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Title of Thesis:

Navigating the Challenges to Digital Transformation:

The Case of a Pan African Commercial Bank.

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ABBREVIATIONS

AI	–AI
API	–Application Programming Interface
BDA	–Business Data Analytics
BMI	–Business Model Innovation
CAPEX	–Capital Expenditure
CBN	–Central Bank of Nigeria
CIO	–Chief Information Officer
CISO	–Chief Information Security officer
CRM	–Customer Relationship Management
DA	–Data Analytics
DT	–Digital Transformation
FSI	–Financial Services Industry
GTCO	–Guarantee Trust Company
IoTs	–Internet of Things
KYC	–Know Your Customer
ML	–Machine Learning
NDPR	–Nigerian Data Protection Regulation
NITDA	–National Information Technology Development Agency
RBV	–Resource-Based View
ROI	–Return on Investment
RPA	–Robotic Process Automation
TGM	–Technology Governance Models
VC	–Venture Capitalist

DEFINITIONS OF KEY TERMS

5G Network	–5G is the fifth-generation technology standard for broadband cellular networks.
Algorithms	–A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.
Ambidexterity	-This is the ability to carry out various functions or business models simultaneously.
Automation	–Automation describes a wide range of technologies that reduce human intervention in processes
Big Data	–Big data primarily refers to data sets that are too large or complex to be dealt with by traditional data-processing application software.
Brick & Mortar	–Relating to or being a traditional business serving customers in a building as contrasted to an online business.
Business Model	–A business model is a strategic plan of how a company will make money.
Cloud	–Cloud computing technology gives users remote access to storage, files, software, and servers through Internet-connected devices.
Cyber Security	–The state of being protected against the criminal or unauthorised use of electronic data, or the measures taken to achieve this
Data Democratization	is when an organisation makes data accessible to all employees and educates them on how to work with data.
Data Governance	–Data governance is a collection of processes, roles, policies, standards, and metrics that ensure information's effective and efficient use.
Data Models	The provide a standardised method for consistently defining and formatting database contents across systems.
Data Silo	is an insular management system in which one information system or subsystem is incapable of reciprocal operation with others that are, or should be, related.
Data Sets	–A collection of related sets of information composed of separate elements that can be manipulated as a unit by a computer.
Data Triangulation	is where the researcher uses two or more methods to verify the findings and results.
Digital Eco System	–It is a complex network of people, businesses, and systems that use technology to interact with one another.
Digital Marketing	–It is the component of marketing that uses the Internet and online-based digital technologies, such as desktop computers,

	mobile phones and other digital media and platforms, to promote products and services.
Digital Maturity	measures an organisation's ability to create value through digital.
Digital Platforms	–A digital platform is the software and technology used to unify and streamline business operations and IT systems.
Digital Vortex	is the inevitable movement of industries toward a "digital centre" in which business models, offerings, and value chains are digitised to the maximum extent possible.
Digitalisation	–Adaptation of a system, process, etc., to be operated with the use of computers and the Internet
Direct Network Effects	–It occurs when the value of a product, service, or platform increases simply because the number of users increases, causing the network itself to grow.
Disruptive Innovation	–It is an innovation that creates a new market and value network or enters at the bottom of an existing market and eventually displaces established market-leading firms, products, and alliances.
Dominant Logic	–It describes the cultural norms and beliefs that the company espouses.
Dynamic Capabilities	–An organisation can purposefully adapt its resource base.
Enterprise Architecture	–It is a business function concerned with the structures and behaviours of a business, especially business roles and processes that create and use business data.
Enterprise Infrastructure	–Consists of three teams –server/storage, network and telephone –that converge to provide mission-critical technology services.
IT Governance	is defined as the processes that ensure the effective and efficient use of technology in enabling an organisation to achieve its goals.
Micro Services	–An architectural pattern arranges an application as a collection of loosely coupled, fine-grained services communicating through lightweight protocols.
Modular Platform	–One that allows swapping modules to configure multiple products in a family.
Network Effects	–It is the phenomenon by which the value or utility a user derives from a good or service depends on the number of users of compatible products.
Network Theory	–It involves the study of the way elements in a network interact.
NVivo	–NVivo is a software program used for qualitative and mixed-methods research.
Open Banking	-Enables secure interoperability in the banking industry by allowing third-party payment services and other financial service providers to access banking transactions.

Operating Model	–It is the representation of how an organisation delivers value to its customers or beneficiaries as well as how an organisation runs itself.
Platform Technology	–A technology platform is the foundation for building and running business applications.
Platformization	-This is the network of agents (people, companies, applications, and devices) where information, products, services, and values are exchanged.
Robo Investors	are digital platforms that provide automated, algorithmic investment services with minimal human supervision.
Target State	–It defines a business strategy/intent blueprint for the organisation's business and technology systems.

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Finally, I would like to thank my wife and children for their constant support throughout the program, especially when I felt no end was in sight; their encouragement made the audacious journey much more manageable.

Dedication

I dedicate this DBA thesis to my late father, Prince Aigbovo Magnus Eweka. A man of valour, a distinguished visionary who made significant strides and a profound impact in this career and country. I also dedicate this work to my late mother, Susan Izevbuwa Eweka, a diligent and hard-working woman.

Declaration of Originality

I declare that this thesis 'Navigating the Impediments to Digital Transformation: The Case of a Commercial Bank." is my work. This complete thesis or in part has not been previously submitted to any other university for any degree, diploma, or other qualification. References to work of others are specified in italics and clearly indicated in the bibliography and reference footnotes section. This thesis is intended to meet the regulations for the issuance of a Doctorate of Business Administration as defined by the University of Warwick Doctoral College website section 3.9 (University Requirements for the Award of Research Degrees).

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ABSTRACT

The financial service industry has enjoyed decades of outstanding success, with many banks consolidating their dominant positions built over time to become market leaders. However, many face stiff competition from new, nimble asset-light entrants aggressively competing for market share. Mounting pressures result from obsolete strategies and deficient business models that once worked very well. Change management, optimal organisation strategy, and leadership challenges are all impacting the ability of financial service firms to pivot operations to become more agile effectively. On other fronts, the regulatory environment is heating up, with increased compliance requirements. There is also a constellation of internal pressures necessitating the need to radically innovate and stand out by leveraging innovative technology to serve customers better.

Owing to these pressures, most banks have embarked on a Digital Transformation (DT) journey to redefine how they do business. Most of them plan to leverage the promises of DT to compete better and to help them achieve operating efficiency and reduced business costs whilst ultimately increasing market share and dominance. The unspoken reality is that the DT journey includes significant hurdles and uphill challenges, such as re-engineering business models and leveraging a robust digital technology infrastructure whilst addressing enterprise change issues. However, most banks need help with the transition process to become truly transformed, while others still need to catch up in the journey despite spending vast sums of shareholder funds. This study aims to develop a new set of tools and a set of interventions that will aid in understanding and assessing the pain points and barriers to a successful transition with practical steps on how best to truly digitally transform.

To fully understand the challenges, this research reviews the various elemental forces that make up the transformation process. It also examines how these challenges impact the organisation, including its leadership, emphasising the collective technological components that drive successful transformation. The study, conducted through a case study approach, also examined the challenges faced by one of the most respected African banks (Guarantee Trust Bank, now formally known as GTCO) and its reactions to the quest to attain digital maturity. The research aims to answer the challenges through an intervention framework on how best to navigate the impediments to a successful transformation.

CHAPTER ONE

INTRODUCTION

1.1 Industry Landscape

The banking industry has witnessed steady growth over the years despite the impact of the 2008 financial crisis and, more recently, the effects of the COVID-19 pandemic. But in the last decade, disruptive innovations from new entrants have been threatening the dominant position held by some traditional banks over the years. The financial service sector in sub-Saharan Africa has arguably fared well in the last decade, with the earnings of most regional banks growing by compound rates of over 25%, with real-term growth exceeding 11%. These banks have also enjoyed significant returns, with the revenues in their portfolio running into billions of dollars, with excellent percentage returns. This is perhaps why African banks are the world's second most profitable and fastest-growing sector (The McKinsey Global Banking Report, 2018).

Fig. 1.1: Illustration of Global Banking Growth (Source: McKinsey, 2018)

The African promise for the continent is further re-iterated in the following quote *"Africa is argued to be better positioned than any other continent due to improving political stability, strong economic growth, and its "demographic dividend. The continent is seen as a unique opportunity for financial investors, given that several African countries are among the fastest-growing countries globally. As a result of these factors, the Economist coined another catchy slogan: "Africa rising."* (Keneilwe Maremi et al., 2020)

Furthermore, banks globally have been instrumental in growing global economies. The situation is not different for African banks; they offer financial support that aids in developing local economies. Regional financial institutions continue to play a vital role in supporting regional commerce, including supporting Africa's largest economy, Nigeria, where the case bank for this study is headquartered. These banks have successfully provided finance for lending and savings to SMEs and enterprises across the continent. They have remained resilient in supporting the local economy whilst maintaining a stable Capital Adequacy Ratio of just under 16%, with cash fluidity of over 40% and non-performing loans capped at just over 6%. (McKinsey, 2020).

1.2 Challenges with Banks Retaining Their Dominant Positions

The COVID-19 pandemic hurt all global banks, including several African financial institutions. However, the pandemic's effects and shocks had little effect on at least four of the strongest banking markets in Africa, namely Nigeria, South Africa, Morocco and Kenya. According to a study by McKinsey & Co and Oxford Economics, individual government interventions in the above countries played a significant part in the banks avoiding drastic declines in GDP. The graph below, taken over three years, illustrates this point; an approximately 6% decline was the highest value recorded in 2020.

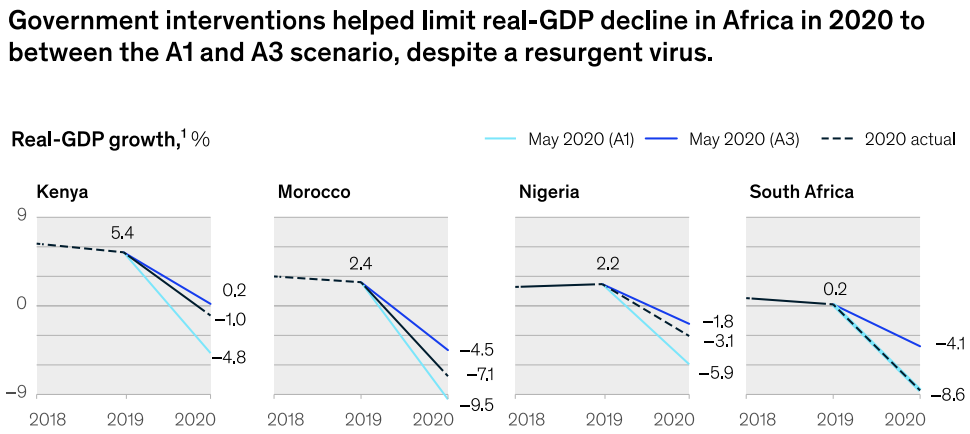

Fig 1.2 above shows the government interventions with regional banks in Africa's most robust economies—Source: McKinsey & Co (March 2021).

