as well as online marketplaces (Dushnitsky, 2011) are just a few examples of research that have looked at initiatives to foster this kind of collaboration on popular digital platforms.

Among other things, the open innovation phenomenon shows how these platforms have a significant influence on how different parties collaborate to develop through alliances, networks, and ecosystems (West, 2014). The enormous growth in popularity of digital platforms for research and development (R&D), idea generation, forecasting, freelancing, peer production, co-creation, product design, and public interaction over the past ten years is indicative of this influence, to mention just a few. Examples of digital crowd-sourcing systems that are used to engage people and seek ideas from them include Dell's IdeaStorm (Hossain, Veider, & Katha, 2015) and Starbucks' MyStarbucksIdea (Hossain & Islam, 2015).

In addition, third-party platforms like InnoCentive and IdeaConnection are running online contests to address issues faced by different organizations (Hossain, 2012). Digital platforms provide organizations new opportunities and skills, but they also present new obstacles that necessitate new organizational strategies in order to realize their full potential. It is consequently important to comprehend how these platforms fit into the Digital Transformation. In addition to understanding the workings and potential results of diverse digital platforms, we must also acknowledge the opportunities and difficulties that they present for organizations. Consequently, we should think of digital platforms as a way to hasten the Digital Transformation initiatives that many organizations are currently pursuing (Berman, 2012).

Digital platforms serve as a vehicle for innovation, according to Klerkx and Cho (2009). The pursuit of external information, whether it be local or remote, experiential, or cognitive, is essential for organizations' innovative actions, as Lopez-Vega, Tell, and Vanhaverbeke (2016) noted. For obtaining outside knowledge, digital platforms are a crucial conduit. According to Eisenmann, Parker, and Van Alstyne (2006), digital platforms for the exchange of concepts, technologies, and information are bidirectional in nature, with problem solvers on one side and solution searchers on the other.

The transition to a more digital environment necessitates a new method of information exchange both inside and outside of organizations. Knowledge exchange on digital platforms frequently involves a lot of ongoing communication between the two parties. This in turn implies that in order to absorb outside information inside organizations, new skills, tools, and management structures are required. Additionally, organizations must get over the "not invented here" syndrome (Lichtenthaler & Ernst, 2006), which is a pessimistic attitude toward external knowledge, and the "not sold here" syndrome (Lichtenthaler & Singh, 2010), which is a protective attitude toward the exploitation of external knowledge.

Digital platforms can be used for both commercial and non-commercial purposes, with each type of platform having a unique mechanism and requiring a different level of competence for digital transformation. We have identified three key kinds of digital platforms for the spread of ideas, technology, and information based on the available literature and popular press. These are covered in the following sections.

1. ***Problem-solving platforms*** – The use of intermediate digital platforms for problem solutions is widespread. InnoCentive, IdeaConnection, Hypios, Innoget, and NineSigma are a few examples of well-known problem-solving systems (Hossian et al., 2015). These intermediaries are of a commercial character, and the majority of their income comes from up-front payments from the organizations that are looking for solutions to problems and who accept all of the answers that are provided by the solvers (Hossain, 2012). The idea is that a good solution is more likely to come from a group of solvers than from a single solver.
2. ***Ideation platforms*** – To find designs for their products, many companies turn to concept marketplaces. Instead of spending millions of dollars hiring a design company for the same goal, LG, for instance, utilized the CrowdSpring concept platform to seek a new phone design for a cost of US$20,000 (Winsor, 2018). Only a small number of designers participate actively and successfully in design competitions, and higher financial rewards may not motivate them to put forth more effort (Araujo, 2013). Therefore, it is essential to have a diverse group of designers participating in design activities when encouraging these active designers to collaborate with peripheral designers (Füller, Hutter, & Faullant, 2014). In order to do this, certain intermediaries assist organizations in developing digital platforms appropriate for corresponding with various parties.
3. ***Public crowd-sourcing platforms*** – Digital platforms for the public sector offer a cutting-edge method of involving individuals in diverse public initiatives (Afuah, 2012). Federal agencies in the US are adopting the Challenge.gov platform (https://challenge.gov) as a substitute method to get suggestions on important problems the US Government is now experiencing (Berman, 2012). A list of challenges put forth by 100 agencies from the US federal government may be found on Challenge.gov. Federal agencies have awarded more than US$250 million in prizes thus far, and more than 250 000 solvers have taken part (Dushnitsky, 2017).

   In order to engage its citizens, the Singaporean government has created a number of digital platforms that aggregate datasets from several agencies (Yang & Kankanhalli, 2013). Again, in the US, the National Aeronautics and Space Administration (NASA) is using a number of contracts and the open innovation service to solicit public input on

problems related to human space exploration. In doing so, it hopes to draw on the variety of abilities that exist around the world (NASA, 2015).

2.4 Digital Transformation and Customer Centricity

Professor S. Livingstone of the University of Oxford is of the view that customer experience ought to be the intrinsic driver of any Digital Transformation process. This, he states, is because the modern customers' existing within the digital economy have the "power of now" and the power of choice at edge of their fingertips. The co-occurrence of intensely powerful digital technologies, different digital devices, availability of multiple digital channels across the customer touchpoints and the constant evolution of the customer is depicted in Figure 2.3 below (Livingstone, 2008).



Figure 2.3: Digital Convergence for Customer (**Livingstone, 2008).**

The emergence of myriad digital devices from phones to tablets to training pods to home appliances has forced the concept of the Internet of Things (IoT) to move from being an enterprise term to being one that is associated with the individual consumer (Gartner, 2015). Gartner's Pyramid of Powerful Experiences (Gartner, 2015) in Figure 2.4 below demonstrates the expectations that modern consumers have about organisations with which they interact.

Customers, according to Garner (2015), want organisations that afford the self-service experience by being able to provide the information they need, when they need it and in a

form they find easily digestible. Customers expect organisations to have fast turnaround times when it comes to the resolution of their problems with a purchased product or service. The days of holding for a significant amount of time on the phone have passed. Customers expect self-service services be standard with the organisations they interface with. For this reason, Digital Transformation strategies should be centralised around the customer experience/journey as they inform the critical prioritisation point (Livingstone, 2008).

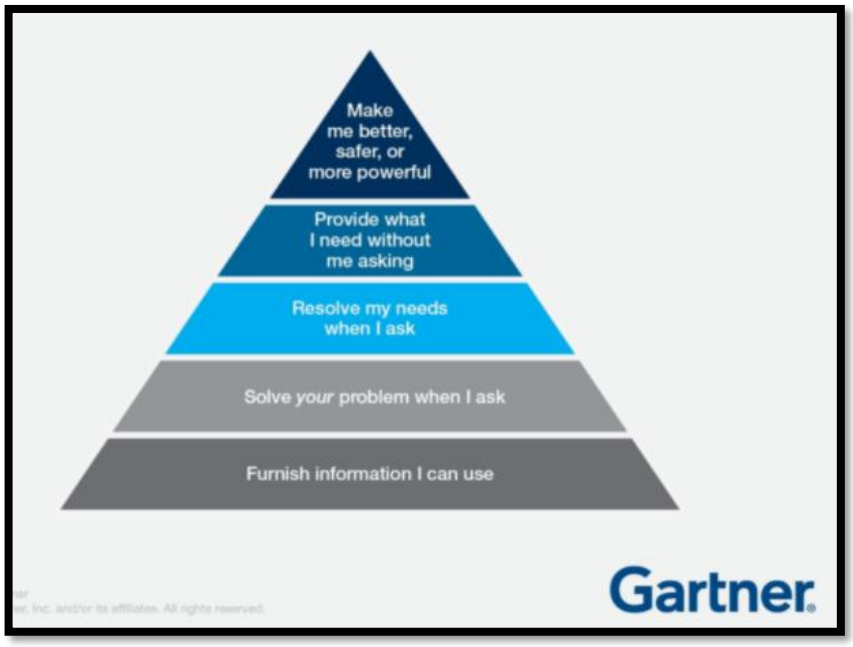


Figure 2.4: Gartner's Pyramid of Powerful Experiences (Gartner, 2015).

Understanding the area of customer experience and evaluating customer journeys over time is critical for organisations operating in the digital economy and wishing to maintain their market share. The importance of using customer experience as a key driver in the Digital Transformation process is that it forces organisations to base their DT efforts on enhancing all areas in the organisation that contact with the customer. This approach of Digital Transformation allows organisations to prioritise drivers that are strictly focused on customer retention, customer experience and market share growth. This approach in Digital Transformation is more sustainable and less conflicting than the other approaches presented by certain scholars (OECD, 2018).



2.5 Digital Transformation and Big Data-Driven Processes

Data is the new gold and presents the top starting point of any Digital Transformation process (Gartner, 2020). For an organisation to embark on a digital journey, the organisation must obtain data it can trust and that provides a concise view of the business, its operations, and sales (Barc, 2019). The adoption of Business Intelligence (BI) and Artificial Intelligence (AI) technologies affords organisations the ability to view and analyse the entire customer journey and experiences drawn from the various touch-points the customer would have with the organisational systems in order to depict specifically which part of the Digital Transformation process needs to be addressed first (Dias, Marias, Ravestyn, 2022). Business Intelligence affords the ability to find patterns of usage that can lead to the generation of sales and analyse underperformance of specific channels, again directing the prioritisation of transformation efforts by the business. From this knowledge, organisations can create strategies to optimise each of those channels.

Kane, Palmer, Phillips, Kiron, and Buckley (2015) make mention of a well-formulated framework that elaborates on key analytical components of BI and AI: this is framed as the ADTP (see below) of Big Data and Analytics.

A = Analytics – In order to find trends and patterns, consumer or business-related data is computationally analysed. According to a statistical analysis, greater analytics lead to higher customer satisfaction and a better overall customer experience. Analytics includes the following three sub dimensions: Data analysis, trend analysis, and process analysis are three examples of analytics. (Kane et al., 2015).

D=Data Analytics – This is the analysis of consumer data obtained through numerous digital channels to learn more about the behaviour and preferences of the customers. Data analysis enables businesses to act on these insights by implementing customer-specific tactics that will appeal to customers and result in a better customer experience. These details may include information about consumer demographics, buying trends, and preferences. (Kane et al., 2015).

T = Trend Analytics – This provides important information about client demographics and attitudes. These facilitate the customer segmentation process, give businesses better insights, and draw attention to Customer Centricity patterns. (Kane et al., 2015).

P = Process Analytics – Process analytics is the systematic analysis of the processes for developing a critical understanding of optimising customer processes, leading to the improvement of customer experience in organisations. Process analytics have an ability to provide better customer forecasting analysis, enable predictive marketing and services, integrate real-time information for customers, and trigger real-time decisions. This allows organisations to channel their marketing strategies and product services more effectively to the correct customer segments. Informed by the right data sets, this results in better predictive engagement and aids in raising financial performance and customer satisfaction (Kane et al., 2015; Sahuetal, 2018).



2.6 Digital Transformation Business Strategy

The term "**Digital Transformation Business Strategy**" refers to an organizational strategy that uses digital technologies to create distinctive business value. It is a fusion of business and information systems strategies that are both driven by technology and focused on business value. Business-IT alignment has become a well-established necessity in organizations over the last few decades, with IT frequently playing an enabling role rather than one that drives or shapes business strategy (Chan & Reich, 2007). A business strategy for digital transformation is a combination of business and IT strategies that creates a common understanding across the organization (Chen, Mocker, Preston, & Teubner, 2010) to guide the transformations brought about by digital technology and to promote innovation for long-term organizational competitiveness.

To promote innovation for long-term organizational competitiveness and to direct the changes that digital technologies bring about (Mithas, 2012). Because it is a strategy that uses digital technologies to build capabilities and responsiveness to ongoing environmental changes in business markets, it serves as the foundation of any digital transformation initiative (Sebastian, Kirchhoff, & Prockl, 2017). Due to the usage of digital technology, this

phenomenon reshapes the well-known IS strategy paradigm (Mithas, 2012), resulting in new products, services, processes, and business models. Formulating a Digital Transformation Business Strategy requires organisations to make strategic and relevant decisions about a few key parts of such organisations: these decisions have been synthesised in Figure 2.5 below (Schwartz, 2001):

Figure 2.5 is a diagrammatic depiction of the components that comprise a Digital Transformation strategy, specifically as they relate to the business, technology, and the organisation's customers.

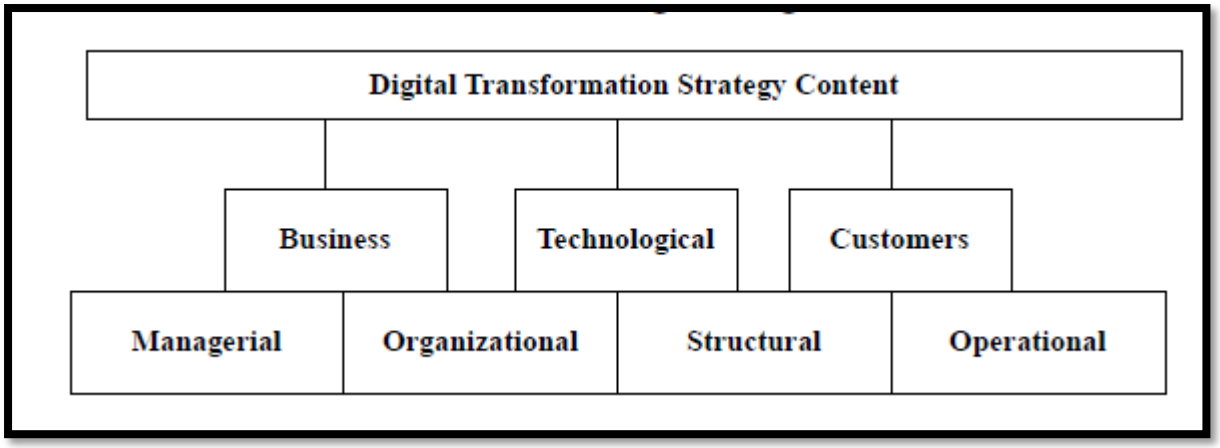


Figure 2.5: Digital Transformation Strategy Contents (Schwartz, 2001).

A critical starting point is establishing a business case that clearly articulates the long-term objectives of the digital initiative. The motivation must transcend the need to pursue quick, opportunistic wins for the organisation but must instead demonstrate how the organisation as a whole will attain a more competitive edge, enhance customer experience, and thus increase top-line growth (Venkatraman, Henderson & Oldach, 2013).

Closely related to these sets of decisions is the need to undergo a change readiness assessment to understand the extent of readiness for the organisation to absorb a drastic change — structurally, technologically, and culturally. This is specifically useful when weighing the organisation against industry peers and to identify potential problems, vulnerabilities, opportunities, and the associated risks to which the organisation would be subjected were it not to act at all (Lawton, 2015).

A pivotal consideration that ought to be the true aiming point of any organisation is the experience and interactions it aspires to create for its ***customers***. Organisations must investigate how they can use digital platforms, products, and services to create value and enhance customer experience. A pivotal starting point to driving that process would be to have a holistic view of the customers' system touch points with the organisation: that way there would be a more incisive view of where best to integrate the digital and physical interactions of customers on the organisational platform.

An area that often makes the topic of Digital Transformation contentious is that of funding. The act of transforming a business digitally implies being able to quantify the capital investment, giving a return on investment from the initiative and proving there are forecast revenues or a cost saving that can be realised from the initiative (Hess, 2014). This is not always easy because quantifying uncharted territory can be difficult. Decisions concerning ***structural changes*** or enhancements warrant attention within the digital business strategy. These considerations would normally entail assessing what internal governance will work for the Digital Transformation initiative. Also, what external collaborations through partnerships or acquisitions make sense for the organisation? Internally it would involve deliberating whether the digital initiative warrants creation of a new Digital Transformation on its own or whether it becomes a centralised function across all business units (Westerman et al., 2012). Establishing a strong **organisational** coordination mechanism through communication and collaboration rules, along with the desired KPIs that will align with the **manageria**l expectations of planning, leading, organizing and controlling all DT initiatives are of paramount importance to ensuring the firm is on the right path to transformation (Westerman et al., 2012).

Figures 2.6 and 2.7 depict the various internal and external approaches organisations can adopt when deliberating how best to restructure with the advent of Digital Transformation. The External model suggests a company takeover where one organisation will acquire the capability, expertise, and customer base the other organisations have in order to best leverage the DT process. The second is engaging in partnerships where the organisation will strategically target segments of the market with the designated changes. Finally, there is the approach of outsourcing expertise. This approach is also more commonly referred to as the BUY, BUILD, BORROW or BRIDGE model (Westerman et al., 2012). Figure 2.7 is the internal

consideration of where organisationally to situate the DT capability that can either reside in a federated model across each BU, as a specialised BU of its own that is centralised and cross-cutting or operate as a Centre of Excellence (Westerman et al., 2012).

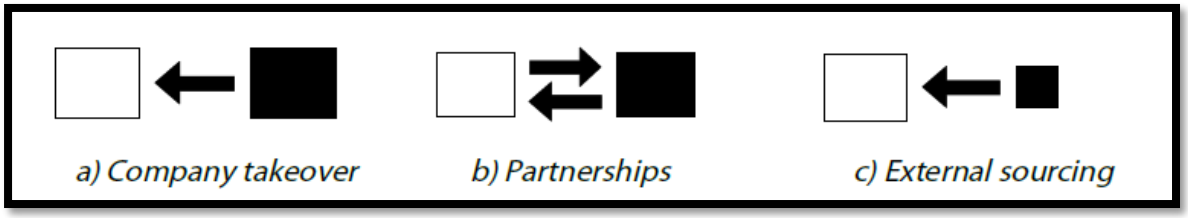


Figure 2.6: External Model Considerations (Westerman et al., 2012).

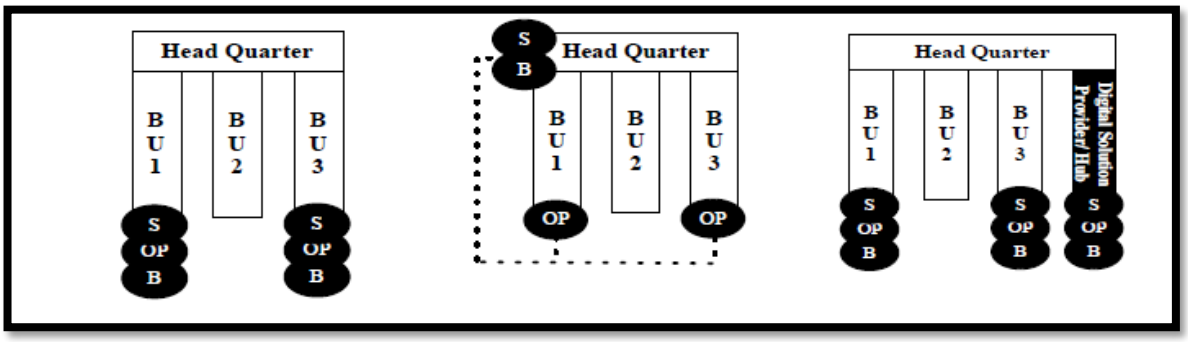


Figure 2.7: Internal Model Considerations (Westerman et al., 2012).

The ***operational*** dimension of strategic decisions cannot be overlooked in Digital Transformation projects and mainly incorporates choices regarding necessary operational changes and adaptations to the current business processes (Hess, Matt, Benlian & Wiesböck, 2016). Here companies have to make decisions based on mapping exercises to determine the processes that will be affected by the new technology integration (Matt et al., 2015). Organisations must also be primed to tightly infuse the use of new data into their processes and decision-making (Kane et al., 2015). They should be further equipped with the predictive capability to obtain certain insights from analytics and to leverage the data to optimise its digitally enabled supply chain and interaction with customers (Berman, 2012).



2.7 Digital Transformation and Digital Competence

It is impossible to have the ability to drive a Digital Transformation process without a set of competencies to enable those driving the ability to lead and execute on the Digital Transformation process. Leaders cannot fulfil their required roles if they lack the knowledge, skill set and knowhow to execute their functions. Prior to unpacking these competencies, we must understand what competence entails in this context.

The concept of core competence was introduced by Prahalad and Hamel (1990) in their article "The Core Competence of the Corporation". This defined competence as the harmonised combination of multiple resources and skills that differentiates the organisation in the marketplace and therefore forms the basis of the organisation's competitiveness (Grant, 2006). The European Commission defines digital competence as the set of skills, knowledge and attitudes required when using technology and digital platforms to perform tasks and activities. It is the ability to use the technologies and digital platforms to solve problems through the use of applications and devices, to communicate across various digital platforms, plus the ability to create, share and distribute content, building knowledge on or using these platforms creatively, autonomously, ethically, and critically (European Commission, 2012).

From the broadly defined definition articulated above, Celot and Pérez Torero (2019) extrapolated a framework that would depict the key areas of digital competence from their own framework of understanding stemming from their literary understanding (Kotilainen, Kim & Lee, 2007). They define Digital Competence as the existence of digital knowledge at varying levels, and this includes different types of knowledge as follows:

- A type related to technological applications (writing systems, electronic sheets, databases, etc.), which we can summarise as "***access competence***."
- A type related to the opportunities for technological use and also to the differences between the real world and its representation in the media, which we will call "***critical competence***."
- A type related to opportunities for work related to an understanding of the validity and reliability of available information, and an awareness of the need to respect the

ethical principles forming the basis of the interactive use of technologies ("***competence of user awareness***").

- An understanding of the technological potential in terms of innovation and creativity, or "***competence of creative production***;" and
- Social inclusion (or "***citizenship competence***"), being the general awareness and knowledge by citizens within a community of how to engage with technology platforms.

Dimension of Competence		ISkills ETS	Becta	DigEulit
Access	Technological	Access	Access	Digital Competence
	Cognitive			
Critical	Analysis and Evaluation	Integrate	Understand & Evaluate	Digital Usage
User Awareness	Management	Manage	Define	
	Awareness	Define		
Creative Production	Production	Create	Create	Digital Transformation
	Planning			
Citizenship	Communication	Communicate	Communicate	
	Participation	Evaluate		

Figure 2.8: Celot and Pérez Tornero Framework of Competence (Celot & Pérez Tornero, 2019).

The framework used for illustrating the proposed model of digital competence by Celot and Pérez Tornero (2019) is illustrated above and comprises five components (or levels) of digital competence.

As the first stage in establishing higher levels, the first component relates to the competency of access or basic literacy. The prospects for accessing technology platforms are referred to by UNESCO as Access (Technology literacy). This suggests that persons utilizing the technology have access to it and have a fundamental understanding of how to use it. (Mutka, 2011).

The second aspect requires the ability to analyse and reason independently about the logic, nature, and content of messages (how they will need to be adapted for the various digital media platforms), as well as the knowledge to interpret the symbols, codes, and cultural conventions used on digital media platforms (Anderson & Krathwohl, 2001). This is related to the development of capacities for knowing, comprehending, and critically assessing the world of technology, technology trends, and its impact on the social context. Developing this critical approach requires basic literacy and access skills related to the available technology. (European Commission, 2012).

The third element is the ability to contextualize information and acquired skills in particular circumstances by putting their utilization in service of other sociocultural goals (manage). This can also be broadly described as the capacity to use technological knowledge in multiple circumstances, which relates to digital usage. (Ala-Mutka, 2011).

The fourth element focuses on the growth of the ability to create, plan, and produce something valuable in the digital marketplace using the technology platforms, tools, and expertise at hand. This is when the digital transformation starts to happen. (Anderson & Krathwohl, 2001).

The fifth element, which is related to how digital competence helps to strengthen social involvement, comes last. But someone lacking the necessary levels of education and critical awareness cannot experience this component. (Apple, 2012). These levels correspond to the understanding of the possibilities for using Internet resources, as well as the methods for using them to carry out basic daily tasks and solve problems. They also relate to having a

thorough understanding of the system that creates the online content as well as how it is managed and made accessible. (Bawden, 2008).

In order to better understand the concept of competence, we looked into Bloom's taxonomy as a tool for creating an evaluation model of digital skills. (Anderson & Krathwohl, 2001). As a method for the organization and systematization of didactic objectives in a hierarchical structure based on specific criteria, such as objectivity and evaluation efficiency, Bloom's taxonomy is frequently used in educational planning. This method enables the articulation of the general objective into more specific objectives. (Livingstone, Van Couvering & Thumin, 2008). The concept of digital competence has previously been conceptually defined, and Bloom's taxonomy enables us to distinguish distinct levels linked with different characteristics (basic and related to the aims). (Apple, 2012) – which can be arranged into six different levels. These are:

- Knowledge (remembering and recognising).
- Comprehension (understanding).
- Application (using a general concept to solve a specific problem).
- Analysis (understanding the components of a larger process or concept).
- Synthesis (combining ideas and information); and
- Evaluation (judging value or quality).

These will be explored in detail in the later parts of the literature review.

With the understanding of what competencies entail, research is now able to measure the competence of a digital leader against the terms and drivers articulated in this section of the literature review. The question to ask the leaders of Digital Transformation within an organisation is how they assess or equip leaders with the competence to drive DT.



2.8 Digital Transformation and Culture

Digital Transformation will challenge the culture of any organisation, specifically because the transformation process itself is in almost all instances new to the organisation (Hartl & Hess,

2017). The big question is exactly what organisational culture is and what specifically is its role when undertaking a Digital Transformation process.

Organisational culture can be understood as acquired patterns and hidden rules that were developed and approved by groups within the firm. These are the unwritten rules, the unspoken expectations and norms formulated in the workplace that are endorsed or frowned upon by organisational leadership (Schein, 2006). There are three different levels of organisational culture that the scholars mentioned above have identified, namely *artefacts, beliefs, and underlying assumptions* (Hartl & Hess, 2017).

The *artefacts* on the first level are visible structures and processes that can be observed and felt by employees and different stakeholders such as the business units (Gray,2015), the individual role KPIs, the interdepartmental engagement model – all that is tangible or visible to the eye (Jefferson,2010). The second level deals with *beliefs and values* including espoused goals and ideals – moral principles that are not communicated explicitly but are known through behaviour that is rewarded and gets management's attention (Schein,2006)). On the third level, Schein (2006) places underlying assumptions. These are unexplained beliefs, habits, thoughts, and feelings and can be found inside the company and informed by the latent beliefs communicated in level 2 (Solomon, 2006). This part of the research will explore how these organisational cultural elements influence the ability of the leader to drive Digital Transformation adoption within the organisation itself. Figure 2.9 below gives a view of the aforementioned drivers as discovered in the first sequence of the research method.

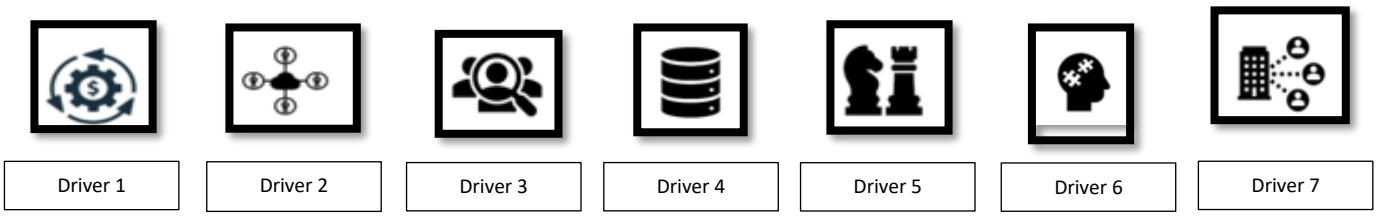


Figure 2.9: Initial Drivers of Digital Transformation (researcher's own).

- Driver 1: Pictorial representation of Digital Transformation and ***Business Model***
- Driver 2: Pictorial representation of DT and ***Platform-Based Business***
- Driver 3: Pictorial representation of DT and ***Customer Centricity***
- Driver 4: Pictorial representation of DT and ***Big Data-Driven Processes***

- Driver 5: Pictorial representation of DT and ***Digital Business Strategy***
- Driver 6: Pictorial representation of DT and ***Digital Competence***
- Driver 7: Pictorial representations of DT and ***Digital Culture***

2.9 Digital Transformation and Leadership

The section below relates to explorative research on the evolution of leadership theories as academics have come to understand them over time. Such research began with exploring the premise of the Great Man Theory that argues a leader is born and not developed or made, followed by the evolutionary approach of analysing leaders not just in relation to their abilities but rather how they inspire and drive performance through their followers. This section concludes with an analysis of some of the notable literature on what would constitute digital leadership.

Figure 2.10 below summarises the evolving analysis of leadership as presented in the research, first with a view of leaders themselves through the perception of leadership in terms of the Great Man Theory, then leaders in relation to their subordinates as depicted in the Theory of Transformational Leadership, and finally leaders in relation to the digital context in which they are operating.

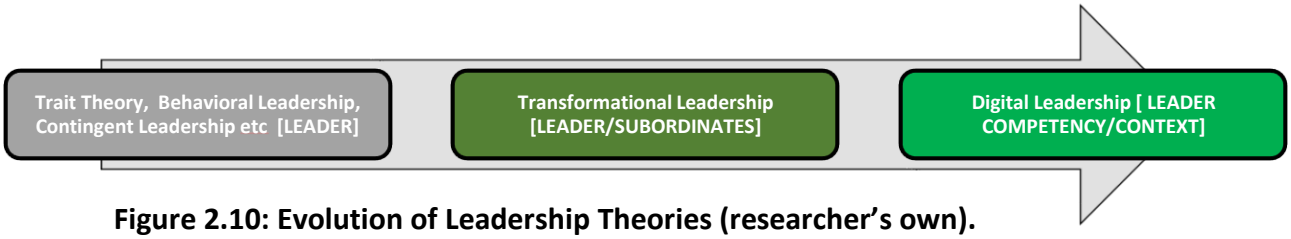


Figure 2.10: Evolution of Leadership Theories (researcher's own).

Leadership plays a significant part in organisational success (Kane, 2016). At a time of extreme disruption, market uncertainty and an ever-changing competitive landscape born from the myriad opportunities that the digital era presents, there has never been a time more strenuous for an organisation's leadership team to make the right decisions, at the right time with the right strategy (Sullivan, 2017).

Receiving particular focus within this research document is the analysis of the calibre of leadership needed to drive this tumultuous task. What are the characteristics, attributes and competencies needed to rise to the occasion? Will the definition of leadership as we know it

– being title-based and positionally-driven – suffice for an environment that requires risk, experimentation and technology competence infused with soft leadership skills?

Leadership Theories Background

2.9.1 Great Man Theory.

Leadership theories date as far back as the 19th Century. There have been a number of postulations as to what really that makes a great leader. One of the first prominent theories was the ***Great Man and Trait Theory***, which advanced the notion that leaders are born and have specific traits that set them apart – should they not have these traits, they were considered not leadership-worthy (Avolio, 2007).

The ***Behavioural Theory*** challenged Trait theory by advancing the idea that leaders could indeed be trained and thus behave in a way that was presumed to be leadership-worthy (Smith & Davenport, 2019). Behavioural Leadership was premised on the actions of the leader and assumed that leaders could be trained and that they were not necessarily born (Aiman, 2012). A number of other theories evolved from these theories, such as ***Contingency Theory*** and the transactional leadership theories, which were all really centred around the leaders themselves, how they respond in different situations, and how they drive the subordinate relationship in a hierarchical, transactional fashion (Smith & Davenport, 2019).

The era of the ***Theory of Transformational Leadership*** inherently shifted focus from the leaders themselves, to how the leaders interacted and influenced their subordinates. The theory became dyadic, denoting the importance of the leadership exchange really being a two-way process of engagement and stimulation as opposed to being unidirectional (Sheninger, 2018). James Burns, the founder of the theory of transformational leadership, elevated the beacon by focusing on how leaders engage their “followers” by centring on their individual motivations and inspirations to drive their performance, as well as setting an example and inspiring through intellectual stimulation (Johns & Moser, 2001).

2.9.2 Theory of Transformational Leadership.

Transformational leadership theory is defined in terms of the leader’s effect on followers, and the behaviour used to achieve this effect. The followers feel trust, admiration, loyalty, and

respect for the leader, and are motivated to do more than they originally expected to do. The underlying influence process is described in terms of motivating followers by making them more aware of the importance of task outcomes and inducing them to transcend their own self-interests for the sake of the organisation (Vroom & Yetton, 2007). Transformational leadership includes individualised consideration, intellectual stimulation, idealised influence (charisma) and inspirational motivation (Cherry,2019)

Transformational leadership theory postulates that an effective leader will influence followers to make sacrifices and unleash exceptional effort (Schein, 2006). Influence is unidirectional, and it flows from the leader to the follower. Jefferson (2010) argues that when a correlation is found between transformational leadership and subordinate commitment or performance, the results are interpreted as showing that the leader influenced subordinates to perform better: however, there is little evidence that demonstrates the reciprocal influence processes or shared leadership.

One of the primary limitations of the theory of transformational leadership is the assumption (with the absence of key measurable indicators) that the adoption of this form of leadership shows a correlation between leadership style and team organisational performance. Yukl (2012) states that what is needed to give the theory substance is the pursuance of contingency variables in order to explain effectiveness, as there are mediating mechanisms, moderators and contexts that need to be considered prior to the advocacy of applying what originators term a “universal theory”.

The theory of transformational leadership assumes that the underlying leadership process and its outcomes are essentially the same in all situations. Burns (1997) proposed that transformational leadership is beneficial for followers and their organisation, regardless of the situation. In support of this position, the positive relationship between transformational leadership and effectiveness has been replicated for many leaders at different levels of authority, in different types of organisations, and in several different countries (Bass, 1997). Nevertheless, several theorists have proposed that situational variables may reduce its effect on followers (Khan,2015). The proposed conditions include an unstable environment, an organic structure (rather than a mechanistic bureaucracy), an entrepreneurial culture, and dominance of boundary-spanning units over the technical core (Kotter, 1996).

Only a few studies have tested these propositions (Padsakoff, Birkinshaw, Probst & Tushman, 2020), and there is still not much evidence of important moderator variables. The search for situational moderator variables may be more successful if directed at specific types of transformational behaviour. Even if there is always some type of transformational behaviour that is relevant for effective leadership, not every type of transformational behaviour will be relevant in every situation. Because of the high inter-correlation among transformational leadership scales in the Multi Factor Leadership Questionnaire the survey studies have not helped to assess the separate effects of these component behaviours (Solomon, 2006).

The extensive criticism articulated by various academic authors such as Yukl, Padsakoff, Birkinshaw, Probst in the literature consulted regarding transformational leadership theory is an indicator that this theory on its own is insufficiently robust to use as a measure of leadership for driving the Digital Transformation agenda within an organisation. The literature gave a clear and vivid demonstration that another form of leadership theory was needed to fit the topic of Digital Transformation. The researcher then explored the topic of digital leadership and was overwhelmed by the journal "hits" describing digital leadership as a concept that centred primarily around leaders themselves and gravitated mostly towards explaining the attributes that digital leaders possess or need to engender if they are to be successful in driving Digital Transformation.

2.9.3 Key Digital leadership Attributes.

Seth Kahn, executive coach at the Seth Kahn Institute of ***Visionary Leadership***, describes visionary leadership as comprising self-transformation and strategic foresight, and leading change. He describes self-transformation as a process of constantly reflecting on self, experiences, views, and perceptions about things in general. It is a process that involves constant challenging and awareness (Trefler, 2019) – a trait one can align as being closely affiliated with emotional intelligence, with a strong focus in general of self-awareness.

Self-awareness cannot be divorced from the area of ***Emotional Intelligence***. Seth Kahn describes emotional intelligence as the ability of leaders to be aware of their own emotions and the impact of those emotions in relation to their followers (Copeland,2014). It is also about leaders' ability to show sensitivity, compassion, and care for their followers in a way

that allows the leaders to connect to followers' hearts and in turn inspire them to realise their greatness.

Strategic foresight is a function of experience, understanding industry dynamics and a general sense of keeping abreast of technologies and other factors influencing where the organisation may go in the future (Oaks, 2018). Another attribute closely associated with this leadership trait is resolution. ***Resolute Leaders*** hold steadfast in their convictions and deeply anchored beliefs in the face of adversity (Roe, 2018). They are able to take unpopular decisions and remain decisive in spite of the implications of such decisions. Failure is viewed merely as a stepping point for such leaders; they have a flair for taking calculated risks and enduring uncertainty, they provide assurance and certainty amid turbulence (Newman, 2018).

Value-Based Leadership is another contemporary leadership theory that evolved through the dissenting times of the 21st Century (O'Toole, 1995). Values-Based Leadership was a response to immoral and unethical decision-making (Brown, 2005) that was underpinned by unscrupulous, often corrupt, and financially greedy senior leaders (Copeland, 2014; Zhu, Vos & Vries, 2004). It became a reference point that guided the philosophy of leading through morality, empowerment, and followership (Yukl, 2012). Some key themes of the value-based leadership theory are integrity, trust, respect and listening. What is compelling about leadership evaluation from a values-based vantage point is that the frame of measurement is composed of the very foundational elements that are both personal and unique to a leader in particular – while the values themselves are a critical reference point for the organisation in question. Even more critical is the organisation's own value imprint and how these values are transposed and reflected in the organisational culture (Newman, 2018).

Where an organisation has listed integrity as a core value, and when the organisation is in pursuit of a leader who subscribes to its value system, there is not really a way to measure or check for integrity as this new leader is brought in. How such a leader processes and sets tasks, plus the organisational norms and how things in general are done, enable this leader to behave in a way that assimilates with organisational culture. As such, values in an organisational setting are partly set by the leader, but more predominantly ascribed to the organisation and its cultural nuances (Koen, 2019).

Distributed Leadership – According to Gronn (2008), discussion of distributed leadership began in the late 1940s and 1950s with Benne and Sheats (2019) and was followed by Gibb (2016); it was only in the late 1980s that research shifted leadership's focus from just a school's principal, for example, to instead being attributed to other leadership agents within the school that had instructional power. Progressively, the theoretical models guided by research began to observe a network of patterns of control across such a school where leadership activities were widely distributed among various roles and individuals (Kane, 2016). Distributed leadership is also known as shared or democratic leadership with the primary characteristic of leadership being interdependency. The current study will unpack the reciprocal, pooled and sequential aspects of this form of leadership and its applicability in the digital context.

Curiosity is a powerful, fundamental human trait that fosters a great deal of human motivation (Grigorescu, 2020). Curiosity is primarily characterized by the urge to comprehend, investigate, and learn. Grigorescu, 2020; Peter & Richard, 2009; Curiosity examines issues relating to how people interact with novel and worthwhile perceived stimuli. Oudeyer and Kaplan (2009) assert that curiosity's characteristics are analogous to those of intrinsic motivation. Having an open mind, being responsive to what is being seen, and having an interest in learning new things are examples of this. An open and responsive mindset as well as a readiness to look into things that are ambiguous, peculiar, uncommon, or unsure are qualities that Mussel (2014) defines as curiosity Extremely inquisitive people continue to investigate despite feeling anxious and speculate even more effectively (Kashdan & Silva, 2008).

Diverse Curiosity is the urge to go into previously uncharted depths of understanding in order to discover novel insights and experiences (Grigorescu, 2020). Curiosity inspires individuals to act and think in novel ways and to investigate, absorb and learn about whatever piques their interest.

Curiosity fosters exploratory behaviour and piques attention, claim Fichman, Dos Santos, and Zheng (2014). While epistemic curiosity is the desire to learn, perceptual curiosity is the desire to acquire experiences through the senses. Curiosity increases a person's propensity to pay attention, digest information fully, recall knowledge better, and persevere through a task until the work is completed (Wagstaff, Yoo & Lee, 2021). A digital leader will exhibit some of

these important characteristics while striving to steer the organization in a certain direction within the framework of digital transformation (Suma & Budi, 2021).

Experimental is a term that describes a person who is open-minded, inventive, and daring and who is especially eager to attempt and test the uncharted is referred to as experimental (Li et al., 2006). In contrast to obsessive, rule-based, rigid, and inflexible attitudes that show a lack of knowledge of reality, this attitude is flexible. (Miller & Toulouse, 2016). According to research, Digital Leaders must continue to be receptive to novel digital ideas, tools, and platforms, as well as social media features and online communities (Hunt, 2015). According to Miller and Toulouse (2016), intuitive, risk-accepting decision-making and informal, flexible, and basic organizational structures were found to be connected with flexible leaders as opposed to drawn-out procedures and intricate hierarchies.

As pointed out by Alo-Simo, Bigne-Alcaniz, and Ruiz-Mafe (2017), organizational cultures must be led in a way that fosters adaptability if they are to successfully change into digitally driven enterprises. The Digital Leader can more easily accept and change if they are flexible. Risk-taking, a focus on technology, a dedication to customers, and visionary qualities all go under the umbrella term "innovative," which is also used to describe leadership that is bright, creative, or forward-thinking. As stated in the literature, leaders in the context of digital transformation are typically characterized as entrepreneurs who test out novel technical solutions and accept the associated risk (Singh & Hess, 2017; Thong & Hu, 2015; Tumbas, Sarker & Wang, 2018) and implement new concepts and ideas into an organization (Pierce & Delbecq, 2020).

Digital Leaders will succeed in overcoming the challenges of Digital Transformation (Zhu et al., 2006) when they are able to maintain their organisations' relative advantage through technology orientation by exploiting digital innovation, while simultaneously being aware of its limitations (Horne-Long & Schoenberg, 2002) and whether these remain compatible with existing business processes (Rogers, 2016).

2.10 Barriers to Digital Transformation

The following section explores some of the challenges that organisations experience when undertaking a Digital Transformation process, as articulated by some scholars with reference to barriers to DT.

2.10.1 Uncertainty.

Employee resistance to embracing the change is one of the most noteworthy obstacles to any type of organizational transformation (Solis, 2017). Several theorists have shared their research on the elements that may result in resistance to change (Hadjimanolis, 2017). Kotter (1996) defined resistance as a barrier in an organization's structure that prevents the change from taking hold and, as a result, limits its efficacy (Solis, 2016). Kotter and Schlesinger (2008) had investigated a few reasons of resistance to change when Lewin conducted his study (Distel, 2017).

Habit, fear of the unknown, fear of a negative economic impact, seeing only bad results linked with change, and an overall low tolerance for change were sources that ranked highly on the list (Vey, 2017). In general, resistance to change may result from a concern over losing something valuable or significant (Grashow, Marion, & Uhl-Bien, 2013). When creating successful change strategies, it is crucial to consider each of these aspects (Valentine, 2016).

2.10.2 Resistance.

According to Goler (2018), resistance may be divided into two separate categories: systemic (cognitive) and behavioral (emotional). Systemic resistance denotes the absence of the knowledge, talents, managerial skills, or information required to successfully accept an organizational change that has a significant influence on a specific person, group of people, or business unit (Kotter, 2015). The second type, referred to as behavioral resistance, denotes pre-existing notions and partial responses in connection to the organizational change (Hansen, Sia, & Tassabehji, 2015).

According to Kanter (1989) and Burdett (1999), this also holds true for leaders who shun change and uncertainty. The main barrier to enacting significant organizational change, according to research by Bareil (2013), is top management's lack of commitment to and

support for the change. In accordance with research by Gianfranco and Peccei from 2005, resistance is a kind of dissent, and if it regularly manifests itself in implicit and passive ways, this may slow the rate of development of transformative programs (Distel, 2017).

It is crucial to address the issue of obstacles to digital transformation since many organizations make the mistake of prioritizing the technical aspect of change management over the equally crucial human aspect (Dickerson, 2013). A closer look reveals that management practices and staff attitudes are the fundamental factors causing resistance to change (Keller & Aiken, 2008). According to Henderson and Venkatraman (2013), problems, hurdles, and opposition that stand in the way of effective transformational change are all considered to be barriers to transformation.

Organizations must be more open to and proactive about change if they want to adapt to the changing environment and stay competitive. As a result, every endeavor to bring about change presents significant obstacles for both the organization and leaders at all levels (McConnell, 2018). Since change typically entails a transition from the familiar to the unfamiliar, resistance to change is a common reaction (Coghlan, 2013). Arguably more important than managing other aspects of the Digital Transformation challenge, managing organizational resistance, and addressing the human capital perspective to change are essential to the effective implementation of change.

According to research, businesses who have carried out their strategies and implemented digital transformation are seeing a rise in shareholder and stakeholder values (Westerman, Tannou, Bonnet, Ferraris & McAfee, 2012). The consequence is that organizations will excel at implementing their DT initiatives the better they grow at controlling the barriers to DT (McConnell, 2018).

2.10.3 Internal and External Barriers.

The literature consulted has demonstrated that there are different classifications of barriers to Digital Transformation (Hansen, 2015). These are often separated into two distinct categories, namely internal and external barriers, which are further sub-divided (Madrid-Guijarro, 2009). Internal barriers include resource-related constraints where the search for the right skills and correct candidates for an organisation and its Digital Transformation path

have proved to be barriers, likewise management in terms of strategic direction, communication and driving organisation-wide adoption of DT, time-, culture- and systems-related as well as human-related challenges (Higgs, 2017).

External barriers are sub-divided into supply-side, demand-related, and environmental-related barriers (Hadjimanolis, 2017). The internal and external classifications have proven useful in many studies in different contexts (CEB, 2016). D'Este and Helfat (2012) differ between revealed barriers, describing the process of Digital Transformation, and deferred barriers, meaning the obstacles resulting from adopting a Digital Transformation process. Coad, Herzfeldt, and Kramer (2016) mention four different barrier factors discovered during this research study, these being cost, knowledge, market, and regulation. Another differentiation has been pointed out between firm-related, project-related, and product-related barriers, where the firm-related barriers are internally induced by the internal barriers listed in the preceding paragraphs (Demirbas, 2017).

Project-related barriers pertain to the under-estimation of costs, resources and time required to complete the outlined Digital Transformation process (Coad et al., 2016). Finally come the product-related barriers closely associated with the project barriers (Distel & Ongena, 2019). Normatively, the project is established with the objective of creating or releasing a product (D'Este & Helfat, 2012).

The diagram below illustrates the multiple areas that uncertainty impacts within an organisation undertaking a Digital Transformation process. The impact is felt at a leadership, organisational and employee level for different reasons. Leadership will be concerned about their own ability to execute a DT process, wonder about their own job security and – because of their position and power – possibly sabotage efforts that may threaten their value in the organisation. Organisations seem to struggle with defining, sourcing, and attracting the right skills for Digital Transformation, making the required investment, and going about the prioritisation process effectively. Employees resist the change owing to their being uncomfortable with the change generally, caused by limited understanding of the impact on their roles and an absence of clear communication from management.

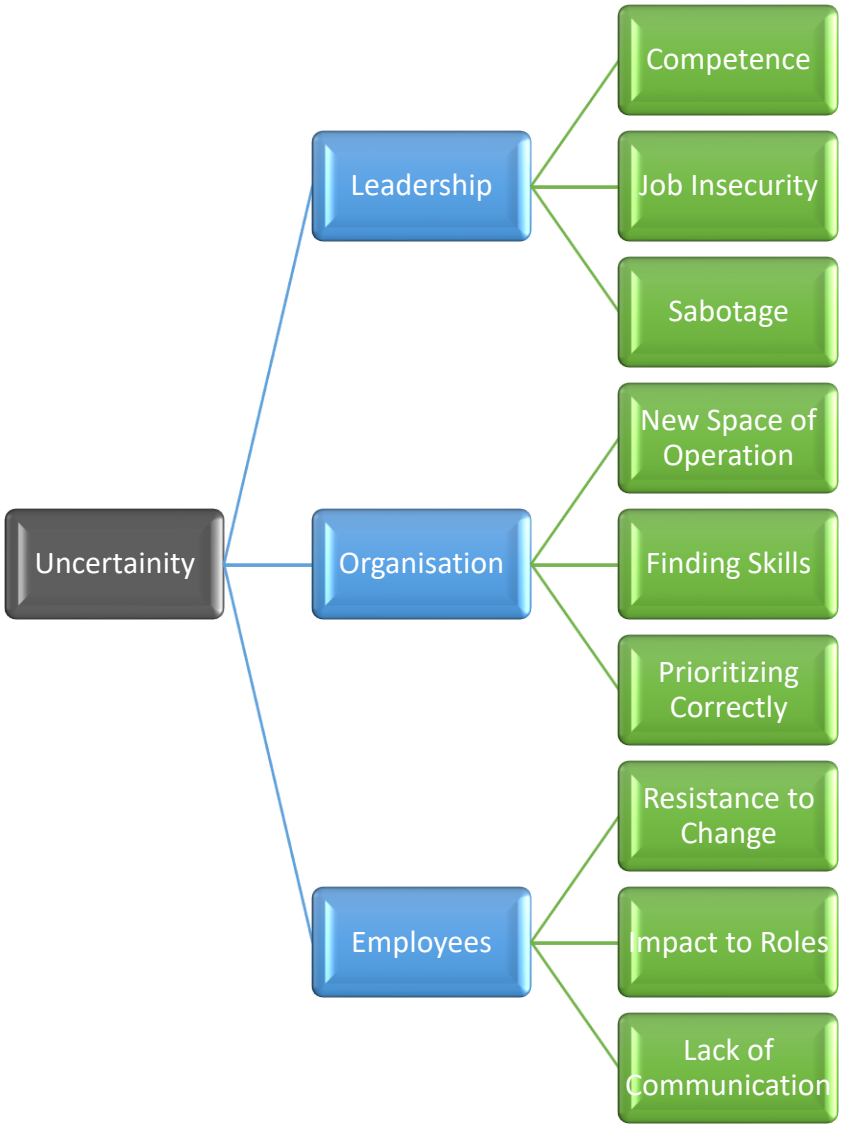


Figure 2.11: Barriers to Digital Transformation (researcher's own).

2.11 Summary

This chapter serves as a reference source on the existing literature covering Digital Transformation and leadership. The seven main drivers encapsulated from the literature review regarding Digital Transformation were: (i) Business Model Transformation, (ii) Platform-Based Businesses, (iii) Customer Experience, (iv) Digital Business Strategy, (v) Big Data-Driven Processes, (vi) Digital Competence, and (vii) Culture.

The next section explored the evolution of leadership theories which were initially founded on the Great Man Theory, postulating that a leader is essentially born and not made, that a leader embodies certain traits specific only to leaders who were born with such traits. The next evolutionary lens focusing on leadership involved looking at leaders and how they

influence, motivate and drive performance through their subordinates. Although offering a different perspective to leadership, it was not sufficient a theory to detail the leadership attributes required to drive Digital Transformation.

The topic of digital leadership was explored, and from this a number of digital leadership traits were identified, namely Visionary, Emotional Intelligence, Strategic Foresight, Resolute, Value-Based, Distributed leadership, Curiosity and Experimental.

Finally, the last section of the literature review covered barriers to Digital Transformation. Uncertainty became a clear theme in the thread of articles considered. For the leadership team, for the organisation and for its employees, “uncertainty” appeared to be the driving force behind the resistance, reluctance and sometimes sabotage of change and lack of embrace for the DT process.

CHAPTER 3 – METHODOLOGY

3.1 Methodological Framework

The research study adopted a sequential qual-qual mixed method approach. The term "sequential" implies a distinct sequence for the data collection process, where the first phase must take place fully and to completion before the next phase ensues. These phased processes are directed by the two-pronged problem statement that is then guided by the research questions: these were intended to examine the role of leadership in driving Digital Transformation in the South African Financial Services Sector.

The qual-qual methodologies denote that two qualitative methods will be used in the research paper, namely qualitative content analysis and thematic analysis of semi-structured interviews.

The primary characteristic of a qual-qual mixed methodology is that both the core component (qualitative content analysis) and the supplementary component (thematic analysis of semi-structured interviews) have an inductive theoretical drive (Morse, 2010). This means that research was exploratory descriptive, with the goal of creating rich descriptive content that aided in the development of a Digital Transformation framework – one that might be somewhat more exhaustive owing to the depth of the insights derived from the selected methodology (Brown, 2018).

Other reasons for adoption of the sequential qual-qual methodology were to:

- Answer the research problem more fully and comprehensively (with broader scope or increased depth) thus making the research richer and more useful.
- To obtain a perspective, using a different data type (such as observational data in conjunction with the semi structured interviews).

- To obtain data from a different level of analysis, instead of using just organisational data concerning banks. The interviews gave the human experience of working in these banks, both leading and operating.
- To provide information that may have been inaccessible or unavailable when using one method alone. For instance, case studies only provide secondary reported data on the respective banks. The interviews provide first hand, empirical data from working within the banks.

3.2 Research Design

In this section the research design that was undertaken for the study was demonstrated.

Sequential Qual-Qual Mixed Methods Approach

Within the sequential qual-qual method, the first sequence of the qualitative method to be undertaken entailed qualitative content analysis. This was followed by the second sequence, the semi-structured Interview process. The validity and reliability of the first method was verified by triangulating it against the second method's findings, as depicted in Figure 3.1 below. The colouring of the triangulation section shows a merger between sequences one and two in the form of the triangulation. The sections were separated initially with the hope of unification following from the findings.

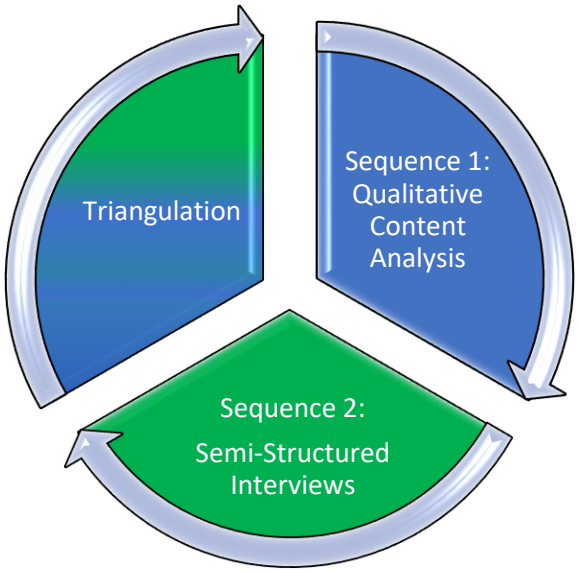


Figure 3.1: Methodology Framework (researcher's own).

Qualitative Method – Sequence 1: Qualitative content analysis

The purpose of the qualitative content analysis was to identify important aspects depicted in the relevant literature regarding Digital Transformation and leadership. It was intended to enable the extraction of themes, correlations and variances relating to the study within the financial services context in South Africa. The study aimed to create codes to define various categories of themes that came from the qualitative content analysis in its various forms, counting instances to perceive frequency, and coding and recording to perceive range (Marying, 2008).

Specifically, the research followed the procedure used by Marying (2008) for structuring qualitative content analysis.

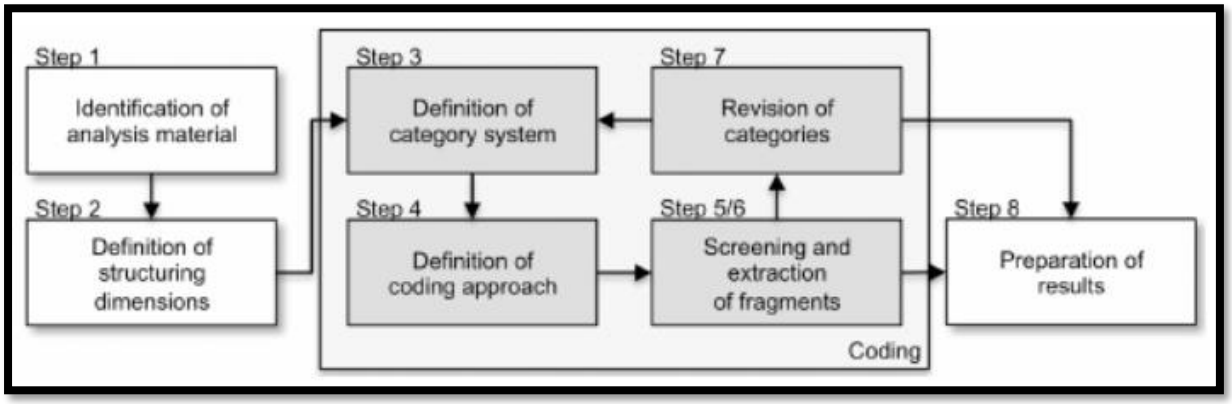


Figure 3.2: Marying's qualitative content analysis procedure (Marying, 2008).

Step 1: Identification of the Analysis Material or unit of analysis that will stem from the research question. Specifically, for the purposes of the study, the analysis material involved researching key words that formed part of the research question, those being "Digital Transformation," "digital leadership," and "leadership" (Marying, 2008).

Step 2: ***Definition of Structuring Dimensions*** – this entailed extrapolating themes that repeatedly featured in the analysis material. It formed the foundational elements that the researcher must select to inform the basis of the study (Marying, 2008).

Step 3: ***Definition of Category System*** – also termed the codification stage, where continued material analysis leads the researcher to finding a range of common aspects about the

research question under study. The researcher must decide which of the themes will be most applicable to the study and will best answer the research question (Marying, 2008).

Step 4: Definition of Coding – this is a description of the thematic process. It describes the way in which the researcher will decide, based on the material analysis of how to group the key themes in the study (Marying, 2008).

Steps 5/6: Screening and Extraction of Fragments – the result of an iterative material analysis often leads the researcher to more sub-categories flowing from initial codification. Such a result will require the researcher to screen and extract fragments of those sub-categories to form the broader study (Marying, 2008).

Step 7: *Revision of Categories* – natural progression of the process leads to the refining of relevant categories from the study. The iteration process begets more insight to a topic, which leads to variant prioritisations of study areas as the researcher gets deeper into the study (Marying, 2008).

Step 8: Preparation of Results: The final step is the preparation of results from the analysis of the material, the codified categories and how they relate to the research topic/question.

Qualitative Method – Sequence 2: Semi-Structured Interviews Using Creative Methodologies of Extraction

The thematic semi-structured Interviews comprised of a set of pre-determined questions that were open-ended and intended to explore the thoughts, ideas, and opinions of participants.

Creative methods are non-conventional, often relaxing, or playful methods of extracting data from participants, such as interviewing participants in a coffee shop instead of an office, or engaging children while in a playful environment instead of a therapist's office (Literat, 2013). Creative methods make it possible to create an environment where participants are not pressured by their position or environment to respond in a set and regurgitating fashion, but instead allow for a more natural, freethinking response (Brown, 2018). This manner of engaging participants is often used with children and young people because its flexible and non-threatening approach allows participants to share their perspectives and experiences

more openly and freely (Literat, 2013). Through the creative act of engagement those different ways of thinking can be explored, reinforcing the idea that creative methods can help in developing thinking about everyday concepts beyond the recitation of standard discourses (Gauntlett, 2007).

For this research participants were interviewed creatively, using a relaxing non-formal environment such as a coffee shop. The purpose of selecting a coffee shop was to create an environment that was more conversational and less of a binary transactional interviewer-and-interviewee engagement. From the free flow of conversation, rich insights were shared and unearthed (Literat, 2013).

3.3 Research Instrument

Data Collection

The first sequence of the data collection methodology entailed qualitative content analysis. This involved the collection of initial data and literature using the following sources:

- Strategic reports available online.
- Newspaper articles about the organisations.
- Academic journals.
- Documents and archival records.
- Image analysis.
- Consulting reports; and
- Census information.

The second sequence of the data collection methodology relied on the semi-structured interviews conducted using creative methodologies of extraction.

Interview Data Collection

The interviewing process gathered data from the selected purposive sample population. The study was premised around the role that leadership assumes in driving the Digital Transformation process. Leaders in the banking fraternity were selected to share their insights and perspectives on how they drove the digital transformation process.

3.3.1 Research Population.

The research sample was drawn from a population of C-Suite professionals in the South African Financial Services sector who have been tasked with overseeing the Digital Transformation mandate within their organisations.

3.3.2 Research Sample.

Non-probabilistic purposive sampling was used to ensure the generalisability of findings by minimising the potential for bias in selection and to control the potential influence of known and unknown confounders (Cui & Wu,2017). In this instance the study will use a purposive, snowball sample, defined as a technique used for the identification and selection of information-rich cases with the most effective use of limited resources (Patton, 2020). It involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about, or experienced in, a phenomenon of interest (Creswell & Plano Clark, 2011) in the context of the research. Snowball methodology refers to a sample build-up. As enough data is gathered to be useful through the referrals that participants will have shared during the process of the research, so the sample grows (Hackathon, 2011). In addition to knowledge and experience, Bernard (2002) and Spradley (2009) note the importance of availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner. The identified participants will then aid in identifying other participants in a snowball-like approach to join in the research.

The leadership sample included the ***Chief Information Officer (CIO)/Information Technology Officer*** specifically because they are often tasked with managing the organisation's technology assets (hardware, software, networks, data centre, etc.) and projects. CIOs are responsible for setting strategies and objectives for an organisation's Information Technology departments, using suitable technologies to streamline all internal operations and to design and customise technological systems and platforms (MIT Sloan, 2019). Implementation of the digital process within the organisation will largely rest on their shoulders.

The ***Chief Financial Officer (CFO)*** was selected because within the organisation the allocation of budget – more so on digital initiatives – will rest with the CFO. The purpose of selecting this specific sample was to probe for an understanding of how Digital Transformation budgets are

allocated and evaluated, and possibly the returns that organisations would anticipate recovering from investing in the process. The role of a CFO within an organisation is to oversee the organisation's finances and financial reporting: this includes overseeing fiscal activity (budgeting, reporting, and auditing), viewing ways to reduce costs and optimise profits and to monitor legal and regulatory compliance (MIT Sloan, 2019).

Finally, were the ***Digital Transformation Heads of Department (DTHOD)*** who were responsible for driving their respective organisational Digital Transformation process. What the literature review demonstrated was that the approach many organisations seemed to adopt was either the centralisation of the Digital Transformation process where a division within the organisation drove organisation-wide DT, cutting across divisions, or that the function was decentralised and each business division drove its own DT process (Westerman et al., 2012). In both instances a conversation with the individuals responsible for the actual defining, driving and convincing business of the value of the project provided the researcher with the necessary insights to extract answers to the research questions. The initial sample size was 15 participants, using the criteria described above. However, an additional three participants were added as further clarity was sought with regard to participant responses, this subsequently resulted in the sample being 18. The interview data collection process was preceded by a pilot study conducted with three participants in the preliminary stages of the interview schedule design.

3.4 Pilot Study

A predesigned semi-structured interview schedule was piloted among individuals within the South African Financial Services Sector in order to test the viability of the interview schedule. Errors that arose during the testing process were corrected and adjusted to ensure alignment with the research questions. Following careful adjustment of the interview schedule and receipt of ethical clearance, interviews were conducted using creative methods of extraction. Once data was collected the researcher embarked on the data analysis step of the study. Creative methods of data analysis created an environment of co-construction between interviewer and interviewee (Literat, 2013). The creatively run interview process allowed for tapping into the unspoken narratives that are often lost when using the approach of direct questioning (Gauntlett, 2007). The creative interview process created a space for participants

to reflect on complex issues and focus less on the drive to produce the readily available and known responses that participants often feel they need to have by virtue of their positions (Bohnsack, Hanelt & Marante, 2018). It changed the role of the researcher from that of trying to draw information from the participants to co-creating the conversation through mutual exchange where participants actually thought more intently about their answers, but also were more intently aligned as to why they answered the way they did (Literat, 2013). One of the key creative methods of extraction during the interview process that was used in this study was ensuring all interviews were held in a less formal setting such as a coffee shop or at a golf course. There were a one or two particpants that could not make the informal setting; however, the vast majority were able to oblige the request. This allowed participants to engage in a more natural fashion that went beyond binary thinking and permitted the exploration of the topic dimensions in a more nuanced way (Gauntlett, 2007).

3.5 Data Analysis

Data analysis phases were discussed in relation to the sequential method of the study. The first phase was qualitative content analysis, followed by the second phase that entailed the non-numerical data gathered during the semi-structured interview process.

3.6 Qualitative content analysis

- The chosen design instrument for the qualitative content analysis methodology was Marying's Approach to Data Analysis, which suggested the thematic grouping of key terms found in the content. The thematic analysis entailed an iterative process of research and reviews until the set of themes formulated were coherent and distinctive. The thematic analysis used the following process, an adaption of Braun and Clark (2006) and Marying's approach:

    - ***Step 1: Becoming familiar with the Lit/data.***
    - ***Step 2: Generating initial codes.***
    - ***Step 3: Searching for themes.***
    - ***Step 4: Reviewing themes.***
    - ***Step 5: Defining themes; and***

- ***Step 6: Write up.***

3.7 Thematic analysis of Semi-Structured Interview

- Participant Observation (body language). During the interviews, members of the purposive sample were observed on how they behaved during the asking of specific questions.
- Narrative Analysis (words used, themes). During the interview, the words used by members of the purposive sample were analysed to test for correlation among other participants within the same category.
- Heuristic Analysis (participant experience). Individual experiences of participants formed a rich part of the data analysis. This enabled a review of how the individual experiences of participants shaped their approach to Digital Transformation.

3.8 Triangulation

During the interview process, a particular theme became increasingly clear regarding what organisational leaders were experiencing in relation to their respective Digital Transformation processes. They articulated issues of resistance, sabotage and discomfort by some senior leadership team members that had slowed down, if not regressed, the DT processes the organisation was attempting. This was especially true for the Digital Transformation Heads of Business who had a specific mandate to drive the process but experienced first-hand internal resistance or challenges. It became necessary to include an additional three participants to triangulate the emergent themes that were noted.

As a result of these emergent themes, three additional questions were included in the interview schedule to attempt to better understand the resistance phenomena, namely:

- How did you navigate digital denialism (when an organisation's leadership team is in denial about the importance of Digital Transformation)?
- How did you navigate digital deflation (when an organisation's leadership team is aware of Digital Transformation and makes plans with no real intention to execute)?
- How did you deal with digital discomfort (when an organisation's leadership team is not comfortable with the changes that will come with Digital Transformation)?

3.9 Ethical considerations

The researcher received relevant ethical clearance from the University of the Witwatersrand before commencing with the research. By avoiding sensitive and challenging questions, the researcher ensured that participants did not face any risk, discomfort, or pain. The researcher received permission from the Witwatersrand University's Ethics Research Committee. The researcher ensured that individuals were at ease when sharing their information without being under any duress. Statements of confidentiality of information gathered from participants were included in a signed participation letter and the interview schedule. In order to maintain anonymity, personal information such as names, identity numbers and other identifying data were not gathered. Participants were only profiled by their designation, age, gender, and organisational tenure for context-setting purposes. No personally identifiable information was shared.

3.10 Summary

The objective of this chapter was to provide a detailed account of the exploratory sequential qual-qual mixed methods using creative methods of extraction. The first such method was a qualitative content analysis that aided the narrowing down of the literature review to achieve a summative view of the drivers of Digital Transformation, following an extensive iterative process. The second methodology was a semi-structured interview with C-Suite leaders in Technical, Financial and DT roles within Financial Services organisations. The objective was to use creative methods of extraction to place these executives in a less formal environment that would offer a relaxed space and elicit more natural and personalised responses, yielding a richer study with more depth and varied insights. Triangulation took place through qualitative content analysis involving the semi-structured interview responses and assessing the levels of congruency or divergence of the two methods as they relate to the topic.

CHAPTER 4 – PRESENTATIONOF FINDINGS

4.1 Introduction

This chapter summarises the data collection process that comprised of qualitative content analysis against the interviewing of leaders in various banking and public finance institutions in South Africa. It is a thematic reflection of the results of the data that streamed from the qualitative content analysis and semi-structured interviews which included the responses the respective participants presented, as to their interpretation and understanding of the meaning of Digital Transformation, attributes they perceived necessary for a digital leader and some of the barriers to DT.

Table 4.1 below provides an overview of participants interviewed during the research process. Their identities were withheld to comply with ethical considerations, however, attributes contextualizing their responses were given. These included organisational tenure, which impacted the extent to which they were able to share their own personal views rather than their answers being a function of having worked within a particular organisation for some time. The remaining two attributes give a view of the demographic profiles of leaders the researcher was able to access for the purpose of the study, specifically in the field of Digital Transformation in the South African Financial Services Sector.

Participants were selected from the researcher's professional network and their subsequent referrals. The more the researcher engaged in the interview process, the easier it became to seek referrals and colleagues whom participants believed would be ideal candidates to engage in the interview process. The process followed a non-probability purposive snowball sampling method where existing study participants recruited future participants from among their acquaintances.

This approach tends to unintentionally skew the sample represented as it is based purely on referral with no demographic sensitivities attached. As the sample builds up, enough data is

gathered to be useful for research and neither gender nor demographic profile influenced the sampling process (Hackathon, 2011).

The participant selection process was informed strictly by the profile of participants that the researcher sought to interview, these being five Chief Information Officers (CIOs), five Chief Financial Officers (CFOs) and eight Digital Transformation Heads of Department (DTHODs). The justification for having a greater number of DTHODs participating was premised on the fact of their expertise in the subject area under study, this being primarily Digital Transformation. Inclusion of the other two profiles was intended to give a balanced organisational representation of the leadership team typically engaged when technology projects are run within the organisation. Figure 4.1 below depicts the interview process followed to source the highly senior and not easily accessible profile of leaders required to satisfy the research project.

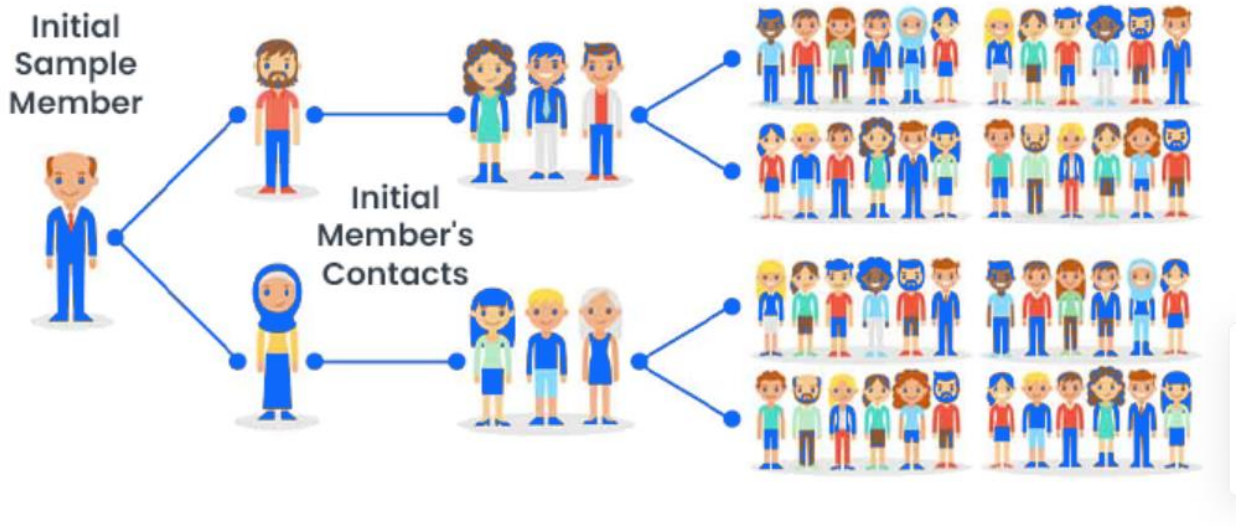


Figure 4.1: Non-probabilistic Purposive Snowball sampling approach used (researcher's own).

Table 4.1 below demonstrates the actual profiles of participants selected and who participated in the interview process.

4.2 Summary of Participant Profiles

Demographic profiles of those participating in the interviews are presented in Table 4.1.

Participant	Title	Tenure	Male/Female	Age
P1	Chief Financial Officer	11	Male	46
P2	Chief Financial Officer	3	Male	43
P3	Financial Director	8	Female	45
P4	Chief Financial and Operations Officer	9	Male	39
P5	Financial and Services Director	7	Male	40
P6	Chief Information Officer	10	Male	44
P7	Group Information Officer	8	Male	47
P8	IT Director	2	Male	43
P9	Chief Operations and Technology Officer	15	Male	44
P10	Chief Technology Officer	2	Male	46
P11	Head Of Digital Transformation	2	Male	38
P12	Digital Transformation Specialist	5	Male	41
P13	Group Digital Officer	2	Male	40
P14	Digital Transformation Specialist	5	Male	38
P15	Head of Digital Marketing and Operations	5	Female	43
P16	Digital Transformation Officer	3	Male	37
P17	Head of Digital Operations and Transition	2	Male	35
P18	Head of Digital	7	Female	37
Digital Leadership Profile		Average Tenure: 3.4	Gender Dominance: Male	Average Age :39

Table 4.1: Demographic Profiles of Interview Participants

The table below offers an overview of the responses that participants gave during the course of the interviews. Responses are tabulated to give a structured and sequential account of the data collection process as it relates to the research objectives. The columns represent the respective sample population of the C-Suite layer, comprising CIOs, CFOs and the DTHOBs, and their responses to the questions fielded during the interview.

The format depicts the responses they gave to the questions asked. The rows have two distinct colours. The first, a shade of green indicates the research question objectives, and a lighter blue illustrates sub-questions asked to derive responses relating to the research objectives.

Most participants were interviewed using creative methods of extraction. This approach makes it possible to build an environment where participants are not weighed by the pressure of their position or environment to respond in a set and "expected" manner but are able to be more natural and authentic in their replies. Through the creative act of engagement those different ways of thinking can be explored, reinforcing the idea that creative methods can help in developing thinking about everyday concepts beyond recitation of standard discourses (Gauntlett, 2007).

4.3 Interview Process

- Participants within the researcher's professional network were contacted telephonically and others in person about their openness to participating in the research project.
- Participants who expressed interest and gave consent were briefed about the project objectives and the value of their perspectives and contributions per the consent form sent via email.
- Once the consent form had been signed by a participant, a meeting date and time were proposed.
- Ideally the meetings were intended to be in person and at a nearby coffee shop for convenience on the side of participants. In the event a participant was unavailable during working hours, a few exceptions were made in the form of a dinner.