Despite the seemingly cushioning efforts from the regional Central Banks to counter the impact of the last financial crisis and, more recently, the pandemic, most banks have struggled to retain their dominant positions for years, partly due to regulatory changes. For example, the Central

Bank of Nigeria exacerbated the problem by raising the capital adequacy ratio to 10%, forcing most regional and national banks to increase their balance sheet value, merge, or go completely out of business. There are also stiffer international regulations the banks have had to contend with that potentially erode capital adequacy ratio by up to 100-400 basis points to meet the newer, more demanding regulatory requirements. Due to the slowing economic growth from domestic markets, this has not been made easy with difficult capital access conditions (Reuters, 2015:2).

1.3 Newer Sector Concerns

The financial industry sector is facing unprecedented challenges from FinTech companies. These include technology companies offering new payments, deposits and lending approaches. The strategies and business models employed decades ago that led to the success of many traditional firms are becoming obsolete. The new entrants are disrupting the status quo at a rapid pace, causing significant concerns for traditional banks. The disruptive force from the Fintechs is also fast eroding market share for most well-established large banks, including the case bank, GTCO. These traditional institutions need help achieving growth and keeping up with technological innovation (Snakes et al., 2016). This is despite the Nigerian financial inclusion targets below showing the promise of expanding lucrative payments, savings and credit market share.

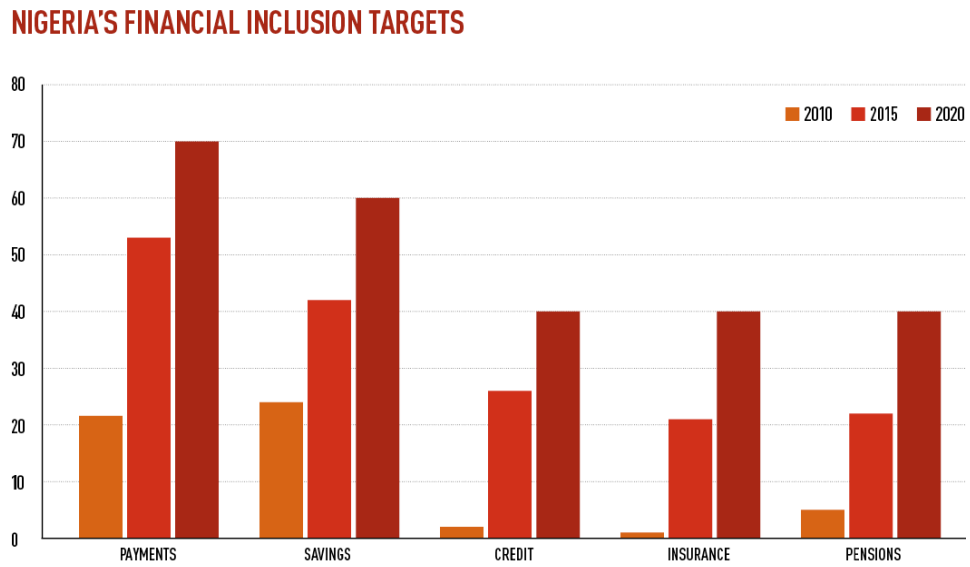

Fig. 1.3: Growing Banking Segments (Source: Central Bank Nigeria, 2021)

The emerging FinTech companies have devised and are executing more efficient business models with promises to gain more market shares from the incumbents (Bennett and Lemoine, 2017). There are new digital challenger banks in Nigeria, including Kuda Digital Bank, Paystack, Alat Bank, Mint, Sparkle and Vbank. They are often called disruptors because they

have emerged with game-changing value propositions in the market. They tackle the markets entirely with unprecedented business models to offer unique services.

	Target	Customer base
FairMoney	underbanked people	5 million
TymeBank	low-income customers	4 million
Kuda	younger generation	1.4 million
Bank Zero	individuals and businesses	100,000+
Sparkle	individuals and SMEs	100,000+
Prospa	SMEs	27,000+
Telda	underbanked people	NA

Fig. 1.4: Rising Demand for Digital Banking Services in Africa (Tab Insight)

These new entrants now offer irresistible interest rates for savings and deposits for customers; they also provide convenient and more accessible methods for banking. These attractive terms are only made possible because they are asset-light with far less cost of doing business, unlike the traditional banks burdened with hefty operating costs, which they cannot shake off as part of the very high cost of doing business. What makes this more worrying for the incumbents is that the Fintechs target the large unbanked sector and the fast-growing digital natives who comprise the bulk of the African youth market. Fig. 1.3.2 illustrates consumer demands by age demographics and the market share the digital disruptors are targeting.

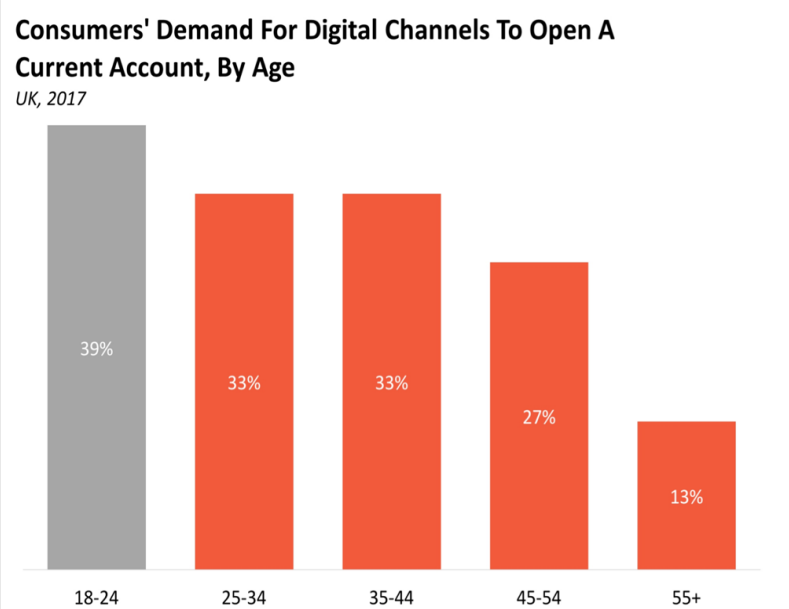

Fig. 1.5: Digital Bank Adoption by Age

1.4 Disruption -A Global Concern

The concerns from the new disruptors are not just an African banking problem; they are a global one. In the West, incumbents' businesses are threatened significantly, even to destruction. In most cases, FinTech companies and banks with DT agendas embracing new business models have rapidly taken over the old ones. However, the cost of embarking on DT is putting significant pressure on bank revenue, as can be seen in the diagram below:

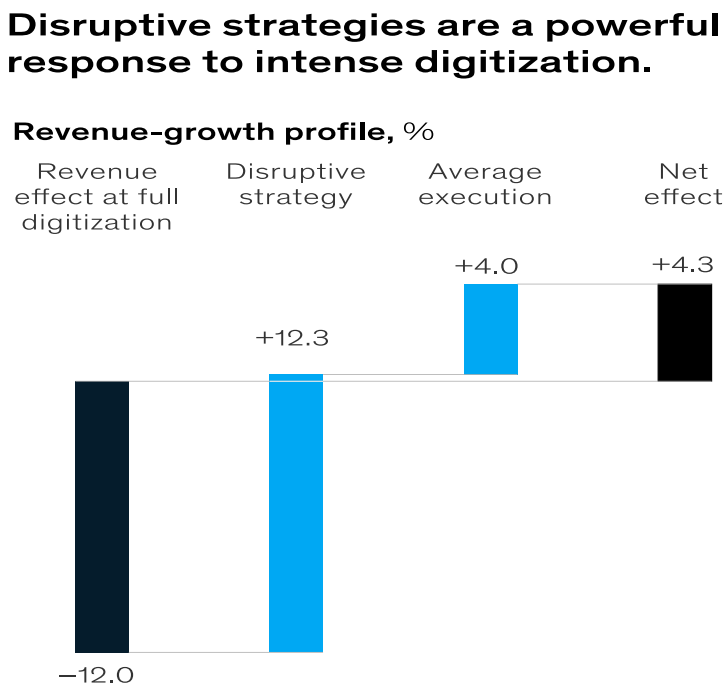

Fig. 1.6: Pressure on Revenue Due to DT Initiatives (Source: McKinsey, 2018: 4)

The new disruptors succeed in developing new strategies, business models and, more crucially, newer mindsets, which consider the megatrends, such as new technologies, changing customer demands and shortened product cycles. The combination of the above has created a new wave of disruption not limited to the financial service sector but extends to other industries. From all indications, no industry remains unaffected by these disruptive threats (Csik, 2014). They are a global "pandemic" with resounding consequences for most traditional, well-established organisations.

1.5 The Urgency for Incumbents to Regain Control

The main concern for the banks arising from these new threats is the erosion of market shares, coupled with operating in the new norm and the much more challenging economic and regulatory environments. These established banks now have to radically change how they operate or run the high risk of total collapse. One of the principal reasons for the need to embark on a transformation journey is the multitude of cases of well-established corporations falling to the cold hand of disruptors.

1.6 Painful Lessons from the Past

A classic example of an organisation affected by disruptors was the Polaroid Corporation. It could not respond to market changes that required pivoting on digital cameras. Blockbuster Inc. also failed in a very "blockbuster" way. It was lost in an old business model that had always worked despite its competitor Netflix adopting a new digital model; it failed to see the

new digital direction. With no digital strategy, it got caught off guard, and the market overtook it.

Most innovative companies, including Nokia, heavily invested in R & D and were engrossed in the model that worked for years –investing in the analogue phone business. They underestimated the new digital smartphone and were caught off guard by two new entrants (Apple and Android), which capitalised on their wrong focus. By the time they realised their mistake, they were headed for collapse. The same error of not shifting to a digital and more transformed operation made several other large companies fail, including Toys R Us, which failed to realise the power of e-commerce but stayed with brick-and-mortar stores.

Yahoo also started well but needed to see the value of partnering with digital giants like Google and Facebook; it could have done better. Xerox also failed to see the market's potential and was slow to recognise the dangers of the status quo until its competitors overran it. Also, Blackberry started well, like Nokia. Still, again it made the same mistake of ignoring changing market requirements and underestimated the "start-ups that initially nibbled at its market share until they gained dominance. The above examples are painful lessons for the banking industry executives should ponder as they transform. It is argued that underestimating the seemingly small-scale Fintechs and avoiding a complex DT effort may ultimately lead to a company's demise.

So, bank executives ultimately are presented with two simple but stark crossroads; they either innovate or face the high possibility of destruction. This urgent message now resonates across the banking industry, particularly with the leadership of traditional banks, forcing these executives to hastily devise how best to digitally transform current methods of operations to reduce waste, operate more efficiently, and leverage digital technologies to extend current offerings much more affordably to the rural unbanked markets.

1.7 DT -Answer to the Threat of Extinction

Many executives firmly believe that DT is their "messiah" for staying competitive and fighting off the new disruptors. But is DT the solution to becoming more agile and pushing back the competition? This "realisation" was highlighted in the Gartner survey done with CEOs on what they believed was their immediate priority in their organisation; IT, including DT, was considered a paramount requirement.