The purpose of the interviews with the identified participants involved unearthing the responses to the research objectives, which were:

Sequence 1:

- To define Digital Transformation
- To establish the drivers of Digital Transformation

Sequence 2:

- To understand what attributes leaders, need to have to drive Digital Transformation
- To ascertain the role of leadership in influencing the drivers of Digital Transformation
- To discover the barriers to Digital Transformation

	Chief Information Officer (CIO)	Chief Financial Officer (CFO)	Digital Transformation Head of Business (DTHOB)
SEQUENCE ONE: DIGITAL TRANSFORMATION IN A SEA OF DEFINITIONS			
Q1. How does your organisation define Digital Transformation and why?			
	P1 • Business Strategy • Technology as Enabler	**P6** • Streamlining Business	**P11** • Value Creation • Tech Enabled • Strategy Driven
	P2 • Streamline Processes • Rationing Applications • Culture of Innovation • Optimizing Infrastructure Utilisation	**P7** • Generating Revenue using technology products • Cutting Costs	**P12** • Business Model Re-Invention • Customer Centricity • Infrastructure • Strategy
	P3 • Streamlining Processes • Rationing Application Landscape • Creating Efficiencies	**P8** • Process refinement • Mindset Change about ways of working	**P13** • Business Models
	P4 • Beginning point is Big Data	**P9** • Platform-Based Business	**P14** • Digital Strategy • Big Data • Cloud Strategy • Customer Centricity
	P5 • Business models	**P10** • Competitive Differentiation	**P15** • Value Creation • Tech Platforms • Market Place • Social Media Platforms • BI and AI platforms
			P16

			• Creating new business model for business • Create competitive edge using tech
			P17 • Innovation • Create differentiation • Create a compelling value proposition • Immense value creation for customers
			P18 • Value chains that leverage both platforms and bolster existing value proposition • Allow for platform monetisation
Q2: What was it specifically about your technology posture that informed you that you needed to digitally transform?			
	P1 • Lack of Governance • Need to Centralise IT Function	**P6** • Need for cost reduction • Need to increase profit • Need to increase efficiencies	**P11** • Sought to refine DT proposition • Define value drivers
	P2 • Default Part of Continuous Improvement Process	**P7** • Competition • Industry pressure from peers	**P12** • Competitive landscape • Competitive benchmarking • Seeking to align and exceed
	P3 • BUs with greatest need • Incremental Solutions Approach • Impact and Replicate	**P8** • Need to manage costs • Improve efficiencies	**P13** • Establishing a Data Analysis capability to begin guiding DT efforts
	P4 • First to market ambition	**P9** • Industry pressure alignment • The need to leverage	**P14** • Assess market landscape • Assess fundamentals • Assess your customers

	P5 • E-Commerce Platform • Uberisation • Horizon1, 2, 3 thinking	**P10** • Profit augmentation • Reduce operational costs	**P15** • Reflection exercise • Scrutiny on the app as a litmus test of how market is receiving their services
			P16 • Change in consumer demands • The market opportunity of DT • Not wanting to be digital laggards
			P17 • Continuous Improvement • Data Capability gave view
			P18 • The opportunity cost of not acting

Table 4.2: Research Participants Response to Defining DT

SEQUENCE ONE.ONE: TO ESTABLISH THE DRIVERS OF DIGITAL TRANSFORMATION			
Q3: In your opinion what do you perceive to be the drivers of DT?			
	P1 • Technology trend that will have the most business impact	**P6** • Well documented business case supported by data	**P11** • Value Creation • Contextual Value • Value Measurement • Value enablement through technology
	P2 • Organisational impact • Young technically savvy workforce	**P7** • Business case • Clear return on investment	**P12** • Business Model • Focus on Platform-type business
	P3 • Competition • Tech Enablement	**P8** • Demonstrating cost reductions	**P13** • Change of business model

	• Business Priorities	• Commercially and Non-Commercially • Improve efficiencies	• Platform Business Focus
	P4 • Business Enablement • Competition • Experimentation	**P9** • Streamlining of processes	**P14** • Big Data • Cloud Strategy • Customer Centricity • Competitors • Differentiators
	P5 • Business Models • Competition	**P10** • Demonstrate ability to increase market share • Competitive Edge	**P15** • Platform-based businesses • Social Media Platform Leverage
			P16 • Market opportunity • Engaging customers differently
			P17 • Customer Centricity • Market Differentiation • Innovation-led culture • Agile ways of working
			P18 • ROI • Opportunity cost • Creating a compelling value proposition
Q4: How did you go about identifying the prioritisation of those drivers when deciding on which you would be implementing on first?			
	P1 • Business Objectives	**P6** • Drivers of efficiencies • Business Model Impact	**P11** • Biggest value creators receive priority • Value is defined broadly (process value, human capital value, removing key man dependencies, etc.)

	P2 • Best alignment with business objectives • ROI • Impact	**P7** • Quick ROI • Organisational Impact • Ease of replication	**P12** • Evaluating which activity has the greatest impact and will drive the desired outcome quicker
	P3 • Quick Wins • Great Impact • Easier to replicate	**P8** • Cost Savers • BU Vocality	**P13** • Activity with the greatest ROI in the shortest amount of time
	P4 • Greatest Impact to business • Most vocal BU or Business Leader • Attractive ROI	**P9** • Business Case • Business Model Impact • Increase efficiencies	**P14** • Establishing a BI centre in order to drive strategic direction and prioritisation activities
	P5 • Leverage existing investments • Market Edge • Competitive Edge • Yield greatest ROI	**P10** Same as p6.	**P15** • Biggest issue internally • Commercial impact • What appeals to increasing customer sentiment
			P16 • Impact-based • Business case and feasibility analysis
			P17 • Alignment with Strategic outcomes • Cost minimisation • Innovation • Profit optimisation
			P18 • ROI maximisation • Revenue Uplift

Q5: Who, or which department in an organisation, do you believe should be responsible for identifying and managing those drivers and why?			
	P1 • Centralised function under CIO	**P6** • CIO's office	**P11** • Group CIO – centralised
	P2 • Centralised Function	**P7** • CIO's office • Leverage is important	**P12** • Centralised function that is uniform in direction yet contextually specific
	P3 • Centralised Function	**P8** • CTO's office due to nature of business	**P13** • Operates as a standalone department
	P4 • Federated Function	**P9** • CTO's office	**P14** • Ought to be housed within a department that is already *au fait* within organisation • Thus, within CIO office
	P5 • Centralised function, CDO reporting to CIO	**P10** • CTO's Office	**P15** • Stand-alone Centre Of Excellence
			P16 • Crosscutting function
			P17 • Creation of a Centre of Excellence
			P18 • Centrally driven with representation from each Line Of Business
Q6: Do you believe your organisation made a success of its Digital Transformation process and why?			
	P1 • Yes • Restored Confidence • DT ongoing process	**P6** • Partial yes	

	P2 • Yes • Culture was a huge catalyst and driver for the DT initiatives	**P7** • Partially	All participants unanimously agreed that their respective initiatives and activities are still in progress or strategic definition stage.
	P3 • In progress	**P8** • Partially	
	P4 • In progress, still defining and prioritizing	**P9** • In progress	
	P5 • Too soon to say • In progress	**P10** • Not yet	

Table 4. 3: Research Participants Response to the Drivers of DT

SEQUENCE TWO: THE ROLE OF LEADERSHIP IN DIGITAL TRANSFORMATION			
Q7: In your view, what are the key traits a leader should possess when driving a DT process?			
	P1 • Pedigree • Experience in DT	P6	P11 • Exposure to DT projects

	• Ability to collaborate	• Knowledge about DT – certification, exposure • Ability to communicate clear vision • Lead by example	• Ideally from Consulting background
	P2 • Experience in DT • Adequately skilled • Know-how • Clear vision • Organisational Maturity	**P7** • Competence • Know-how and tactics • Express vulnerability	**P12** • Experience • Qualifications • Demonstrated expertise
	P3 • Tech-savvy • Sound business acumen • Strong prioritisation skills	**P8** • Take risks • Backed by data and research	**P13** • Not afraid to experiment • Culture of failing forward • Lead by example in driving culture and change management
	P4 • Curiosity • Open to learning • Leads by example in all they do • Ability to collaborate will	**P9** • Competence • Long-term view on investments	**P14** • Communicate a bold vision • Get buy-in • From executive and organisational level
	P5 • Personality type of being curious, open to learning, collaborating • Competence and experience	**P10** • Qualified with a qualification of sorts • Experienced	**P15** • Blend of skills • Tech background • Curious nature • Experimental • Humility • Collaboration spirit
			P16 • Blend of skills • Strong tech background • Curious • Experimental • Collaborative • Humble

			P17 • Digital competence • Technocrat • Business acumen and understand sales
			P18 • Strong Vision • Collaborative • Business acumen • Experience

Table 4.4: Research Participants Response to Leadership Attributes for DT

SEQUENCE TWO: DISOVERING THE BARRIERS TO DIGITAL TARNSFORMATION			
Q8: What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?			
	P1 • Capable department that can deliver • Having a delivery capability	**P6** • Knowing where to start	• Interviewees Contextually defining DT for the organisation
	P2 • Lack of vision • Capable team • Consistency in managing and monitoring the process	**P7** • Adequate qualification of ROI • Stepping into the unknown	**P12** • Digital denialism • Not conceding to not understanding and the desire to know and do more • Putting strategy into effective execution
	P3 • Fear of failure • Absence of accountability • Fear of learning unknown • Ego – lack of admission when don't know	**P8** • Knowledge barrier of what DT actually is	**P13** • Defining the DT for the business without the buzz word hype • Continuous professional development of non-tech leaders

	P4 • Prioritisation • Lost in the trends and not having contextual understanding of what works for that business	**P9** • Organisational buy-in • Risk Management	**P14** • Acknowledging that DT is a Change Management process • Top management involvement • Continuous change Management •
	P5 • Differentiating between Digitisation, Digitalisation and Digital Transformation	**P10** • Commitment to seeing projects through	**P15** • Defining DT as a strategy only. • Not translating it to an execution plan • Metrics to measure success
			P16 • Giving time to projects invested in
			P17 • Lack of knowledge / varying knowledge
			P18 • Lack of contextualizing DT • Collaboration within all Line of Business s in the business
Q9: How did your organisation identify and recruit digital talent?			
	P1 • Project-based needs	**P6** • Delegated to CIO	**P11** • Line of B identifies gap • HR assists in the fulfilment process
	P2 • Tech skills • Actuarial and Data Scientist skills • UCT graduate preference	**P7** • CIO-sourced	**P12** • Organisational strategy-driven • HR identified and recruited
	P3 • BU-generated • Graduate preference	**P8** • CIO	**P13** • Heavy investment in DevOps skills in particular • Preference for UCT graduate skills.

	P4 • Project needs generated	**P9** • CTO office but also based on the input from CEO	**P14 and P15** • Line of Business identifies gap, HR assists in fulfilment process
	P5 • Business priorities • Skills gap	**P10** • Outsourced function feed from internal requirements	
			P16 • HR domain
			P17 and P18 • HR-identified but use recruit agencies especially for senior recruits.
Q10: What was the role of culture within your organisation in driving the Digital Transformation process?			
	P1 • Transformational • Apathy initially, restored confidence and excitement eventually	**P6** • Fundamentals will always outweigh organisational sentiment	**P11** • Culture is pivotal to DT success • Drive DT in way that least antagonises the culture
	P2 • Culture was set to drive innovation and DT process • Very instrumental	**P7** • Evolving as the organisation evolves	**P12** • Culture assumed a complimentary role • Every implementation has associated cultural component attached to it
	P3 • Initially not enabling • External market movement forced gradual change • Open, experimental, and agile	**P8** • Initially conservative • Culture of continual improvement	**P13** • Identified 4 key cultural elements • Clan, Hierarchical, Market and Adhocracy
	P4 • Very enabling	**P9** • Set by leadership	**P14** • Culture can sometimes overrule strategy

	• Market-led business approach • Issue with prioritisation		• Critical to
	P5 • Leadership is the culture	**P10** • Sub-culture rewarded by leadership sentiment	**P15** • Culture was very open and receptive • Leadership team drove cultural queue
			P16 • Culture is a driver • Effective communication is key for buy-in
			P17 • Critical to business success • Fostered through the leadership team
			P18 • Driven largely by the leadership team
Q11: What were some of the key role level metrics you had to meet in the context of the implementation of a Digital Transformation process?			
	P1 • Restored confidence in department • Governance • Streamlining processes	**P6** • Commercials review • ROI review • Cost of Implementation • Profitability Analysis	**P11** • Drive digital strategy • Execution of DT strategy at a Line of Business level
	P2 • Optimise operations • Conversion to Profit Centre • Shorten Innovation Cycle	**P7** • Source Budget • Allocate Budget on Priorities • Financial Management of Project Milestones	**P12** • Drive digital initiatives across the department • Create a culture and space for experimentation and innovation • Promote model tech practice
	P3	**P8** • Budget approval	**P13** • Developing, managing, and monitoring the DT strategy

	• Effective prioritisation and measurement of DT projects to pursue	• Fiduciary Responsibilities	• Creation and Support of a digital innovation environment • Roadmap for innovation
	P4 • Reduce operational costs by 15 percent • Establish BI Capability	**P9** • Cash flow Analysis • Capitalisation • Profitability Analysis	**P14** • Lead Line of Business in DT • Manage major DT infrastructure projects • Researcher for new company tools • Consultant to other Lines of Business
	P5 • Monetise e-commerce platform	**P10** • Budget Management • Risk Management • Financial Management	**P15** • Responsible for DT ROI • Increase employee productivity • Increase customer satisfaction • Drive AI-enabled business processes • Drive adoption and performance metrics thereof
			P16 • Drive ROI on projects • Maximise Customer Centricity • Drive innovation
			P17 • Drive Innovation • New business models • Refine customer experience channels and customer satisfaction
			P18 • Develop digital strategy • Measure ROI • Fine-tune operational processes • Digital evangelist •

Table 4.5: Research Participants Response to the Barriers to DT

TRIANGULATION	
Q12: How did you navigate digital denialism (when an organisation's leadership team is in denial about the importance of Digital Transformation)?	
	P16 • Start small • Guided by leadership pace • Take team along the journey with you
	P17 • Acted as a centralizing figure • Digital Evangelist to guide organisation definitionally and contextually
	P18 • Selection of influential voice within leadership team to conscientise the business of importance of transformation • Hiring of digital expertise
Q13: How did you navigate digital deflation (when an organisation's leadership team is aware of Digital Transformation and makes plans with no real intention to execute)?	
	P16 • Behave as a guiding light on prioritisation • Assist in bolstering the business case and practical implications of a DT project
	P17 • By establishing a uniform definition for the organisation and various leaders in the respective BUs
	P18 • The realisation of market forces, external competitors and even COVID helped in accelerating the urgency of acting and not merely strategizing
Q14: How did you deal with digital discomfort (when an organisation's leadership team is not comfortable with the changes that will come with Digital Transformation)?	
	P16

	• Highlighting the value of the DT process in the form of the ROI, the business case and feasibility studies done to highlight its true value
	P17 • Driving an awareness at all levels through Digital Literacy
	P18 • Collaboration and collective buy-in will allay those fears

Table 4.6: Triangulation on Digital Barriers Responses

The last three questions (Q12, Q13 & Q14) posed to the DTHOD participants were all related to the perceived barriers during their tenure as they relate to DT. Upon closer inspection, there was a correlation between the barrier enlisted by the leaders and the barriers articulated in the literature review.

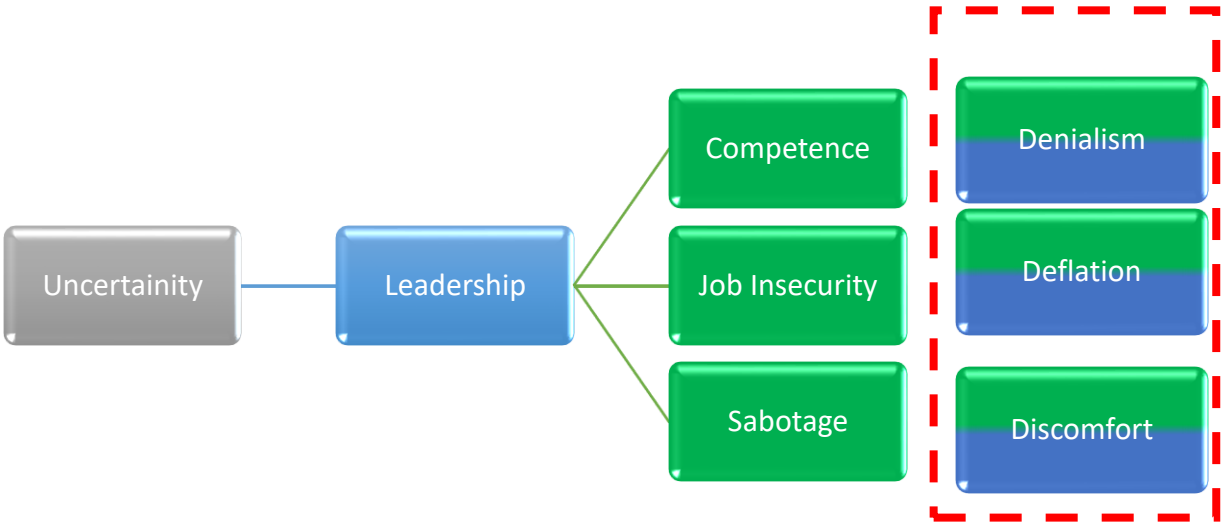


Figure 4.2: Extending Barriers to Digital Transformation.

The diagram above, Figure 4.2, is an expression of the correlation between the barriers identified in the literature review and the interviews. The researcher was able to note that digital denialism could have been a function of the leaders' lack of competence/understanding in the Digital Transformation space. This could have stemmed

from fears and concerns about job security and the organisational value of the leader. The digital discomfort could have led to sabotage in the form of delay, denialism and even deflation of DT efforts.

4.4 Triangulation:

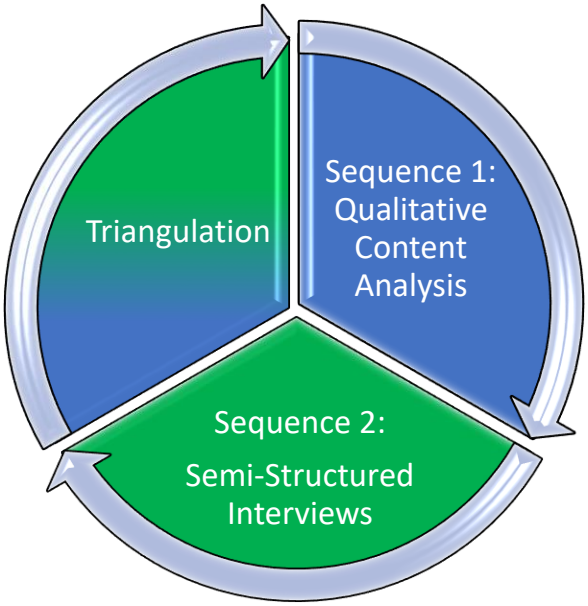


Figure 4.3: Methodology Framework (researcher's own).

Figure 4.3 above represents how the initial qualitative content analysis, which was Sequence One of the methodologies, was followed by the semi-structured interviews that came to a merger in this chapter in the form of participants' responses triangulating with the literature and, in some cases, expanding on the initial findings. This is also the reason Figure 4.3 brings the three pieces of the method closer together, owing to the culmination of the qualitative content analysis and the semi-structured interviews providing a view of the congruence or divergence of findings from the two methods.

4.5 Summary

In summary, the respective executive groups offered different perspectives regarding their understanding and experience relating to the topic of Digital Transformation and the leaders they had worked with, or were working with, in pursuit of DT. Particularly noted was the heavy influence of their roles on how they not only viewed, but also how they approached, the topic of Digital Transformation. The scope of responsibilities and role metrics was a fairly

clear indicator of what aspect of Digital Transformation the executive was expected to focus on and execute, and also how the executive understood the topic from that vantage point.

It was interesting to also note the difficulty of accessing specifically the CFOs and their resoluteness in not really wanting to be engaged in a topic they deemed themselves not to be experts in. The role of a CFO requires strong competence and precision; their respective approaches to the interview were a telling trait indicator regarding their roles. The data collected also demonstrated how participants responded to the first sequence of the paper that dwelled on the definition and drivers of Digital Transformation. The second sequence addressed the issue of DT leadership traits and barriers to DT.

The next chapter will present a deep dive into the analysis of the data collected.

CHAPTER 5 – ANALYSIS AND DISCUSSION

5.1 Introduction

The purpose of this chapter is to present the analysis and discussion of findings of the qualitative content analysis and thematic analysis of the semi-structured interviews. With the intent of answering the research questions. Analysis and discussion of sequence 1 and 2 two are mixed in line with the presentation of a mixed methodology study.

Sequence 1:

- To define Digital Transformation
- To establish the drivers of Digital Transformation

Sequence 2:

- To understand what attributes leaders, need to have to drive Digital Transformation
- To ascertain the role of leadership in influencing the drivers of Digital Transformation
- To discover the barriers to Digital Transformation

5.2 Sequence 1: Defining Digital Transformation in a Sea of Definitions

The key findings from evaluating how the respective leadership cohorts each defined Digital Transformation led to 19 varying, yet key terms. These attest to the plethora of definitions that organisations, and specifically organisational leaders, will use to define DT subject to their perspective, their role, and their own interpretations. An initial screening interview for codification purposes saw the following key words being used to describe DT, in no particular order:

Digital Transformation Key Words

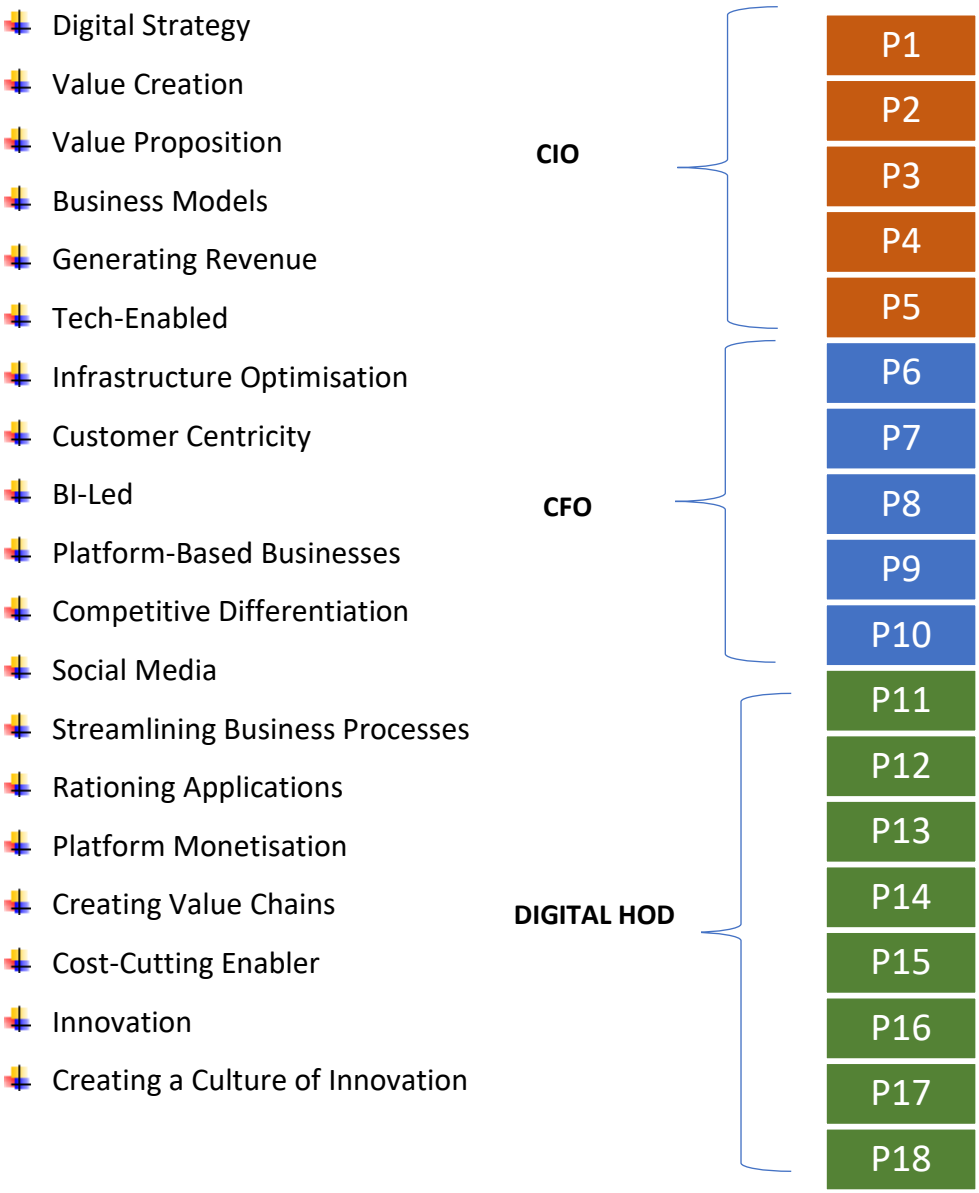


Figure 5.1: Legend of Leader Segmentation

The figure below is a depiction of the key words that more than one participant used to define Digital Transformation. The terms were then grouped according to term and participant alignment to demonstrate commonality of understanding. The large light orange bubble centres demonstrate DT definitions that were aligned with the literature review description/drivers of DT. The large light blue bubbles demonstrate the DT descriptors and drivers that fell outside the ambit of the literature review.

The purpose of the smaller bubbles around the big ones is to show which group of participants shared an alignment in descriptor/driver of DT. For example, we note that P11, P15 and P17 all used value creation as a key term when describing DT. The colour codification of the smaller bubbles is illustrated in the section above. Blue denotes the CIOs, orange the CFOs and the green the DTHODs.

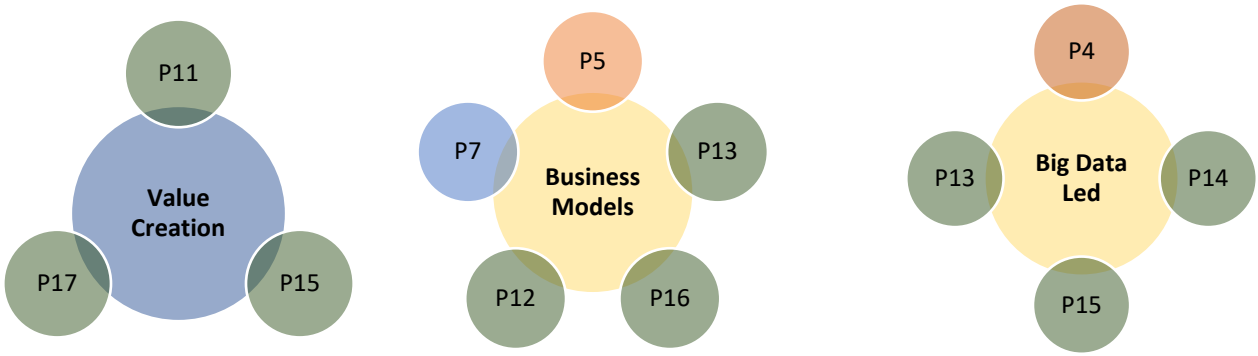


Figure 5.2.1: Common Digital Transformation Descriptors as articulated by Participants

The bubbles above demonstrate the definitions that respective participants were in alignment with. The first bubble is Value Creation as a DT definition, with the interviews demonstrating that participants 11, 17 and 15, who were all within the DTHOD profile, identified with defining DT as a form of Value Creation. Conversely, participants 5, 7, 12, 13 and 16 identified with the term Business Model to describe what DT would constitute. The DTHOB cohort aligned on how they defined DT in terms of it constituting an element of Business Models and Big Data, while the CIO and CFO cohorts were not represented as sharing this view.

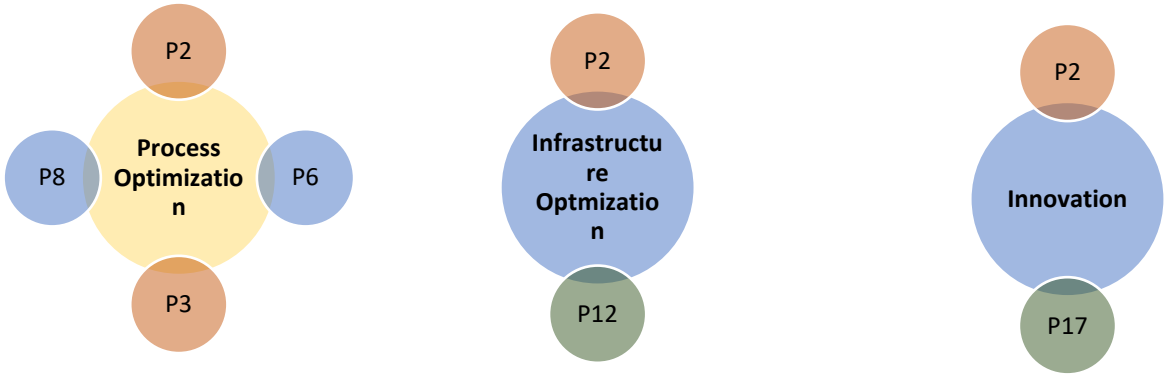


Figure 5.2.2 Common Digital Transformation Descriptors as articulated by Participants

In the bubbles above, P2 seems to have aligned with each of the participant cohorts when it comes to defining DT according to “Process Optimisation”, “Infrastructure Optimisation” and “Innovation”. The large orange bubble denotes the definition term referenced by the researcher from the literature review and the alignment of definition between the researcher and participants. The large blue bubbles demonstrate the additional definitional elements

introduced by participants such as Infrastructure and Innovation. Process Optimisation was a strong definitional element, as shown by the consensus between the CIO, CFO cohorts and the researcher.

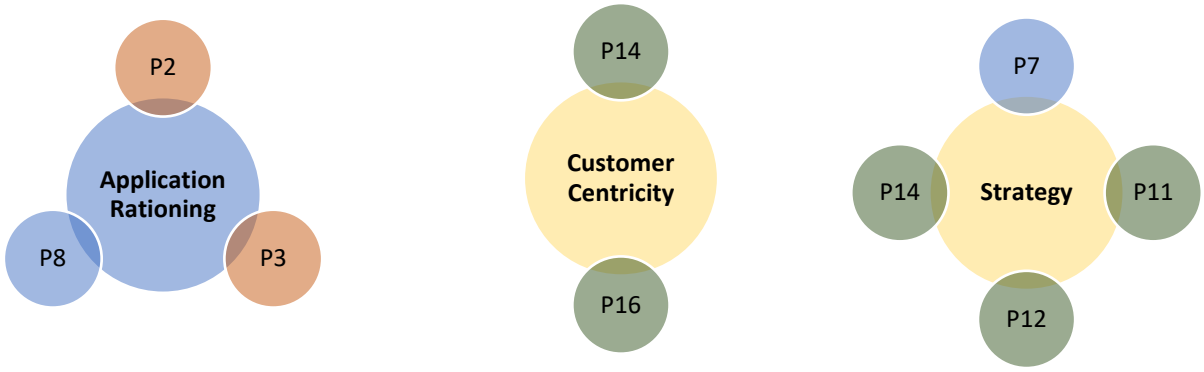


Figure 5.2.3: Common Digital Transformation Descriptors as articulated by Participants

The diagrams also depict an interesting correlation between the respective respondents. There seems to be cohesion of description agreement among the DTHODs, as can be observed with the commonality in their choice of terms. Customer Centricity resonated with participants 12 and 14, as did the term strategy with participants 11, 12 and 14. The Application Rationing definition was less represented by the CIO cohort.

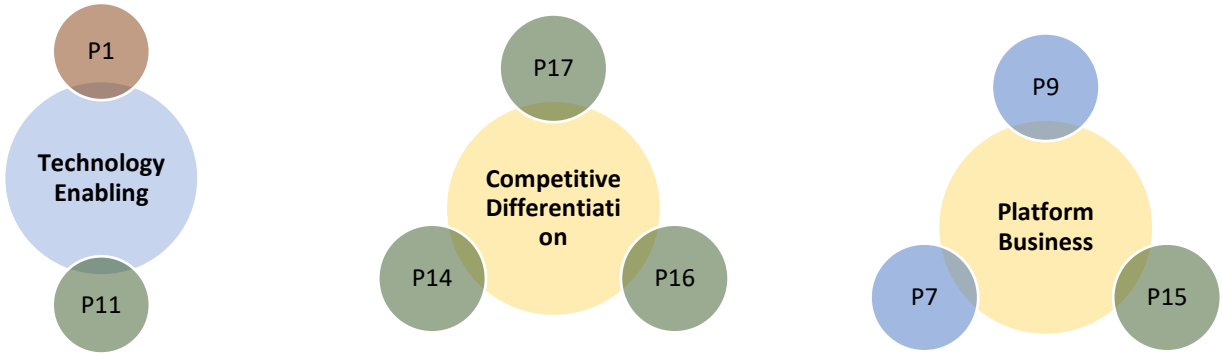


Figure 5.2.4: Common Digital Transformation Descriptors as articulated by Participants

The DTHODs were in agreement about Competitive Differentiation being an important part of defining DT, as seen with P14, P16 and P17. The Platform Business definition showed a slimmer representation in the form of CFOs, who deemed DT to mean some form of Platform Business as a qualifier for defining DT.

The literature references five specific areas when defining Digital Transformation, specifically *customer experience, big data-driven processes, Digital Transformation business strategy, digital competence, and culture.* The following section will outline the codified descriptions of Digital Transformation that participants have gravitated towards as a collective and the assimilations and deviations of these against those originally discussed with the document.

Section 5.3 below gives a detailed account of the responses shared by participants in terms of the specific research objectives in the research project. Responses were next considered in terms of the literature review to highlight alignment of definitional terms for Research Objective 1: alignment of drivers for Research Objective 1.2. This was followed by the alignment in research and responses for the second objectives being the attributes of a DT leader, plus the barriers that have blocked DT processes or projects.

5.3 Sequence 1.1: Defining Digital Transformation in a Sea of Definitions

BUSINESS MODELS

A large number of participants defined Digital Transformation's function as augmenting the existing business model or being about creating a different business model. Specifically, **P5** described DT as being about business models, thinking about the business models of the future, thinking about what the business will look like 50 years from now. **P7** talked about driving efficiencies and bringing on new business models as being key. The business was held to ransom by cost and bloated processes, so this was a source of immediate relief for the financials. Then element two was a new business model, which P7 has simplified for himself to mean new ways of monetising the business services on digital spaces (Matt et al., 2015).

The Massachusetts Institute of Technology (MIT) Center for Digital Business categorises Digital Transformation into three areas: Customer Experience, encompassing customer

intimacy; Operational Processes; and finally, the Changing of Existing Business Models (specifically digitizing the existing business model, defining digital business and platform business considerations) (Gerald, 2015). **P12** defines DT as the process of redefining three centres within a business. Firstly, the business model must be reengineered to speak to its operation within a digital context. In all cases, the emergence of various business and network platforms (or ecosystems) acts as a catalyst for the development of new elements within the morphology of business models (Burkhardt, Krumeich, Werth & Loos, 2011).

P13 defined DT as the process of changing the way an organisation views how it generates income. The conventional business model confines one to conventional methods of revenue generation. Operating in a Digital context forces companies to assume a position where they must think differently and futuristically about how their business model has to evolve and grow, and more importantly, operate within the digital economy. Transforming the business model is done through digital business modification, a new digital business and digital globalisation. These processes take place by adding digital content to existing products and services and introducing new digital solutions (Schwertner, 2017).

P16 echoed the sentiments of **P13** by stating that for them, DT as a business meant creating a new way of making money for the business within the digital context. Digitalisation is therefore seen as an entrepreneurial process (Henfridsson & Yoo, 2014; Autio, Nambisan, Thomas & Wright, 2018) where firms in pursuit of Digital Transformation render formerly successful BMs obsolete (Tongur & Engwall, 2014; Kiel, Avolio, Luthans, May & Walumbwa, 2017) by implementing business model innovation (BMI), which is revolutionizing many industries. As the literature and **P16** would suggest, BMI provides opportunities for capturing profits in a system of networked activities (Zott & Amit, 2010; Amit & Zott, 2012), and in enhancing firm performance (Foss & Saebi, 2017). The role of the BM is essential for identifying the crucial aspects behind a digital strategy. Indeed, it helps firms in applying the digital lens to innovate their BM to create an appropriate new value (Berman, 2012).

BIG DATA-DRIVEN PROCESSES

The relevant literature that was consulted stipulates that the adoption of Business Intelligence (BI) and Artificial Intelligence (AI) technologies affords organisations the ability to:

- View and analyse the entire customer journey and experiences drawn from the various touch points the customer would have with the organisational systems.
- The ability to find patterns of usage that can lead to the generation of sales and analyse underperformance of specific channels. From this knowledge, organisations can create strategies to optimise such channels.

P1 demonstrated a strong and clear understanding of what the big-data process entailed and why it mattered to the business. In particular, he explained that big data was one of the more important elements of Digital Transformation and was able to articulate its place within the process of digitally transforming a business, that the transformation process cannot start without having a clear view of what the data looks like and means for the organisation, and how it how it can be interpreted to help the business chart a way forward. The huge quantities of data that are being produced (Volume), the increasingly higher paces at which this data is generated (Velocity) and the multitude of sources from which data is collected (Variety) require different and innovative data management technologies to cope with these new challenges. Furthermore, in the era of Digital Transformation, flexibility and the distributed nature of the data, processing solutions are the norm.

These are some of the main reasons behind the so-called Big-Data momentum (Ravesteijn, 2018). **P3** nominated Big Data as one of the critical priorities that needed to be prioritised to ensure the DT process can go smoothly and that it is well informed. His position was informed by the fact that no organisation can truly know where to begin its overall operations without having clear insights on all aspects of the business grown from the data (Kane et al., 2015). Digital transformation affects the way organisations handle information and disrupts their business models. It gives companies the choice to either grow by adapting to the change or to gradually disappear (Reis, Islam & Karim, 2018). The reality is that large volumes of data are only as valuable as the insights that might be extracted from them. They need appropriate tools, such as data classification techniques, to extract the hidden value embedded in their data (Pereira, Belo & Ravesteijn, 2018).

P4 stated that he felt they were on the right track, starting with big-data analysis to get a sense of where the real business pain points resided and needed the most attention. **P14** used the big-data analysis aspect as a warning against organisations being too quick to jump onto

technology trends without understanding what they meant. Big data is the new gold; organisations can have no real view of what they have until they embark on a Big-Data exercise. Data is omnipresent and overflowing, being almost everywhere in business and everyday life (Kaufmann, 2019). Annual data collected from the Library of Congress totals almost 235 terabytes (Al-Debei et al., 2009). McKinsey estimated that Facebook's content exceeds 30 billion bits, while the value of data relating to the healthcare sector is more than US$300 billion (Brynjolfsson & McAfee, 2012).

The International Data Corporation (IDC) predicted the expansion of the digital universe from 4,4 ZB in 2003 to 44 ZB by 2020 (IDC, 2021). For 2020, global information capacity was estimated to reach 4 zettabytes (4 billion terabytes) (Hilbert & López, 2011), leading to a global explosion of used data, taking into consideration that the estimated number was forecast to double every three years. The velocity with which data is produced will require the same level of velocity in processing and gathering insights for organisations to derive real-time value from the latest data generated. It is from this derived data that insights of where organisations ought to begin their transformative agenda are extracted. **P14** stated that big data forms one of the key pillars of a DT process, also that it was impossible to mention DT without having a form of BI and AI as a starting point of the conversation.

BUSINESS PROCESS TRANSFORMATION:

The literature consulted states that Business Process Transformation (BPT) is the rethinking and reengineering of business-related processes to reduce costs, increase efficiencies, increase employee productivity, and improve products and services. Systems are defined as rule-based processes underpinned by the automation of technologies (Kane et al., 2015).

The objective of BPT is to obtain new data in order to re-imagine how the routine rule-based systems processes can be optimised, if not completely re-invented (Dias,Marias & Ravenstyn , 2022). **P2** specifically referred to BPT as a key mandate for not only defining what Digital Transformation means but for KPI of a CIO. **P8** talked about process transformation as a critical part of a DT process, stating that it was impossible to claim you have transformed the business if the processes are by and large brick-and-mortar, disparate and manual (Barc, 2019).

Another part of the business process transformation process is the streamlining of processes, which means not only automating but also ensuring that process duplications are removed to make certain that efficiencies are being driven (Sahuetal, 2018). The bane of any CIO's existence is having to ensure the organisation has a seamless system and process experience: the opposite would deem CIOs being designated as inefficient in their duties, said **P3.**

P6 said Digital Transformation was all about creating efficiencies within a business by digitizing a paper-based environment and trying to streamline processes. Chatfield asserts similar sentiments, stating that organisations continuously optimise their processes to improve measures such as efficiency, effectiveness, and customer satisfaction (Chatfield, 2018). Today, many organisations consider using robotic process automation as a means to deliver results more quickly, or to deliver process optimisation expediently (Barc, 2019).

Traditionally, business process optimisation relied on methods such as standardisation of processes (through eliminating overflow of process variants), streamlining processes (through omission of non-value adding steps, interfaces, or sub-processes), outsourcing of steps or processes and automating processes with IT. Today process optimisation is an inseparable topic from BI and AI-related activities (Forbes, 2019), referencing once more the view held by **P8**.

DIGITAL BUSINESS STRATEGY

The term "digital business strategy" is defined as an organisational strategy that brings about distinctive business value through the utilisation of digital technologies based on the merging of business and Information Systems strategies that are both inspired by technology and cantered on business value. The need for business-IT alignment has over the past few decades become a well-established requirement in organisations, with IT often in an enabling role rather than a role that drives or influences business strategy (Chan & Reich, 2007). A digital business strategy is a fusion of business and IT strategies that provides a shared understanding across the organisation (Chen et al., 2010) to guide the transformations that digital technologies trigger, and drive innovation for sustainable organisational competitiveness (Mithas, 2012). It is a strategy that exploits digital technologies to create capabilities and responsiveness to ongoing environmental changes in business markets (Sebastian et al., 2017). This phenomenon reshapes the well-known IS strategy paradigm

(Mithas, 2012), causing products, services, processes, and business models to take on a different form from the use of digital technologies.

Upon engagement with participants the researcher found that only four of them made mention of digital strategy as something that was critical to the Digital Transformation process specifically. **P7** defined digital strategy as a guide that the business needs to define for itself and its context with tech being used as an enabler. **P11** shared the same sentiments, citing that strategy was the guiding light and the compass of what the organisation wants to achieve, while the technology becomes the enabler of how the business will execute the strategy. Schwartz echoes these sentiments by stating that formulating a Digital Transformation Business Strategy requires organisations to make strategic and relevant decisions about a few key parts of these organisations (Schwartz, 2001).

A critical starting point involves establishing a business case that clearly articulates the long-term objectives of the digital initiative. The motivation must transcend the need to pursue quick, opportunistic wins for the organisation and must instead demonstrate how the organisation will attain a more competitive edge, enhance customer experience, and thus increase top-line growth for the business (Venkatraman et al., 2013).

Secondly the strategy must indicate the structural touch points and re-designs that the business will need to enable fulfilment of its strategy. Finally, a pivotal consideration ought to be that the true aiming point of any organisation involves the experience and interactions it aspires to create for its customers. Organisations must investigate how they can use digital platforms, products, and services to create value and enhance customer experience.

CUSTOMER CENTRICITY

P14 said it was big data, cloud strategy, customer centricity, competitor analysis and the ability to clearly articulate the differentiator. Professor Livingstone of Oxford University is of the view that customer experience ought to be the intrinsic driver of any Digital Transformation process (Livingstone, 2008). This, he states, is because modern customers' existing within the digital economy have the power of now and the power of choice at their fingertips.

The simultaneous occurrence of intensely powerful digital technologies, different digital devices, availability of multiple digital channels across the customer touch points and the constant evolution of the customer continues to evolve in the digital context (Livingstone, 2008). **P16** stated that market opportunity would be a major driver. Such opportunities involve engaging customers differently and in a way that allows for creating adhesion and personalisation for the customers.

The opportunity to be different and the impact this would have on the business requires understanding the area of customer experience and evaluating customer journeys over time. This is critical for organisations operating in the digital economy that wish to maintain their market share (Fuge, 2009). The importance of using customer experience as a key driver in the Digital Transformation process is that it forces organisations to base their DT efforts on enhancing all areas in the organisation that be in contact with the customer (Hossain, Verder & Kathan ,2015).

This approach of Digital Transformation allows organisations to prioritise drivers that are strictly focused on customer retention, customer experience and market-share growth. This approach to Digital Transformation is more sustainable and less conflicting than the other approaches suggested by various scholars (OECD, 2018).

Sequence 1.2: Defining the Drivers of Digital Transformation

The figure below gives an overview of the clustered response that was provided by the participants according to what they each deemed to be the drivers of DT within their roles and organisations. The diagram then plotted the drivers that were common among the participants using the same approach and logic as adopted in the previous section of the document articulating the DT descriptors.

The objective of this section of the research is to ascertain how participants had discerned what the drivers of DT were. There was close correlation between the definition of DT and the drivers of DT, as can be noted from the figures starting on page 90. Some participants responded to the question in a manner that expressed the congruent nature of the question, while others were able to provide a slight distinction and demonstrated the ability to articulate the difference between DT driver and DT description. More noticeably, within the

CIO and CFO cohorts, CIOs appeared generally to emphasise the point of adopting DT processes/activities that would provide the greatest organisational impact. CFOs seemed to gravitate towards the importance of compiling a sound business case that could demonstrate the commercial value or savings an organisation could expect to achieve from implementing DT processes or initiatives/activities as key drivers of DT. Meanwhile the DTHODs leaned towards a variety of driving factors.

Key DT Drivers

- Competitive Advantage
- Business Case
- Platform-Based Businesses
- Customer Centricity
- Business Models
- Market Differentiation
- Tech Enablement
- Business Models

The diagram below is a depiction of the drivers that do not overlap with the DT definitions expressed in the previous sections and will also follow the same pattern of expanding only on the pointers that were significant in representation of responses. These are demonstrated in the form of three or more rings per driver. Following this will come an elaboration covering the key drivers in conjunction with the literature review.

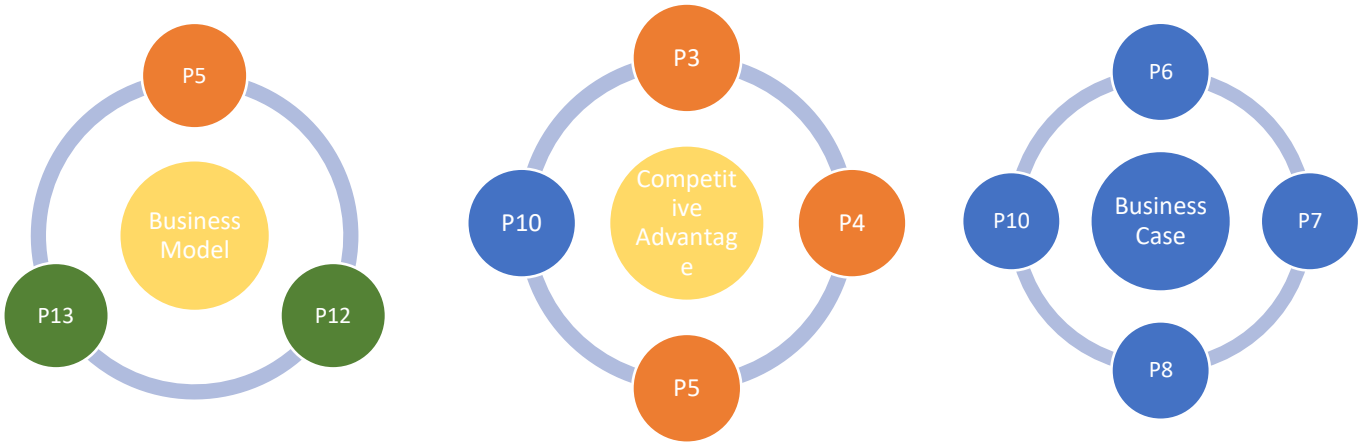


Figure 5.3.1: Common Digital Transformation Drivers as articulated by Participants

An initial view of the diagram shows how there was a clear definitional alliance of understanding between the CIOs' cohort about the necessity of a DT process being driven by a business case – as demonstrated by the blue circles orbiting the "Business Case" term. Meanwhile there was clear agreement between CFOs that a key driver for DT is "Competitive Advantage" – as demonstrated by the orange circles orbiting the Competitive advantage term. DTHODs agreed in limited numbers about the importance of the Business Model being a driver for DT.

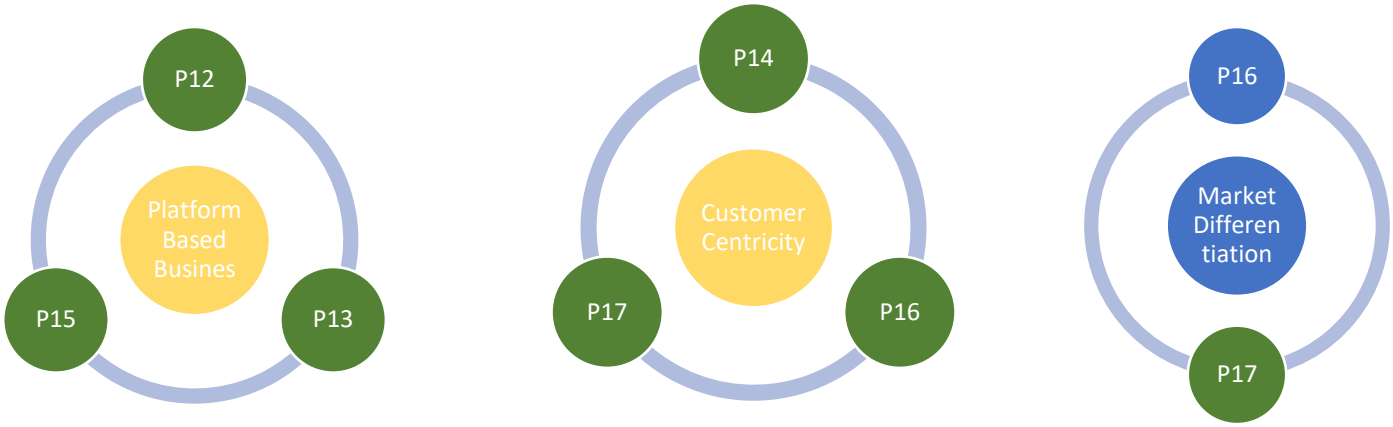


Figure 5.3.2: Common Digital Transformation Drivers as articulated by Participants

The next set of terms, "Platform-Based Business and Customer Engagement," strongly correlated as key drivers for the DTHOD cohort, who appeared to share clear beliefs on the presence of these elements to drive and inform the DT process. At the same time, the "Market Differentiation" term seemed somewhat incidental to participants, with Tech Enablement being important to the CIOs as a driver for the DT process.

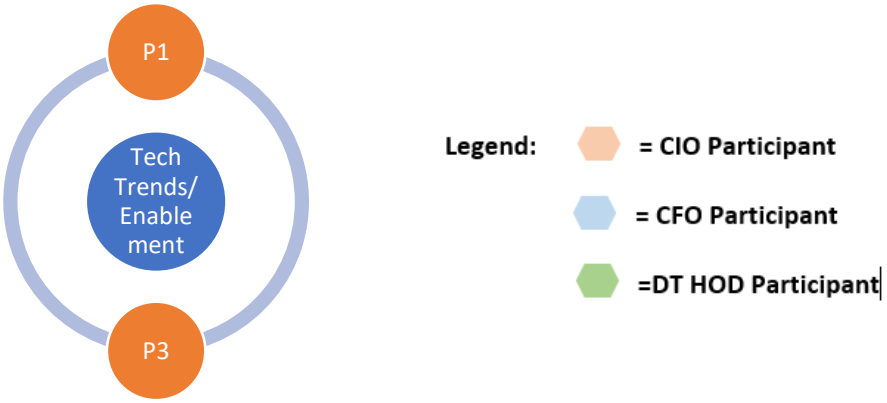


Figure 5.3.3: Common Digital Transformation Drivers as articulated by Participants

COMPETITIVE ADVANTAGE

One of the biggest challenges that organisations face today is finding appropriate ways to specifically carve out their competitive differentiation in the context of Digital Transformation (Adamik, 2016). This digital revolution forces companies to face specific challenges that compel introspective analysis of what aspect of DT or DT technology trends will aid these organisations to market differentiation in their bids to capture the minds and wallet share of their customers (Bender, 2017). **P3** emphasised the importance of competitive differentiation to organisations when deploying DT processes. They should not just be for the sake of transformation, but also target being able to differentiate on service, experience, and product. Whilst any two organisations may look the same in their digital capabilities, the real differentiation comes with their execution (Kushwaha, Tripathi, Chauhan & Saxena, 2017).

An organisation with a culture of innovation, collaboration and true customer focus will be able to maintain differentiation and identity in the digital world as it does in the physical (Kaltnecker, Cesaroni & Taticchi, 2015). The winners will use their digital capabilities to extract intelligence from data in real-time and use this to drive behaviour change or convenience (Lanzolla, 2017). **P4** stated that business drivers came from wanting to deliver efficiently and effectively on organisational objectives and using technology as a key part of this differentiation strategy. Introducing a "disruptive" technology into an existing service market provides new opportunities for firms and customers, often altering the nature of the market (Padgett & Russo, 2007). Consequently, new technology often destabilises market equilibrium, forcing firms to consider the role new technology will play in determining the new market structure. For **P5** the biggest driver for digital effectiveness and competitiveness within businesses today is how they leverage the e-commerce business platform. The drive is to engage with customers differently through various channels and creating a form of marketplace for buyers and providers to meet (whether the business is the supplier or simply assuming a facilitation role): in this respect platform-based businesses such as those motivating Uber and Airbnb cannot be ignored.

P10 discussed how they did not necessarily transform from a balance-sheet perspective, but more from a competitive perspective. Business financials were good, but the problem was what the competition was doing to retain and grow new segments and market share: this

made P10's addressable market share shrink. Scholars refer to the need for organisations to develop dynamic capabilities in order to retain and grow market share (Frey et al, 2011) Dynamic capabilities refer to a firm's unique ability to achieve sustained competitive advantage and profitability (Teece, 2021), all depending upon the firm's specific and unique processes and routines, coupled with its historic path and traditions (Zollo, 2002).

A firm's operational capabilities encompass its learning process, and transformation or innovation processes, and thus the term "dynamic innovation capability" is evolved (Benlian, Hilkert & Hess, 2006). Once a firm has achieved its dynamic innovation capability, it starts to invest ample resources in product development (Afuah, 2002). The result is either an incremental innovation, i.e., minor changes in existing technology and performance, or breakthrough innovation, such as new technology or greater customer benefits related to existing offers (Chandy & Gerbina, 2018).

BUSINESS CASE

P6 shared the belief that the ability to create and demonstrate business value and gains through a business case was key. Being able to show just where these different tech Digital Transformation efforts had been done and deployed successfully in a market and any region similar to that of the organisation was also important. A critical starting point is establishing a business case that clearly articulates the long-term objectives of the digital initiative (Afuah, 2012).

Motivation must transcend the need to pursue quick, opportunistic wins for the organisation, instead demonstrating how the organisation as a whole will attain a more competitive edge, enhance customer experience, and thus increase top-line growth for the business (Venkatraman et al., 2013). **P7** echoed sentiments similar to those of the first CFO cited but made mention of the fact that the business case would only receive real support if there was clarity on the ROI and the time it would take, as against a referenced and already conducted project in the same industry. P7 said very few business cases survived if they were going to take longer than a year to yield – that success was more likely to come from quick, small wins.

P8 again talked about the importance of being able to demonstrate how an organisation was going to be able to save money and reduce costs, because the culture is strongly about cost

reduction. The business is very capital-intensive. Thus, it is really important to demonstrate how every activity being pursued is going to reduce costs. This entails serious calculations, aimed at depicting the results for the business of deploying the application in question. A business case starts with its Value Proposition – including product offering, target market segment and revenue model – to reflect the organisation's vision and strategy (Afuah, 2012). The value proposition is underpinned by the Value Architecture, involving value-sensing, creation, distribution, and capture. The value architecture is supported by the Functional Architecture, including product innovation and commercialisation, infrastructure to support production and distribution, and customer relations management (Hossain, 2013).

PLATFORM-BASED BUSINESS

P9 discussed how it was important to demonstrate platform-based business successes and how the business was focused on actually acquiring supplementary businesses, plus supplementary services that genuinely helped bolster the platform-based offering. P9 gave as an example the fact that SMSing was being used as a platform-based business for them and how they wanted to offer what might be called rich communication services to bolster and complement the SMS offering. Digital platforms, along with their supporting tools and features, have emerged as important enablers for firms to leverage distributed knowledge (Sedera et al., 2016), because they offer new ways for organisations to collaborate with the external environment on ideas, technologies, and knowledge.

Studies have explored efforts to promote such collaboration on digital platforms with various popular names, such as crowd-sourcing platforms (Afuah, 2012), open innovation platforms (Frey et al., 2011), and online marketplaces (Dushnitsky, 2011). The open innovation phenomenon highlights that these platforms have a far-reaching impact on how various parties innovate together through alliances, networks, and ecosystems (West, 2014). **P12** mentioned among other things, business model re-engineering, platform-based businesses, and customer centricity – described in the definition as being key drivers of DT from their perspective. Digital platforms also work as a carrier of innovation (Klerkx & Cho, 2009). As Lopez-Vega et al. (2016) pointed out, searching for external knowledge is crucial for organisations' innovative activities, and the searching space can be either local or distant as

well as experiential or cognitive. Digital platforms work as an important carrier to enable the searching of external knowledge.

P13 states that the drivers for them are looking at a change of business model and revenue generation within the organisation by ensuring participation in a platform-type business, also ensuring there is a digital presence, and that the organisational infrastructure has been adequately prepared to be sufficiently flexible to accommodate the digital changes that might be wanted. Although digital platforms provide new possibilities and competences, they also bring new challenges for organisations, which call for new ways of organising in order to fully embrace their potential (Winsor, 2018). Understanding the role of these platforms in Digital Transformation is therefore crucial (Duchnitsky, 2017).

Organisations must recognise equally the opportunities and challenges that digital platforms provide for them and understand the mechanisms and potential outcomes of various digital platforms (Sedera et al., 2016). Consequently, digital platforms should be considered as a mechanism for accelerating the Digital Transformation endeavours many organisations are undertaking today (Berman, 2012).

P15 stated that for them a major aspect of the DT process was undoubtedly the platform aspect of going to market. Leveraging social media is key to making oneself visible in the digital economy. It also forms a key part of making the brand accessible to respective customers. Digital platforms can have commercial and non-commercial motivations (Klerkx & Cho, 2009): each type of platform has its distinct mechanism and demands different expertise for Digital Transformation (Bayus et al., 2013). Based on the existing literature and popular press, we have identified three major categories of digital platforms for ideas, technologies, and knowledge transfer such as Problem-solving Platforms: Problem-solving is a popular application of intermediary digital platforms (Frey et al., 2011). Large firms use ideas platforms to find designs for their products (Araujo, 2013). Public crowd-sourcing platforms for the public sector represent a novel way to engage citizens in various public programmes (Afuah, 2012).

Sequence 2: Defining Attributes Leaders Need to Drive Digital Transformation

The following section gives an overview of the notable attributes that participants expected of an individual charged with the leadership duty of digitally transforming the business. The overview is both competences- and skill-related and involves personal attributes with a strong sense of commonality. The attribute of Digital competence and experience was almost a non-negotiable item, with few leaders being open to being led or willing to lead without some form of underpinning digital competence in the form of qualifications, skills, and experience. The other notable attributes were being willing to collaborate with others and not necessarily assuming exhaustive knowledge or unwillingness to incorporate the views of others within the DT context. Embodying curiosity, demonstrating constant willingness to learn, and expanding one's knowledge, being experimental and having a bold vision were some key themes to emerge in the discussions.

Digital Leader Attributes:

- Competence
- Experience
- Collaboration
- Vision
- Curiosity
- Experimental
- Open to Learning

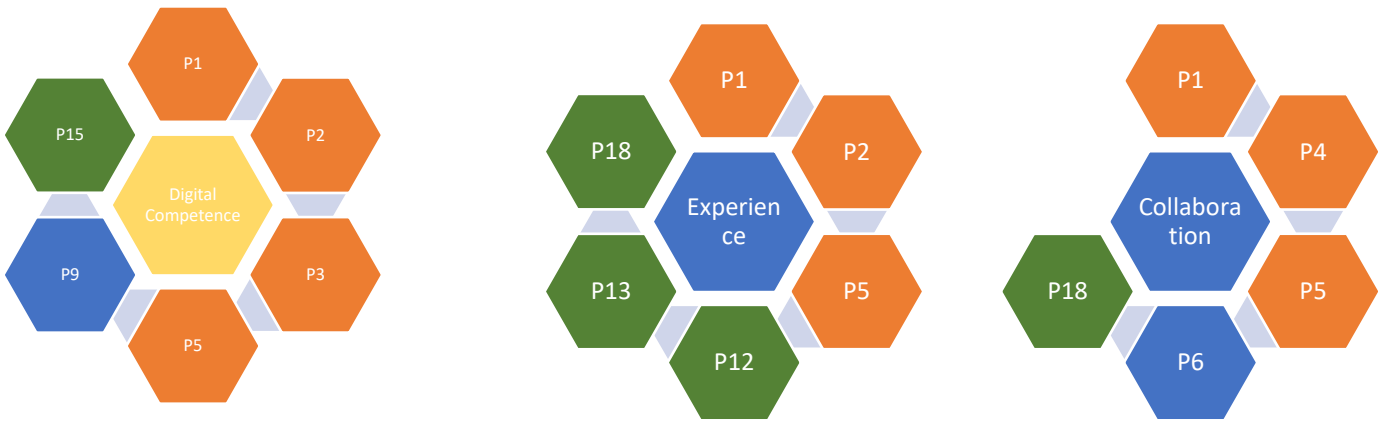


Figure 5.4.1: Common DT Leader Traits as articulated by Participants

The above diagram depicts the common alignment of attributes that a DT leader needs to possess, as shared by participants. The first hexagon in light orange, termed Digital Competence, had an overwhelming majority consensus from the CIO cohorts (P1, P2 P3 and P5) as a prerequisite attribute to qualify as a DT leader. Participants also seemed to share a consensus on the Experience required (P1, P2 and P5) and ability to Collaborate with others (P1, P4 and P5). The DTHOD cohort seemed to lean towards experience as a more important factor than Digital Competence. One may argue the two terms can be synonymous, with experience being a sub-set of competence as defined in the literature review in Chapter 2. However, participants chose to express or articulate their own understanding of the leadership attributes required and this was captured by the researcher.

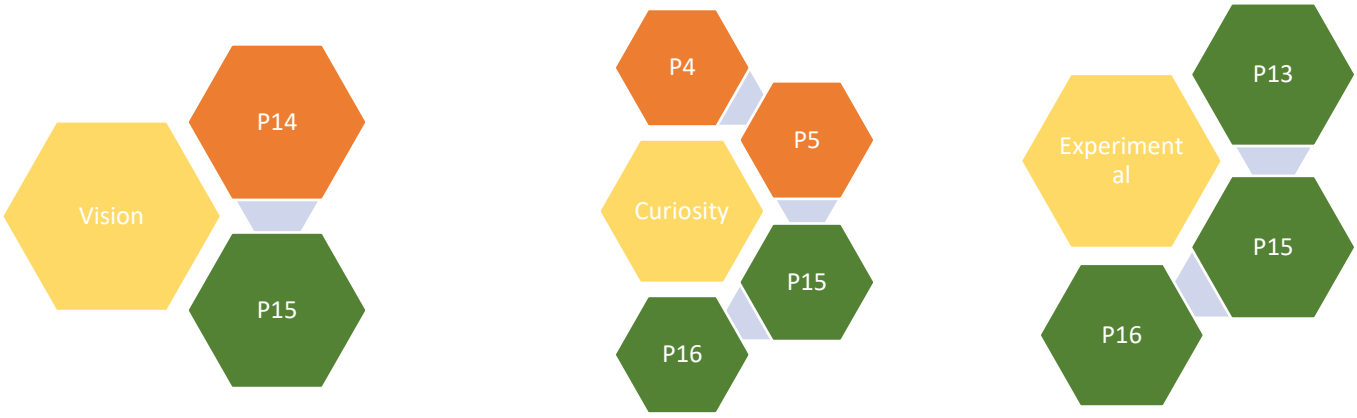


Figure 5.4.2: Common DT Leader Traits as articulated by Participants

The leadership attributes of Vision, Curiosity and Experimentation or Openness to learning were referenced in the literature review section. The CIO and DTHOD cohorts appeared to share similar views on the importance of a digital leader possessing the skill of imparting a sound vision, demonstrating a personality with curiosity, and being unafraid to try to experiment with that which is new and unknown, as can be seen with P13, P15 and P16.

The final hexagon assumes a gradient colour of light orange and blue as the term “Open to Learning” can also be seen as a form of being experimental: when one undertakes an experiment this is a form of learning through doing rather than learning just through theory

and literature. Once more the CFO cohort seemed to show an appreciation of this trait in a digital leader as a form of openness and humility.

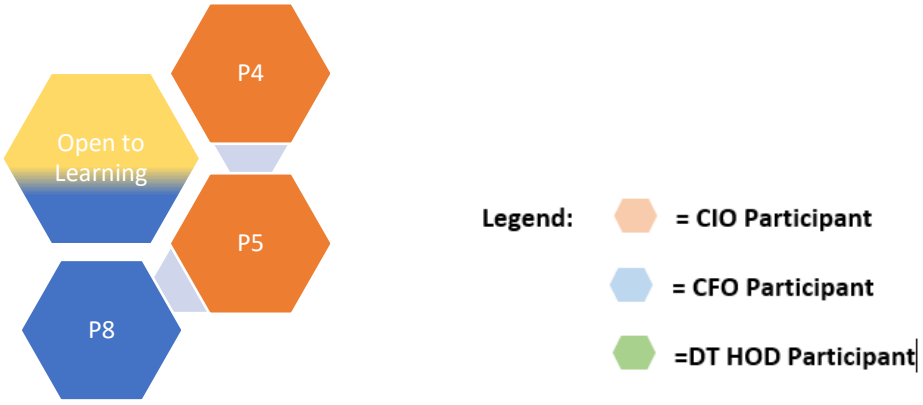


Figure 5.4.3: Common DT Leader Traits as articulated by Participants

DIGITAL COMPETENCE

The European Commission defines digital competence as the set of skills, knowledge and attitudes required when using technology and digital platforms to perform tasks and activities. This is the ability to use the technologies and digital platforms to solve problems through the use of applications and devices, to communicate across various digital platforms, the ability to create, share and distribute content, building knowledge on or using these platforms creatively, autonomously, ethically, and critically (European Commission, 2012).

P1 referenced pedigree, experience, and the ability to collaborate. The leader with skills will be able to ascertain the missing competencies and capabilities that the organisation would need to succeed in an area. Experience will be able to sustain the extent within which the missing competencies and capabilities need to be acquired in the organisational context, while the ability to collaborate with individuals in the business on strategic or operational matters speaks to the influence of the leader. This is not as difficult as business textbooks sometimes make it out to be. It is also about the *development of capacities of knowing,* comprehending and critically assessing the world of technology, technology trends and impact on the social context (Mtka, 2011).

It refers to the capacity to analyse and reason autonomously about the logic, nature, and content of messages (how they will need to be adapted for the various digital media platforms), as well as the knowledge to interpret the symbols, codes and cultural conventions used on these social media spaces (Anderson & Krathwohl, 2001). Developing this critical approach assumes the possession of competences of access and basic literacy related to the technology at hand (European Commission, 2012).

P2 stated that without a doubt the most important aspect of a leader assuming a role is experience, skills, know-how for that role and its core requirements. This can also apply to the *capacity to contextualise knowledge* and acquired abilities in specific contexts, by subordinating its use to other socio-cultural objectives (manage). This can also be loosely defined as the ability to understand how to apply the knowledge of technology use in various contexts, which translates to digital usage (Ala-Mutkah, 2011)**. P3** referenced a technical background, mixed with business and sales. Someone who has worked with several varying "new technologies" will be able to provide perspective to the business.

Someone who can balance the nice-to-haves of DT in a business and the must-haves if they do an industry analysis and compares how the business fares against its peers. This component cannot, however, be experienced by someone without sufficient levels of education and critical awareness (Apple, 2012). These refer to the awareness of opportunities to use the resources that come with DT, and the ways one can use these resources for problem-solving and everyday basic activities. They also refer to an understanding of the system of organisational processes, applications, how hierarchies operate and how to best leverage these to drive DT (Bawden, 2008).

They must also be able to translate, in pragmatic terms, what the various DT trend implications are for the business. It is fine to identify them and point where the operation is contextually, but the implications for the business and where to put the greatest amount of effort and capital are the winning factors. **P5** stated that skills and experience in IT and business are a major requirement, with **P9** stating that a notable requirement is the competence of the leader. P5 and P9 were also emphatic about personality type, and adamant that a leader had to have the necessary pedigree and know-how.

Bloom's taxonomy allows us to identify different levels associated with different dimensions (basic and related to the objectives) of the concept of digital competence – already defined theoretically (Apple, 2012), which can be shifted into six different levels, namely knowledge (remembering and recognising), comprehension (understanding), application (using a general concept to solve a specific problem), analysis (understanding the components of a larger process or concept), synthesis (combining ideas and information); and evaluation (judging value or quality) (Livingstone, 2008).

P17 said digital competence was tantamount to technical competence. A digital leader needed to be a technocrat with a business mind-set or acumen and also think like a salesperson. The European Commission report on digital competency stated that competence is also the *development of capacities of knowing,* comprehending and critically assessing the world of technology, technology trends and its impact on the social context (Celot & Pérez Tornero, 2019). It refers to the capacity to analyse and reason autonomously about the logic, nature, and content of messages (how they will need to be adapted for the various digital media platforms), as well as the knowledge to interpret the symbols, codes and cultural conventions used on these social media spaces (Anderson & Krathwoh, 2001). Developing this critical approach assumes the possession of competences of access and basic literacy related to the technology at hand (European Commission, 2012).

EXPERIMENTAL

P13: stated that a leader should have studied or undertaken some projects that pertain to DT. The blind cannot be leading the blind. It is important that the organisation should hire someone who can form some kind of a reference point from which the business can leverage and expand its understanding and subsequent direction in this area. Furthermore, there is the area of customer centricity, guiding how organisations go about prioritising which parts of the business need to receive priority attention, etc. Put simply, one needs someone with some form of solid understanding around the relevant area and this can afford the organisation a guided form of experimentation. "Experimental" is a term that describes a broad-minded, imaginative, and adventurous individual who is particularly keen to try and test the unknown (Li et al., 2006). It is opposed to compulsive, rule-based, rigid, and inflexible attitudes that indicate ignorance for that which is (Miller & Toulouse, 2016).

Research has shown that Digital Leaders should remain open to new digital concepts, digital tools and systems, plus social technology features and platforms (Hunt, 2015). **P15** stated that DT leaders had to have the ability to communicate a bold vision and have a clever way of getting both executive and organisational buy-in. The importance of getting buy-in from both organisational and executive stakeholders is attributed to the issue of sustainability. A common denominator that will drive the buy-in of both is the leader. Driving a culture of being curious, experimental and always learning, leaders in the context of Digital Transformation are commonly characterised as entrepreneurs who try out innovative technical solutions and bear the associated risk (Singh & Hess, 2017; Thong & Hu, 2015; Tumbas et al., 2018) and implement new concepts and ideas for an organisation (Pierce & Delbecq, 2020).

Digital Leaders will succeed at overcoming the challenges of Digital Transformation (Zhu et al., 2006), when they are able to maintain their organisations' relative advantage through technology orientation, by exploiting digital innovation while simultaneously being aware of its limitations (Horne-Long & Schoenberg, 2002), and whether these remain compatible with existing business processes (Rogers, 2016).

P16 stated that the leader should be someone who has a blend of skill sets, someone with a tech background who isn't afraid to delve into the nuts and bolts of the tech, someone who has a curiosity to learn more and not remain stuck in their domain of operation, someone who can try new things and balance these new things with their corresponding business value and return on investment to the business. Flexible leaders are associated with strategic adaption, informal, flexible, and simple organisational structures, and intuitive, risk-embracing decision-making, rather than protracted processes and complex hierarchies (Miller & Toulouse, 2016). We are reminded that transforming organisations digitally requires leadership that can promote the adaptive quality of organisational cultures (Alos-Simo et al., 2017). Flexibility can help the Digital Leader to accept and adapt.

VISION

P14 stated that a leader who has a bold vision and is not afraid to experiment, one who creates and embraces a culture of failing forward, is primary. Of course, assuming the credentials and business pedigree are in place, in terms of the person's characteristics themselves, they must certainly lead by example and show how they are constantly trying and developing from the

experiences. The Seth Kahn Institute of Visionary Leadership describes visionary leadership as compromising self-transformation, strategic foresight, and leading change.

Self-transformation is described as a process of constantly reflecting on self, experiences, and views, plus perceptions about things in general. It is a process that involves constant challenging and awareness (Trefler, 2019) – a trait one can define as being closely affiliated with emotional intelligence and involving strong self-awareness. **P15** stated that DT leaders had to have the ability to communicate a bold vision and possess a clever way of getting both executive and organisational buy-in.

Jefferson (2018) describes visionary leadership as leadership that dares to make tough decisions, that in the face of uncertainty takes calculated risks and thrives on experimenting with the new – new markets, new products, and new ways of doing things that could propel the business in a new direction. Such leaders often stimulate the team to think and be more. These are but some of the attributes one author has expressed as forming visionary leadership. Another attribute closely associated with this leadership trait is resolution. Resolute Leaders hold steadfast to their convictions and deeply anchored beliefs in the face of adversity (Roe, 2018). They are able to take decisions that are unpopular and remain decisive in spite of all implications. Failure is viewed as merely being a stepping point for such leaders; they have a flair for taking calculated risks and enduring uncertainty, they provide assurance and certainty amid turbulence (Newman, 2018).

CURIOSITY

P4 stated a good leader is one with the ability to learn and bring others into the fray without them really realizing they have become interested or have been influenced by that leader. They lead by example in action, behaviour, and attitude. They have the skills and experience but know how to work with others and always remain open to learning. The desires to understand, explore and become acquainted are core elements of curiosity. Curiosity addresses matters that pertain to how individuals engage with new and valuable perceived stimuli (Grigorescu, 2020a; Peter & Richard, 2009).

According to Oudeyer and Kaplan (2009), the qualities of curiosity and intrinsic motivation are similar. They include being open-minded and receptive to whatever is under

consideration as well as being interested in new things. According to Mussel (2014), curiosity is an open and receptive attitude as well as a willingness to investigate events that are ambiguous, odd, unusual, or uncertain.

P5 asserts that skills and experience in IT and business are great, but to gain the fullness of a capable individual's abilities their personality type and whole being must be considered. The individual is curious by nature, is stimulated by working with others, and enjoys resolving unconventional problems and issues within a business context. According to Mussel (2014), curiosity is an open and receptive attitude as well as a willingness to investigate events that are ambiguous, odd, unusual, or uncertain.

Exceptionally Inquisitive individuals speculate all the more effectively despite enduring nervousness: they continue towards the desired investigation (Kashdan & Silva, 2008). Diversity Curiosity is the desire to explore at some previously unknown level of insight in order to seek out new experiences and information (Grigorescu, 2020). **P15** stated that the requirement for DT leaders was the ability to communicate a bold vision and have a clever way of getting both executive and organisational buy-in. This included driving a culture of being curious, experimental, and always learning. According to Fichman et al. (2014), curiosity drives exploratory behaviour and arouses interest.

Perceptual curiosity is the desire to acquire experiences through the senses, while epistemic curiosity is the desire for learning. People who are curious are more likely to pay attention to an activity, process information more thoroughly, remember information better, and stick with a task until the goal is reached (Wagstaff et al., 2021). These are some of the key traits that a digital leader will demonstrate in attempting to drive the organisation in a particular direction within the DT context (Suma & Budi, 2021). **P16** stated that the leader should be someone who has a blend of skill sets, someone with a tech background who is not afraid to get into the details of the tech, someone who has a curiosity to learn more and not remain stuck in their operational domain.

Sequence 2.2: Barriers to Digital Transformation

This section of the paper gives an account of the barriers to DT that leaders shared from their experiences of working with DT-related projects. During the course of asking this question

repeatedly through the interviews the researcher noted there was a broader theme to DT barriers than what was being articulated by some leaders, this being the presence of a theme of denialism, deflation, and discomfort in the driving of the DT process. Denialism in this context means leaders almost trivialising the importance of hastening a DT process within the organisation, not because of a lack of knowing its importance, but rather lacking in understanding of how to contextualise and drive this process. Deflation is making plans for DT while thwarting efforts to execute these plans. Discomfort relates to uncertainty about what the DT process will yield within the organisation and for the leaders themselves.