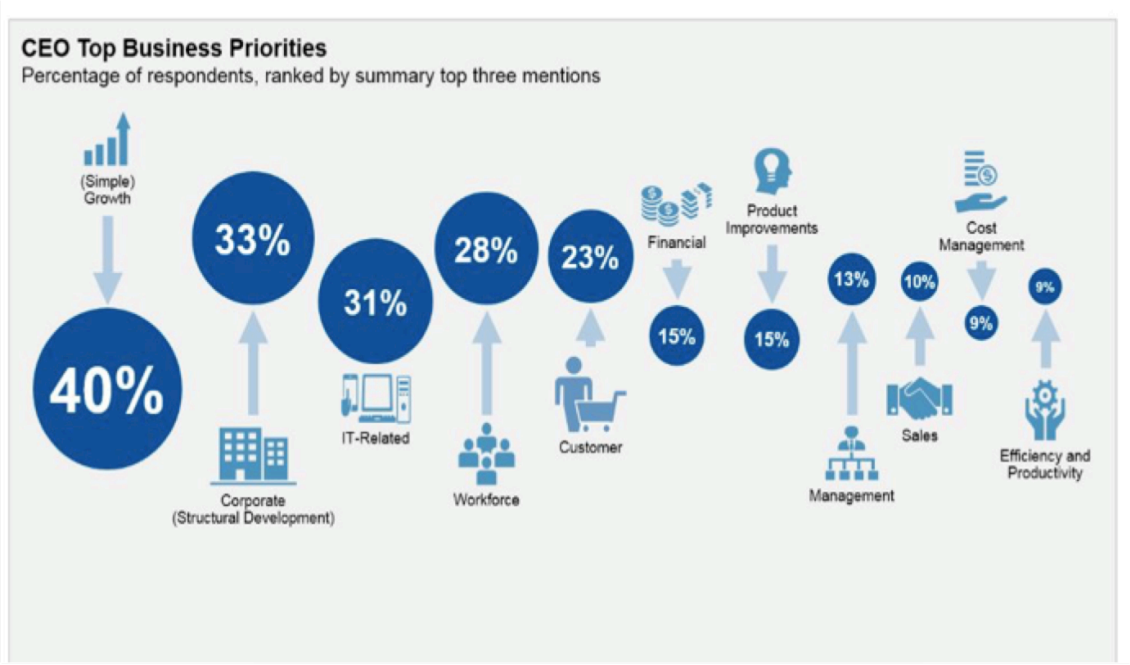

Fig. 1.7: Most Important Business Priorities (Gartner, 2018).

For most CEOs in the FSI space running large organisations, their attraction to digital transformation is spurred on by global trends on banks that have successfully transformed and attested to operating more efficiently with double-digit growth numbers. This fact is further illustrated in the graph below, indicating increased revenue due to undertaking the DT journey.

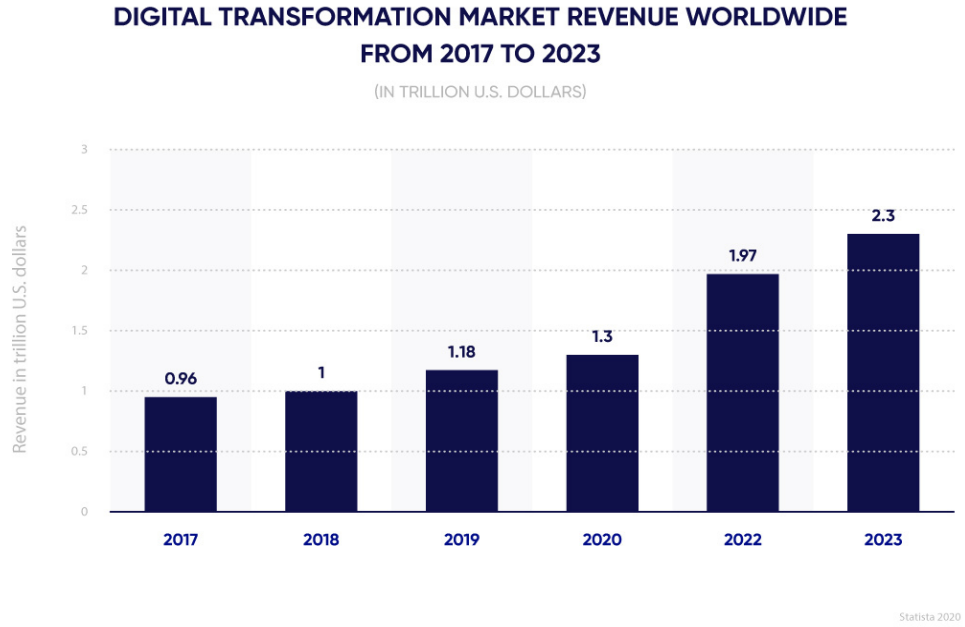

Fig. 1.8: Growth Projection in Revenue after DT (Statistica, 2020)

However, the transformation journey is not a walk in the park; it is a tough and gruelling process, fraught with significant challenges, such as completely pivoting business models, deploying the required technological infrastructure, and revamping how large-scale organisational change is effectively managed. Failure will occur if the process of change and the critical components of transformation are not well managed, including a large cost deficit bill. There are still excellent prospects for DT, and the race for African countries to fully participate in the digital revolution is further fuelling the desire of most banks to transform. The quotes below further illustrate the renewed promise of the digital revolution and perhaps why several traditional banks decided to embark on the arduous digital transformation journey:

"In Africa, we have missed both the agricultural and industrial revolutions but in Rwanda, we are determined to take full advantage of the digital revolution - "Paul Kagame, the president of Rwanda.

To further emphasise the above point,

"*In 2019, the World Bank started a moonshot initiative to boost Africa's digital economy that is said to cost hundreds of millions of dollars, with digital entrepreneurship forming a key pillar (Goldberg 2019)."*

However, despite the encouraging promises of the digital revolution that can provide the foundation for DT, many banks still need to execute their transformation initiatives successfully. Therefore, DT should be seen as a more challenging exercise; it is complex, multi-faceted and directly impacts all areas of an organisation, from its strategy to its people, processes to operations, culture, and mindset. It also touches on other organisation segments, including how the business creates and captures value. The alarming figure below from McKinsey further reaffirms banks' internal struggles when looking to transform. More than 70% of all digital transformation efforts fail traditional companies, including established banks; there is only a success rate of 4-11% *(*Akhil Babbar et al., 2023) (1).

1.8 Pressure and Promise to Transform

Digital Transformation (DT) is a new phenomenon gaining popularity in the financial service industry. It includes redefining critical pillars within the organisation, particularly people, process, structure, culture and technological strategy. There is an upward trend in adopting the various components of transformation. Banks are embracing digitisation, extensive enterprise data, AI, machine learning models, and migration to a platform business model to shape a formidable corporate strategy for better organisational performance. But not all banks are leaping to transform; an Accenture report confirmed that only half of the global banks are making real advancements in their digital transformation journeys. The diagram below from the report illustrates this fact.

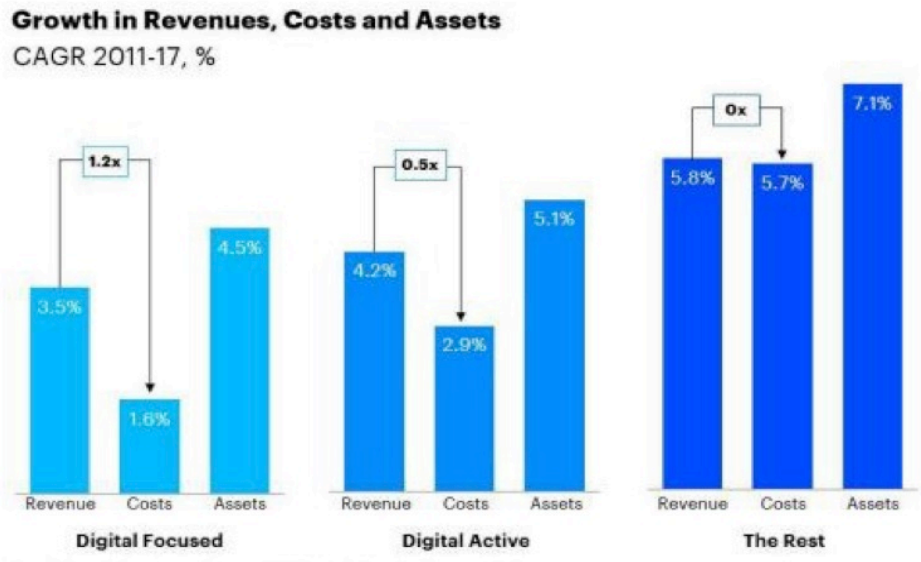

Fig. 1.9: Growth in Revenues (Accenture Research on S&P Capital Data, 2021)

1.9 The Digital Transformation Phenomenon

Adopting a digital strategy, embarking on a companywide DT initiative and leveraging technologies consuming data to generate uncommon business insights are now paramount business requirements for any financial organisation. This new digital trend offers the possibility to revolutionise operations radically. The idea of transforming digitally, which includes the possibility of revamping technology and business processes, now resonates well with many technology executive stakeholders, partly owing to its promise. However, its drawbacks are also of great concern to many people. But what exactly is DT, and why do banks need to embark on this somewhat tortuous and seemingly never-ending journey? A definition of the term DT will provide further clarity and a better sense of what value the technology phenomenon offers:

DX takes a customer-driven, digital-first approach to all aspects of a business, from its business models to customer experiences to processes and operations. It uses AI, automation, hybrid Cloud and other digital technologies to leverage data and drive intelligent workflows, faster and smarter decision-making, and real-time response to market disruptions. And ultimately, it changes customer expectations and creates new business opportunities (IBM, 2022:8).

The above definition stresses the benefits of undergoing DT. The figure below proves that applying disruptive strategies will increase the revenue growth profile of companies that decide to take the leap.

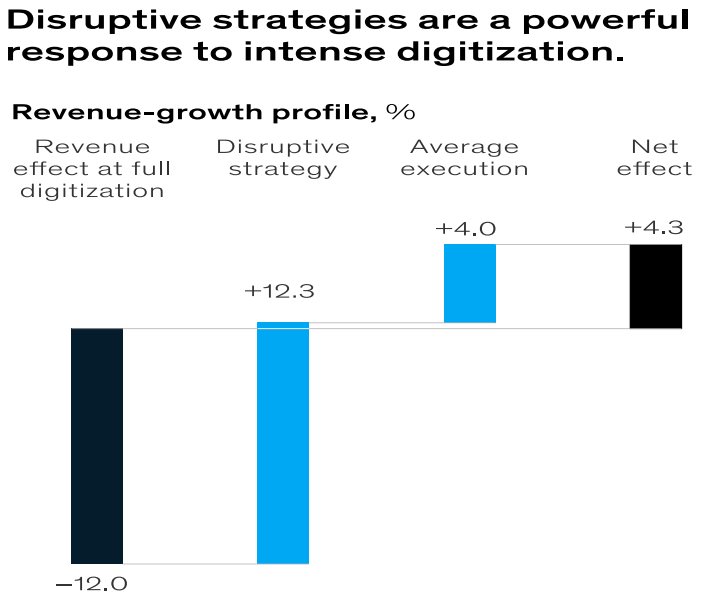

Fig. 1.10: Disruption Increases Revenue and Growth (McKinsey 2021)

1.10 Historical Overview of Technology Adoption

Financial service firms have done primary forms of digital automation and applied some simple business intelligence algorithms, although they needed to be more organised. They often gathered data in silos from internal sources, which differ in form, complexity and structure (Muhammad Younas, 2019).

The above is the case at GCTO, where a primary type of digitisation was used but in different forms, with technology upgrades in specific "important" units and departments. Most employees worked in isolation, with semi-structured and structured data, some on Excel Sheets, using central document tools, like share-point, to collate and disseminate data to various groups. However, it was an inefficient method, not the entire transformation process, and was not done at an enterprise scale. Automation and other forms of technology deployments are still done on a small scale and prone to various human errors; the technology infrastructure used at the bank was built on legacy operations, which essentially cannot support functioning in today's fiercely competitive financial market.

1.11 Transformation –Need for Strategy Realignment

A formidable strategy has been one of the principal reasons why the case bank outperformed its peers over the years. However, the status quo no longer holds, with the entrants deploying more formidable competitive strategies to win. Traditional regional banks need help to realign current strategy to ensure future success. Some have resorted to making systemic changes to current business models as part of their transformation strategy, while others are restructuring their entire operating model, including radical changes to assets, processes, people and

structure, in the hope that the changes will allow them to offer more value to customers efficiently.

It is often argued that a significant change to the business model and the internal moving parts of the organisation is required to ensure a successful transition, which leads to the notion that a firm's business model sets the stage for the strategy to drive the structure and systems of an organisation's processes (Casadesus-Masanell & Ricart, 2009). To benefit from enterprise DT, a firm must develop and communicate a clear strategy driven primarily by management. It will highlight the transformation of products, services, processes and business models (Matt, Hess, & Benlian, 2015). However, does the above hold true? Many banks have great strategies with excellent communication on how best to transform their operations, but they still need to improve the process. The realities of the complications of DT are becoming more evident as more banks embark on this highly uncertain and uncharted digital journey.

1.12 Data Arsenal -Promise of a New Competitive Weapon

Considering the proliferation of various methods to capture enterprise data, massive amounts have become more available in different forms, giving hope to organisations undergoing DT. Digital infrastructure components generate significant customer transaction data for banks. This trend of information growth also pustulates that data will double every two years (Turner, Gantz, Reinsel, & Minton, 2014), making leveraging valuable company data impossible to ignore and bringing to bear valid reasons for developing a comprehensive data strategy as part of the DT planning process. These facts and potential benefits of information have exponentially increased the value of enterprise data, which is now the new black gold (A. Singh, 2013),(2). Combined with other digital tools, this realisation of exponential data availability promises to add significant value to any DT initiative.

However, it seems almost impossible for banks to compete in today's digital world, where transforming to digital is arguably the principal building block upon which any organisation now exists and thrives. In addition, the evidence seems to point to the fact that no serious organisation can embark on the DT journey without having a data exploitation and use strategy. These variables will make up elements of the technology review on the case bank.

1.13 Data Analytics –Frontier to Achieving a Winning Strategy

Another essential component of DT is the processing (analysis) of data. Collecting data without making meaningful sense of them may be of no value, leading to the need for understanding analytics and how it potentially adds value. Business data analysis (BDA) allows for collating and reviewing large data sets to generate insightful value, a critical component most banks struggle with as part of their DT initiative. Banks need to get their BDA strategy right, mainly because of the complexity involved in building a fully-fledged analytics factory and recruiting the skilled resources to man extraction, processing and dissemination of data to the various departments.

1.14 Investing in Digital Assets: A Prerequisite for Success

As the bank undergoes the DT process, they should understand how first to build an enterprise infrastructure which forms the foundation, with the capability to hold and manage the massive amounts of data generated across the enterprise, allowing technology teams to consolidate, analyse and extract information for valuable insights (Faroukhi et al., 2020). However, despite the fanfare associated with DT making the rounds with transforming banks in the financial service sector, most are still embarking on deploying new silo technologies with minimal data sharing across the organisation.

There is a need for these financial institutions to understand the entire consolidated infrastructure, shared data lifecycle process and functional areas required to create lasting success collectively. Sadly, this understanding seems ambiguous to the banks, with most concerned about the high CAPEX cost of investing in digital capabilities across the board. However, over the years, more powerful and affordable computing and storage facilities are opening new possibilities, giving the banks hope and motivation to transform into formidable and closely integrated digital organisations (Chui, Kamalnath, & McCarthy, 2018).

1.15 New Age of Digitalization

The current transformation efforts at the case bank are not a routine incremental technology enhancement but one that is transformative, as it has the potential of positive changes to the organisation's internal functions, processes and operations. In the last decade, banks performed some of their methods manually and at a high cost, with many errors in operations, particularly the end-of-month runs; it was a time when visiting the bank branch was required for virtually all transactions. However, this is a new technology era, a digital age where the entire enterprise transformation seems imminent in creating the path for growth, and one that can determine the fate of at least the next decade.

With transformation comes a change of processes, core values and beliefs. Adopting and putting structures for execution across the organisation foster greater chances of success. However, it may also be a tremendous challenge for the banks because their executives may have to change their age-old strategy significantly. If these changes are not carefully considered before implementation, they can make or break the entire DT change process (Tawse & Tabesh, 2017).

1.16 Research Context

The Internet and mobile technologies used for online banking are widespread among millennials and other age groups. This study focuses on the African banking industry, specifically GTCO, a leading African bank undergoing DT. In the past decades, the African banking industry experienced significant changes and reforms regarding the financial industry’s business and model, including rapidly changing customer behaviour. Today, DT is of great interest in the banking space.

Even though online banking is still fast rising, the financial banking industry has of late been heavily focusing on the opportunity of smartphones and other digital platforms, particularly for

mobile banking (Dahlberg & Halén, 2016). This is in line with the fact that infrastructure in Africa is a significant deficit and that mobile phones are the most used device for accessing the Internet (Tilastokeskus, 2017). Financial service companies have also had to react to significant changes in consumer behaviour and general expectations. Studying the pain points and how best to overcome the attendant challenges of DT is a great opportunity.

1.16. 1 Case Company

This research examined one of the largest retail banks in Africa, GTCO, listed on the London Stock Exchange. The bank serves private and corporate customers, with many branches across the African region and several corresponding UK and European offices. The main objective of the organisation's leadership is to provide adequate banking services unmatched by its competitors. The GTCO customer is the baseline of the business as it looks to reinvent itself to cater for a changing banking demographic. It intends to do this by leveraging the physical and digital service offerings across multiple channels. The company's board decided to transform the business to enable the bank to become more digitally mature in competing in the financial services sector.

The bank has witnessed the extreme competitive pressure and has decided to take actions that will enable it to become more agile, efficient and coherent in running its operations, leading to maintaining and subsequently growing its market share. Currently, the bank has witnessed that traditional banking services are rapidly decreasing. There is a leap towards digitalisation and the need to offer bank services to customers after work hours. In recent years, the bank has been moving towards digitalisation and consistently migrating its customers and product offerings towards digital channels. These enriched digital channels enable customers to instantaneously reach out to the bank's customer service team, all in real-time, from the convenience of their digital devices.

1.16. 2 Company Profile

GTCO (Guaranteed Trust Holding Company), formally known as Guaranty Trust Bank Limited, is a multinational financial institution that provides individuals, businesses, private and public institutions across Africa and the United Kingdom with a broad range of market-leading financial products and services. Headquartered in Lagos, Nigeria, its vast business branches and subsidiaries across Africa are located in Cote D'Ivoire, Gambia, Ghana, Liberia, Kenya, Rwanda, Tanzania, Uganda, Sierra Leone, and the United Kingdom. The bank employs over 12,000 professionals and has assets of almost $11 billion as of 2018. Its UK subsidiary Guaranty Trust Bank (UK) Limited, is a wholly-owned subsidiary of its new holding company GTCO (3). For more information on the case bank, including its history, please see Appendix 1.2.

1.16.3 Need and Justification to Transform

Over two decades ago, banking in Africa, particularly in Nigeria, was seen as opportunistic, with mainly rapacious financial institutions seeking to capitalise on businesses and individuals desperate for funds to grow their businesses. The perception made the hard labour of certain banks looking to stand out from the crowd obscure at best; trust for banks needed to be improved in the region, leading to the pioneer banks, including GTCO, seeking to differentiate themselves from the pack.

Furthermore, the high cost of doing business was mainly attributed to excessive inefficiency in operations; these led to increased fraud cases as operations lacked the capabilities to offer large-scale banking effectively. Furthermore, the Central Bank policy of ensuring every bank customer had a unique identifying number using the BVN (Bank Verification Number) paved the way for a rapid transition to digital services. Banks could identify customers and significantly reduce fraudulent activities whilst providing banking services to many customers. The above created an enabling environment for African banks to change the trajectory; the quote below further emphasises the promise:

"Africa, so the saying goes, is rising. From Mark Zuckerberg to Emmanuel Macron to Paul Kagame, presidents, prime ministers, technologists, and policymakers have proposed hopeful narratives, arguing that digital technologies enable Africa to leapfrog and experience groundbreaking economic progress." Friederici, N., Wahome, M., & Graham, M. (2020).

Though GTCO made several strides in deploying the latest innovation to ensure a better operation, there was still a significant gap in leveraging these technologies to achieve real efficiency; further issues included the ability to increase customer satisfaction, deal with legacy system infrastructure, efficiently meet the banking needs of a growing digital customer base whilst maintaining services for the less literate customers heavily dependent on the brick-and-mortar branches.

There was also the need to reduce security challenges associated with online banking transactions and, more importantly, the ability to offer compelling value services in a market with weak digital infrastructure while managing epileptic power issues required to run digital banking operations. Furthermore, the up-and-coming start-ups significantly challenged GTCO and other established traditional banks, and to make matters worse, non-financial technology companies with little or no banking experience were also moving into financial services to erode market shares further. In the words of the CEO:

"We have decided to disrupt ourselves and not live in denial," Agbaje said. "At one time, when we did competitor analysis, we only used to look at other banks. Today, we look at fintech businesses, telecommunications firms, and even betting companies – essentially, anyone who offers any payment service. And one thing that we have learned is that although people will always need banking services, they may not always need banks."

Agbaje further said. *"However, the most important thing we do is continually ask ourselves what is the best way of remaining relevant to our customers when their needs and expectations are always evolving".*

The culmination of the above regional challenges, including the ever-increasing cost of its vast and inefficient branch network and the grave concerns from Fintechs increasingly gaining market share, led the bank on a self-disrupt trajectory; this finally led to its ambitious group-wide transformation journey. The decision was clear for GTCO on the urgent need to transform despite it coming at a time when low-interest rates were hitting banking sector returns. However, they understood they had to invest in the transformation initiative at the time they did or face severe repercussions in the future.

Consequently, the above factors led the researcher to understudy the GTCO case, taking the following into cognisance; the bank's steady position in the region as a leader in disruptive innovation, a position it held steadily over the years. Secondly, its dynamic leadership, narrow focus and unshakable status in staying number one in its application of technology to achieve its strategic objectives, including attaining above-normal customer satisfaction. The researcher was also keen to understand how one of Africa's most innovative financial institutions can best overcome the significant but peculiar regional challenges mentioned above, unique hurdles often only associated with developing economies in the African continent.