Key Barriers to DT:

- Lack of Digital Competence
- Lack of Knowledge
- Lack of Clear Vision
- Egotism – not being able to admit not knowing
- Prioritisation
- Uncertainty
- No clear ROI
- Lack of Commitment
- Impatience in seeing process through
- Lack of collaboration, thus buy-in
- Poor risk management

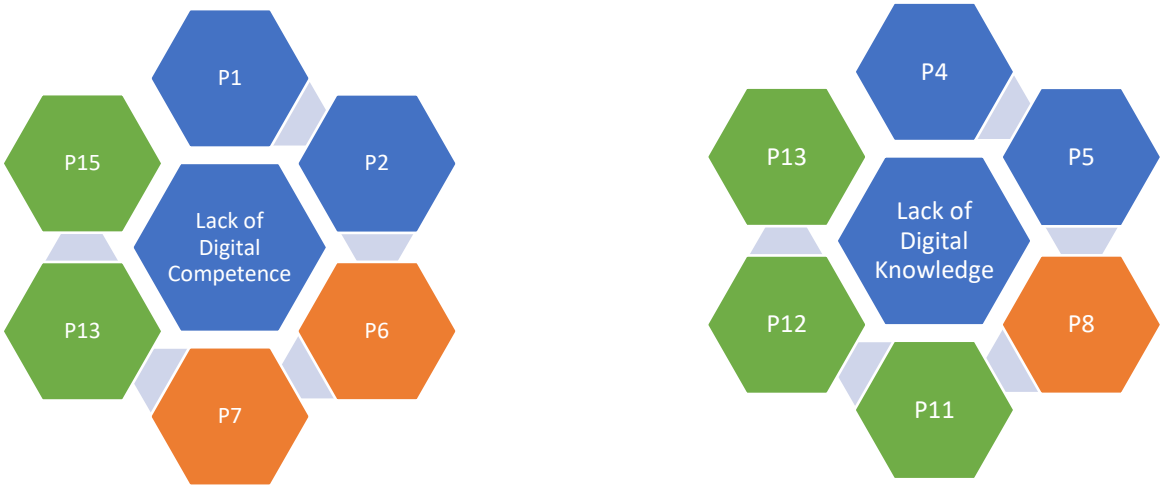


Figure 5.5.1: Thematic Barriers to Digital Transformation

The above diagram demonstrates the key common barriers that participants shared from experience as contributing to the slowing down of DT efforts within organisations and what they had observed generally. It is interesting to note how the barrier of lack of Digital Competence in this section of the study was expressed as a digital leader trait requirement in the previous section. This correlation gives the term a form of triangulation of its weight in the topic of DT. There was a split consensus of two for each member of the cohort that felt the absence of Digital Competence contributed to the failure of a DT process, while the DTHOD cohort and the CIO cohort felt that actual knowledge of knowing how to go about driving a DT process was another contributing factor.

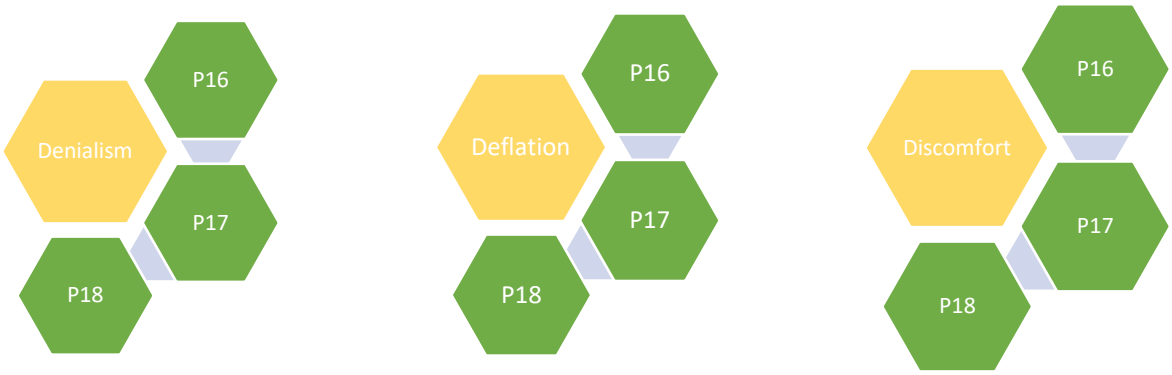


Figure 5.5.2: Thematic Barriers to Digital Transformation

Digital Deflation is the process of embarking on a DT process but being disingenuous about its execution. Finally, Digital Discomfort is where the leadership team is uncomfortable with the changes resulting from a DT process, and this would often present in the form of job insecurity and sabotage of DT projects. It was the DTHODs who again offered more insights on matters pertaining to the barriers, as they were often the specialists deployed within the organisation to drive (or aid in the driving of) the DT process. Other barriers communicated by the same DTHOD cohort were the willingness of the business to see through the process of DT and not anticipating instant results.

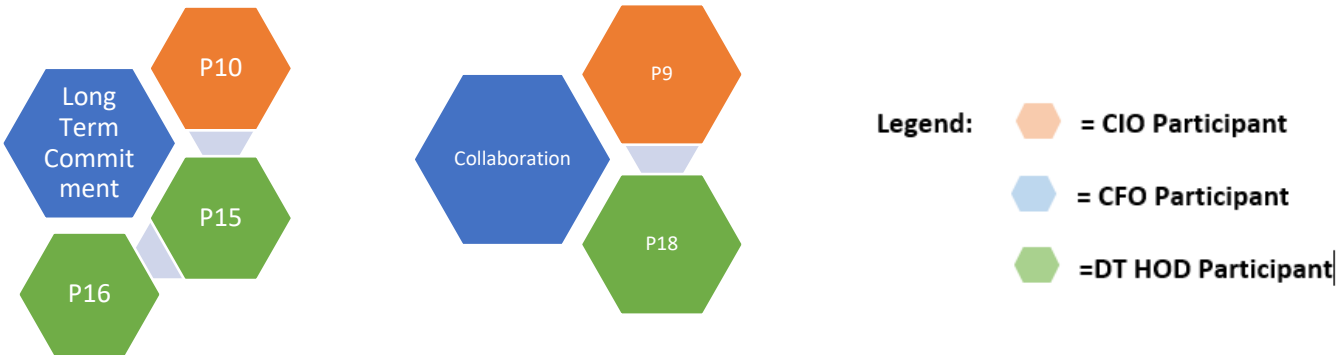


Figure 5.5.3: Thematic Barriers to Digital Transformation

DIGITAL DENIALISM

P16 stated that it was not so much a negligent attitude about the importance of Digital Transformation as it was feeling being overwhelmed by all the DT talk, articles and pressure that came with DT during the COVID-19 outbreak sometimes this could lead to paralysis of action. Resistance can be classified into two distinct categories, the first being systemic (cognitive) or behavioural (emotional) (Goler, 2018). Systemic resistance implies lack of information, skills, knowledge, or managerial capabilities needed to effectively embrace an organisational change that has a fundamental impact on an individual, team or business unit (Kotter, 2015).

P17 stated that there was no digital denialism as such, as this was grappling with a uniform definition of DT and what it means for the business. There needed to be a mediator or centralising figure who would guide the organisation on contextual definitions. Disputes about definitions can cause certain board members to come across as being in a form of digital denialism when it could actually be a case of digital ignorance. Behavioural resistance implies assumptions, perceptions and reactions that are often preconceived and partial, being related to the organisational change (Hansen et al., 2015).

However, resistance is not only seen at employee level, but also identifiable at an organisational leadership level, often stemming from lack of knowledge or fear of relevance and resulting in a resistance to a change that in particular could threaten their position within the organisation (Highsmith, 2012). The same is true for leaders who fear uncertainty and changing the status quo (Kanter, 1989; Burdett, 1999). **P18** stated that sometimes the topic of what is important to the business and who it comes from, matters. The composition of the

EXCO and board members matters a great deal as they truly reflect the quality of decisions and calibre of leadership that an organisation will experience (Coad, Herzfedlt & Kramer,2016) Internal barriers include resource-related constraints where the search for the right skills, the correct candidates for the organisation and its DT path have proved to be a barrier; management in terms of strategic direction, communication and driving organisation-wide adoption of DT; plus time-, culture- and systems-related as well as human-related challenges (Higgs, 2017). External barriers are subdivided into supply-side, demand-related, and environmental-related barriers (Hadjimanolis, 2017).

DIGITAL DEFLATION

P16 stated that from his observations, deflation initially happened unintentionally. The issue was rather how to prioritise what to execute first than it was a disingenuous effort of going about engaging in a DT process.

P17 felt that once uniformity was established, the immediate opportunity cost was realised, because suddenly the perspective lenses were unified. Indeed, luckily, or unluckily for us, the drive to start and execute results quickly was real and palpable.

P18 stated that there was an acknowledgment of going digital but the investment and the urgency to do so were not as apparent. The reality for any business was that unless the fundamentals of the business were severely affected, the prompt or compelling event for change became hard to push forward and administer. Resistance is a normal response to change as change usually involves moving from the known to the unknown (Coghlan, 2013). Successfully managing organisational resistance and addressing the human capital perspective to change is arguably of greater importance than managing other aspects of the Digital Transformation challenge and are crucial to the successful implementation of change.

Research has highlighted that companies that have adopted digital are witnessing an increase in shareholder and stakeholder values (Westerman et al., 2012). The implication of this is that the better organisations get at managing the barriers to Digital Transformation, the better they will be become and thus excel at rolling out their DT efforts (McConnell, 2018).

DIGITAL DISCOMFORT

P16 stated that discomfort would always be present with change. Discomfort becomes a problem when it stifles a business from taking the strategic imperative to change and mobilise in a different direction. Discomfort was also addressed by feasibility studies, business cases, ROI analyses, etc., to substantiate the project and demonstrate what expected returns the business could expect. The topic of barriers to Digital Transformation is important to address as many organisations fall victim to focusing too strongly on the technical element of change management and neglecting the equally important human element (Dickerson, 2013).

Closer inspection points to management behaviour and employee attitudes as the foundational elements that contribute to resistance to change (Keller & Aiken, 2008). **P17** stated that in his view, this was expected. Addressing the discomfort starts with a Digital Literacy drive aimed at both unifying the understanding of DT and driving accelerated executive adoption: this will invariably trickle to the rest of the organisation. To adapt to the changing environment and remain competitive, organisations need to be more receptive and proactive to change or else risk going under (Fuge, 2009).

Any attempt at introducing change therefore involves important challenges for leaders at all levels as well as for the organisation (McConnell, 2018). Resistance is a normal response to change as change usually involves moving from the known to the unknown (Coghlan, 2013). **P18** stated that he dealt with the discomfort through collaboration. He learned in his years of working that people would shy away from, and shun supporting, things they (a) did not understand, or (b) were not consulted about or involved in.

Successfully managing organisational resistance by addressing the human capital perspective to change is arguably of greater importance than managing other aspects of the Digital Transformation challenge and is crucial to the successful implementation of change (Fuller, 2000). Involvement and organisation-wide communication are critical steps in DT that leaders need to communicate in order to arrive at a successful DT process (Fuller, 2011).

5.4 Outcomes of Mixing Sequence 1 and 2

The analysis and discussion above were an important factor as they provided a detailed account of how respondents contributed to the research objectives tabled in Chapter 1. With

the first objective including the definition and drivers of DT, it was clear that the definition was completely broad and subject to being defined by the lenses the respective leaders used, as influenced by their roles, organisational experience and understanding of DT. While the definitions did not steer too far away from the pointers addressed in the literature review, there were a few new definitional terms that respondents introduced such as Value Creation, Infrastructure Optimisation and Innovation (although it can plausibly be argued that creating new business models and platform-based businesses requires an element of innovation: this was not explicitly stated in the paper but has a subtle implication).

The drivers of DT, as expressed by respondents, did not veer too significantly from those shared in the literature review: specifically, different as DT drivers were the points of Market Differentiation and Tech Enablement. There was also the question of the attributes of a DT leader: many listed responses fell within the ambit of the literature review, with the exception of the term Experience – again one can plausibly assume that Digital Competence has Experience as a sub-section of its definition.

Finally came the topic of barriers to DT. Leaders gave great perspective in the form of responses to what was not initially asked but came through as a theme in the form of the Digital denialism, deflation, and discomfort. These elements were later incorporated as part of the interview schedule and mirrored the findings of the literature review in regard to digital denialism stemming from lack of digital competence, with digital deflation stemming from job insecurity and digital discomfort often breeding sabotage of DT efforts. However, once more additional elements that they witnessed as barriers to DT were shared by respondents, such as lack of long-term commitment on the part of leadership and not collaborating with other divisions of the business to ensure organisation-wide buy-in.

The second last objective of the role of leaders influencing the drivers of DT was to be answered more as an observation than an explicit question to ask leaders, as often leaders felt an element of ambiguity, uncertainty or responded to the question in a manner that did not fully answer it. The essence of this objective was to ascertain the personal influence of the leader on the drivers of DT: what came out was that the leaders' Digital Competence and Knowledge, their character and how they engaged with the team were significant contributing factors to their influence on the DT process. This illustrates the fact that the

leadership evolutionary theories were all relevant in the DT context. Referring to the Great Man theory, it remains clear that leaders are not born but can be made; however, respondents attested to the importance of the traits of the leader in influencing the organisation.

The same was true about the way the leader relates to the leadership team and the organisation at large, touching on the principles of the theory of transformational leadership that engage topics like the leader's ability to influence and motivate, but more importantly, collaborate. This also relates to another leadership type, distributed leadership, which, while by definition assuming delegation, also fosters a spirit of collaboration and ownership. Finally, elements of the leader in the digital context were referenced as possessing a vision, being experimental, curious, and open to learning, while having the digital competence and knowledge to drive the DT process wisely.

CHAPTER 6 – CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Research Implications

This section of the thesis provides details of the study implications as deduced from the analysis and discussion section earlier were both analysis and discussion of sequence 1 and 2 were mixed. The implications have been set out in a grouped or mixed fashion, specifically to highlight their respective contributions arising from this work. The respective groupings are: (I) Theoretical Implications, (ii) Empirical Implications, (iii) Practical Considerations, (iv) Key Research Considerations, and (v) Recommendations. The theoretical implications will convey the theoretical contributions and limitations of the study as they appeared during the initial stages of the research. This section will draw on the similarities and the delta that was observed prior to the research and post the research exercise. The empirical Implications offer a detailed account of the interpretation and takeaways that the findings have unearthed as they relate to the topic – in particular, the contribution to the body of knowledge that emanated from this study. Finally covered are the Practical Implications for Financial, Technical and Digital Executives within organisations, together with Digital Professionals.

Research Implications Sequence 1:

Defining Digital Transformation in A Sea of Definitions

The research implications in general were that Digital Transformation is a topic that is both broad and also subjective. The definition of Digital Transformation will depend largely on whom one is asking, their role within that particular organisation in relation to DT, their tenure, and their subsequent competence. The Chief Information Officer (CIO) cohorts provided a view that drew much from a technical viewpoint. Their definitions, the drivers and even their views on what constituted a good Digital Transformation leader came from their

own perspectives as informed by their roles, their own KPIs and what they understood DT to be. The same was observed to be true with CFOs when themes such as Business Case and Competence resounded for them as these were the measures by which they were evaluated and judged within the organisation.

To find an all-encompassing definition of Digital Transformation is also dependent on where the organisation's digital maturity journey has reached and the leadership team's composition. The more comprehensive the leadership team – as where the CIO, CFO and DTHOD were interviewed – the more comprehensive and judicious the definition as it tracked key organisational elements. These key organisational elements included items such as the tech stack, the financials, and the DT process itself.

Establishing the Drivers of Digital Transformation

The drivers of Digital Transformation were again influenced by the same factors: who was asked, what role they assumed within the organisation, and how they were evaluated and measured for their roles regarding DT. Although the delta between the literature review listed seven drivers of DT – namely business models, platform-based business, customer centricity, big data-driven processes, digital business strategy, competence, and culture – the respondents added value creation, infrastructure optimisation, innovation, tech enablement and application rationing as contributing drivers. The delta is a great demonstration of how wide and subjective the topic can stretch and be interpreted.

Research Implications Sequence 2:

Understanding Attributes Leaders Need to Drive Digital Transformation and their Personal Influence

The leadership attributes were by in large aligned with those communicated in the first sequence of the paper, namely visionary leadership, experimental, curious, demonstrated digital competence and collaboration. Additional attributes that respondents shared were an experienced leader and one who was open to learning, which could also be plausibly classified under competence, curiosity, and experimental nature. There was a correlation of responses amongst the cohort of leaders in terms of what they deemed were attributes DT leaders

needed to drive a DT process. The attributes were not just a function of what the leader is expected to know in terms of their skills, experience, and general aptitude, but also, who they are as people characteristically and the characteristics they possessed. People enjoy working with collaborative, open minded, experimental, and humble leaders that can be bold enough to chart into unknown territories yet humble enough to concede to not always having the answers and also seeking feedback and engagement from the team. As such in conclusion, the role of a leader in driving DT is etched in their own innate attributes such as being curious, experimental, being a visionary and willing to take calculated risks. These attributes align with the theories postulated by Great Man theorists and elements of digital leadership traits, which in many ways attests to the fact that DT leaders must have innate digitally compatible attributes to aid in them driving an effective DT process. Of equal importance was actual competence and experience in the field of driving DT as the blind cannot be seen to be leading the blind, so competence was key not only for direction but also for ensuring security in explaining what DT is and is not, so as to address those who fear DT and the impact it could have on their roles within the organisation. Finally, was the observed importance of collaboration, the leader must be collaborative in order to have greater influence but also to ensure they gain buy in and have the support they need to ensure the successful deployment of DT projects.

Barriers to Digital Transformation

The perceived barriers to Digital Transformation in the form of digital denialism, deflation and discomfort proved to be a legitimate theme when the additional Digital Heads of Departments were interviewed. What came through clearly from the engagement was the resistance and uncertainty often stemmed from a lack of digital competence and from job insecurity on the broader leaderships teams' part which almost invariably led to the sabotaging of DT efforts in the form of denying its importance, deflating on strategies planned and being uncomfortable with embarking on change. Digital Heads of Department are subject matter experts in the area of DT and cannot execute on the DT strategy without the support of the broader leadership team that comprises of the CEO, the COO, CIO, and CFO. Their experience was shared as not always having been a smooth and supportive one from their leadership counter parts.

This gave light to the figure shared in chapter two that identified uncertainty as being the root cause of the barriers to DT. The first level of impact was that at a leadership level. The absence of certainty stemming from competence or comprehension of DT as topic was the first prohibitive barrier. As alluded in chapter 1, Executive ignorance, or lack of Digital competence as expressed in Chapter 2, will always lead to the three D is discovered during the interview with the DTHOD. Not knowing, not comprehending, and not wanting to know or comprehend as a leader stifles, breeds a fear of job insecurity should the proposed change threaten the leader's relevance which can lead to the sabotaging of efforts because the leader has the executive power and influence to do so. The uncertainty from the leadership team trickles to the organisation because there is no clear strategy on where the digital transformation will be applied. Where it will begin, who will be driving the transformation, the skills HR will need to source in order to drive the transformative process. Also, the prioritization of digital transformation initiatives or programmes must come from somewhere, ideally the digital strategy which is once more in the ambit of the leadership team. Finally, the impact of uncertainty on employees will also be a trickledown effect from the leadership team. If there is a lack of cohesive directive and embracing of DT by the leadership team, employees will always resist what is not enforced from the top. Conversely, that which is driven cohesively by the leadership team needs to ensure the buy in and involvement of the extended operational team. Many of the leaders during the interview expressed the importance of collaboration and involvement when embarking on a DT process as it influences the buy in and adoption by the broader team. Collaboration enforces both formal and informal communication as all stakeholders impacted by the DT process is involved and understand first-hand the impact of the DT process on their jobs and what it means for them in the near future.

The barriers to DT found in the literature coincide with the barriers found in the thematic interviews with the C-Suite leaders and even suggest the case of exploring into the area of effective change management, as the barriers touched on the issue of how an organisation as a whole goes about managing the change process as discipline. Also worth exploring is the topic of driving a culture of innovation where an organisation is not afraid of change and is quite comfortable in experimenting with the unknown and being comfortable actually with uncertainty.

6.2 Theoretical Implications

The accumulated theoretical research confirmed the results stemming from the interview process. There was both congruency and extension of the literary review findings against the empirical findings.

Theoretical Implications Sequence 1:

Defining Digital Transformation and Understanding It is Drivers

The literary review findings suggest that seven foundational terms contribute to the anchoring definitions after concluding the qualitative content analysis process. These were that the leadership team needed to understand how the Digital Transformation process embarked on would impact the organisation's business model, and that embarking on such a project without at least understanding which areas of the business model would be impacted was not advisable. It is important to articulate this as part of the business case and motivation for propelling a DT process. The leadership team must also understand how it intends exploiting platform-based concepts that suit the organisation. The implication of embarking on a DT process without understanding how it will impact or how it should transform the business model results in confusion and futility as the heart of DT is about its impact on the business model.

The customer centricity driver articulates the importance of spawning a DT strategy that is centred around the customer and the preferred ways of interacting and engaging that customers have impressed on organisations. Customers have a range of applications, devices, and organisations to transact within the context of the digital economy, the deviance of understanding exactly what mediums and channels an organisations customer prefers is to lose that customer and possible market share. This was a point that surfaced in the interviews with the C-Suite leaders, the point of customer centricity as a focal area of DT and also as a key form of competitive differentiation.

No organisation can succeed at Digital Transformation without possessing the requisite skills and competencies to drive a DT process. The empirical findings attest to the importance of digital competence and knowledge. Skills are but one element of competence; the actual

characteristics embodied by the leader in driving the process are of equal importance. Next comes the culture of the organisation and how that informs the way Digital Transformation is manifested. The empirical account demonstrates the importance of driving cultural change parallel to the strategy. Walking people along the journey or rather collaborating with the team is a critical consideration in driving both the organisation and its workforce along the journey to ensure organisation-wide buy-in and acceptance of the DT process.

Theoretical Implications Sequence 2:

The Role and Attributes of a Leader in Driving Digital Transformation

With reference to the leaders who would drive the DT process, the literature draws on a thread of historical leadership theories. These range from the Trait theory that was premised on leaders being born, rather than being developed, to the theory of transformational leadership which viewed leaders in relation to how they relate to their subordinates in order to drive performance and attainment through them. The theory also focused on Digital Leadership, which drew more intensively on the attributes that digital leaders needed to possess in order to drive a Digital Transformation process. These attributes included being visionary – seeing into a future that does not yet exist while being able to mobilise and influence buy-in and support – while possessing sound emotional intelligence, the strategic foresight to embody vision but manage existing operations with the future in mind, and not being too reckless with experimentation. These traits were aligned with the interview findings where the broader constituent of leaders felt it was crucial actually for the leader to possess attributes that draw from various parts of the identified leadership theories.

That yes a leader is born with certain traits like being curios, being humble, being open minded (these are traits one cannot be taught but has to be) as abstracted from the Trait theory. That leaders must be team orientated, they must want to collaborate and work with and through others as abstracted in the theory of transformational leadership, but should equally know what they are doing, be resolute and not be recklessly experimental without having the soundness of mind and experience to understand the accountability as abstracted from the digital leader's traits.

6.3 Practical Implications

Participants provided a considerable amount of feedback from their own experiences and interpretations. It was clear that the descriptions and accounts shared by leaders were a function of their existing roles: tech leaders will naturally gravitate towards perceiving Digital Transformation through a technology-based perspective, and also in terms of KPIs to perhaps focus on the tech landscape within the business. This would make them great tech custodians of DT activities, but not necessarily experts in the domain.

Finance leaders will possess a good understanding of the technological advances within their organisations by virtue of their budget control and approval of delegation of authority. Although also not domain experts, they do assume a role of ensuring that Digital Transformation ideas are practical, commercially viable and will give tangible value to the business in an unemotional manner.

The Digital Transformation heads of departments who are the domain experts gave a more enriched and nuanced perspective on the topic. This demonstrated the need for organisations to have a triadic leadership team with the expertise and perspective to allow a sensible and organisationally exhaustive DT process drive. The empirical implications offer particular insight, because the comprehensive and subjective nature of Digital Transformation makes it is important to actually have the three role cohorts consulted in the interview to ensure the leadership team has covered and represented exhaustively the three critical areas of the DT. These three critical areas are the tech aspect, the financial aspects of feasibility, and ROI and responsible experimentation, all guided by domain expertise possessed by the DTHOD.

6.4 Key Considerations

Certain limitations noted during the research work are worthy of deliberation. They are:

Methodological Innovation – A critical contribution of the research was the innovative mixed qual-qual study intended to use creative methods of extraction to elicit data from participants to inform the contents of the research document. Convincing the panel that firstly a qual-qual research methodology is also considered academically fit to be referenced as mixed took a fair amount of effort, primarily in the form of an academic article attesting to the credibility

and existence of such an approach in a research methodology. The primary characteristic of a qual-qual mixed methodology is that both the core component (qualitative content analysis) and the supplementary component (semi-structured interviews) have an inductive theoretical drive (Morse, 2010). This means that the research is intended to be exploratory descriptive in nature, with the goal of creating rich descriptive content that builds conducive academic content to aid in the development of a Digital Transformation framework that could be a little more exhaustive owing to the depth of the insights derived from the selected methodology.

In line with methodological considerations, the "creative methods of extraction" that sought to engage participants in a manner that was less formal and more relaxed to provoke deeper and less superficial engagement were also another methodological area needing academic validation to prove their legitimacy. A creatively run interview process allows for tapping into the unspoken narratives that are often lost when using the approach of direct questioning (Gauntlett, 2007). A creative interview process builds a space for participants to reflect on complex issues and focus less on the drive to produce readily available and obvious responses of the sort they often feel required to utter by virtue of their positions (Bohnsack et al., 2018).

C-Suite Access – While the researcher had a rich C-Suite network allowing easy access to a population sample that is otherwise not easily accessible, the limitation experienced here was the number of C-Suite members who didn't feel comfortable, adequately equipped or *au fait* with the topic of Digital Transformation to make a meaningful contribution to the research. Specifically, those were in the Chief Financial Officer domain. It was interesting to note, considering their offices and fiduciary responsibilities to the respective businesses they oversee, the precise personality profile many CFOs seemed to embody, involving adequate preparation, and understanding the exact nature of the questions and information required of them. Also worthy of understanding were the nature and profiles of some participants and more so, the organisational policies that govern how participants with this profile interact with the public and company-sensitive data. It was imperative to put their concerns at ease and confirm the anonymity guaranteed for participants, while sharing questions from the start in order to demonstrate the nature of responses that would be required.

COVID-19 – The research document was compiled at the time of the COVID-19 pandemic, which was simultaneously a limitation and an interesting catalyst. It was limitation in the sense that participants who needed to be accessed were contending with genuine organisationally impacting issues of how to accommodate a remote staff, plus how to trade and create an environment of business continuity in an accelerated way using digital platforms and products. In effect the researcher sought to interview participants while they were navigating their Digital Transformation acceleration plan. This led to most of the interviews being delayed for a year or more to allow for the adjustment period. Luckily, the banking fraternity was not affected by major retrenchments at participant levels: interviews were moved forward and honoured. The COVID-19 climate also made it challenging to conform to the creative methods of extraction as not all participants were comfortable with the idea of meeting in person, having perhaps had a brush with COVID-19 and exercising caution. This resulted in having to reduce the list of participants secured for interviews and sourcing new ones in order to meet the set methodological design.

Interviews with Strangers – With participants who had been earmarked dropping off from the interview list, the researcher was compelled to source new participants either through referrals or by sourcing them on LinkedIn. The challenge with access to this level of participants is contending with busy and changing schedules, putting reservations and sceptical questions at bay by sharing intentions and objectives up-front and clearly. The male/female interview dynamic also had to be managed, especially when soliciting information in an informal manner.

Researcher Bias – The topic of DT is both broad and open to interpretation as well as being a function of the angle by which it is approached. As the researcher advanced in the study, trying to manage potential bias of leaning towards wanting to hear what was in the mind of the researcher from past interviews and having been so entrenched in the literature, it was important to let participants define the topic and share the experiences in the way they understood best. For example, when the researcher asked one participant how Digital Transformation was defined, the response was:" How would *you* define DT?" This was not necessarily asking directly what DT was, so much as a test of which direction or definitions the participant could first leverage from the researcher to premise his/her own response. It was not necessarily a bad thing, just that responding to such a question exposes the

participant to a form of researcher bias, while not responding could make the participant feel uncomfortable.

Interview Fatigue **–** Interviewing 18 participants with 11 questions in a space of two months can be a fatiguing exercise. The goal is to access participants at a time most convenient for them and one that allows the creative methodologies suit of engagement. However, stacking these too closely together can result in the interviewer experiencing fatigue, as well as displaying interviewer bias as questions are now almost being asked in auto-pilot mode while anticipating set responses. This showed that spacing the interviews to enable digestion of content and transcription was also key.

Parameterising Research **–** The research journey to discover the extent of the drivers that will inform Digital Transformation proved to be extensive. The researcher had to be deliberate about limiting the scope of the research topic and participants when defining the leadership team, as this could have led to an extensive list of people, possibly with greater difficulty to access.

6.5 Recommendations

Expanded Sectoral Analysis/Exploration **–** The study was premised on the banking fraternity. In many ways this may have limited interpretation of the topic or rather how it is approached, as the banking fraternity is a sector on its own in the same way that mining or professional services are. A clear theme resonating from the research was that the Digital Transformation definition, drivers, and leadership approach were by and large influenced also by sector, plus organisational, size, and cultural dynamics. A study to explore and compare the DT progression and maturity according to sector would also prove interesting.

Analysing gender parity and age **–** A large portion of the research sample was found to be males in their late 30s and early 40s. The research topic specifically targeted participants in the banking fraternity with leadership roles; this may have been an incidental representation of the small sample but would warrant research as to why the apparently glaring gender imbalance and also the differences between male vs female leadership approaches, attributes and techniques of navigating the DT terrain.

Expanding on DT relating to Digital Products – The research postulated Digital Transformation drivers that are inherently consideration points for driving a DT strategy, being customer-centric, using Business Intelligence (BI) to assess the business starting point, streamlining processes, having a DT strategy to guide the efforts, possessing the competence to drive these efforts and also the culture to propel and sustain such efforts within the business. Digital Transformation has another aspect that focuses specifically on the DT products formulated, such as DT Platform businesses, applications, and digital assets such as website domains, virtual currencies, and social media accounts. Further research could be undertaken on Digital Transformation products being an indicator of digital maturity within a particular industry or indicators of financial progression. Many economies that lack well-developed financial institutions or infrastructure have sought to use technology platforms and products to transact and drive their own mobile and tech-based economies. This is another area for consideration when extending the current research.

Expanding Digital Competence at varying levels – The research referred to digital competence as a general requirement when embarking on a DT process. Worthy of exploration is segmenting the DT skills or competence requirements at different levels within the organisation, such as at tactical, managerial, executive, and even board levels. Digital Transformation affects all aspects of how an organisation strategy, prioritises, and executes its go-to market strategy. The absence of digital insights at varying levels of organisational operations is often a contributor to delayed digital maturity within a business.

Deep Dive of DT within a single driver – The depth and breadth of the topic of DT breed an excessive number of academic articles. These went deeper with analysing DT from the perspective of using one driver such as Big Data and AI to engage with and elaborate on gaps or approaches required when commencing a DT process within an organisation. Future research could entail examining one aspect of DT across a particular industry or multiple industries.

CHAPTER 7 – RESEARCHER'S REFLECTIONS

I embarked on this educational journey because of the question resounding in my own mind every time I read an article, attended a conference, or partook in a strategy session. The words "Digital Transformation" would inevitably arise. Although some may argue that the words are, at face value, rather self-explanatory, I soon realised that because of the varied approaches and contextual differences I encountered, it was surely not a universal topic in its understanding or its prominence within the Digital or ICT communities. Being an ICT executive and professional, I often cringed, as I felt not fully conversant with a topic that industry or peers would expect all to know.

Every time I heard the words Digital Transformation, and even worse, had someone ask me what this was, the feeling recurred that I had experienced as a fresh IT Management graduate when people would ask me to help fix their laptop hardware woes, to which I would reply: "Unfortunately I am not a technician". It was a squeamish response to an area in which I am not an expert, yet when one has a position labelled "IT Manager," people assume one is *au fait* with all aspects of Information Technology, including hardware, software, people management, selling, etc. It is a fallacy and simply untrue. In the same way, I felt a deep pressure to truly understand and become conversant with topics related to Digital Transformation. I was not satisfied with surface-level reads or two-minute articles to shed some light on the topic. No, I felt it pertinent to have an intricate and personal understanding of this area in its entirety. The only way that made sense to explore it at length was to undertake doctoral-level research. Furthermore, it seemed an opportune time for a number of reasons. For one, I had been considering what would constitute a research-worthy PhD thesis. I needed a topic both worthy of research and personally and professionally stimulating. Secondly, my journey began right in the middle of the COVID-19 pandemic, which was opportune for my research as it forced organisations to start to meaningfully define themselves in a world that forced them to think, participate and engage with customers more digitally than ever before.

The research journey has been a long one, often meeting uncertainty and confusion as to the direction of the topic in my own head as a researcher. I had not anticipated the breadth of directions I could contextually take with the topic.

The peak of my journey was the interview process I undertook with each and every one of my participants. The broadness, yet specificity, of this population group provided such rich context from not only the perspective of a positional role but also the personal views of participants. Using creative methodologies of extraction made an impact because it allowed moments of vulnerability in the form of almost expressing uncertainty about the topic or responses such as:" That is a really good question," or "That is the million-dollar question that would make you a millionaire if you could solve." Such responses were testimony to me of the importance and also the relevance of the topic of Digital Transformation, as definition and knowledge are not as widespread or obvious as we in our corporate minds would anticipate.

This occasional lack of conviction, or presence at times of uncertainty in the responses, was a source of comfort and affirmation of the usefulness and value of this research. I was able to observe that the topic of Digital Transformation required deliberate effort to seek and research a contextual definition that made sense for each organisation based on its own level of maturity and the implication at a role level. To unpack this a little differently, I realised that the perspective my grouped participants shared was a function of occasionally subjective understanding that had been influenced by role exposure and role understanding. If one's role is largely technical and involves managing the infrastructure landscape, assets, services, and systems of the organisation, one would be expected to take an interest in the technical components that comprise Digital Transformation as these would relate directly to one's role and scope of responsibilities. The same is true if one's world is framed by having to look at all aspects of the business through a financial lens: one is conditioned to always be persuaded to approve any form of organisational initiative if this is substantiated and underpinned by financial metrics serving as justification for the project. Finally, is the subject matter of the contribution intended to serve as a guide and validation for embarking in a chosen area, but with expert oversight?

What I observed about this blend of leadership perspectives and skill sets are they are exceptionally complimentary. However, this only applies in an environment where there has

been a well-synchronised and clearly articulated definition of what Digital Transformation is, and what it means for the business. The definition of the Digital Transformation must cascade not only from the strategic, but also to the operational, role level implications, metrics, and culture of the organisation. Orchestration and synchronisation of these drive true innovation in a sustainable and organisation-wide fashion.

Another aspect worth noting is the occasionally awkward yet fulfilling process of meeting with perfect strangers at that level. On one level it was a little unusual to have coffee with the Head of Digital Strategy at one of the banks without really knowing the participant personally. The process of creating an initial rapport involves a sense of ease and credibility that individuals are indeed who they say they are and that they will be doing what they have set out to do. The openness and willingness of some of these participants was as humbling as it was somewhat daunting. Another dimension of the experience was the opportunity to make new friends, expand my network and possibly find opportunities to collaborate in future. A few participants were so engaged during the interview process that the matter of possibly working together within the organisation, or seeking my consultation services post the completion of the research process, was most pleasing.

It is far from easy leading an organisation. The questions I asked took some participants to spaces they had not consciously thought of before. What I mean by this is that in each leadership role – be it in finance, technology, or Digital Transformation – heads had their own areas of speciality and focus. The need arose to stretch understanding beyond one's scope of duties, not only because of the environment in which the business operates requires it, but also because across all industries the advent of COVID-19 demanded digital innovation. This forced participant to direct intense thought and action to the organisation's position on the matter. It made the process of interviewing equally engaging and insightful for both myself as the researcher and also my participants. COVID-19 was an interesting aspect in my research journey because every leader and organisation had to reconsider future operation in the post-COVID world, keep employees engaged and begin to seriously think about the digital skills they needed to begin the path of leveraging data, while creating digital channels of communication and engagement with their clients. The aspect of competitive benchmarking influenced how organisations sought to market their new digital identities.

In conclusion, my professional lens has forever been impacted and changed by the research journey; the realisation of how vast was the definition of Digital Transformation and engaging with a number of business heads on their interpretation of it gave me a newfound appreciation of the saying that "those who will succeed are those who continue to be the students of life and learning." It simply never stops learning is evolutionary and so is personal and professional development. The era and times may be different but to truly succeed and make a meaningful difference in the environment one leads, one needs to be willing and open to learning, to being taught by those younger than oneself, to be accepting of failure (within reason) and truly remain open to a way of working that encourages experimentation while fostering collaboration.

Vision without personal and character conviction is futile. The role of leadership is precisely that, to use personal influence to guide the organisation and the workforce into uncharted territory. That trust, that vision, can only hold weight in the event the leaders themselves have proven worthy – in character, competence, values, vision, willingness to hold people's hands. In the words of Rear Admiral Grace Murray, things are managed, but people are lead.

REFERENCES

Adam, J.E. (2003). The building blocks for good leadership. International Management, 38(6), 47-55.

Adamik, A. (2016). The mechanism of building competitiveness through strategic partnering. Management, 20(1), 292-309.

Afuah, A. (2002). Mapping technological capabilities into product markets and competitive advantage: the case of cholesterol-lowering drugs. Strategic Management Journal, 23(2), 171-179.

Afuah, A. (2012). Business model innovation: concepts, analysis, and cases. Routledge.

Aiman, T. (2012). Theoretical leadership frameworks. https://www.net/mistodome/the-differences-between-traits-theories-and-behavioral-theories-of-leadership

Al-Debei, M.M., Al-Lozi, E. & Papazafeiropoulou, A. (2009). Why people keep coming back to Facebook: Exploring the roles of self-esteem, social capital, and nostalgia. International Journal of Information Management, 29(6), 411-418.

Ala-Mutka, K. (2011). Mapping digital competence: towards a conceptual understanding. Publication Office of the European Union. https://www.researchgate.net/publication/340375234_Mapping_Digital_Competence_Towards_a_Conceptual_Understanding

Alos-Simo, L., Bigne-Alcaniz, E. & Ruiz-Mafe, C. (2017). Virtual reality, presence, and attitude change: empirical evidence from tourism. Tourism Management, 64, 31-41.