1.16.4 Objectives of the Study

The objective of this study is to review the overwhelming challenges facing GTCO as it seeks to be one of Africa's first banks to successfully achieve total DT across its global operations, a feat very few International and African banks have successfully achieved, considering the multi-dimensional regional challenges amongst other critical success factors required to transform. The broad spectrum of large-scale DT at a bank such as GTCO will be an uphill task. Concerning the adoption and challenges of DT at GTCO, it is essential to review how financial service firms have changed their narrative and why and how internal technology and organisational changes can be perceived in the increasingly crowded banking market. The study will review different variables of DT components such as the technology components, governance, regulation, leadership and business model options will be explored. Change management and other essential elements of DT will also be examined in some level of detail.

1.17 Research Objectives

The thesis sought a better understanding of the impediments involved in the DT journey at the case bank. Specifically, it examined how GTCO can best navigate the extreme challenges of transitioning digitally to its desired maturity target state.

1.17.1 Research Questions

The following research questions guided the study:

“How can Africa’s leading bank GTCO best navigate the challenges in their transformation journey to attain digital maturity?”.

1.17.2 Research Contributions

This research will allow GTCO (Guarantee Trust Holding Company PLC) to understand better DT's direct impact on its operations, including the overall strategy alignments that may be required. It developed a holistic and measurable set of actions and interventions to best aid in navigating the challenges of transformation, which will make up collective contributions of the findings to the DT body of knowledge. The study will be able to answer the why and how questions of dynamically transforming its operations and increasing overall performance by extensively deploying new digital technologies as a key driver and catalyst for transformation.

The findings and interventions will provide clarity and further insights for a successful digital transition. Interventions from the study will include a comprehensive theoretical and practical knowledge guideline on how the bank can best navigate the intricacies of disruptive DT change, one that filters across all functions of the organisation. The findings will also clarify the ability to formulate, alternate and execute its DT strategy. Overall, the bank will either be more optimistic, embrace the transformation process and overcome the hurdles of DT across the enterprise or face the inevitable consequences of inaction. The research findings may inform the bank to take a more pessimistic view of transforming and achieving digital maturity, considering its peculiar challenges in adapting to a digital organisation. Finally, there will be a clear and transparent road map for the bank to execute its transformation efforts on overcoming the DT challenges at the bank, enabling it to adjust its realistic expectations on a best-fit strategy and overall benefits realisation hopes for the DT process.

1.17.3 Structure of the Thesis

Chapter One examines the digital transformation phenomenon and its importance to traditional banks and the financial industry sector at large. It covers how DT impacts the rapidly changing banking industry landscape; it specifically reviews the struggles and significant threats posed by the fast-rising Fin-techs and attempts by traditional banks to transition to more digitally mature organisations. This section also reviews the study research context, the research gap identified and how the findings can contribute to the DT body of knowledge.

Chapter 2 investigates domain-specific conceptual frameworks on DT; it looks at specific literature on Change Management, Business Model Innovation, and Digital Disruption, as well as critical digital technologies, including the Platform Business Model concept, Artificial Intelligence, Machine Learning, Data Analytics; technologies aiding company-wide DT in the financial service sector. The section includes how the various theories reviewed can be used to investigate the case under review further, providing a specific navigation guide for the case analysis.

Chapter 3 describes the Case Research methodology and why the researcher selected this approach. This method of inquiry is the most popular for qualitative research studies (Yin,

2002). The section explains why the approach was chosen for the case under review and covers the details of the qualitative inquiry process, including interviews, questionnaires and observations made by the researcher. According to Harding (1986), qualitative methods are tools for collating research evidence as part of the inquiry process. A section includes the merits and demerits of case-based methods, the common pitfalls of the qualitative approach to providing validity of data collected, and the robustness of the CSR method adopted for the case review. Findings from the qualitative inquiry process aided the researcher in validating the theoretical literature reviewed.

Chapter 4 examines the research analysis of data gathered from the interviews, questionnaires and observations. This helped the researcher understand the challenges of digital transformation and how best to surmount the significant hurdles; findings from the data gathering process, including details of the data collation and review phases. Details of a triangulated method employed to verify, validate and review the authenticity and quality of the datasets were also covered in this section which led to specific pain points identified as critical challenges to DT, resulting from extensive coding to include a summation of order concepts, themes and aggregate dimensions for the various categories identified. Key findings aided the researcher in revalidating the theoretical literature reviewed. Datasets analysed were collated from engagement with the case organisation and external data on the company, including published CEO interviews and statements on the bank's current position on transformation.

Chapter 5 covers the research findings and looks at crucial action points developed from the analysis phase based on data collected from the CSR methodology, including a summation of the pain points faced by the bank as it transforms to a new target state. This section contains specific action points on how the case organisation can overcome the struggles to transition. There is a recommendation summary guide on the key challenges, a detailed framework developed by the researcher that covers the following identified areas for change within the case organisation; technology innovation, change management, digitalisation and organisation transformation that can act as a guide to the case bank executives as well as practitioners looking to undergo the DT process. This section also discusses transformation and how the case bank can leverage strategic alliances to achieve its transformation objectives.

Chapter 6 is a summation of the research study; it covers various areas of the thesis of the research method process as well as the analysis of datasets reviewed by the researcher. This section brings together the concluding arguments of the study, the limitations of this particular study, its conclusion on research areas covered by the researcher and sections open for future DT research. Finally, it includes a feedback section from various bank executives on the framework developed by the researcher as a tool to overcome the intricacies and struggles of digital transformation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Literature Review Landscape

Any research study requires literature associated with the case under investigation for extensive analysis that eventually informs the researcher on possible outcomes. This review process is carried out to understand better the case study (Saunders et al., 2016). As part of the literature review, a decision was taken on what subject areas the study would entail relating to Digital Transformation (DT) at the case organisation, which helped in setting the building blocks for the development of a relevant theory relating to the research topic (Webster & Watson, 2002). The review of relevant literature was particularly useful in consolidating the findings gathered from different sources during the study. It has helped synthesise the case findings in more detail and assist in discovering valuable insights on specific deficit areas requiring additional evaluation. Although it is argued that the conventional methods of presenting literature can be vague, with minimal accuracy and depth (Transfield et al., 2003), the approach effectively extracted the relevant theories required for the study.

A comprehensive literature search was conducted and reviewed in some detail to gain significant conceptual knowledge. It followed a process that included organising the review by collating categories with similar patterns and groups to avoid ambiguity and duplication. The primary literature section is divided into three main sub-sections: the introduction, the main body of reviewed literature, and the review's conclusion. The methods used in this review were narrowed down in scope to the subject matter under research (Saunders et al., 2016). The literature scope was narrowed down to very specific sub-sections. The primary literature areas covered extensively are depicted in the diagram below.

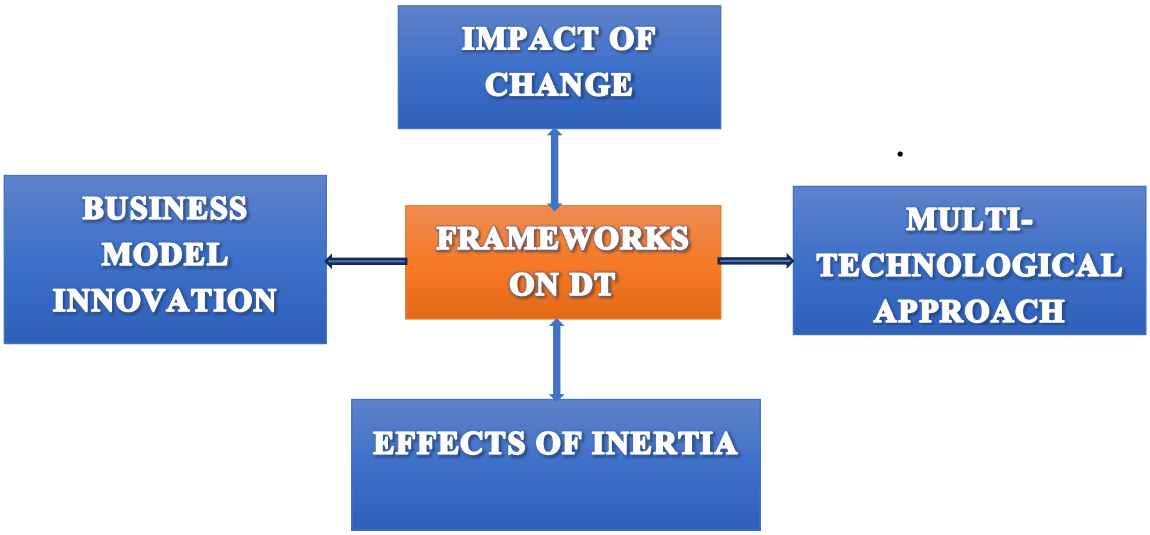

Fig. 2.1: Literature Review –Flow Diagram

Several databases and other online resources were referenced as part of the research. This step involved connecting and assessing the multiple research databases within the university and reviewing information from third-party databases and online academic articles. Searching for specific terms as part of the topic was difficult, which meant constantly refining the search criteria as more extensive search queries were conducted (Baumeister & Leary, 1997). Whilst the researcher reviewed the literature on the subject matter, there was also the concern of selecting theories out of bias or theories that did not explain DT in the level of detail required for this research. Accuracy of synthesis requires selecting and reviewing appropriate research materials. There was a conscious understanding during the literature review stage (Webster & Watson, 2002).

The digital environment impacts how fast banks respond to market forces in a highly competitive financial industry. Traditional banks are seeking how best to adopt the large-scale change required to transform their organisations. Some have started incremental changes, while others have gone aggressive, hoping they can quickly go through the DT process. The reality is that the change process is challenging and arduous for most regional banks in Africa. One of the major factors responsible for the arduous journey is the quality of digital infrastructure currently in most African regions. Most were built decades ago with minimal maintenance and were primarily designed for low voice and data traffic levels.

"Any successful DT ambition requires a robust digital infrastructure as a foundation for success. In Africa, undersea cables linking the North of Africa directly to the South have advanced the digital networks in the region, connecting the Africa Coast to Europe and other continents. These initiatives have significantly propelled digital banking in Africa, providing the enabling environment for digital platforms to move from a nascent state to one that is more vibrant for the banks like GTCO with subsidiaries across Africa (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019). "

The transformation effort at the case bank involves several factors the researcher will review in this study. But one critical component of DT is the need to manage the large-scale change process delicately to avoid a failed strategy. The researcher reviewed several change models as part of the investigative approach to managing change at GTCO.

2.1.1 Conceptual Frameworks

2.1.2 Theoretical Cornerstone

Several conceptual frameworks and tools were reviewed and presented in this study to help practitioners understand the challenges of DT from the perspective of how best to navigate the transformation journey.

2.1.3 The Kurt Lewin Model of Change

DT is all about enterprise change, and one of the earliest proponents of change is Lewin. His model, developed in 1947, focuses on planned methodological change processes illustrating change using forces –resisting forces as against positive forces for change. The Lewin model

concerns how general organisational change can be managed. It also emphasises how leadership initiatives are significant when conducting effective complex organisational changes. Kurt Lewin was seen as a pioneer in social psychology, creating methods from action research for resolving change management issues organisations face. His tireless study informed the decision to develop two popular models: Lewin's Force Field Analysis and Lewin's Change Management Model.