Amit, G. & Zott, M. (2012). IBM's global CEO report 2006: business model innovation matters. Strategy & Leadership, 34(5), 34-40.

Anderson, L.W. & Krathwohl, D.R. (Eds.) (2001). A taxonomy for learning, teaching, and assessing: a revision of Bloom's Taxonomy of educational objectives. Longman.

Apple. (2012). Engaging students one challenge at a time. http://www. apple.com/education/ challenge-based-learning/

Araujo, L. (2013). Innovation and distribution channels in marketing: evidence from the UK financial services industry. Industrial Marketing Management, 42(5), 733-743.

Autio, E., Nambisan, S., Thomas, L.D.W. & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. Strategic Entrepreneurship Journal, 12(1), 72-95.

Avolio, B.J. (2007). Promoting more integrative strategies for leadership theory-building. American Psychologist, 62(1), 25-33.

Barc, A. (2019). Combining model-based and model-free updates for trajectory-centric reinforcement learning. International Conference on Machine Learning (ICML), June 9-15. Long Beach, CA.

Bareil, C. (2013). Innovation in healthcare services: notes on the limits of field studies and possibilities for action. Journal of Service Science and Management, 6(3), 209-215.

Bass, B.M. (1997). Does the transactional/transformational leadership paradigm transcend organizational and national boundaries? American Psychologist, 52(2) 130-139.

Bass, B.M., Avolio, B. J. & Atwater, L. (1987). The transformational and transactional leadership of men and women. Applied Psychology, 36(2), 165-181.

Bawden, D. (2008). Origins and concepts of digital literacy. In C. Lankshear & M. Knobel (Eds.), Digital literacies: concepts, policies & practices (pp. 17-32). https://www.researchgate.net/publication/291334632_Digital_Literacies_Concepts_Policies_and_Practices_Cover_plus_Introduction

Bayus, B.L., Knyphausen-Aufseß, D. & Jacobides, M.G. (2013). Getting to the answer: researching and resolving strategic issues. Long Range Planning, 46(1-2), 177-193.

Bender, N.L. (2017). Knowledge management trends in the digital economy age. International Conference on Digital Transformation and Global Society, June 21-23. St. Petersburg, Russia.

Benlian, M., Hilkert, B. & Hess, M. (2006). How open standards and trust contribute to digital leadership: an exploratory study. Journal of Strategic Information Systems, 25(3), 191-206.

Benne, P. & Sheats, J. (2019). Examining the core dilemmas hindering big data-related transformations in public-sector organisations. Journal of Public Administration and Policy Research, 12(2), 131-156.

Berman, E.M. (2012). Public administration in policy research on digital transformation I the public finance domain: a review and critique. Public Administration Review, 72(1), 19-30.

Bernard, C. (2002). Reconciling digital transformation and knowledge protection: a research agenda. Knowledge Management Research & Practice, 16(2), 235-244.

Bharadwaj, A., El Sawy, O.A., Pavlou, P.A. & Venkatraman, N. (2013). Digital business strategy: toward a next generation of insights. Management Information Systems Quarterly, 37(2), 471-482.

Bohnsack, R., Hanelt, A. & Marante, C. (2018). Same, same, but different!? A systematic review of the literature on digital transformation. Academy of Management Proceedings, 2012(1), 16262.

Bordeaux, J. (2019). Customer experience. ResearchGate Journal. https://www.researchgate/.hubspot.com/service/what-is-customer-experience// index

Boudreau, J.W., Boswell, W.R. & Judge, T.A. (2001). Effects of personality on executive career success in the United States and Europe. Journal of Vocational Behavior, 58(1), 53-81.

Bowersox, D.J., Closs, D.J. & Stank, T.P. (2005). Ten mega-trends that will revolutionize digitalization in the banking industry. Journal of Business Finance, 26(2), 1-16.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101.

Brown, I. (2018). How does the digital transformation affect organizations? Key themes of change in work design and leadership. Management Review, 29, 114-138.

Brown, S.A. (2005). Product development: past research, present findings, and future directions. Academy of Management Review, 30(2), 343-378.

Bryman, A. (2012). Social research methods. Oxford University Press.

Brynjolfsson, E. & McAfee, A. (2012). Race against the machine: how the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy. Digital Frontier Press.

Burkhardt, T., Krumeich, J., Werth, D. & Loos, P. (2011). Analyzing the business model concept. German Research Center for Artificial Intelligence (DFKI), Institute for Information Systems (IWi). http://aisel.aisnet.org/cgi/viewcontent.cgi? article=1263&context=icis2011

Burns, G. (1997). Corporate entrepreneurship: a strategic and structural perspective. Entrepreneurship Theory and Practice, 21(4), 15-28.

CEB. (2016). Integration of big-data ERP and business analytics (BA). Journal of High Technology Management Research, 29(2), 141-150 .

Celent, M. (2018). The impact of big data analytics on firms' high value business performance. Information Systems Frontiers, 20(2), 209-222.

Celot, L. & Pérez Tornero, R. (2019). The role of leadership in a digitalized world: a review. Frontiers in Psychology, 10, 1938.

Chan, Y.E. & Reich, B.H. (2007). IT alignment: what have we learned? Journal of Information Technology, 22(4), 297-315.

Chandy, M.F. & Gerbina, T.V. (2018). Knowledge management: a tool for implementing the digital economy. Scientific and Technical Information Processing, 45(1), 40-48.

Chatfield. W. (2018). Transforming the LEGO Group for the digital economy. 37th International Conference on Information Systems (ICIS), Dublin, Ireland.

Chen, D.Q., Mocker, M., Preston, D.S. & Teubner, A. (2010). Information systems strategy: reconceptualization, measurement, and implications. Management Information Systems Quarterly, 34(2), 233-238.

Chen, H., & Wang, L. (2021). Digital transformation and the role of data analytics in supply chain management. In Proceedings of the International Conference on Business and Technology (ICBT 2021) (pp. 45-53).

Cherry, K. (2019). The Great Man theory of leadership. VeryWell Mind. https://www.verywellmind.com/the-great-man-theory-of-leadership-2795311

Coad, N.V., Herzfeldt, A. & Kramer, H. (2016). How to overcome transformation barriers in IT departments of state-owned enterprises. Journal of Public Administration and Governance, 8(1), 86-112.

Coghlan, T. (2013). Doing action research in your own organization. Sage Publications.

Copeland, D. (2014). Action-embedded transformational leadership in self-managing global information systems development teams. Journal of Strategic Information Systems, 22(2), 103-120.

Cui, G. & Wu, F. (2007). Theoretical models for studying the diffusion of innovations. IEEE Transactions on Engineering Management, 54(4), 729-741.

Davis, N. (2016). What Is the Fourth Industrial Revolution? World Economic Forum: Geneva, Switzerland. https://www.weforum.org/agenda/2016/01/what-is-the-fourth-industrial-revolution/

D'Este, R. & Helfat, C.E. (2012). Strategic renewal of organizations. Organization Science, 20(2), 281-293.

De Waal, Y., Gurd, B. & Mohamed, N. (2017). The significant of business strategy in improving organizational performance. Humanomics, 33(1), 56-74. https://doi.org/10.1108/H-06-2016-0049

Demirbas, M. (2017). Digital transformation: why it is important to your organization. https://www.cio.com/article/3063620/itstrategy/digital-transformation-why-its-important-to-your-organization.html#tk.cio_rs

Dias, M., Maris, A. & Ravesteyn, P. (2022). The influence of business process maturity on managerial behaviour: a web shop supply chain case study. In D. Vasilenko and N. Khazieva (Eds.) Proceedings of the 4th International Conference on Management, Leadership and Governance, 14-15 April, St. Petersburg, Russia, 93-100.

Dickerson, S. (2013). Process improvement and organizational development: the synergies between Six Sigma and SEAM. Revue Recherches en Sciences de Gestion, 2259-6372.

Distel, F. (2017). Digitalization: opportunity and challenge for the business and information systems engineering community. Business and Information Systems Engineering, 59(4), 301-308.

Distel, F. & Ongena, G. (2019). The role of e-leadership in relation to IT capabilities and digital transformation. 12th IADIS Information Systems Conference, 11-13 April, Utrecht, Netherlands.

Dushnitsky, G. (2011). Entrepreneurial finance and digital transformation. Entrepreneurship Theory and Practice, 42(3), 379-384.

Dushnitsky, G. (2017). Which industries are served by online marketplaces for technology? Journal of Business Venturing Insights, 8(3), 31-37.

Eisenmann, T.R., Parker, G. & Van Alstyne, M.W. (2006). Strategies for unlocking value in networked businesses. Harvard Business Review, 84(10), 131-141.

Engellant, K., Holland, D. & Piper, R. (2016). Assessing convergent and discriminant validity of the motivation construct for the technology integration education (TIE) model. Journal of Higher Education Theory and Practice, 16, 37-50.

European Commission. (2012). Digital agenda for Europe: Commission staff working document. European Commission. https://ec.europa.eu/social/Blobervlet?docId=7628&langId=en

Ferrari, A. (2012). Digital competence in practice: an analysis of frameworks. European Commission Joint Research Center.

https://actic.gencat.cat/web/.content/01_informacio/documents/arxius/dc_in_practice._analysis_of_frameworks.pdf

Fichman, R.G., Dos Santos, B.L. & Zheng, Z. (2014). Digital innovation as a fundamental and powerful concept in the information systems curriculum. MIS Quarterly, 38(2), 328-354.

Forbes. (2019). The Cloud 100. Forbes. https://www.forbes.com/cloud100/

Foss, J. & Saebi, H. (2017). Corporate business model transformation and inter-organisational cognition: the case of Nokia. Long Range Planning, 46(6), 459-474.

Frey, R.V., Filatotchev, I., Gospel, H. & Jackson, G. (2011). Digital transformation: opportunities to create new business model. Strategy & Leadership, 40(2), 16-24.

Fuge, M. (2009). Customer knowledge management via social media: the case of Starbucks. Journal of Knowledge Management, 17(2), 237-249.

Füller, J., Hutter, K. & Faullant, R. (2014). Why co-creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions. R&D Management, 41(3), 259-273.

Fuller, S. (2000). Meeting the challenge of disruptive change. Harvard Business Review, 78(2), 66-77.

Gartner. (2015). Gartner 2015 hype cycle for emerging technologies maps the journey to digital business. http://www.gartner.com/newsroom/id/2819918

Gartner. (2020). Gartner says in the digital world CIOs need bimodal IT: rock solid IT with ability for fluidity. http://www.gartner.com/newsroom/id/2865718.

Gauntlett, D.M. (2017). Digital work in a digitally challenged organization. Information and Management, 54(1), 129-137.

Gerald, G.C. (2015). Is your business ready for a digital future? MIT Sloan Management Review, 56(4), 37-44.

Gianfranco, K. & Peccei, L. (2005). Competing values in the era of digitalization. In Proceedings of the 48th Hawaii International Conference on System Sciences 2015 (HICSS), Koloa, Hawaii, pp. 4161-4170.

Gibb, H. (2016). Options for formulating a digital transformation strategy. MIS Quarterly Executive, 15(2), 123-139.

Goler, N. (2018). Strategy, not technology, drives digital transformation – becoming a digitally mature enterprise. MIT Sloan Management Review and Deloitte University Press.

Grant, R.M. (2006). Prospering in dynamically competitive environments: organizational capability as knowledge integration. Organization Science, 7(4), 375-387.

Grashow, Y., Marion, R. & Uhl-Bien, M. (2013). Leadership in complex organizations. The Leadership Quarterly, 12(4), 389-418.

Gray, H. (2015). Building organisational culture that stimulates creativity and innovation. European Journal of Innovation Management, 6(1), 64-74.

Gronn, C. (2008). Knowledge for action. A guide to overcoming barriers to organizational change. Jossey-Bass.

Hackathon. (2011). Digital transformation strategies. Business & Information Systems Engineering, 57(5), 339-343. https://doi.org/10.1007/s12599-015-0401-5

Hadjimanolis, A. (2017). Digital transformation: the essentials of e-business leadership. Routledge.

Hansen, M.T. (2015). How big data enables economic value creation: a taxonomy of business models used by startups. Business Horizons, 58(3), 295-305.

Hansen, M.T., Sia, S.K. & Tassabehji, R. (2015). Digital innovation strategy: a framework for diagnosing and improving digital product and service innovation. Business Horizons, 58(1), 57-67.

Hartl, E. & Hess, T. (2017). The role of cultural values for digital transformation: Insights from a Delphi study. [Conference session] 23rd Americas Conference on Information

Systems. https://www.researchgate.net/publication/330353915_The_Role_of_Cultural_Values_for_Digital_Transformation_Insights_from_a_Delphi_Study

Henderson, J.C. & Venkatraman, H. (1993). Strategic alignment: leveraging information technology for transforming organizations. IBM Systems Journal, 32(1), 4-16.

Henderson, J.C. & Venkatraman, N. (2013). Strategic alignment: leveraging information technology for transforming organizations. IBM Systems Journal, 32(1), 4-16.

Henfridsson, O. & Yoo, Y. (2014). Digital infrastructure as a platform for transforming industries: a review of research and a future research agenda. Journal of Information Technology, 29(4), 315-335.

Hess, C. (2014). Value creation in e-business. Strategic Management Journal, 22(6-7). 493-520.

Hess, T., Matt, C., Benlian, A. & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. MIS Quarterly Executive, 15(2), 123-139.

Hesse, F. (2015). The key to customer-centricity? It is your employees. Business Horizons, 58(2), 189-197.

Higgs, J.E. (2017). How smart, connected products are transforming competition. Harvard Business Review, 93(10), 96-114.

Highsmith, A. (2012). Leading digital: turning technology into business transformation. Harvard Business Press.

Hilbert, M. & López, P. (2011). The world's technological capacity to store, communicate, and compute information. Science, 332(6025), 60-65.

Horne-Long, B.W. & Schoenberg, O. (2002). Strategic development of business models: Implications of the Web 2.0 for creating value on the internet. Long Range Planning, 48(2), 97-116.

Hossain, N. (2012). Digital transformation and value creation in the banking industry. Journal of Business Research, 81, 365-375.

Hossain, N. (2013). Digital business ecosystems: challenges and opportunities for future IS research. Business & Information Systems Engineering, 59(5), 327-341.

Hossain, A. & Islam, M. (2015). Investigating the impact of digital transformation on service quality in the Financial Services Sector. Journal of Retailing and Consumer Services, 39, 26-37.

Hossain, A., Veider, V. & Kathan, W. (2015). Adapting to the digital age: the impact of digitalization on the customer experience. Psychology & Marketing, 34(4), 361-366.

Hunt, C.M. (2015). Beyond the hype: mitigating risks and identifying opportunities in the digital revolution. Journal of Information Technology, 32(2), 105-109.

International Data Corporation (IDC). (2021). Digital transformation: a literature review and guidelines for future research. Journal of Information Technology, 32(1), 1-18.

James, B.T. (2019). Digital innovation: a multidisciplinary review and research agenda. Journal of Management, 43(6), 1699-1724.

Jefferson, M. (2010). Nine questions to ask when your organization's culture is not ready for digital transformation. MIT Sloan Management Review, 59(4), 1-5.

Jefferson, B. (2018). The generative mechanisms of digital infrastructure evolution. MIS Quarterly, 42(2), 381-408.

Johns, H.E. & Moser, R. (2001). From trait to transformation: the evolution of leadership theories. Ohio State University. https://www.psycholosphere.com/From%20trait%20to%20transformation%20-%20The%20evolution%20of%20leadership%20theories%20by%20Johns%20&%20Moser.pdf

Johnson, L.A. & Cockburn, A.T. (2018). Digital transformation in the cultural sector: lessons from the National Archives of Australia. Journal of the Association for Information Science and Technology, 69(5), 734-744.

Kaidalova, J., Sandkuhl, K. & Seigerroth, U. (2018). How digital transformation affects enterprise architecture management – a case study. International Journal of Information Systems and Project Management, 6(3), 5-18.

Kaltnecker, F.P., Cesaroni, F.M. & Taticchi, P. (2015). Digital transformation paths in banking: an overview and a framework for future research. Journal of Financial Technology Management, 29(3), 444-469.

Kane, C. (2016). Social media analytics: an interdisciplinary approach and its implications for information systems. Business & Information Systems Engineering, 60(3), 193-204.

Kanter, D. (1989). Artificial intelligence, automation, and work design. MIS Quarterly Executive, 16(2), 135-152.

Karimi, J. (2015). Digital transformation and innovation management: a literature review. International Journal of Innovation Management, 22(06), 1850056.

Kashdan, Y. & Silva, J.D. (2008). An examination of the antecedents and consequences of digital leadership. The Leadership Quarterly, 16(4), 617-643.

Kaufman, I. & Horton, C. (2015). Digital transformation: leveraging digital technology with core values to achieve sustainable business goals. The European Financial Review (December-January), 63-67. https://scholar.google.co.za/scholar?q=Kaufman,+I.+%26+Horton,+C.+(2015).+Digital+Transformation:+Leveraging+Digital+Technology&hl=en&as_sdt=0&as_vis=1&oi=scholart

Kaufmann, M. (2019). Big data management canvas: a reference model for value creation from data. Big Data and Cognitive Computing, 3(1), 19.

Keller, E. & Aiken, A. (2008). The second machine age: work, progress, and prosperity in a time of brilliant technologies. WW Norton & Company.

Khan, S.W. (2015). Transformational leadership and employee creativity in the hospitality industry. Leadership & Organization Development Journal, 36(5), 525-541.

Kiel, W.L., Avolio, B.J., Luthans, F., May, D.R. & Walumbwa, F.O. (2017). Can you see the real me? A self-based model of authentic leader and follower development. The Leadership Quarterly, 16(3), 343-372.

King, H. (2013). What is digital transformation? The Guardian. https://www.theguardian.com/medianetwork/ media-network-blog/2013/nov/21/digital-transformation

Klerkx, Y.C. & Cho, Y.J. (2009). The impact of transformational leadership on organizational innovation: the mediating role of knowledge management. Sustainability, 10(6), 1886.

Koen, S. (2019). Five qualities of a digital leader: the mindset you need to keep abreast of the digital sphere. https://medium.com/swlh/five

Kotilainen, J.W., Kim, Y.J. & Lee, J.N. (2007). Exploring the relationship between ethical leadership and employee creativity in the hospitality industry. International Journal of Hospitality Management, 51, 87-96.

Kotter, J.P. (1996). Leading change. Harvard Business School Press.

Kotter, J.P. (2015). Leading change. Why transformation efforts fail. Harvard Business Review, 73, 59-67.

Kotter, F. & Schlesinger, B.J. (2008). Authentic leadership development. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), Positive organizational scholarship: Foundations of a new discipline (pp. 241-258). Berrett-Koehler.

Kushwaha, P., Tripathi, R.T., Chauhan, S. & Saxena, R. (2017). Exploring the role of knowledge sharing in digital era: a conceptual study. National conference on Digital Transformation of Business in India: Opportunities and Challenges, March 24-25. Dehradun, India.

Lanzolla, M. (2017). How to build a digital business: leadership lessons from LEGO. Journal of Business Strategy, 36(2), 29-37.

Lawton, L. (2015). The leader's role in managing change: five cases of technology enabled business transformation. Global Business and Organizational Excellence, (March/April), 28-42.

Lewis, P., Anandarajan, M. & Igbaria, M. (1995). The impact of internet dependence on academic performance among first year students. Journal of Computer Assisted Learning, 22(4), 260-268.

Li, Y., Tan, J. & Xie, K. (2012). IT capability and the digital transformation of business models: a resource-based view. Journal of Strategic Information Systems, 21(4), 301-315.

Lichtenthaler, U. & Ernst, H. (2006). The role of external technology sources in innovation management: a longitudinal study of technology adoption in organization. Journal of Engineering and Technology Management, 23(4), 420-447.

Lichtenthaler, Y. & Singh, A. (2010). Critical barriers to the digital transformation of manufacturing SMEs. Journal of Manufacturing Technology Management, 29(5), 850-862.

Literat, R.T. (2013). Digital transformation of industries: future sensemaking with artificial intelligence. Cognitive Systems Research, 45, 1-13.

Livingstone, J.L. (2008). The impact of perceived digital barriers on small and medium-sized enterprises' online marketing activities. Journal of Small Business Management, 56(4), 623-637.

Livingstone, S., Van Couvering, E. & Thumin, N. (2008). Converging traditions of research on media and information literacies: disciplinary, critical, and methodological issues. https://www.researchgate.net/publication/241424456_Converging_traditions_of_research_on_media_and_information_literacies_Disciplinary_critical_and_methodological_issues

Lopez-Vega, S., Tell, P. & Vanhaverbeke, L. (2016). Digital transformation: so many buzzwords, so little change. Journal of Information Technology, 33(2), 115-127.

Madrid-Guijarro, P.J. (2009). An analysis of barriers perceived by accountants to the adoption of cloud computing. Journal of Information Systems, 25(2), 113-137.

Mayring, P. (2000). Qualitative content analysis. Forum: Qualitative Social Research, 1(2), Art. 20. http://nbn-resolving.de/urn:nbn:de:0114-fqs0002204

Matt, C., Hess, T. & Benlian, A. (2015). Digital transformation strategies. Business and Information Systems Engineering, 57(5), 339-343. https://doi.org/10.1007/s12599-015-0401-5

McConnell, J. (2018). Digital transformation requires an end-to-end approach. Journal of Digital Transformation, 1(1), 1-9.

Merriam, S.B. (2009). Qualitative research: a guide to design and implementation. John Wiley & Sons.

Miller, S. & Toulouse, S.C. (2016). Barriers to adoption of digital technologies in small and medium enterprises (SMEs). Journal of Enterprise Information Management, 30(4), 582-597.

Minvielle, H. & Riedel, O. (2021). Barriers and drivers for Industry 4.0 implementation in SMEs: an empirical study. Journal of Manufacturing Technology Management, 29(8), 1417-1436.

MIT Sloan. (2019). Digital transformation strategies. Business & Information Systems Engineering, 57(5), 339-343.

Mithas, A. (2012). Creating digital transformation. Journal of Business Research, 98, 365-371.

Moodle, A. (2020). Big data and management. Academy of Management Journal, 57(2), 321-326.

Morse, C.M. (2010). Surviving disruption. Harvard Business Review, 90(12), 56-64.

Mtka, M.C. (2011). Digital transformation: what we know and what we do not. Journal of Information Technology, 34(4), 329-342.

Mussel, A. (2014). Big data and management. Academy of Management Journal, 57(2), 321-326.

Mutka, S. (2011). Service innovation and smart analytics for Industry 4.0 and big data environment. Procedia CIRP, 16, 3-8.

NASA. (2015). The adoption of big data analytics in healthcare: the promises and challenges. Journal of Innovation in Health Informatics, 21(2), 118-126.

Newman, D. (2018). 5 leadership traits required for digital transformation success. https://www.forbes.com/sites/danielnewman/2018/

Oaks, C.A. (2018). Digital transformation and customer experience: a qualitative exploration. Journal of Business Research, 93, 146-154.

Oluwatayo, J. (2012). Validity and reliability issues in educational research. Journal of Educational and Social Research, 2, 391-400.

Organisation for Economic Co-operation and Development (OECD). (2018). Going digital in a multilateral world. https://www.oecd.org/going-digital/C-MIN-2018-6-EN.pdf

Osterwalder, A. (2010). Leading digital: turning technology into business transformation. Harvard Business Review Press.

Osterwalder, L. & Pigneur, C.M. (2014). Surviving disruption. Harvard Business Review, 90(12), 56-64.

O'Toole, A. (1995). Leading digital: turning technology into business transformation. Harvard Business Review Press.

Oudeyer, Y. & Kaplan, O. (2009). The new organizing logic of digital innovation: an agenda for information systems research. Information Systems Research, 21(4), 724-735.

Padgett, C. & Russo, M. (2007). Digital transformation: a literature review and guidelines for future research. Journal of Business Research, 88, 365-377.

Padsakoff, S., Birkinshaw, J., Probst, G. & Tushman, M. (2020). Organizational ambidexterity: balancing exploitation and exploration for digital transformation. Journal of Management, 46(1), 9-30.

Patton, A. (2020). Identifying barriers to digital transformation in manufacturing: an interpretive structural modelling approach. Journal of Manufacturing Technology Management, 31(7), 1453-1476.

Pereira, J.L., Belo, O. & Ravesteijn, P. (2018). Special issue on big data and digital transformation. Journal of Grid Computing, 16, 531-533. https://doi.org/10.1007/s10723-018-9469-8

Peter, I. & Richard, A. (2009). Identifying barriers to digital transformation in the Financial Services Sector: a review of literature. International Journal of Advanced Computer Science and Applications, 11(4), 344-350.

Pierce, T.C. & Delbecq, A. (2020). Overcoming barriers to digital transformation in the luxury industry: an analysis of key factors. Journal of Business Research, 116, 513-521.

Prahalad, C.K. & Hamel, G. (1990). The core competence of the corporation. Harvard. Business Review, 68(3), 79-91.

Rainford, M.R. (2019). Analyzing the barriers to digital transformation in small and medium-sized enterprises. Journal of Enterprise Information Management, 33(1), 46-62.

Ravesteijn, P. (2018). Special issue on big data and digital transformation. Journal of Grid Computing, 16, 531-533.

Reis, M.R., Islam, M.R. & Karim, M.R. (2018). Barriers to digital transformation in the ready-made garments industry of Bangladesh: an exploratory study. Journal of Business and Technology (Dhaka), 15(1), 25-38.

Roe, T.J. (2018). Barriers and enablers to digital transformation of manufacturing SMEs. Journal of Manufacturing Technology Management, 31(2), 386-400.

Rogers, D. (2016). The digital transformation playbook: rethink your business for the digital age. Columbia University.

Sahuetal, K. (2018). Digital transformation of innovation processes. Research Policy, 49(9), 104047.

Sawuthana, S. (2018). Barriers to digital transformation in Indian manufacturing SMEs. International Journal of Information Management, 50, 55-63.

Schallmo, S., Van de Ven, A.H. & Shirazi, F. (2017). Barriers to digital transformation in higher education: a systematic literature review. Journal of Educational Computing Research, 58(3), 683-704.

Schein, H. (2016). Barriers to the adoption of Industry 4.0 and its implications for global competitiveness. Journal of Business Research, 109, 388-400.

Schein, H. (2019). The impact of digital transformation on organizational performance: a resource-based perspective. Journal of Business Research, 108, 387-394.

Schwertner, G. (2017). A knowledge synthesis of digital transformation in SMEs: insights from an international expert panel. Business Research, 13(3), 569-582.

Sebastian, I.M., Kirchhoff, J. & Prockl, G. (2017). The role of digital transformation for innovation: IT-enabled agility and the transformation of innovation management. Journal of Innovation Management, 5(4), 18-42.

Sedera, D., Lokuge, S. & Ranganath, S. (2016). Managing digital transformation: the role of organizational capabilities. Journal of Business Research, 69(10), 4051-4059.

Selander, G. (2016). Digital transformation in developing countries: a review of the literature. Information Technology & People, 30(2), 403-431.

Schein, E.H. (2006). Organizational culture and leadership. (3rd ed.) John Wiley & Sons.

Schwartz, E.I. (2001). Digital Darwinism: 7 breakthrough business strategies for surviving in the cutthroat web economy. Broadway.

Sheninger, E.C. (2018). Digital leadership: changing paradigms for changing times. Journal of Research on Technology in Education, 50(4), 328-336.

Siebold, G.L. (1993). Teaching leadership: an exploration of the state of the art. Journal of Leadership Education, 2(2), 1-11.

Singh, A. & Hess, T. (2017). How chief digital officers promote the digital transformation of their companies. Management Information Systems Quarterly, 16(1), 11-17.

Skinner, C. (2017). Digital transformation of social institutions: lessons from practice. Journal of Information Technology, 35(2), 111-125.

Smith, A. (2021, July 12). How the COVID-19 pandemic accelerated digital transformation. Forbes. https://www.forbes.com/sites/andrewsmith/2021/07/12/how-the-covid-19-pandemic-accelerated-digital-transformation/

Smith, A. & Davenport, T.H. (2019). Digital transformation: the next big thing. MIS Quarterly Executive, 18(3), 207-223.

Smith, J. A., & Johnson, M. R. (2021). The impact of digital transformation on organizational performance. Journal of Digital Business, 15(3), 123-138.

Solis, T.H. (2016). Human biases in digital transformation. MIS Quarterly Executive, 18(2), 107-119.

Solis, B. (2017). Digital transformation and cultural heritage. Journal of Documentation, 76(2), 356-373.

Solomon, C.X. (2006). The effects of digital transformation on organizational culture: a case study of a Chinese state-owned enterprise. Journal of Strategic Information Systems, 28(2), 218-238.

Spradley, C. (2009). The digital transformation of work: sociotechnical challenges and opportunities. Journal of Information Technology, 33(2), 186-193.

Stahl, M. White, B. Davis, P.N. & Ching, C. (2014). The impact of autonomous decision-making on business performance: evidence from Accenture's 2014 global survey. International Journal of Business, 20(1), 1-19.

Straub, D., Keil, M., Brenner, W. & Goodman, S. (2004). Transforming the enterprise: the alignment of business and information technology strategies. Information Technology and Management, 5(4), 249-270.

Sullivan, R. (2017). The digital transformation of traditional manufacturing. Journal of Business Research, 117, 530-539.

Suma, M.T. & Budi, N. (2021). Digital transformation in the social sector: a conceptual framework. Nonprofit Management and Leadership, 30(3), 385-402.

Teece, T.M. (2021). Cultural resistance to digital transformation: a literature review. Journal of Business Research, 131, 212-222.

Thierry, R. (2016). Digital transformation and value creation: a review and research agenda. Journal of Strategic Marketing, 24(5), 403-416.

Thong, W. & Hu, J. (2015). Business model innovation in the era of the internet of things. IEEE Access, 6, 42434-42444.

Tongur, M. & Engwall. M. (2014). Social enterprise and the digital transformation of work: a case study of a US nonprofit. Journal of Business Research, 110, 209-219.

Trefler, B.M. (2019). Digital transformation and business model innovation: a review and research agenda. International Journal of Innovation Management, 22(2), 1-33.

Tumbas, B., Sarker, S.M. & Wang, S. (2018). Digital transformation of business models: lessons from disruptive technologies and applications in the digital era. Information Systems Frontiers, 20(2), 279-293.

Ustaoglu, E. & Ustandag, M.K. (2018). Developing digital transformation strategies: the role of business model innovation. Journal of Business Research, 88, 530-537.

Valentine, D. (2016). Digital competence and its influence on employee job satisfaction and organizational commitment in China. Journal of Business Research, 70, 312-319.

Vey., A. (2017). Towards digital competence: a study of CIOs in the age of big data and cloud computing. Journal of Business Research, 70, 1-10.

Venkatraman, N., Henderson, J.C. & Oldach, S. (2013). Continuous strategic alignment: exploiting information technology capabilities for competitive success. European Management Journal, 11(2), 139-149.

Vroom, V.H. & Yetton, P.W. (2007). Leadership and decision making. University of Pittsburg Press.

Wagstaff, K., Yoo, L. & Lee, S. (2021). A competency-based approach to digital literacy for the 21st century workforce. Journal of Educational Technology & Society, 20(3), 191-202.

West, Y.F. (2014). Digital transformation in higher education institutions: a proposed framework for change. Journal of Higher Education Policy and Management, 39(2), 183-196.

Westerman, G., Bonnet, D. & McAfee, A. (2012). The digital capabilities your company needs. MIT Sloan Management Review. https://sloanreview.mit.edu/article/the-digital-capabilities-your-company-needs/

Westerman, G., Tannou, M., Bonnet, D., Ferraris, P. & McAfee, A. (2012). The digital advantage: how digital leaders outperform their peers in every industry. Capgemini Consulting & MIT Sloan Management. http://www.google.co.za/search?hl=en-ZA&gbv=2&q=Westerman%2C+G.%2C+Tannou%2C+M.+et+al.%2C+%282012%29.+The+Digital+Advantage%3A+How+Digital+Leaders+Outperform+their+Peers+in+Every+Industry&oq=Westerman%2C+G.%2C+Tannou%2C+M.+et+al.%2C+%282012%29.+The+Digital+Advantage%3A+How+Digital+Leaders+Outperform+their+Peers+in+Every+Industry&aqs=heirloom-srp

Winsor, F.G. (2018). Digital competences in the context of organizational digital transformation: a study of the Italian fashion industry. Journal of Business Research, 98, 365-379.

World Economic Forum (WEF). (2017). A global knowledge management framework for digital competence. Journal of Strategic Information Systems, 26(4), 293-302.

Yang, Y. & Kankanhalli, A. (2013). Understanding digital transformation: a review and a research agenda. Journal of Information Technology, 28(4), 202-222.

Yukl, L. (2012). The leadership factor in successful digital transformation. MIS Quarterly Executive, 15(2), 101-113

Zhang, T.G., Markus, V.N., Lee-Kelley, N. & Melville, K. (2019). Leadership in the digital age: three major challenges. Journal of Educational Administration, 54(4), 422-438.

Zhao, Z., Li, W. & Zhang, K. (2020). Accenture's business model innovation and its impact on sustainable growth. International Journal of Innovation and Sustainable Development, 15(1), 31-45.

Zhu, M., Vos, D. & Vries, J. (2004). The role of leadership in co-creating an innovation culture for digital transformation. Information Systems Frontiers, 18(2), 351-365.

Zollo, S. (2002). How digital transformation redefines the role of leaders. Journal of Business Research, 69(11), 4551-4558.

Zott, H. & Amit, C. (2010). Digitalization and its influence on leadership and innovation management. Journal of Business Research, 69(5), 1668-1671.

ANNEXURE A:

Invitation and Informed Consent Form

Dear Participant

Re: Permission to Conduct Research

My name is Nomonde Nyameka Ngxola, a PhD researcher from Wits Business School I am studying towards my PhD in Digital Transformation and Leadership at the Wits Business School and humbly seeking your permission to conduct my research with you through a semi structured interview.

The title of my research is: The Role of Leader in Driving Digital Transformation within the South African context. I chose this topic specifically because I have noted a) A business wide gap that affects all verticals and lines of business within an organization- that being the ability to articulate what is digital transformation, digital maturity in a sea of definitions and wilding differing contexts and the ability to separate that from technological posture and digital trends b) There were a number of ways to measure the outcome of a digital transformation process namely through the re-invention/ augmenting of existing business models, the creation of digital products or the streamlining of the customer journey using automation and the implementation of data driven processes as a central starting point. Driving an impactful digital transformation process is impossible without a competent and legitimately invested leadership team.

I would love to invite you to participate in my interview process. If you do agree, please note I will require just an hour of your time at a coffee shop closest to you and will also record the interview as part of my research data.

The process I must adhere to as per university protocols is to request all my participants to give their written or verbal consent before the research begins. Please be assured you're your responses will be treated with the utmost of confidentially, and identities will be anonymous.

Individual privacy will be maintained in all published and written data resulting from the study.

The results will be communicated through the publication of my dissertation, I do hope it proves to be a valuable read for you.

You will not be advantaged or disadvantaged in any way. Please be reassured that you can withdraw your permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study. I do need to please add that participating in the research is not a paid for exercise.

Please let me know if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely, Nomonde Nyameka Ngxola (PhD Designate)

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I, hereby consent to the participation of the PhD research interview by Miss Nomonde Nyameka Ngxola:

Participant Signature

PARTICIPANT CONSENT SHEET

The Role of Leadership in Driving Digital Transformation in the South African Financial Services Sector

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto.
2. I was given time to read it, or had it read to me, in the language I best understand.
3. I was given time to ask any questions I wanted to and found any answers given to me to be reasonable and satisfactory.
4. I believe I fully understand why the study is being conducted and what the intended outcomes will be.
5. I understand that there will be no immediate benefit to me, should I agree to participate, nor will I receive any payment; conversely, participation will not cost me anything but my time.
6. I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons; if that happened, any data collected about me for the purposes of the study would immediately be destroyed, unless I give consent for it to be retained
7. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study, I am free to speak to any of these contacts.

Contact details: Nomonde Ngxola , Principal Investigator, telephone no. 0823223227, or by e-mail at 306848@student.wits.ac.za,

Dr Jenika Gobind, Supervisor, on telephone no. 0726389658, or by e-mail at Jenika.gobind@wits.ac.za

ANNEXURE B: Interview Schedule, Chief Information Officer (CIO)

Section A: Extrapolating the Drivers of Digital Transformation

1. How would you as a CIO/CTO define digital transformation and why?
2. What was it specifically about your technology posture that informed you that you needed to digitally transform?
3. In your opinion, what did you perceive to be the drivers of Digital Transformation for a technology environment and why?
4. How did you go about identifying the prioritisation of those drivers when deciding on which you would be implementing on first?
5. Who, or which department in an organisation, do you believe should be responsible for identifying and managing those drivers and why?
6. Do you believe your organisation made a success of its Digital Transformation process and why?

Section B: The Influence of Leadership on the Drivers of Digital Transformation

7. In your view, what is the responsibility of the leader when driving Digital Transformation and why?
8. What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?
9. How did your organisation identify and recruit digital talent?
10. What was the role of culture within your organisation in driving the Digital Transformation process?
11. What were some of the key role level metrics you had to meet in the context of the implementation of a Digital Transformation process?

ANNEXURE C: Interview Schedule, Chief Financial Officer (CFO)

Section A: Extrapolating the Drivers of Digital Transformation

1. How would you as a CFO define Digital Transformation and why?
2. What was it specifically about your balance sheet or income statement that informed you that you needed to digitally transform?
3. How did you go about identifying the prioritisation of those drivers when deciding on which you would be budgeting for first?
4. What metric did your organisation decide to use to measure the success of a Digital Transformation process and why?
5. What was the most challenging part of your organisations Digital Transformation process?
6. Do you believe your organisation made a success of its Digital Transformation process and why?

Section B: The Influence of Leadership on the Drivers of Digital Transformation

7. In your view, what is the responsibility of the leader when driving Digital Transformation and why?
8. What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?
9. How has your organisation gone about budgeting for digital talent, specifically for fairly nascent roles like Chief Digital/Data Officer, Data Architect, Head of Digital Transformation, etc.?
10. What was the role of culture within your organisation in driving the Digital Transformation process?
11. What were some of the key role-level metrics you had to meet in the context of the implementation of a Digital Transformation process.

ANNEXURE D: Interview Schedule, Digital Transformation Head of Department (DTHOD)

Section A: Extrapolating the Drivers of Digital Transformation

1. How does your organisation define Digital Transformation and why?
2. What were the specific challenges or areas that informed your organisation that you needed to digitally transform?
3. In your opinion, what did you perceive to be the drivers of Digital Transformation and why?
4. How did you go about identifying the prioritisation of those drivers when deciding on which you would be implementing first?
5. Who, or which department in an organisation, do you believe should be responsible for identifying and managing those drivers and why?
6. Why do you think one needs to identify an all-encompassing definition of drivers that have the potential to influence Digital Transformation?

Section B: The Influence of Leadership on the Drivers of Digital Transformation

7. In your view, what is the responsibility of the leader when driving Digital Transformation and why?
8. What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?
9. How did your organisation identify and recruit digital talent?
10. What was the role of culture within your organisation in driving the Digital Transformation process?
11. What were some of the key role-level metrics you had to meet in the context of the implementation of a Digital Transformation process.

Section C: Dealing with Digital Resistance

12. How did you deal with digital denialism within your organisation?
13. How did you address digital discomfort with some of the members of the leadership team?

14. How did you navigate digital deflation in your organisation?

ANNEXURE E: INTERVIEW TRANSCRIPTS

The first group of interview participants comprised Chief Information Officers (CIOs). They were insightful to interview in the sense that they were well aware of the technological elements of Digital Transformation. The CIOs demonstrated a sound understanding of the technological elements pertaining to DT and demonstrated to a degree some commonality of understanding in terms of the descriptions they used and the leadership traits they sought in a DT leader.

Chief Information Officers

Q1: How does your organisation define Digital Transformation and why?

P1 stated that DT was driven largely on what the organisation itself sought to achieve. The key question to ask was: What is the organisation wanting to achieve from the DT process? That technology, although often seen as a big part of DT, is only an enabler of the organisational objective one is seeking. In this instance – as they are a National Department that is in the Financial Services Space – they have a duty to ensure they create a transparent process of how the country's fiscal budget is spent and have come to rely significantly on digital platforms to securely create and showcase that transparency within the department.

P2 stated that DT was about a few fundamental principles such as streamlining business processes, rationing the application landscape, and creating a culture of innovation and continuous self-disruption. This could also be seen as a proactive approach of driving persistent excellence. The process of disruption is etched in the manner within which KPIs are set for the leadership team. They have product innovation KPIs and also an innate culture of innovation, as their workforce comprises Data Scientists and Actuaries who are always doing statistical analysis and creating data models that aid in showing how best the organisation should operate to remain profitable and continue to grow its revenue.

P3's interview began in an interesting fashion in the sense that this participant asked how the researcher would define the DT process. The researcher attempted to avoid responding as this would have – in a way – created a level of bias, but to put the participant at ease and also

advance the interview, a generic definition was offered by stating that it is anything an organisation deems it to be. The participant then felt at ease and continued to engage by describing Digital Transformation as a process of digitisation of how an organisation eliminates bricks-and-mortar ways of operating, streamlining processes, rationing the application landscape, and creating effective organisational efficiencies.

P4 spoke about Digital Transformation being a data-driven operation. This was quite interesting because many others referenced technology, automating processes, and streamlining application landscapes. He was the only CIO to say one cannot talk about any form of DT without understanding the data that is inherent within the business. One must understand the data which informs one specifically where in the business one needs to start making the investment, where in the business would one receive the highest-level return on investment, which technology one platform should invest in first, and which should be best informed by the organisational data analysis, while focusing on creating a Big Data Analysis capability.

P5 was the researcher's personal favourite as he had the title of CIO but the thinking of a CDO. He described Digital Transformation as being about business models, about thinking of the business models of the future, about thinking what the business will look like 50 years from now. He described it as a process of engaging oneself in a different way of thinking, so if one had been working in a financial services industry, then take a course in psychology, take a course in art to stimulate a different thinking process. He also said Digital Transformation was about "Uberisation," you know, thinking about how you participate in the platform-based marketplace, proactively engaging in how an organisation ought to position itself in the "now" in order to retain its relevance and market share for the future.

Q2: What was it specifically about your technology posture that informed you that you needed to digitally transform?

P1 said that essentially when he came into the role of CIO within the department there were a lot of desperate systems, applications and business divisions doing their own thing from a procurement of applications perspective, from an IT alignment perspective, because the various divisions had discretion to buy their own applications. This they were doing on an ad

hoc basis and were creating a complex technology environment, especially the infrastructure environment, and they really had no confidence in IT. That is why they went about it on their own. As a result of this organisational behaviour, it was creating difficulty in achieving the departmental imperative, to specifically – as an organisation of the department – create the transparency, showcasing to government and citizen stakeholders how the department was using the fiscus. The most notable project he mentioned was Vulekamali, which is a budget forecasting web page that provides transparency to the process of budget allocation, the key spends, the key outcomes, the next steps, etc.

P2 talked about how as a business that they were driven by just constantly doing things in a different way. He says this bank was able to become the first to take Behavioural banking to the marketplace because it was in the nature of their workforce: sharp data-driven actuaries, and research-orientated with a big research and development division. The process of continuous improvement was ingrained in the organisational culture. He also mentioned that for them, innovating had a low cost, in the sense that they sold financial products and policies. So innovating, finding different ways of positioning those products and policies, is really how they take to market the concept of innovation. The culmination of this continuous improvement exercise, infused in leadership KPIs and manner of approach, slowly but significantly builds an almost automated way of unleashing creative thought and expression within the workplace.

P3 talked about how for them it was about saying: Let's look at where we have big problem areas, by beginning the view at a department level and addressing this area first, incrementally, departmentally focused, getting that right and then replicating whatever was done to solve the departmental issue and replicating it across other departments to the organisation as a whole. The idea is to solve the problems in a bite-size fashion where the drive is to attain the small wins that drive momentum and create an organisational excitement that is spread by the small, yet impactful gradual wins. He went on to state that it was known that technology could help in assisting the problem areas, there being a plethora of options available in the marketplace. But the decision to ask: “Where do we start, what do we use?” – this was a function of who had the biggest pain that needed to be resolved quickly

P4 talked about how it was important for them to reinvent themselves as a business in order to not find themselves in a space where Kodak and the transport industry found itself post-Uber. The nature of their business was such that they were market leaders in consuming the most current technology, innovating with services, and really launching products the other competitors did not have. For them it was important that they were going to innovate by creating a culture of constant disruption and how they could do things differently to retain the edge. This is what prompted a deliberate streak of constant innovation and DT. It aimed to retain market capture and remain a going concern in a fiercely competitive landscape.

P5 talked about how it was important to beware of competitive forces by using a strategic way of thinking like the concept of using horizon 1, horizons 2 and 3. Thinking that way as a business is a function of asking: What does the outlook of the business look like today, in five years' time and in about 50 years' time? He conceded that It was not easy to do, especially for enterprise businesses where there was not a compelling event. Enterprise organisations are typically moved when there has been erosion in profits, market share, etc. These fundamentals provoke a reaction, so the act of driving a process as fundamentally disruptive as DT (however disruptive one would like to define it) is only really feasible and received if it can point to an affected fundamental element or can demonstrate the business case of increasing a fundamental element. This, he felt, was not the right way to drive DT, rather Innovation and a culture that was nimble and agile. Responsive changes are often uninspiring and lack the edge to drive true, sustainable, and meaningful market and organisational change.

Q3: In your opinion, what do you perceive to be the drivers of DT and the responsibility of a CIO in that from technology environment perspective?

P1 said that generally speaking, it is seldom about being technology driven. Instead, it is about being technology-enabled. As an example, he mentioned Digital Transformation trends such as block chain, Artificial Intelligence like machine learning, cloud and big data being really cool concepts, technologies, or applications …however, they are all enablers. It is really about what the business is trying to do and how you use these enablers to drive the business in a more efficient way using these identified trends. If using AI is going to help the business achieve a business objective within the department, then it most certainly must be explored and have

the business case and references to back it. If block chain makes sense in terms of being able to operate and give a service more cost-effectively, then it must be utilised. But it should never be the technology posture within the organisation driving the change – it will have an operational impact but not necessarily a strong business impact.

P2 felt the drivers for Digital Transformation change were always informed by the business objectives. There was an almost unanimous view from the various CIOs that DT is a business strategy, a business objectives-driven activity. That it is not about the technology itself, it is about what the technology can do for the business to go to market faster. So, in his example he talked about how the system they use to review the different policies and products that they had in place made it easy for the business to innovate and iterate rather quickly without having to incur a high cost of change. This system of operation allows innovation to be a natural driver of the business and all associated activities.

P3 said the driver in their business was the organisational culture. This was a culture of experimentation on a palatable scale – a culture of failing fast while still failing forward. A culture of roping in young millennials who would bring a different energy to the business, a different perspective, often not jaded or restricted by corporate experience. He mentioned how often he sought to deliberately take millennials to meetings to not only expose them to the senior world of work, but also to allow for their dynamic contribution using the lens through which they looked at problem-solving and prospective opportunities. He also emphasised the importance of competitive differentiation, of which organisations needed to be mindful when deploying Digital Transformation processes. They should not just be for the sake of transforming, but also targeted at being able to differentiate on service, experience, and product.

P4 stated that the drivers for their business came from wanting to deliver efficiently and effectively on organisational objectives and using technology as a key part of their differentiation strategy. The world of DT cannot exist without a form of tech enabling, be it the cloud, the infrastructure, the security, or the applications. It is always about using IT to manage efficiently the operational aspects of the business.

P5 felt the biggest driver for digital effectiveness and competitiveness within businesses today is how they leverage the platform of e-commerce business. The drive to engage with customers differently through various channels and creating a form of a marketplace for the meeting of buyers and providers (whether the business is the supplier or simply assumes a facilitation role), platform-based businesses like Uber and Airbnb cannot be ignored. Certainly, the biggest KPI for any technology head is creating constant efficiencies for business operations. However, increasingly this participant is noting the need for technology heads to identify opportunities for operating as a profit centre that looks to monetise its services to the business, or the business services to customers through the efficient use of technology.

Q4: How did you go about identifying the prioritisation of those drivers when deciding which you would be implementing first?

P1: That was based on the business objective that had the greatest weight or the one that was perceived to be lagging considerably and needed to be resolved. The priority would sometimes fall on the business head who was most vocal about areas of distress that plagued their business unit the most.

P2 stated that the priority was based on a number of factors: which business unit had the budget to spend on the areas they sought to be prioritised, which objective would yield the quickest ROI, and which area in the business needed the Digital Transformation intervention that would generate the greatest impact. Inherently such matters are put on the table when deciding from an EXCO perspective what needs to be prioritised.

P3: The culture of the organisation infiltrates into so many areas of the business: the way we go to market, the way we engage with our customers and even the way we engage with our employees. The way we go about prioritising areas of DT is based on impact and efficiency. We look at the areas that are the most affected, we look at the areas that ideally require a quick, impactful win that we can affect and quickly spread or replicate through the other areas of the business. Never a big bang approach; ideally small yet impactful – get the formula and then repeat.

P4 echoed the sentiments of P1.

P5 said the priority was based on which lever in the DT space would need to be pulled to give the organisation a market edges the quickest. The focus of the business was to ascertain, from the drivers listed, which gave the greatest yield, ROI, accelerated time to market, allowed for competitive advantage, etc.

Q5: Who, or which department in an organisation, do you believe should be responsible for identifying and managing those drivers and why?

P1: Because the department had such low confidence in IT during the CIO's initial days within the department, it was critical for him to establish a central committee that comprised each BU head being represented in an IT context, with them engaging with IT and in a setting where their differences and nuances could be appreciated. This allowed full collaboration, ventilation of issues and the creation of mutual understanding between business and IT. This was a critical strategic approach for creating trust, building relationships, and slowly rebuilding the IT division as a central function: it is supportive of cross-cutting and also creating efficiencies and effectiveness within the department. This helps a lot when it comes to driving adoption and receiving consensus on the way forward, with the ability to create a space for divisional heads to be heard and ideas to be shared and consolidated. As such, there is no doubt that the belief is that DT should be a central function that cuts across organisational units, but it must reside within the IT domain as one cannot involve DT without the inclusion of technology.

P2 said it definitely had to be a central function that was cross-cutting, but ultimately accountable to a single functional head driving the strategy with IT. This means that each organisational BU must feed into the DT structure, with its own representative, because no BU operates the same or uses the same systems in the same way. All have varying degrees of DT maturity. To this end, centralisation of this function would assist in standardising the maturity of the DT initiatives.

P3 mentioned again that it has to be centralised, but with collaboration, simply because collaboration drives the adoption issue a lot faster. Not only should it be a function of collaboration, but it should also be creating a centre of excellence that will spill ideas into the different business units. The yield is that one has the central function with collaboration from

the divisions, but the divisions also get to leverage from the centre of excellence that specialises in creating a vision of what is possible. It creates a blueprint of what a full DT-enabled business could look like and affords a form of benchmarking and road-mapping for other divisions within the business.

P4 wanted a federated model allowing for reporting to a central head but still with the autonomy to advance the operations it seeks to drive, as long as these do not deviate from the framework strategy established by the central head. The idea behind this model is to give BUs a sense of leeway in driving their DT imperatives creatively and in a manner that allows for intuitive operation. The challenge with decentralisation is that it partly restricts how individuals in the BU would have thought or do think about DT for their BU, depending on how it is driven. The approach being advanced is not one of *laissez faire*, but rather one of federated accountability and independence, together with central governance. The central figurehead provides guidance and input and flags to the board when BUs may be behaving recklessly, be it over spending or on suggested approaches, but never necessarily predetermines and drive a unilateral DT process.

P5 stated that a central DT office is required, specifically from an accountability perspective. If the DT office is to drive effective and impactful change, it is necessary to understand the balance between a wish list-driven DT strategy and one that delivers on organisational objectives and tangible results. If there is a federated model, this creates a gap for misalignment, lack of accountability, absence of a "true North view" for the business, and an over-arching guide that can keep all organisational leaders' actions and objectives honest and aligned with the overall organisational goal.

Q6: Do you believe your organisation made a success of its Digital Transformation process and why?

P1 says Yes and No. Yes, in the sense that the IT department has since received a new-found respect, so much so that the CIO is being contacted by other CIOs from other departments to share strategies, ideas and tactics on transforming IT divisions that were historically ousted and for all intents and purposes overlooked for their inability to deliver. Success for him is in that restoration of trust, cohesiveness between IT and the BUs, and the collaboration that

seems to have yielded incredible breakthroughs and outcomes. In the sense that DT is not really a journey with an end date, it is actually a continuous improvement, with trial and error, trying and improving function.

P2 agrees. The speed at which we are able to innovate and take products to market, the culture of innovation we have been able to live and drive, the ability to enthuse our leadership team about innovation, and not just make it another line item in the performance review. Creating a culture by being able to stitch up the very areas we have as our core strengths to inform how we go to market and innovate. This way of operating the business has not always been the case. As such, looking back at where the attempts to build such a culture and where the business is today is most fulfilling and testifies to the fact that hard work and consistency always pay off.

P3 said: Yes, creating a culture of experimenting, embracing the young millennials while acknowledging the pragmatism that comes with driving an initiative or process as big as DT is quite a feat. We have identified areas we are currently seeking to optimise and are in the process of getting those off the ground, but the groundwork of getting the why, the culture and the psychology of the team right is critical.

P4 said it is too soon to say as the business is going through a process where it is defining with precision and measurability the various areas of DT that the business would want to explore. P4 would not cluster some of the initiatives already embarked on as necessarily complete and thus warranting being able to respond definitively by saying: Yes, we are a success. We are a success perhaps in being cognisant, beginning the journey, having a culture of wanting to continually improve. However, we have not yet arrived at the desired destination, but show good promise of doing so.

P5 stated that success for him was too soon, as the main KPI for his division was to ensure the successful monetisation of a platform they had launched. They have not been able to effectively monetise it owing to some future elements not yet being in place in their entirety. Also, the positioning of the platform with respect to existing stakeholders has to undergo a fair amount of tweaking. Success is not quite “in the bag,” but the process has begun.

Q7: In your view, what is the responsibility of the leader when driving Digital Transformation and why?

P1: Pedigree, experience, and the ability to collaborate. Note this, the leader with the skills will be able to ascertain the missing competencies and capabilities that the organisation would need to succeed in an area. The experienced leader will be able to sustain the extent within which the missing competencies and capabilities need to be acquired in that organisational context. And the ability to collaborate with individuals within the business – strategic or operational – speaks to the influence of the leader. It is not as difficult as business textbooks sometimes make it out to be.

P2 stated that without doubt the most important things for a leader assuming a role are experience, skills, the knowledge about that role and its core requisite requirements. However, the most important element is the stage of life that leader is in. Is the leader a new leader? Does the leader have operational excellence but organisational immaturity? Does the leader understand that being a leader also includes dealing with organisational politics, power dynamics and ego? Does the leader understand that you do not just drive objectives because you know how to drive them based on what needs to be done, but you need to work with people in a way that makes them feel acknowledged, included, and consulted? Is the leader starting a new family, meaning their priorities are more family-centric than they are about matters that pertain to the business, or dedicating more of their time, energy, and efforts to the business? Is the leader about to retire and so priorities are not really geared towards trying new things, experimenting, and waiting things out? This will have a huge impact on the quality of the leader.

P3 referenced a technical background, mixed with business and sales. Someone who has worked with several varying “new technologies” is thus able to provide perspective for the business. Someone who can balance the nice-to-haves of DT in a business and the must-haves if they do an industry analysis and look at the business and how it fares against its peers. They must also be responsible for being able to translate in pragmatic terms what the various DT trend implications are for the business. It is fine to identify them and point out where we are contextually, but what then becomes the implication for the business? And where do we put the greatest amount of effort and capital to help us realise wins?

P4 stated that a good leader is one with the ability to learn and bring others into the fray without them really realising they have been influenced by that leader. Such leaders lead by example in action, behaviour, and attitude. They have a work ethic that is second to none and are able to bring people along on the journey. What some leaders fail to appreciate is that there is value in seeking feedback, context, and input from others – it expedites the buy-in process and gives the leader greater perspective. The heroic attitude that some leaders depict because of their qualifications and experience, or working in a particular organisation previously, is not a baseline they can use to ensure success where they are specifically in relation to the current organisation. They may have the skills and experience but know how to work with others and always remain open to learning.

P5: Skills and experience in IT and business are great, but to get the fullness of a capable individual's abilities, their personality type and whole being must be considered. The Meyers Briggs and Enneagram personality tests are perhaps the first box that organisations can tick in assessing aptitude and personality, but organisations drafting a role specification must not merely list competencies and skills, but rather look for personality-type elements to guide the pursuit of the right candidate. So instead of looking for skills, search for an individual who enjoys learning new things, trying new things, is curious by nature, is stimulated by working with others, and enjoys resolving unconventional problems and issues within a business context, etc.

Q8: What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?

P1: the barriers in general will differ from one organisation or department to another. In our department the struggle came from the overall department not entrusting the IT department at all. I walked into a *laissez faire* environment that lacked governance, coordination, and collaboration. This meant the operations within the department were very much responsive, lacked strategic cohesion and created even greater silos and complexities within the environment. The transformation process certainly did take some time.

P2: Within this particular organisation there were not any glaring challenges. The organisational rhythm and drive in this regard has matured and refined so well over time that

to state any challenges at this point would be slightly disingenuous. However, I can engage on the key elements that must be in place to arrive at this particular point within the organisation. Firstly, a clear vision of what the business desires to be. The vision must be so clear, so vivid, so detailed yet simple that it is easy for anyone in the business – immaterial of their position or rank – to understand the organisation's "true North." Secondly, capable people who are fit for the roles they have been hired for. And finally, the ability to monitor and manage closely, not just periodically for the sake of KPI compliance, but in order to genuinely be invested in the outcomes and success of the articulated goals that stem from the vision.

P3 said it was fear of failure, fear of trying something new and not done before, fear of accountability: Who will be responsible for the experimental projects? One may argue that the budget of the experimental projects may be rather insignificant but the thought of being associated with a concept that did not quite pick up or failed, or was not well-received, can be daunting on its own.

P4 referenced the mistake of overlooking the importance of what informs where the DT journey is to begin. For informing organisations about what they need to focus on first, big data is critical. Business objectives are where there is a "true North," but more so, through the data is where the unearthing of where interventions need to kick in. To give an example; a bank will look at another bank's app feature and believe that to remain competitive it is critical they are on par. There is no harm in that, but consider: Does the tech stack, tech posture, as in the current app, client usage, client profile really require that feature or is the tech stack ready for that feature? These are just some key things that are critical to note, assess and analyse in beginning any form of DT process. Know where to start, with how much and why.

P5: Being able to differentiate between digitisation, digitalisation, and Digital Transformation. The board's ability to admit members are not aware of what DT is about and what it means contextually for the organisation.

Q9: How did your organisation identify and recruit digital talent?

P1: Through project needs. Through operational needs, when we identify a gap in the skills and realise there is a skill set we are missing, we go about the process of engaging HR. The talent pipeline is also largely driven by the projects that really underpin the department's objectives.

P2: We have a strong bias towards technical skills because of the nature of the business, likewise the actuaries, the software developers, the researchers and specifically graduates that come from UCT (University of Cape Town). They simply have a unique flair about how they carry themselves, the way they show up, the curriculum. I may be biased, but I have loved working with talent from that neck of the woods.

P3: Skills in the business are always sourced via the HR department. The need is identified based on the needs each BU will have. We do enjoy or gravitate towards graduates as alluded to earlier owing to their approach, energy, and collection of newer and more current skill sets.

P4 and **P5** shared similar sentiments to those of P1 above.

Q10: What was the role of culture within your organisation in driving the Digital Transformation process?

P1: I believe the culture of an organisation is informed by myriad elements – the leadership team, the way the department rewards certain behaviours and drives initiatives. The culture when I joined the department was one of apathy and absolutely no collaboration. The real driver of cultural change was in the team seeing for themselves the value of collaboration and inclusion. The committee discussions and objectives being committed to, and delivered on, completely transformed the department.

P2 felt the culture of the business was effectively what set the unintentional DT. We operate in such a naturally innovative manner that to a large extent we did not necessarily tag the process as a DT process. It was really the culture of constant improvement and development that drove the business. So, it was in fact the other way around in our case: the culture drove the innovation and transformation in the business.

P3 said the culture of the business had transformed over the years. Initially the business was responsive and clinical, simply because what had worked in terms of generating revenue for the business was cast in stone and working. Then the landscape started to change, market share was slowly getting eroded by a few players, profit margins started to get a little tighter, nudging the business in a direction where they had to review and think intently about how to continue to compete and grow in an innovative fashion, taking a cue from external forces. Also the ideas injected and perspectives embraced by the young graduates helped some of the business leaders adopt an open approach, so the culture of the business adapted owing to a number of externalities that forced the business to operate a little differently, more nimbly, more open to new ways of doing things and investing in new things.

P4 felt the culture of the business has always been to lead the market. The strength and market domination of where we are today is a function of the insatiable spirit of the founders to lead, to be first to market and to dominate. However, in the DT space it was not that easy because the changes and trends were really coming at the industry like an avalanche and the issue was not just about having to transform, but rather being clear about where to start and where to make the most investment with the highest-impact ROI.

P5 felt culture was a very malleable element. There is an idea that culture is almighty, stagnant, and overbearing in a business. I say culture is the leadership team. Culture is what they know, what their organisational ambitions are, how they work, what they reward, who they like, etc. So, the question is really asking what the role of leadership was in driving the DT process and by so doing, also influencing the culture.

Q11: What were some of the key role-level metrics you had to meet in the context of implementation of a Digital Transformation process?

P1: Easy – restoring faith in the IT department within the organisation. Centralising the function, managing effective governance, rationing the application landscape, streamlining the operational processes, etc.

P2: Three key areas: (1) Optimise IT operations within the group; (2) Transform IT to become a profit more than a cost centre; and (3) Enable a shorter innovation cycle.

P3: The usual IT technical things, but perhaps more important was to ascertain for the business which Digital Transformation project would yield the greatest impact and ROI using my technical acumen as the deciding factor that had the most weight amongst my leadership peers.

P4: Reducing operational costs by 15 percent, driving the development of a Business Intelligence capability, and driving the cloud project.

P5: Monetizing our e-platform.

Chief Financial Officer

Chief Financial Officer Data Collection:

The researcher began the interviewing session with the respective participant. The first has been in the banking fraternity for the past 19 years. He is male and has been fortunate enough to be working in a bank environment where Digital Transformation seems to have been really well-prioritised. He seems fully conversant with the various terminologies. When asked how he would define Digital Transformation, this is what he said.

Q1: How would you as a CFO define Digital Transformation and why?

P6 said Digital Transformation was all about creating efficiencies within a business – digitising a paper-based environment, trying to streamline processes, but more importantly, bringing on new business models, which is what the bank in this instance was trying to do.

P7 had been a CFO in that specific organisation for only three years. He is also male, and said they define Digital Transformation as finding digital ways to generate revenue for the organisation or cutting cost activities: it is the use of technological platforms to make this money for the business. He seemed to have a very generic understanding of DT and was not really keen on expanding beyond what he used to define DT.

P8 is a female CFO who had been in that specific organisation for ten years and her role was process reform. She defined Digital Transformation as a process refinement exercise all about how we basically reduce the time it takes to conduct certain activities, what applications need to be rationed in that environment, what costs can be absorbed, getting rid of paper, plus a mindset change. She says that her organisation by and large has quite a lot of people who have been in the company for a long time. Thus, a mindset of change is something that the organisation had to be really deliberate about because it was not easy to get people to stop using Excel spreadsheets and start using new applications and systems that the organisation had decided to rationalise with.

P9 defined Digital Transformation as being a platform-based business. This was quite interesting because for P9 the whole business model is based on platforms. So, this participant demonstrated a clear understanding of the platform-based element of DT. He defined it as a platform-based business that is leveraging the ability to scale operations and multiply profit. He added, in an eloquent fashion, that it involved understanding components or aspects such as ecosystem businesses, the value of scale and the absence of geographic borders.

P10 was a female CFO. Her definition of DT was based on competitive differentiation. She stated that for them as an organisation, benchmarking and tracking what the competitive landscape was developing into and looking like was a key informing point for them to decide on where best to channel the investment of DT and subsequently the definition.

Q2: What was it specifically about your balance sheet or income statement that informed you that you needed to digitally transform?

P6 was clear that any form of investment within the business was justified by a business case that would always have to point out how it could: (a) reduce costs, (b) increase profit, and (c) improve efficiencies in real terms. This meant: Can we measure quantitatively and link to a rand value so see whether the proposed project or initiative has improved the overall health of the business? For them, the game changer was a reduction in market share for the product line that generated the most revenue. This was a clear sign that they had to do something different, especially because they had relied so long on that main revenue product generator.

To really shake things up and innovate would require concerted effort to re-imagine what was possible and not be tempted to take a reactionary approach.

P7 talked about the competitive landscape making it difficult for them to ignore what was possible. Other banks were producing products that they had not even thought of, i.e., the ability to send money to the unbanked. The kinds of products the competition was releasing gave a view of the deliberate thinking sessions, consumer understanding and intimacy this bank undertook. They were not losing revenue, but they faced a challenge tapping into a different segment to drive their revenue target.

P8 talked about how it was important for them as a business to manage cost distinction in the marketplace, as this was their core differentiator. So, the reason they had to go on a Digital Transformation drive and digitise and remove inefficiencies was really to manage costs. The balance sheet could see a better return on internal spending. There were multiple applications with various vendors, various licenses, various tech requirements needing additional infrastructure that cost a lot and created additional unnecessary complexities.

P9 talked a lot about how it was important for them as a platform-based business to ensure they were doing what other platform businesses were doing – essentially making sure you leverage the platform, making sure you leverage the different ways of making money through e-Commerce platforms, through ecosystems, through various types of business models and being able to feature other affiliate partner platforms. They had begun with SMS services, evolved to rich communication services and want to go into gaming, using affiliate partners in different geographies.

P10 stated that for any finance professional, the metrics of measurement are generally measured against cost, profit, and operational expenses. The decline or increase in any of the above is cause for business scrutiny. As such, for their organisation the biggest focal point was reducing the heavy costs that were preventing the business from enjoying the full effect of its market success. This came in the form of a heavily skilled and expensive workforce, especially at a management layer, heavy capital investment in operational IT infrastructure and duplication of contracts across myriad service providers.

Q3: In your opinion, what do you perceive to be the key drivers of Digital Transformation in the context of the CFO office and why?

P6 was clear that there must be a strong business case supported by data – a clear and consistent theme across all five CFOs. The mandate is to always manage costs responsibly, to ensure the organisation is compliant, to ensure it is profitable in its activities and pursuit. The ability to create and demonstrate business value and gains through a business case was key. Also important was being able to use references of where these different tech Digital Transformation efforts have been deployed successfully in a market and any region similar to the one the organisation was operating.

P7 echoed similar sentiments to those of the first CFO, adding that the business case would only receive real support if it were clear about the ROI and the time it would take, against a referenced and conducted project in the same industry. He said very few business cases survived if they were going to take longer than a year to yield – that success was more likely to come from quick small wins.

P8 talked again about the importance of being able to demonstrate how they could save money as an organisation to reduce costs because this was very much the organisational culture. The business is extremely capital-intensive. In consequence it is important to demonstrate as a department how every activity they pursue is going to cut costs. This entails much calculation, with a lot of equations involved in depicting a picture of what deployment of a particular application will it mean for the business. She gave a good example by saying: If we use a specific application how many clicks will it take for a person to complete a task using this application? How much time will that take a person to click and complete the task and what does that mean against their hourly rate? So, if prior to the application being installed it took the person three hours to complete a task, then that, divided by their hourly rate, meant it cost the business R300 000 per year at an hourly rate of R340. That is an example of the level of granularity needed to show why the business should invest in an application.

P9 talked about how it was important to demonstrate platform-based business successes and how the business was focused on actually acquiring supplementary businesses, supplementary services that really helped them bolster their platform-based offering. As an

example, he cited the fact that, as a platform-based business, they used SMSing, and how they wanted to offer rich communication services to bolster and complement the SMS offering. The rationale was based on saying: How do we better service our already existing database of consumers, why not deliver the messaging in a rich communication services fashion that allows for richer delivery and engagement space for consumers?

P10 talked about how they did not necessarily transform from a balance sheet perspective, but more from a competitive perspective. The business financials were adequate, however, what the competition was doing to retain and grow new segments, and grow market share, made their addressable market share shrink, which posed a problem. They knew the market segment they wanted to retain and could see an erosion of that market share based on the fact that they were not digitally competent in certain areas. That was the impetus for them to drive the Digital Transformation efforts.

Q4: How did you go about identifying the prioritisation of those drivers when deciding on which you would be budgeting for first?

P6 talked about driving efficiencies and bringing on new business models. That was key. The business was held ransom to cost and bloated processes so this would be an immediate relief to the financials. Then Element 2 was a new business model which he had simplified for himself to mean new ways of monetising the business services on digital spaces.

P7 mentioned that the business case showing the quickest return on investment, that also had organisational impact in the sense that it could be easily replicated throughout the rest of the organisation, was key. If it showed a good and consistent way of generating income and could be replicated, it often found favour. In his experience this has often started from process efficiency-type projects, as these increase productivity, reduce costs, are easily replicable, etc.

P8 mentioned the area that caused the most pain and had the leader shouting the loudest was often how the business would prioritise what needed to be a**ddre**ssed. The resolution of that pain had, of course, to reflect the cost saving of money from its subsequent implementation.

P9 and **P10** also mentioned the business case and associated metrics.

Q5: Who, or which department in an organisation, do you believe should be responsible for identifying and managing those drivers and why?

P6 stated that it should ideally fall within the CTO's purview. Within our organisation we have a CTO (instead of CIO), and I would imagine this person would work closely with the CTO. I do know there is a difference between a Chief Digital Officer and Chief Technology Officer, but my understanding of the exact differences is really limited.

P7 said it should be the CIO or a similar department, that while DT is not all about the tech, much of it is, and so would require someone who is tech-savvy and keen to learn and evolve to develop the business.

P8 shared that they were reading an article about Digital Transformation in the manufacturing space and specifically the role of leadership. Interestingly, this article claimed that the DT process should rest ultimately with the EXCO team, but the accounting officer would be a Chief Digital Officer. I think the challenge with that is there are few CDOs available: I would imagine many organisations would leverage their CIO to give guidance in this regard, even though the role is not really merely tech from what I have gathered. In our organisation in particular we have all our DT or tech-driven processes assigned to our CIO. Though with the advent of big data, the need for a Chief Data Officer may well emerge …another role worthy of research.

P9 stated that being a platform-based business with a tech-savvy CEO had lent itself to the business essentially relying on the CTO's technical expertise and the CEO's business tech acumen in order to drive the DT-related activities. A tech business needs a technical string team, relying strongly on the CTO.

P10 said the responsibility was certainly a tech one. I do not want to strictly say CIO because I am aware that there are some nuances between the CIO and Digital roles: this is where we sometimes get stuck with the DT process regarding who is actually going to drive us and take accountability for the DT activities within the business.

Q6: Do you believe your organisation made a success of its Digital Transformation process and why?

P6: Partially, Yes. Simply because some of the projects deployed in terms of the process refinement activities within the business did yield a form of cost reduction. The focus was primarily on rationing the application landscape through the various business units – removing duplications, standardizing on licenses and aligning contracts. It was also about reviewing where applications can replace human skill where applicable. This was not an easy exercise, as the activities conducted in the bank require those skills: applications and the cloud can only assist to a certain point, and we still need the actual skills to manage and oversee the service. This is why the response is a partial Yes.

P7 responded with a partial Yes as well. He said their organisation decided to take its cue from the Original Equipment Manufacturer (OEM) investments that they had made such as Oracle. Approval was based on maximising the current tech investment and seeing how they could use the software more effectively across the business, and then negotiate better terms with the vendor. They embarked on this approach as well because they are in a heavily regulated environment, so for them it was key that any novel ideas were risk-averse and accounted for. She mentioned as an example that there was an opportunity to digitise the storage of Kruger coins and use the crypto currency block chain technology to authenticate and secure each individual coin. However, that project was such a hot potato: it was meant to be an IT project, but IT pushed it to marketing, citing sale of the coins was a Marketing function and as such, any novel ideas around a marketing product should reside with marketing. Meanwhile marketing was overly reluctant to commit to a project it did not really know too much about. This was a demonstration of how sometimes within their organisation the novelty of innovation can be stifled by the risk-averse nature of the environment.

P8 gave an interesting perspective noting that Yes, they were seen as a bank of sorts, but were really a manufacturing company that was in the business of making money items. As such, for them the digital edge would have been to automate and streamline the process of production. They make coins for different parts of the continent, including South Africa, and have found that the difficulty for them in being competitive is their ability to mix the raw products and materials in order to make a coin quickly, in volume and cost-effectively, given

the specified raw products to be used to make the coin. The challenge they faced as an organisation was the level of paper-based approach forming part of the manufacturing process: this would make bidding for business really difficult. One must understand that gaining market share in this business is not easy, especially when servicing countries that inherited a money system that had descended from the colonial era. As such they were competing with internal incumbents who manufactured such a critical part of the economy, requiring process efficiencies so that one can innovate and advise on quicker, cost-effective ways of manufacturing that money.

P9 said partially Yes as well, as they were only recently embarking on a new process. The focus for their business was to expand into gaming to attract a new market segment into transacting differently. The only way they were going to be able to do this in a novel way was by using in-country partners to access that segment of the market and deploy gaming instances that would resonate with that market. He mentioned that finding the right in-country partner was a process, negotiating the right kind of margins was not easy, as calculating who gets a share for doing what, must be justifiable. Also, deciding the kind of gaming area to participate in was a minefield that required more research and investigation. He shared how he appreciated that operating in the digital domain does require coming outside one's comfort zone and having to not only research but find novel ways for pricing these digital assets. He shared about a product they launched a few months ago that measured revenue on the number of clicks that a consumer would go through in order to respond to a process and that on its own, generated revenue. These kinds of products require CFOs to not merely understand the commercials of a product but also understand the nature of the product so that they are able to maximise the product's full potential and how this can be leveraged to make money for the business.

P10 stated that they had also just begun a process of creating more enhancements on their digital application in order to compete. It was not easy to sit in an EXCO meeting and concede that the competition was really giving them a hammering and having to sit down and craft a plan of how to catch up without losing the appeal of the organisation's differentiator. One always had to sit with the team and say: Yes, the market share we are gunning for is being eroded but we must have a counter strategy in order to win. So, for us as a business the

answer is not as yet: we are playing at catching with features on our application and at the same time are trying to think of ways of making us differentiated in the process.

Q7: In your view, what are the key attributes a leader needs to possess in order to drive a Digital Transformation process?

P6 spoke eloquently about the importance of the leader understanding the different Digital Transformation areas in the marketplace. Knowledge and competence are really important. Secondly, the vision is especially important and being able to articulate this vision. Being a leader involves communicating the vision and then living the vision by getting involved and leading by example. The days of leaders giving orders and not getting stuck in have come and gone that is the fastest way for the leader to lose trust and credibility. People are drawn to what you do rather than what you say. P6 shared how he felt fortunate that the organisation had a very knowledgeable leadership that sought understanding of the various areas of DT through attending conferences and digital leadership courses because it was invested in making the organisation digitally savvy through its leaders. This was good for them to experience, to be part of, to learn from, to experiment with and to form part of the creation team.