2.2.4 Motivation and Driving Forces for Change

According to Lewin, in his 3-stage model, change occurs in three very distinct stages, which should be planned for before the change occurs. Motivation for change is critical for any transforming organisation and should be factored in as an incentive before embarking on the change programme (Mindtools, 2017). It means there should be a good understanding of the reasons for change before undergoing the transformation process. Although it might appear evident about the case under review, ensuring all employees at the organisation understand why they should move to digitally transformed state matters. They should know that they are not just doing it because of the latest technology; they may be doing it for survival in a new digital era with stiff competition emerging from various quarters. So, communicating this across all levels is essential to enact positive change (Furst & Cable, 2008).

Lewin's model emphasises that the driving forces of change, including the above reason, should be the driving force and must outweigh the resisting forces working against the transformational change initiatives. Although some people would always criticise the organisation embarking on such a journey, some lack the vision or are oblivious to the threats from other incumbents, including the FinTech companies playing in the same space. However, some scholars emphasise the changing market environment and the threat change brings to the banking sector:

"New entrant fin-techs, namely digital-only banks and lending platforms of various sizes, emerged as part of the new wave of creative forces shaping various African industries. While this is an exciting opportunity for Africa, there are legitimate fears that the high number of new entrants may lead to congestion, negative growth, and decline. The new entrant fin-techs have gained traction, equipped with 'attackers' advantage', which enables them to resort to various means to 'creatively destroy' the incumbents -while many of the incumbents are dealing with varying levels of inflexibility (organisational, managerial, and strategic)" (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

Managing the threats from the Fintechs, change from employees reacting to change, or how customers receive the new change in banking relationships requires a robust change strategy to ensure the resisting forces above do not cause a significant problem for traditional banks.

According to Lewin's model, the resisting forces will always exist in any change programme. However, the model emphasises that the driving force for any transformational change can be overwhelming for positive change to occur. The model also emphasises that the message of transformation should be communicated across the entire organisation to oppose the resisting

forces across all levels. The Lewin model provides the tools for the leadership of a change organisation to apply in explicitly addressing the transformation process of change. These principles aid the planning and implementation stages in some detail (Cameron & Green, 2015).

Although the DT journey is often long-term, executives driving the change can create a sense of stability with the changes carried out as they go through the process (Porras & Robertson, 1992). It reduces employees falling into any transition bubbles that can derail the program. According to Lewin, the refreezing process will allow employees to internalise the various change initiatives. It will also help the organisation to institutionalise the changes implemented rapidly to enable staff and customers to accept the changes and see the new state as expected. It will include ensuring the use of the new transformation processes, structures and technologies deployed with training provided to ensure employees stay calm, develop cold feet and then start looking to revert to the status quo.

2.1.5 Change - Value Realization

One of the benefits of Lewin's Change Model is its claim that planned change leads to a successful change process and that several variables are involved in the equation to trigger transformational change. The model emphasises that planned change will have an overwhelming value impact on any transforming organisation, causing it to move from its comfort zone of the status quo to the new target state. Lewin argues that this will lead to a strategy enabling the change transition to move much faster across the enterprise, engendering minimal resistance from the resisting forces opposing change across the organisation. However, it is essential to note that age, size and, more importantly, employee openness to the change process also play a significant role in achieving successful change and gaining value (Lines et al., 2015).

2.1.6 Perspective on the Lewin Model

The key areas of interest in the model include how any firm affects change across the organisation, the required communication and knowledge sharing from the leadership, and how this is disseminated to all levels of the organisation (Burke, 2008). It also includes the change impacts on employees and customers transitioning to a new way of working and receiving products and services. Part of these impacts are new changes to people, process, structure, culture and technology, as well as the leadership changes required from executives and how their method of leading the change process across the organisation affects the organisation in general (Malik & Masood, 2015).

As an organisation embarks on the DT journey, it is crucial to realise the ramifications of such large-scale changes required. These large and complex changes describe the organisation's transition from the current state to the target state. Since the future state is relatively uncertain, despite grand plans to transform digitally, there will be great concern from any organisation's leadership and employees' trepidation as to whether the target state can be successfully realised and if the effective huddles in the transformation process can be overcome. These facts

collectively form the resistance that can be a force against a successful deployment (Cummings & Worley, 2003).

The first phase of the 3-step model will be a giant huddle to overcome for any transforming organisation in terms of changing the existing working norms and operations and convincing all employees and stakeholders that the change project is imperative (Burnes & Bargal, 2017). It is more of a challenge when the employees do not see tangible benefits and performance increases whilst still undergoing the journey. Furthermore, it is even more of a problem when only the executives embrace the programme and push for change despite little or no early wins or gains.

2.1.7 Friction with Employees on Change

According to Lewin, employee resistance can be reduced or eliminated if the executives take on a solid leadership position and communicate the new change process. Existing staff resistance can be reduced through deliberate efforts of change. In Lewin's opinion, this will reduce the resisting forces of staying with the current state of operations at the organisation (Peng et al., 2020). The Lewin model emphasises that employees should be set on a new course immediately after the old norms, structures and processes are removed and maintain a good momentum away from the previous ways of working (Randall et al., 2018). Therefore, previous strategies, rules of engagement with customers, structures and technological processes in the status quo should be discarded entirely. However, it may be more challenging than it appears and will require tangible commitments from the organisation's leadership.

Frequently, failure in moving to the new state also comes from senior management's need to discard the old and move entirely to a new working method. According to Lewin, the lack of clear program vision or strategy and regular communication with all stakeholders also plays a crucial role in success; most employees who are unable to break away from the old and move to the new direction may leave the organisation at this stage, as they get stuck in limbo, trying to change but unable to do so. With new structures and processes in place, formalisation is also required at this stage to avoid regression of the change (Jabri, 2017), which will help eliminate all fears and uncertainties associated with the planned change phase.

In summary, the practical use of all components of the Lewin models with the case bank can present obstacles driving the change programme. According to Lewin, setting specific and actionable goals is essential to give all employees a clear direction and barometer on where they are in the change journey. But in reality, this may be challenging to achieve with a large bank the size of GTCO. Lewin emphasises that new employees can be introduced as the changes gain momentum and ensure they participate in the contemporary cultural values of the organisation, but taking on new staff and putting them in the driving seat of new change initiatives can potentially be dangerous; they are still trying to understand the new environment and may find it overwhelming also to take on the pressures from the new operation. The researcher agrees with Lewin on the need for leadership to drive change from the top down. Still, they must fully understand the organisation’s critical operations, people, processes and structure challenges. They will also need to understand the strategic limitations in the business

and operating model of the bank, including how to best align this with the new target operating model the bank decides to employ (Hussain, 2018).

2.3 Kubler-Ross Change Curve

The Kubler-Ross model takes a different view to change management. It elaborates more on the various stages of change, as seen below.

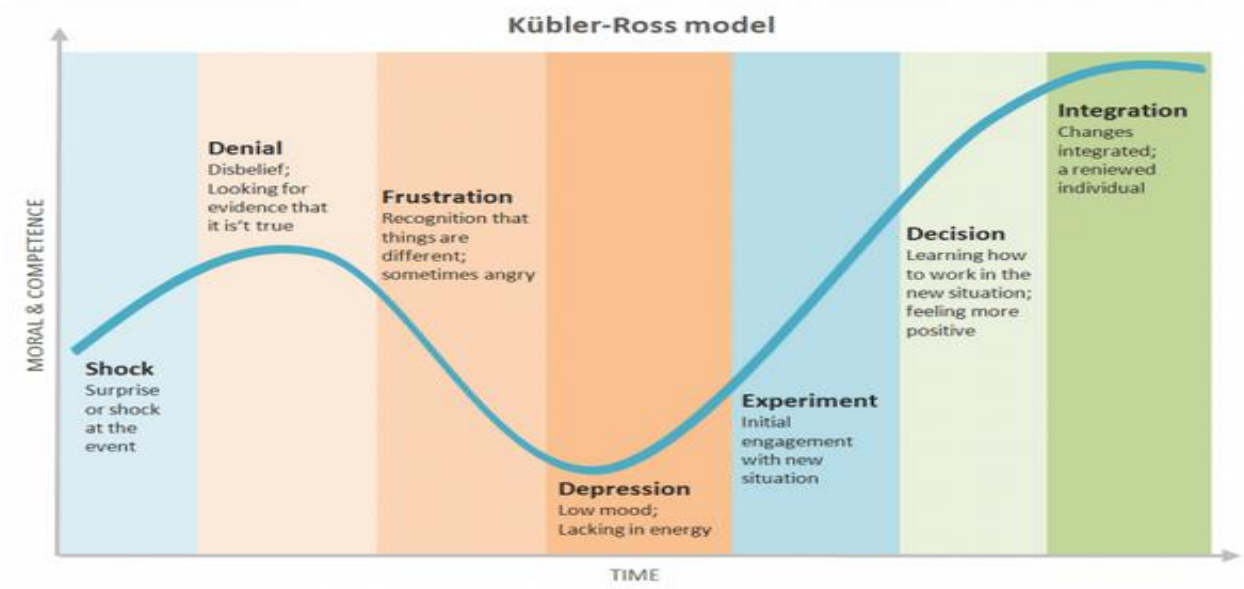

Fig. 2.2: Kubler-Ross change curve (Cleverism, 2015)

According to Kubler-Ross in the diagram above, applying the change model to any transformation programme may start as a complete shock, followed by denial of the new target state. The impact of the transformative change will likely result in denial and defensiveness as the firm struggles through the change process. The Kubler-Ross change curve confirms this as a temporary feeling that will wear off, although some staff may remain in this shock for extended periods. It is where management should understand the change pains that teams will most likely undergo and then develop strategies to cope with the feelings of shock, anger and the blame game as they resist transformation change. One of the keys to overcoming this stage of change is regular communication between executives and senior managers (Cleverism, 2015).

There is often more receptivity for change if the tangible value of transformation and how the firm can benefit from it can be proved to all stakeholders. It may lead to more acceptance rather than resistance to the change efforts. Capacity building and regular training for people are critical to reaffirming the benefits of any new change and how it can fit into the new working method. It can lead to demotivation, but with sensitisation and regular hand-holding, inertia and resistance will be overcome, leading to acceptance of the transition to the new state (Helpap, 2016).

The Kubler-Ross Model details the stage of accepting change, a bonus when people realise that change is here to stay and that resisting it will be counter-productive. However, the levels in the Kubler-Ross Model may not automatically result in the acceptance of complete transformation change. Other variables that will inform the decision to accept or resist change may not be covered. For example, not all staff learn fast, mainly when using new technology platforms and processes. Some groups of people who could be more tech-savvy may still oppose the transition despite all the training provided. Unfortunately, this can still lead to inertia, cold feet, and further resistance.

2.4 John Fisher Change Curve

The John-Fisher Change Curve is another classical model that can be applied to the transformation process at the case bank. In this approach, it is understood that people go through multiple change processes, including emotional stages, from anxiety to fear, guilt, sadness and, ultimately, acceptance. The process of transition below illustrates the John-Fisher Curve.