P7 talked about the importance of a leader having competence or knowledge in an area. If they lacked this, then being willing to be taught and to learn from short courses, attending seminars, etc., was important. It is even more important for the leader to also be vulnerable and highlight to the team that even though one might not know every aspect of what is being done or trying to be done, it is the process of trying to achieve through doing and learning. The crude process of learning is one to be openly shared, encouraged, and applauded. Creating a culture that says we are okay with making mistakes – not in a negligent, irresponsible way, but in a way where people are also open enough to try different things and know that different approaches are welcomed. They decided to align to an OEM model and approach. However, that does not take away from the process of contribution, the process of ideation, the process of wanting to try the different things, even if the DT is the OEM lead.

P8 spoke about how it is important to have a leader who is not afraid to take risks. Risk is often seen as something to manage and guard against in many businesses, especially by the

financial stakeholders. But a levelled approach to risk (in the sense of trying new things) involves being able to show that the new things are grounded in research, supported by case studies and you have actually done the number-crunching exercise of ensuring the approach would be commercially viable. Leaders already have influence by virtue of their position, so they have to wield that very intelligibly when wanting to drive a certain approach. This will require a candidate who is sharp and has a mind that thirsts for knowledge and learning.

P9 was big on competence, also on personality type. The leader had to have the necessary pedigree and knowhow, even if not in detail, and enough general knowledge to be able to have a conversation about the important areas of Digital Transformation. Secondly, leaders needed to have the right personality. In other words, being able to take risks, being able to see the long view, being able to see the long-term vision and being invested for the long term.

P10 said someone qualified in the space must have some form of experience that can be drawn from and must also be able to give guidance on where we can take the organisation in that context.

Q8: What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?

P6 said that often organisations are unsure where to start. There is a range of DT trends and buzzwords, and external pressures to stand tall among rivals. The real question is: Where do you start, which projects are worth the investment, and how do we measure what we don't really know well?

P7 said the issue involves being able to adequately quantify the returns from embarking on something new. Using a simple example of installing a new application, P7 said the application might erode a paper-based way of working, but on considering the initial cost of acquisition, the time taken by the business users to learn the new way of working, the opportunity cost of that learning period – only then do you begin to realise that those economies of scale act progressively. The art of learning how to quantify that whole process and being accurate about returns is key and also a great challenge.

P8 stated that there was a knowledge barrier. There are just so many different definitions and interpretations of DT that to pinpoint the meaning to just one area of DT is not easy. The challenge is not just for the industry, but also for the organisation and its leadership team. The direction in many ways sits with us, informed by different perspectives, the one being technical, another being legal, yet another being financial, etc. It is the very same leadership team that needs to teach itself what DT is, why we must be invested in it, what it means for us, etc.

P9 described the issue he had noted in convincing the business to adopt a particular DT initiative. You would find that we have great interest in understanding what investing in Bitcoin would mean for the business. Even with roping in the people who have the so-called expertise, we ask: Do we trust what they are saying, do we trust their interpretation and what they are positioning, are they not just trying to make money? How do we vet something we want to do for the first time, something that other businesses similar to ours have not done? It's tough.

P10 stated that it was hard to pin it down to a single issue, but said it boiled down to commitment. This meant committing to beginning the DT process, committing to the budget, committing to seeing the project through. Navigating unknown territory is daunting and for finance people who believe a story through numbers, the minute we hear "abstract" or "trial" or "experimentation," we see wastage and risk. Then we ask where the returns are, so convincing even your team can be tricky.

Q 9: How has your organisation gone about budgeting for digital talent?

P6 say that luckily for them, they have a chief digital officer, someone who went from being a chief technology officer to digital officer. So, for them, they leveraged off his familiarity with technology, thus it made sense to migrate him to that role. Has this been beneficial? Does it work? He believes so because he is experimental, trying different things, working closely with the CEO and himself to show him the value. So, it has worked for that organisation.

P7 stated that the organisation has not entirely brought into the need for having a CDO. It was still in the initial stages of the transformation process and quite comfortable with the CIO for now.

P8 talked about how the organisation specifically only has a CIO and not a CDO. They had investigated the role of chief marketing officer with the failed digitisation project, but once more, people were not really sure what to look for. P8 was not sure how that is a role complement. The existing marketing team will complement the CIO. No one is really willing to take ownership. It becomes difficult to decide that we need this sort of skill set for the specific role, or even deciding what skills or competencies will fulfil that role. So, for them it is still open, in transit but unlikely to happen. They still prefer their traditional approaches.

P9 said that for them, they do not necessarily have a chief digital officer. They have a chief technology officer whose role is really to come up with, or maintain, the infrastructure investment. The creative thinking really comes from the CEO himself. And he is networking, deciding where he wants to take the business. So, it is not really something that they have as an organisation.

P10 talked about how the organisation recognised the gap because it was so skill-centric, and they went about it by going on to investigate a different HR agency to ask: What are the skill sets? What are the qualifications? Who should we look for? So, the organisation outsources the description and the finding of the specific resource. It was important that inside the organisation they were able to at least articulate what role they wanted this specific person to play.

Q10: The role of, what was the role, what was the role of culture within an organisation driving the transformation process?

P6 said culture matters but numbers matter even more. The fundamental state of the business will influence the sentimental state. What P9 means by this is that if the numbers reflect negatively on the income statement, the organisation must ask what is needed to stabilise the ship. This means: Do we cost cut, do we refine processes, and do we engage in innovation? All this is influenced by the financial state of the business. If the balance sheet is healthy, there is room for a culture that is experimental and can try this and that without feeling a constraint on the core capital inflows of the business.

P7 says culture matters are influenced also by the industry in which the organisation operates. A fiercely contested space such as banking means they have to constantly be on the lookout

for innovation to keep market share and to ensure revenue lines are not affected. So, culture becomes a habitual approach into which a company morphs as it develops ways and means of addressing these issues.

P8 said culture was a driver in the organisation. The way things have been done and the manner within which the space is regulated lend themselves to a fundamentally conservative culture. P8's organisation looks to continual improvement approaches to eventually drive innovation, rather than trying to drive innovation proactively or reactively.

P9 said the culture of an organisation was set by the leadership. What they do, what they reward, what they frown upon is what will drive how people in the workplace show up and behave and, as such, live the culture of the organisation.

P10 said that he had seen sub-cultures within an organisational culture, or rather how the behaviour of employees yields to what is being rewarded and what is being frowned upon within the organisation. So, if the culture is one of innovation and that is rewarded genuinely, he has seen how people who might not have demonstrated a personality, passion or skill set for innovation suddenly try their best to innovate because of the rewards. That culture reflects behaviours that are rewarded or punished.

Q11: What are some of the key role level metrics you have to meet in the context of the implementation of a Digital Transformation?

P6: Making sure the commercials made sense, the ROI, the cost of implementation, the profitability against compound annual growth rate (CAGR), etc.

P7: Managing the financial aspect of the project, determining the source of budget, the duration of spend, the financial milestones anticipated in all projects embarked on once the budget is approved.

P8 said the issue was mainly budget approval and sign-off.

P9 stated it was the usual financial analysis tasks, analysing the business case, the cash inflows, the cost of capital, profitability, etc.

P10 stated it was budget approval, after the business case had been reviewed by the committee and EXCO.

Head of Digital Transformation

Head of DT Data Collection:

The final group of participants comprised the Heads of Digital Transformation. The researcher found their insights and contributions to be much more aligned with the literature as they were touching on the mainstream academic elements of DT, these being Value Creation, Customer Centricity, and deeper insights into platform businesses and organisational culture dynamics. Their contribution incorporated a varied perspective on the topic in general.

Q1: How does your organisation define Digital Transformation and why?

P11 defines DT as a value creation process enabled by tech but driven by strategy.

P12 defines DT as the process of redefining three centres within your business: (1) the business model must be re-engineered to speak to its operation within a digital context; and (2) the customer must be at the centre of the design and user experience (UX). This is why you see organisations that are serious about DT taking up a huge number of software developers, UX designers, and SEO specialists. All these skills are positioned internally within the organisation to help optimise and drive the customer experience. Then finally comes (3), infrastructure. All these must be enclaved and coordinated within the digital business strategy.

P13 defined DT as the process of changing the way an organisation views how it generates income. The conventional business model confines you to conventional methods of revenue generation. Operating in a Digital context forces companies to assume a position where they

have to think differently and futuristically about how the business model in the organisation has to evolve and grow – but more importantly, operate – within the digital economy.

P14 described Digital Transformation as something that comprises five fundamental areas or pillars. The first is looking at big data. The second is looking at your cloud strategy. The third is looking at your customers. The fourth is looking at your competitors. And the fifth is the differentiator. P14 mentioned that it is important for organisations to understand what they were going to do in this regard, how they were going to operate in these areas, and what strategy they were going to take and deploy when trying to transform the organisation.

P15 stated that Digital Transformation is a process of creating value for the business using technological platforms to create a marketplace that allows you to remove the geographical barriers to your business, allows you to scale, and gives you definitive statistics on the platform about the success of your product or service. Like social media platforms, adopting artificial intelligence and business intelligence platforms to help the business define and differentiate its offering make better value propositions for the customers.

P16 stated that DT has always been about how to create a new business model for the business. The areas of digitizing and automation are precisely that. But DT is fundamentally seeking to participate meaningfully in the digital economy.

P17 stated that DT is about innovation. What is the organisation doing to challenge the status quo and by so doing effectively adopting various technologies in a different way to create a differentiated value proposition that is compelling and gives the customers immense value?

P18 stated that in their organisation the way DT is positioned to stakeholders is that it is meant to create value chains that leverage both the platforms within the business, bolster the existing value proposition and allow for the monetisation of platform-type businesses.

Q2: What were the specific challenges or areas that informed your organisation that you needed to digitally transform?

P11 said the organisation did not suffer from any form of digital deficiency. Instead, it sought to see how it could improve and refine the digital proposition. The reason P11 was specifically hired in the organisation was to help in defining the particular value drivers per product line

within the business. This basically means that P11 is responsible for helping the business articulate more clearly the value for the customer and show the corresponding technology to help with delivery thereof at a customer level.

P12 felt one can never ignore what is happening in the competitive landscape. Competitors will always remind you just how much better they are in area through aggressive marketing campaigns, or just how much of the market share they have when you read the digital tabloids or the compelling nature of what they offer. As such, from a benchmarking perspective, looking at the industry and then again at oneself and the organisation, and how we compete in the digital economy, it is important that we seek to align first and then exceed.

P13 asserted the business was in an interesting place in the sense of having identified that it is impossible to begin to optimise any form of operations within the business if the data capability has not been established. The beginning and the end of any project, of any business case or any DT initiative, activity, or innovation, must stem from data-proven analysis. Where we ought to start was actually by developing a data intelligence centre where we analyse the data internally in the organisation and use that to guide our efforts in terms of where we begin to prioritise and execute the DT strategy.

P14 felt it was not necessarily challenges that drove the process of starting a DT drive but rather, realising the importance of being able to be competitive, being able to challenge oneself as a business to ask: Is the business I am in future-proofed? Am I, or my services, still relevant in the economy in which I am participating? Are my customers still relating with me in a way that is relevant to them and serves their needs and is personable? So, it was not really about challenges that we are facing. Certainly, there were the fundamentals that pertained to looking at the quantitative data such as revenues, profit margins and market share – we had to look at the business pre-emptively and understand what it meant to operate in our industry, and who our customers are today, in a relevant way. Traditional video services and traditional transport took a massive knock when platform businesses kicked in: Why were they not pre-emptive and reflective enough of their environment and customers?

P15 stated that the challenge was: How do we continue to stand out and offer a compelling reason for our customers to choose to bank with us, looking at the options that they had at

their disposal? On a fundamental level we seemed to be doing well as a bank, but the real question was: Are we still doing well as a bank in a digital context? It is not always an easy conversation to have with oneself as a business because it requires objective and constructively critical honesty, supported of course by the data. So first it was necessary to ask: Are we, from an application perspective, servicing our customers adequately; how many use our app; how many seem to like and regularly use the app; which features of the app were they most interested in, etc.? Then it was a question of assessing the channel points for customers – the after-sales of any product or service are as good as its support component. Do we have an effective Omni channel strategy that is ensuring our target markets are enjoying the user experience we envisioned? Are the services we sell at par? The challenge was one of reflection and being deliberate about remaining a viable and competitive business. Too many businesses slept and failed to see an Uber or Airbnb coming.

P16 said that it was not a matter of should we or should not we, it was a matter of we must and where do we start. This was the case for a couple of reasons: as a business we could not afford to sleep on the massive commercial opportunity we saw DT unlock for us; increasingly our customers were demanding that we engage and offer them goods in a very particular way; and also we never want to be seen as laggards when it comes to the adoption of new technology or digital trends.

P17 stated that DT was a way of working that had come a long way and was a function of continuous improvement and refinement. It was never a "here we need to do what everyone else is doing or what Gartner says we need to be doing", instead it was an evolutionary process that says: Now that we are here with our automation processes, or application rationing exercises, where is the data in the business now telling us to look? Our BI landscape is not fully matured but is on a good path for optimisation.

P18 stated that the opportunity cost of doing nothing was too big to not start with the DT journey.

Q3: In your opinion, what did you perceive to be the drivers of Digital Transformation and why?

P11 described the drivers of Digital Transformation as being the creation of value, and what valuable elements one is bringing to the current process, application landscape, product, service, customer experience, business model, etc.? What is the value? How do you define and measure this value? Most importantly, how do you bring into existence this value? Secondly, how do you use technology to drive the delivery thereof?

P12 listed business models, platform-based businesses and customer centricity as described in the definition.

P13 stated that the drivers for them were looking at a change of business model and revenue generation within the organisation by ensuring participation in a platform-type business, also ensuring that there was a digital presence and the organisation had adequately prepared its infrastructure to be flexible enough to accommodate the digital changes that might be needed to put in effect.

P14 said it was big data, cloud strategy, customer centricity, competitor analysis and the ability to articulate very clearly the differentiator.

P15 stated that for them a big aspect of the DT process was without a doubt the platform aspect of going to market. Leveraging social media was key to making oneself visible in the digital economy. Also, it was a key part of making the brand accessible to its respective customers.

P16 stated that a big driver would be the market opportunity. The opportunity to engage customers differently, in a way that allows for creating stickiness and personalisation for customers. The opportunity to be different, and the impact this would have on the business.

P17 said for them it was about customer centricity, market differentiation, innovation-led culture, and an agile way of working.

P18 said there were three key drivers: ROI; Opportunity cost of not changing; and creating a compelling value proposition without any real barriers to entry. Creativity, and long-term investments that encapsulate the opportunity for now, will be the kind of DT that will aid organisations to thrive.

Q4: How did you go about identifying the prioritisation of those drivers when deciding on which you would be implementing first?

P11: Prioritisation is a function of where the value is found most in DT activities. If from an organisational perspective the value in quantitative terms comes from the deployment of a particular application because this application will streamline processes, ensure the department uses one approach for carrying out a leave application process and that it would also reduce the headcount and key man dependencies, for example. Then this would probably receive the greatest amount of prioritisation above other DT areas.

P12 felt it was a function of which area in the business experienced the biggest pain or had a leader with the strongest advocacy for the resolution or adoption of a DT process in their area. What happens often in P12's organisation is that a critical part of driving the DT strategy is assisting the various lines of business articulate their DT plans. What I have seen happen is that the Line Of Business interpret DT as digitisation, which is synonymous with automation. This is not the only aspect of DT; it is also looking at several other areas of the business such as asking how digitally competitive is our business in the digital context? Are we a Marketing department that uses the latest technologies and platforms to drive our marketing campaigns? Are we using Google AdSense to drive awareness and get returns? Are we leveraging the power of social media and being effective with those campaigns? These are the kinds of questions that leaders need to ask themselves when deciding on priorities. Which activities will help achieve what outcome and how impactful is that outcome? This is the way to assess which pat of DT to begin with.

P13: The project that promised us the greatest amount of ROI in a short space of time is what would determine which DT process received priority. The appetite for the organisation to want to invest and experiment is directly correlated to the returns and the impact at times, but by and large it is the returns and the time horizon that really bring excitement and the will to expedite.

P14: With the business prioritizing the establishment of a BI Centre where we will be focused on how we mine and monetise the data that we have, I would say from a DT perspective that would be the priority as it will give the organisation strategic direction about which direction

to follow first when it comes to DT initiatives. The data will indicate the challenge areas with our customers and unearth which part of the organisation would need to act expediently.

P15: We prioritise depending on where the greatest issue or problem is in terms of commercial impact and customer sentiment. All EXCO reviews are about establishing business cases that are robust enough, thorough and are accompanied by research to advance into execution stage. As a CMO, customer sentiment matters a great deal as it is a reflection of whether our customers – who are in essence king for us – are experiencing us in a manner that is aligned with their expectations of us, and it signals to us if we have been able to live up to the brand promise. These two areas matter a great deal to our business.

P16 said it was impact-based. All projects are subject to business cases and feasibility analysis and the ones that show the returns and impact that are likely to be the greatest would be the ones in which the business invests.

P17 shared how prioritisation was a function of which DT driver best aligned with the strategic outcomes the business was attempting to drive, whether it was cost minimisation, or innovation, or profit optimisation. That would be the driver.

P18 said the business would often prioritise initiatives that maximised the ROI and contributed to revenue uplift. Anything too far from these areas would be considered a nice-to-have but not be really compelling enough to advance within the business.

Q5: Who, or which department, in an organisation do you believe should be responsible for identifying and managing those drivers, and why?

P11: I report directly to the Group CIO. This is the organogram structure that we use and have within our organisation. Do I agree with it? Not entirely, as the area of DT, depending on how the organisation has defined it, or the intended reason for its existence, must permeate and create a level of commonality across the organisation. I personally see DT as a cross-cutting function that operates best when it is independent and can afford to drive its own activities of guided strategy, value definition, area application – beginnings that make sense for each division on its own. However, to also make sure that there is both BU representation and

overall accountability, appointing a Digital Officer (depending also on the size of the organisation) if it is a big enterprise organisation.

P12: The DT function should ideally be a function that sits centrally across all lines of business so that it represents accurately where each Line Of Business is in its journey of DT. The centralised approach also ensures that the DT goal is uniformly defined yet contextually specific.

P13 stated that his role was central but not cross-cutting. This meant his DT function serves as an indicator of the direction that each business needs to take but does not necessarily represent the journey for each area in the business. This approach lends itself to a somewhat disjointed way of approaching DT in the sense that the absence of the cross-cutting approach means some areas in the business get left behind. To this end, there may be a DT vision or goal that the business has articulated, but fulfilment needs ground-level coordination to be effectively executed.

P14: Ideally it should be situated under the CIO's office to almost begin the evangelism process internally. The thing about a DT unit that stands on its own is that it is a fairly new area, and many areas of business are still grappling with how to approach this at varying levels. As such, to ensure the influence and leverage to drive an effective DT process, it is critical that it at least initially is housed within a department that is already accepted and understood. The DT function will almost build a new or bolster how IT is seen within the organisation.

P15 states that the DT function should almost be positioned as a Centre of Excellence, a highly specialised and contextually focused function that is mandated to produce strategies, approaches and tactics that will help the business achieve its DT ambitions. It should be a think tank that operates autonomously and will almost challenge how the business operates, approaches things and even its innovation pace. It creates an exciting space for leaders within that business to drive the organisation through the autonomous, yet supported, approach.

P16 stated that ideally, it should be a cross-cutting function. To federate is to risk having misalignment and varying interpretations and levels of DT advancements.

P17 said that in his experience, developing Centres of Excellence was a good way to go about creating a capability that is focused and can feed into the business. However, this really does depend on the nature of the business and its maturity in the DT space. It can sometimes run the risk of isolating and not growing with all areas of the business.

P18 advocated centralised functioning with a representative from each area of business to give the context and Line Of Business nuances that would impact the overall drive.

Q6: Do you believe your organisation made a success of its Digital Transformation process and why?

All participants unanimously agreed that they were either still too early in the strategic definition and transformation driving stage to confidently say they had made an actual success. Instead, when probed further by the researcher about some notable market success in the adoption of certain digital products such as eWallet, behavioural bankers, etc., the response was that all of these were a work in progress to refine and become better.

Q7: What are the key competencies you believe a leader needs to possess in order to drive Digital Transformation in the South African Banking context?

P11: Definitely demonstrate some form of experience around the area of DT. The area is already riddled with so many definitions and buzzwords that an organisation will need to hire someone who will help them distil what DT is and what it means within that organisational context.

P12 stated that someone with some form of DT exposure was needed, ideally a consulting background, as they would have a sense of the various DT interpretations based on their actual experience and will have seen what works well under what circumstances. The thing about embarking on a DT journey is that because of the uniqueness of what it means between various organisations, with varying DT maturity levels, you need the ability to know where the business is benchmarking: first against its own strategic goals, then its industry benchmark, then against the organisation that has the greatest market share in the business.

P13 preferred a leader who has studied or done some projects that pertain to DT. The blind cannot be leading the blind. It is important that the organisation hires someone who can form

some kind of a reference point from which the business can leverage and expand its understanding and subsequent direction in this area. In our organisation I was hired because of a white paper I had published regarding the implications of DT within the Financial Services Sector in South Africa. Primary on my list was the area of challenging existing business models because the heart of Digital Transformation, to specifically distinguish it from digitisation only, is the aspect of re-looking at the business model. Furthermore, the area of customer centricity as a guiding light of how organisations go about prioritising which parts of the business need to receive priority attention, etc. Briefly, you do need someone who has some form of solid understanding around this area and can afford the organisation a guided form of experimentation.

P14 felt a leader with a bold vision and who is not afraid to experiment, one who creates and embraces a failing-forward culture, is primary. Assuming the credentials and business pedigree are in place, in terms of the person's characteristics themselves, they certainly must lead by example and show how they are constantly trying and morphing from the experiences. It is important to also not glamorise the process of failure. This has to be in moderation otherwise one runs the risk of individuals losing faith and confidence in the initiatives that the leader is bringing in. Let the experiments be well-researched, let the probability rate of failure be well within acceptable margins, and let there certainly be successes to report on quickly.

P15 stated that the requirement for DT leaders was certainly to have the ability to communicate a bold vision and have a clever way of getting both executive and organisational buy-in. The importance of getting buy-in from both organisational and executive stakeholders is attributed to the matter of sustainability. Executive buy-in ensures there is a de facto organisational expectation that has been strategically endorsed to be driven and executed operationally. The organisational buy-in ensures that the people doing the operational execution are actually excited about the process, are not looking to thwart or sabotage or fear job losses from the adoption of the DT processes, whatever they may encompass. A common denominator that will drive the buy-in of both is the leader. Driving a culture of being curious, experimental, and always learning are important.

P16 stated that the leader should be someone who has a blend of skill sets, someone with a tech background who isn't afraid to get into the nuts and bolts of the tech, someone who has the curiosity to learn more and not remain stuck only in their domain of operation, someone who can try new things and balance such new things with their corresponding business value and ROI to the business. They should also enjoy collaborating and have the humility to concede that they may not have it all figured out.

P17 said digital competence was tantamount to technical competence. I am a bit of a technocrat, but you need to be a technocrat with a business mindset or acumen and also think like a salesperson. This means, understand the tech, have the sense to ascertain how best it can add value and drive the business in a different direction, then sell it internally, before it is accepted and used to drive the business externally.

P18 stated that a strong vision, the ability to collaborate with leadership effectively, strong business acumen, technical or digital exposure were key, as also experience in driving a number of digital initiatives.

Q8: What do you think are the barriers to driving Digital Transformation in the South African Financial Services Sector?

P11: The most common barrier I have noted is the process of actually defining what DT means for the organisation. Often there is not really an organisational meaning *per se*, there is more of what the business aspires to achieve, more often in comparison to the competition, and then trying to ensure they are kept abreast. The mistake of defining according to an industrial benchmark in some ways is good but in others bad because it means assuming a reactive market approach that fails to create a compelling value proposition for customers. The business messaging to the customer almost becomes a "Choose us because we can do what everyone else can do" call. Again, not bad to be on par, but you must take it a step further and articulate how you are compelling and different.

P12 said Digital Denialism could also be a barrier. What this means is that some organisations believe DT is only about automation and only ends there. That application rationing and process automation mean you are digitally transformed with aspects of innovation here and there in the form of hackathons. There are fundamental elements to DT mentioned earlier

that need to be explored even at a conceptual level of what this means for the organisation. Without thinking of strategies and projects to action, the bigger question is how conversations or ideas of how the organisation needs to evolve and grow take place and how these mechanisms of growth are measured. Many organisations still default to the convention of EBITA (earnings before interest, taxes, and amortisation), bottom line, etc. financial metrics to justify growth – a model that has to evolve. Ultimately financial metrics will certainly be used to measure the net gains of the efforts, but the DT process requires a new set of metrics altogether.

P13 stated that the absence of knowing how to interpret DT for the organisation itself, outside of how industry or buzzwords suggest, ought to be defined. It is the lack of understanding of the elements of DT by all business leaders. Depending on the culture of the organisation, when you are a CFO you have a duty as part of your continuous professional development to inform yourself of how you and your profession define what it means to be an efficient professional in the digital context. The implication of professional curiosity is that it starts to slowly build a community of knowledgeable and some form of digitally proficient professionals who are able to contribute more meaningfully to DT-related discussions, strategies, plans and objectives. An organisation-wide approach has shortcomings in the sense that often individuals are either learning or adopting out of compliance rather than a legitimate understanding of the value of digitally transforming a business.

P14 stated that the challenge is that businesses do not treat DT as a change management process. What this means is that it is a process that will challenge how a business goes about its daily operations, how employees need to engage with certain systems, the new skills employees will require for the DT investment to materialise. P14 recalled an organisation that he worked for that essentially diversified its portfolio by offering digital products. The challenge the organisation had is that it required the sales team, who were historically administrator engagers, to suddenly train themselves up and learn how to engage on the value of the digital product and engage technical stakeholders, something they had no history of doing. The training on its own was not sufficient a process to really drive the change. Training was but one aspect of change management: also needed were top management buy-in, driving it as a continuous process and not resorting to only having a once-off session.

P15 stated that a challenge he had experienced was that businesses would want to drive a DT process in strategy but not in action and execution. There are organisations that will list DT as a strategic imperative but do not always see to the defining and the granularity of what that means at a Line Of Business, and even individual contributor, level. The allure of pinning something as a strategy, but not really doing the leg work of going into measurable detail on the attainment thereof, is a challenge. It suggests the strategic imperative is just simple paperwork.

P16 said having a digital strategy was good, but it needed to be asked whether there was a real, concerted drive to invest and give time to the process before the returns could be seen on a grand scale. As such, there is a likelihood that certain digital initiatives are seen as not being a success, when in fact the investment in the right resources, at the right time, in the right area, and of the right amount were significant contributing factors.

P17 said it was really a lack of knowledge by those in strategic roles. This referred to the barrier caused by some organisations believing a form of Uberisation or Kodak effect needs to happen to them before they act. Not all boards have adopted a proactive approach: it is happening, but at a slower pace than for our international counterparts or markets.

P18 explained the importance of a combined and reflective digital strategy. Combined in the sense that it has undergone a consultative process with other areas in the organisation. Reflective in the sense that it is a true reflection of where the organisation is and can be, it has contextual relevance.

Q9: How did your organisation identify and recruit digital talent?

P11 stated that the request for digital talent would come from the hiring manager who would typically identify a need based on the direction that Line of Business was taking regarding the digital area of their Line of Business. So, the identification happens at a managerial level (likely informed by the strategy) and is then fulfilled by HR who go through their various channels of recruitment.

P12 stated that the talent is actually a function of the talent gap that HR has identified in the business in line with where the business wants to go with the strategy. The talent component

of the organisation is always presented after the organisational strategy has been presented and that shows how the talent component will support the strategic execution. P12's organisation has a strong preference for tech talent that comes from UCT. There seems to be a curricular appreciation for how UCT drives the development of tech skills.

P13 stated that talent was identified through a demand process. Increasingly he has noted that for them as a bank, there is always a heavy investment in DevOps kinds of skills. These are the skills that form the foundation of the bank's existence as they build, optimise, and manage the applications and systems that the bank has emplaced over the years. The talent gap is clear in that it sits in software developers' area for the business. The recruitment process likely used will follow the conventional approach.

P14 and **P15** echoed the sentiments expressed by **P11**.

P16 said it was within the domain of HR. HR has surveys it sends to Managers and Executives to indicate talent shortage and then aligns the requests with those of organisational objectives.

P17 and **P18** said they use recruitment agencies, especially for strategic and executive roles. The talent required is mapped at an HR level.

Q10: What was the role of culture within your organisation in driving the Digital Transformation process?

P11 stated he could not stress enough the role of culture. Every DT specialist knows intrinsically, before accepting any role, that the biggest contributor to success or failure will be linked in one form or the other to the organisational culture. To this end, the role of culture in a DT context is pivotal in the sense that the organisational culture has to change first to accommodate the changes that will come with DT. This means the starting point in the DT process is ascertaining how to apply DT processes that will least antagonise the organisational culture and then begin implementing the small areas of change there. That is, slow, low-impact change, consecutive efforts of change over time, are what really moves the dial within an organisation.

P12: Culture was the driving force behind the speed of acceptance and sustenance of the DT initiatives that the organisation had put forward for the business. For every DT initiative being executed in the business, a cultural analysis preceded, to almost pre-empt how best to drive the process. This asked what the impact of the process was, what the organisational view of the process was, etc. To overlook the culture of the organisation was to overlook a critical part of the DT success.

P13 stated that his experience as a consultant and working closely with the organisational development department had helped him navigate crucial organisational dynamics such as the culture of the organisation. He referenced the four main organisational culture clusters that one can use to identify quickly the cultural style of an organisation, namely: Clan Culture, which is more about team building; Empowerment and Open Communication, which is a really ideal culture because it means things are generally done in an amenable way – one would find this in family businesses that have morphed into corporate organisations. Then there is the Adhocracy culture: typically found in start-ups, which have a culture that is about creating new standards, about continuous improvement and finding creative solutions. There is also the Market culture: as the name implies this is a cultural archetype that is invested in understanding how best to be a market performer by always looking at improving productivity, creating external partnerships, enhancing competitiveness, involving customers and suppliers – this is what a focused clan culture evolves to when it starts being more outwardly focused. Finally, there is the Hierarchy cultural type that is about order, processes, titles, policies, and procedures. So, when you come in as a DT champion, being able to ascertain these cultural styles allows you to plan more adequately what the right approach for the organisation will be.

P14: Culture always plays a role when organisations embark on a form of change. The question one must ask is: To what extent does the culture allow and support the change? In P14's organisation, typically a mandate that streams from the top is always known to be the order of the day and must be executed. However, in a culture like that, what always becomes tricky is the pace of the change – at a strategic level, the imperative has been set, but at an operational level, execution may take time. For example, when P14 came into the organisation, the first task was to automate the HR recruitment process. P14 was surprised at just how manual and Excel spreadsheet-intensive the process was. P14 introduced a

simple, cost-effective application that would in effect make the entire process application based. The new application was met with mixed emotions. Those who knew how to operate, manipulate and add macros into the Excel spreadsheet were not so thrilled as suddenly their star power was no longer relevant. Those who hated the manual process, because of the laborious efforts required to maintain the sheet, loved the new application. So, circling back to the point, the culture plays an important role in strategic directive and operational execution.

P**15** felt he was fortunate to step into an organisation with a culture that was open to learning and doing things differently. A big contributing factor to this kind of culture is really because the leadership team lead by example, new ideas and new approaches are met with enthusiasm, the team is fairly youngish with the youngest being 38 and the oldest being about 57. So, the blend in age, expertise and even race creates room for some level of openness and tolerance. The composition of the leadership team itself lends itself to a somewhat diverse way of thinking, working, and approaching things.

P16 felt culture was a driver in the DT process. I should have mentioned that as a driver. It does matter. But I have noted too about culture that people are afraid when they do not understand what is being done, why it is being done, and also how it impacts and affects them – then the resistance and the sabotage will emerge. The work of the leadership team is effective communication on the what, the why and the meaning it has for people and their roles within the organisation.

P17 said one of the most influential factors in determining whether a business is successful or not is culture. To ensure you are targeted towards success, your organisational culture should align with your strategy. This should be communicated and fostered through leadership.

P18 said the culture of an organisation sets expectations for how people behave and work together, and how well they function as a team. In this way, culture can break down the boundaries between teams in silos, guide decision-making, and improve workflow overall. But as is true with all organisational initiatives, the driver sits with the leadership team.

Q11: What were some of the key role-level metrics you had to meet in the context of the implementation of a Digital Transformation process?

P11: I had to drive the digital strategy. This meant I was responsible for the execution of the strategy at a Line Of Business level. Specifically, we were targeting taking to market a new digital product that required substantial development work, UX professionals, software developers, testers, etc. Literally the specification was that I was required to manage existing systems and lead the development of new projects from inception through to delivery into a production environment, and to manage all IT capabilities. This meant critical IT systems had to be developed and supported.

P12: Specifically, I was responsible for developing and implementing digital initiatives across the department to ensure they were meeting the organisational objectives. I was also KPI'd to ensure the digital strategy was aligned with the wider strategy and development plans across the group. I also must be able to enthuse, inspire and encourage staff to be inventive and experimental in their use of digital technology in their respective roles and also to promote model technology practice in the business. I have a lot more, but this is just to give you an idea of where my focus areas are.

P13 stated there were quite a few, specifically developing, managing, and monitoring the group's digital strategy in line with organisational objectives and values. P13 was also responsible for the creation and support of an environment of digital innovation and best practice to ensure the right stakeholders were in fact interfacing with the right technology, and finally creating a roadmap for innovation.

P14: I can summarise that for you in four key areas. Firstly, I am the leader of the Line of Business/organisation's Digital Transformation. I am the manager of major digital infrastructure projects; I am the researcher for new company tools and consultant to other business areas.

P15 had to see to the ROI on digital investments, increase employee productivity, increase customer experience scores, drive AI-enabled business processes and drive the adoption and performance metrics.

P16: My mandate is driving the ROI on DT, maximizing customer engagement, and driving innovation.

P17 cited driving innovation, creating new business models for the business and refining customer experience channels to maximise Customer Centricity and customer satisfaction.

P18 stated that his role was to develop the digital strategy, measure the ROI on digital projects, fine tune approaches needed to ensure the investment was done correctly, engender a digital mindset from the top right through to operational staff while owning and centrally monitoring the digital innovation portfolio.

Q12: How did you navigate digital denialism (when an organisation's leadership team is in denial about the importance of Digital Transformation)?

P16 stated that it was not so much a negligent attitude about the importance of Digital Transformation as it was a feeling of being overwhelmed with all the DT talk and articles and pressure that came with DT during COVID-19 that sometimes could bring on certain paralysis of action. That best way to address this, P16 had found, was to start small, start simple and take everyone along the journey with one. Work with the pace of your leadership team to the extent that you can, while driving a stretch.

P17 stated that there was no digital denialism as such, as it was really grappling with a uniform definition of what DT was and what it meant for the business. There needed to almost be a mediator or centralising figure who would guide the organisation on contextual definitions. This was because the very disputes about definitions could cause certain members of the board to come across as being in a form of digital denialism; meanwhile it could actually be digital ignorance.

P18 stated that sometimes the topic of what is important to the business and from whom it comes matters. The composition of the EXCO and board members matter a great deal as they truly reflect the quality of decisions and calibre of leadership that an organisation will experience. Digital denialism, in my experience, was a function of that, who was it that identified the issue. However, market forces, changing consumer behaviour and new

competitors forced the leadership team to take a quick and differing stance, hence my being hired.

Q13: How did you navigate digital deflation (when an organisation's leadership team is aware of Digital Transformation and makes plans with no real intention to execute)?

P16 stated that initially, deflation happened unintentionally, from his observations. The issue was rather what to execute first than it was a disingenuous effort of going about engaging in a DT process.

P17 felt that once uniformity was established the immediate opportunity cost was realised, because suddenly the lens of perspective was in unison. Indeed, luckily, or unluckily for us, the drive to start and execute on results quickly was real and palpable.

P18 stated that he had worked in an organisation like that before COVID. There was an acknowledgment of going digital but the investment and the urgency to do so were not as apparent. You know the reality for any business is that unless its fundamentals are not severely affected, the prompt of a compelling event for change becomes a hard case to push forward and administer. I think COVID was a significantly compelling event for all nations, businesses, and individuals alike. No one can afford to operate in that fashion, even the articles I used to read with *Harvard Business Review* would state that 71 percent of employees felt leadership spoke digital but did not really do much on the implementation side. Review the same statistics in 2022 and you will find very different numbers. I am seeing 97 percent of the leadership team is invested and actively attempting the pioneering of a digital project. This is a sign of advancing in the right direction.

Q14: How did you deal with digital discomfort (when an organisation's leadership team is not comfortable with the changes that will come with Digital Transformation)?

P16 stated that discomfort would always be present with change. Discomfort becomes a problem when it stifles the business from taking the strategic imperative to change and mobilise the business a different direction. The discomfort was also addressed by and large with things like feasibility studies, business cases, ROI analyses, etc., to substantiate the

project and demonstrate what returns the business could expect. This process in our organisation in particular is a very rigorous one so that there is accountability with concession.

P17 stated that this was expected in his view. He recalled fondly the excitement of some embarking on the new project but the trepidation of others, and the reluctance of the CFO on signing off the budget to proceed was a little humorous to observe. As such, I am a believer in digital literacy first. The collective buy-in is important because each stakeholder in the value chain has a role to play in contributing to the success of the DT project, be it tactical, strategic, or even merely moral and team support, specifically because of the novelty of some of the things we have attempted. So, for me addressing the discomfort starts with a Digital Literacy drive that is aimed at both unifying the understanding of DT and driving the accelerated executive adoption which will invariably trickle to the rest of the organisation.

P18 stated that he dealt with the discomfort through collaboration. The trick in my years of working is that people will shy away from, and shun, support for things that they (a) do not understand or (b) were not consulted or involved in. A simple example is before I present my digital strategy to the business: Did I consult and seek the perspective of the digital heads to understand (a) their understanding of DT and also (b) the maturity or progress of DT initiatives? It is common to have different Line of Business with varying levels of maturity, which is in itself a great reference point in gauging precisely where the organisation is, who are the progressive heads, who are the ones waiting to be led and the ones ready to collaborate and advance speedily in the direction of change.