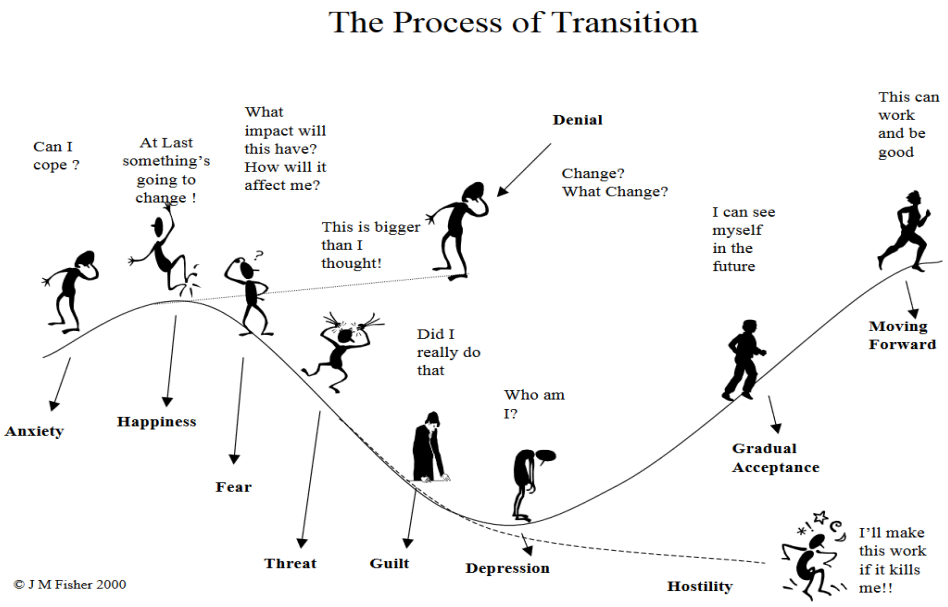

Fig. 2.3: John Fisher's Process of Transition

In general terms, change is envisaged as either continuous or discontinuous. The former is seen as continually improving processes, structures and systems. The latter is a significant change impacting central, if not all, parts of an organisation, including those involved in the change process (Vukotich, 2011). The transformation change process at the case bank will ultimately fall under the discontinuous change types, including an inflexion point. The John Fisher model explains the psychological components of change in some detail; This can be helpful for any transforming organisation to fully understand what employees and customers may be going through as they transition to a new, transformed organisation.

2.5 Other Approaches to Organizational Change

According to Cameron and Green (2015), the change process is metaphoric. Specific metaphors are relevant in changing to a new stage, including the machine, organism and transformation components of change. The machine metaphor looks at companies with established processes and components, which require clear direction for functioning effectively. Organisations undergoing DT changes are typical examples of machine organisations. The downside of such organisations is that they are only effective in stable situations (Cameron and Green 2015).

Also, firms seen as political systems emphasise the importance of understanding where power rests in the organisation and adjusting accordingly to gain support for any change programme. It can lead to developing strategies that can be seen as complicated with the power play in the middle. It presents a potential challenge of conflicts internally. Organisations categorised as organisms work well when social needs for specific individuals and organisations are satisfied, with the company designed to meet those particular needs. However, on the other side of this approach, it includes that organisations are shaped to fit environmental needs. Therefore, all factors should be considered before a significant change decision, and the process should be designed to accommodate environmental changes.

The flux-type of organisations and transformation metaphor organisations indicate that structure naturally appears from challenges that arise and that the change process cannot be fully managed independently. These approaches can be helpful for the case under review to act as mediums to interact and share views and to narrowly focus on the significant issues that arise in the change process. In an uncertain world of change, one where impact is felt across every sphere of the organisation, this metaphor may hold, but it should also lead to some specific action plans for a change road map, which it seems to lack (Cameron & Green, 2015). In bringing about tremendous transformation changes like a DT programme that will last for a long time, it is vital that leadership fully understands the change process, including environmental actors, before embarking on the journey.

Fig. 2.4: The Machine Metaphor

2.5 The Kotter Model

The Kotter model addresses some aspects of the perceived resistance relating to transformative change processes. These include creating the needed climate for change, addressing communication issues and understanding the challenges and steps emanating when transitioning. This approach can be practical, as it supports the initial energy to change. However, it needs more punch to go through the complete transition of DT change, owing to the long time needed to complete the journey from increased urgency to making the change process stick (Cameron & Green, 2015).

However, the relatively simple 3-step Lewin Model of unfreezing, moving and then re-freezing better addresses the driving change forces needed to overcome the significant resistance to change. The Kotter model may be suitable for understanding and analysing the fundamental forces behind opposition to the DT change programme. It can also help operational managers responsible for various aspects of the transition for planning purposes, particularly when planning the various change implementations in their respective domains. Otherwise, if the model is used as the only model of change, stress levels may rise dramatically, creating more chaos in the process (Blom, 2018).

2.5.1 Sense of Urgency to Transform

The Kotter Model looks at DT change differently and requires management to establish change with a sense of urgency (Brocker et al., 2004), which other models need to emphasise in detail. However, Kotter states that at least 75% of senior management should buy into the change to gain success. Having more executives, particularly the chief executive and board members, buy into the DT journey, and the tremendous value it brings is significant for success to be recorded, especially amongst employees to get their full support (Du et al., 2020). Establishing

the DT change with a high level of urgency can go a long way in achieving lasting change across the organisation.

The model also addresses complacency's adverse effects after a round of change; see Fig 2.5 below. Although significant changes are required to transform digitally, these will most likely be recorded in specific milestones. Kotter's model highlights the importance of management staying within the point of complacency with the small or incremental changes achieved through the various transformation initiatives. It further stresses that the leadership powering the changes should remain focused and consistent until the journey is completed. Otherwise, they may become oblivious to the current battles and reduce that initial sense of urgency by focusing on the small wins, which can lead to the programme's failure (Akhtar, 2016).

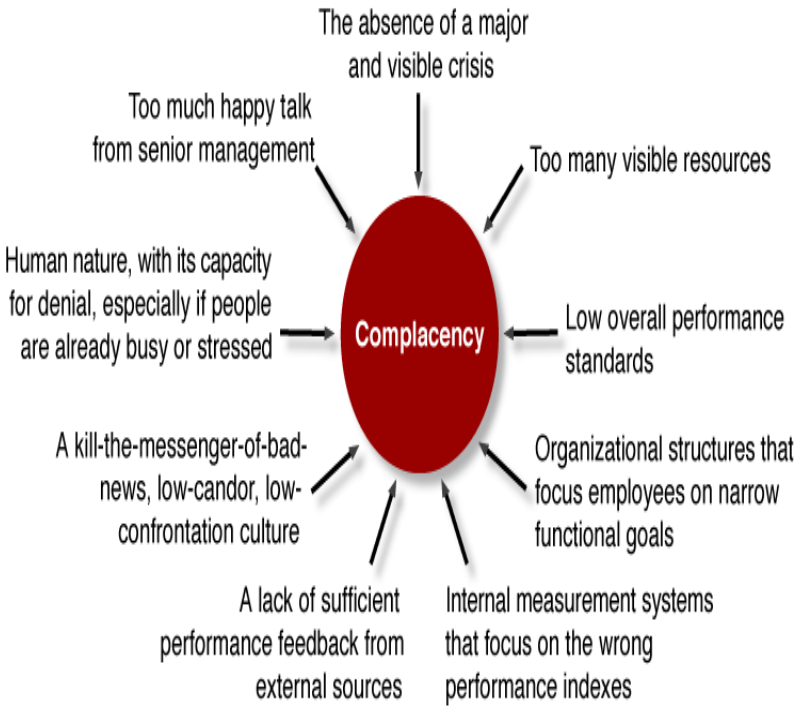

Fig. 2.5: Kotter's Model –Sense of Urgency

Concerning an organisation undergoing DT, new roles will fit into the change programme for the various teams. To get that sense of urgency in place at the case bank, certain management decisions that will make the staff uncomfortable to realise that the change should happen are required. It is a delicate part of the Kotter change model and can lead to failure if managed poorly. Many managers may want to avoid stepping the boat and taking certain change decisions that will backfire. They may rather hide behind the status quo. Nevertheless, the urgency of change may still need to be realised, which can lead to failure (Abbas, 2021).

2.5.2 Employee Empowerment

According to Kotter, it is crucial that employees feel empowered to carry out their new functions during the successful implementation of any change effort. Four key areas are usually barriers to change: people, processes, structures, skills and systems factors.

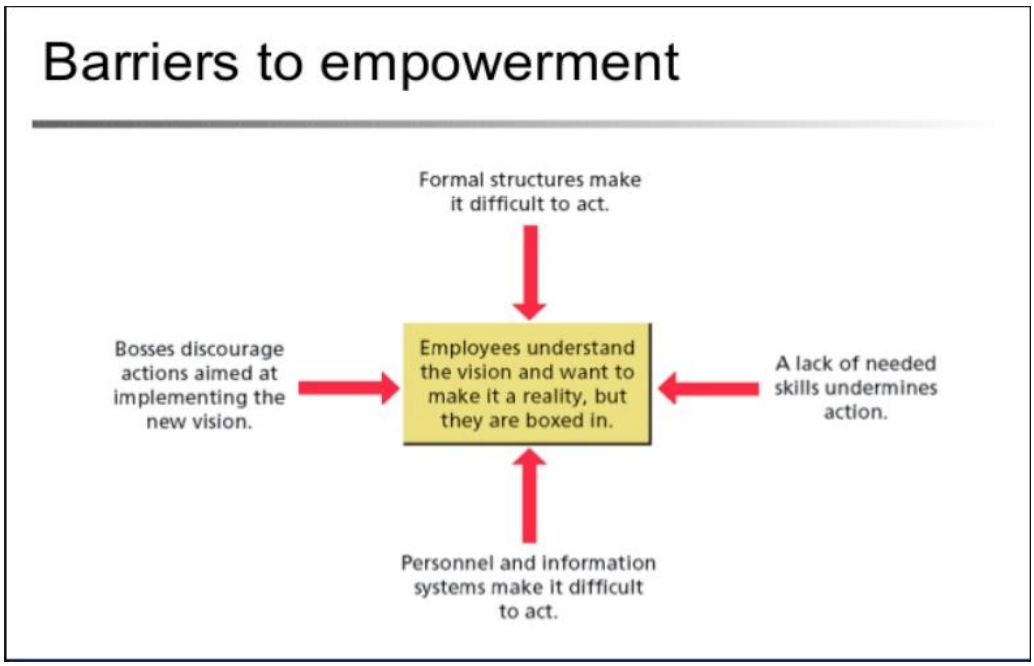

Fig. 2.6: Barriers to Empowerment (Kotter, 2012)

According to Kotter, rapid gains in a transformation change programme can soon be devoid of complete structural limitations, or significant barriers can present themselves, linked to organisational and resource structures or complicated processes existing within the organisation. In overcoming these barriers, it is essential to review a key impediment: the skill adequacy required to drive change. Without the right skills, including technical skills, obstacles can lead to the programme's failure (Ambrosini & Bowman, 2001); this often requires some capacity building for staff.

2.5.3 Clayton Christensen -Disruptive Change

One advantage of FinTech companies in making faster progress than the large traditional organisations regarding disruption is that they often start small and focus on relatively small niches. According to Christensen, these areas of focus may seem non-threatening to traditional banks' transformation. Starting small allows the Fintechs to grow gradually while the slower traditional banks focus on the big-ticket projects to earn significant revenue. However, when the larger established firms realise the danger, they need more time to change radically. Christensen argues that what causes rigidity in large banks is a deep-rooted business culture, the inability to make swift changes, and the organisation's values. Leading large-scale organisational change requires significant financial strength, resource capability and large-scale DT programmes involving many employees. Some of the limitations suffered by such

large entities include the fact they have extensive structured and rigid processes, firm culture rooted in their tradition built over the years, and a fixed set of unmovable values that are often misaligned with the new digital era in which they operate.

The three factors, built over decades, are challenging to alter, particularly for top-down structured organisations seeking to undergo transformative change. Their business model, which defines how value has been created and successfully captured over several years, which shot them to stardom, can be a significant challenge to redefine and chart a course towards a completely new trajectory. Christensen suggests setting up parallel business models to serve the traditional status quo and another business to capture value using the digital platform business models to serve the new promising market segment. He believes it is almost impossible to continue sustaining current business operations and disrupting the organisation simultaneously. Consequently, stalling DT for too long will mean organisations lose market share to competitors and forcing a new parallel business to grow too fast to the size of the traditional business is arduous at best and can lead to failure. It is a dilemma most traditional companies contemplating DT are currently facing.

"The legitimacy challenge is confounding since digital models are characterised by low entry barriers and rapid disruptive innovations. While new entrants are known to benefit from their smallness in triggering gales of 'creative destruction' on their way to market dominance, incumbents can adapt if they deploy a relevant strategic posture by reorganising" (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

The above points to the fact that despite a watertight business strategy employed by the incumbent banks, there is still a high risk posed by the Fintechs flooding the financial space, all fighting for market share. However, with successful transformation, the incumbents can reposition to become successful.

"With an appropriate strategic posture, incumbent banks could engage in the 'creative reconstruction' of their digital spaces, thus avoiding the associated 'incumbent's curse' (Zook and Graham 2007). The already existing vast network of resources available to incumbent banks confers a valuable advantage when facing threats of technological change (Mitchell and Singh 1991)" (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

Despite the vantage point for the incumbent, which includes the vast resources, brand name, experience built over decades and the branch assets they own, they may still suffer from the "incumbent curse' as indicated above. Unfortunately, their vast size can impede transformation, thus requiring them to adopt a more flexible and agile business model.

The *Innovation Dilemma,* a book by Christensen, provides a framework to prevent organisations from stumbling on their major transformation change programme. The book attempts to answer questions on why transformation can fail in an attempt to execute disruptive change across the organisation. Christensen argues that the traditional business methods of closely marking the competitor, building new technological platforms and engaging and acting

on customer need that worked in the old business model can directly impede progression to a new disruptive business model that can drive innovative transformation.

According to Christensen, the Innovator's Dilemma is when the leadership of an organisation decides to transition to disruptive technologies within the markets where they operate. As the organisation steadily grows, engaging with disruptive technologies like DT becomes more challenging due to fear of change and the impact of change on shareholders' Return on Investment (ROI). He confirms that executives should also understand which technology is critical as they undergo the journey of DT and, more importantly, when they should make that transition call. Based on Christensen's assumptions, any successful company with established products and services in the market they lead would eventually get overtaken unless the executives realised that they should move away from the traditional business model that pushed them to stardom.

In his model, Christensen lists influencing factors that lead to large firms struggling with disruptive innovations like DT at the case bank, and this includes the fact that large organisations are heavily dependent on their customers and investors. It restricts them from entering an emerging and potentially risky market, changing the status quo with operations in the volatile emerging market where they operate. It is only when their investors and customers agree to technological change that it can happen. Besides, executives will need to convince them of the need to invest heavily in projects such as DT. Any large-scale project will be approved with the buy-in from the board, customers and investors, and this process takes significant time and effort.

Furthermore, since disruptive technologies, like DT, are higher risk and will require longer-term investments, board-level decision-makers in large organisations may oppose the idea. Projects like DT in a sizeable financial service firm may never match market demand due to the ever-growing need for digital banking services. Therefore, as large banks rely heavily on market demand, some may be interested in something other than disruptive technologies like DT. However, Christensen re-affirms the importance of first mover advantage when leading disruption and technological change; it is critical to be a first mover in a traditional banking environment to implement DT. Transforming organisations should be the first mover in their market to win in the transformation programme. Although, he also warns that being first will have minimal impact if the bank is looking to offer products and services with a new platform business model in the existing market territories where they operate; he argues they will only make an impact in a new market.

The above implies that transforming organisations will be disruptive, and they should only go ahead with DT if they have strategic plans to move into new competitive markets. Christensen confirms the first mover advantage phenomenon with a study that provided concrete evidence when operating within disruptive markets. The companies that embraced disruption by offering new products and services had a cumulative total revenue of 62 billion dollars between 1976 and 1994. The companies that followed in the same market (second movers) only made an

average of 3.3 billion dollars in total revenue. The average company that led in offering new products and services with disruptive technology generated 1.9 billion dollars in revenues.

2.5.4 First Mover Vantage Point

Any company looking to lead in DT should aim to exploit the first-mover advantage. From the researcher's engagement with the case organisation and other banks, this is one of the reasons why traditional firms are looking to lead by embracing the reality of DT. In reality, organisations adopting DT are looking to usher in new and current markets where FinTech companies compete for market share. In this case, the Christensen model may be more effective and prove true in analysing organisations going through disruption in both existing and new markets.

According to Christensen, successful disruptive technologies can be achieved by organisations creating charts illustrating performance improvement demanded in the market they either operate in or where they are looking to operate. It should be plotted against performance improvement derived from DT. More importantly, executives will need to ask whether DT provides an opportunity for substantial, profitable growth, so many companies rush to deploy the best technologies with no proven path to growth. Therefore, as indicated on the balanced scorecard diagram below, companies contemplating the transformation journey should consider if the trajectories on the graph below are in parallel. If they are, then it is unlikely that DT would work and successfully integrate into the mainstream market where transforming firms operate.

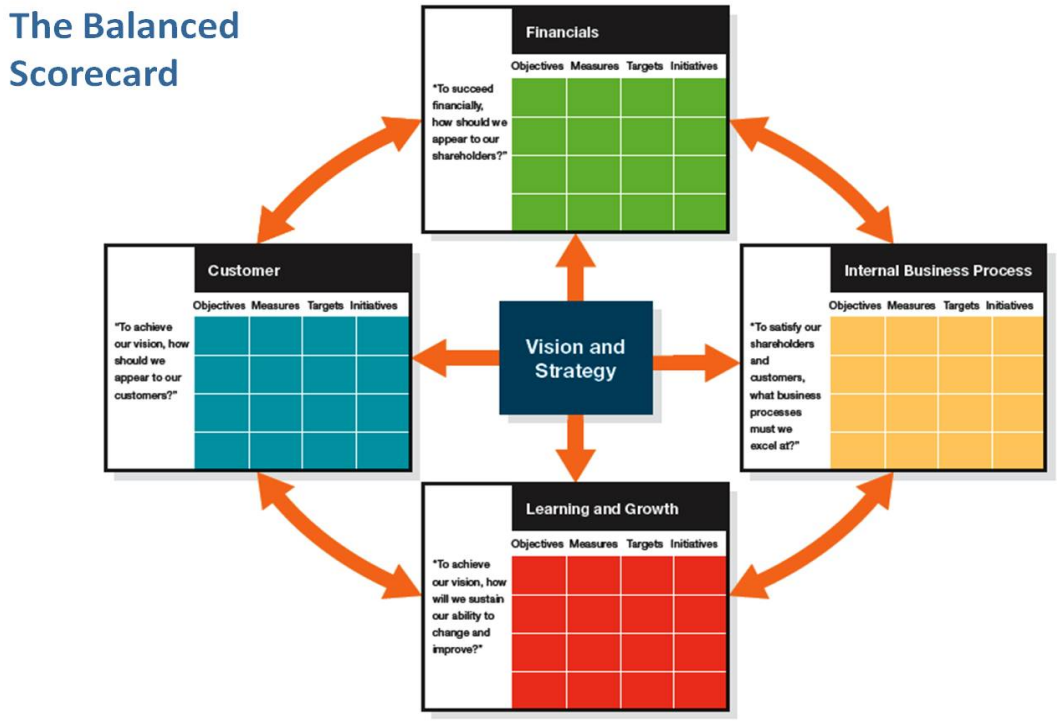

Fig. 2.7: Balance Scorecard for Performance Improvement

On the contrary, if the DT progresses faster than the pace of improvement demanded by the market, organisations might have a successful disruptive technology. It is worth mentioning that more than a company doing the right things, including under-going DT, is needed to maintain the market leadership enjoyed by transforming organisations. As illustrated in the digital vortex, competitors can emerge overnight and take over the market; this seems to be happening with the Fintechs gradually gaining market share from the incumbent banks. Christensen suggests that the incumbents can identify disruptive technologies that will offer fantastic value in emerging markets, in this case, DT and then embark on the journey.

In summary, Christensen's model affirms that any organisation going through significant technological change can be successfully disruptive if the organisation continues the momentum and trajectory of rapid change that impacts the market demand. The model suggests that transformational changes in any organisation can fail, not because of a lack of resources but for several other important reasons. Enterprises often do most large-scale DT projects with significant resources, but having resources does not protect against failure. Failure can occur for many reasons unrelated and complex causes. An example is when traditional and status quo processes and values become obstacles when developing small marginal gains, this can inevitably lead to failure.

2.6 Change Management –General Perspective

Brightman (2001) defines change management as continually renewing an organisation's direction, structure and capabilities to serve customers' changing requirements. Organisation change transformation impacts all facets of an enterprise, not limited to specific systems. However, radical change in the financial industry sector is inevitable if traditional organisations are to survive the onslaught from the digital Fintechs gaining momentum and accessing their market share (Alvesson & Sveningsson, 2008). The researcher's review of the various change models is meant to assist the leadership and managers of the case organisation on how best to navigate frictional resistance to the transformation change programme. The review is also an attempt to assist in monitoring, reviewing and planning all changes required to ensure the transformation programme succeeds. This includes changes in response to market forces and technology deployed to better service customers in this modern digital age (van Ossten, 2006).

According to Gleick (1987), enterprise changes may often need to be structured. They can be chaotic because many change variables evolve concurrently in any enterprise's internal and external environments (Dunham, 2002). This creates a mix of contending forces to the exact large-scale change. The effect is the inability to predict and control the transformation changes. Contrary to Glieck's views on change, several studies showed varying classes of change events within organisations. It is essential to reflect on large-scale change to establish causal factors for change across the enterprise. There should also be legitimate reasons, including financial and regulatory factors, necessitating change; focusing only on secondary aspects can fail (Alnoor et al., 2021).

Pierce and Gardners (2002) give two types of distinct enterprise changes, name reactive and proactive changes. The former occurs when forces internal or external to the change

organisation trigger change. Both will be effective in transitioning from one state to a target state. Any organisation going through change owing to internal pressures will fall under the reactive category. In contrast, proactive change occurs when the transformation is seen as a pleasant and desirable change to implement, possibly to gain shareholder confidence (Peters and Waterman, 1982). In the researcher's view, most DT changes in large financial organisations result from reactive change, which requires urgent reactive efforts to lead transformations to address pressing internal and external challenges.

2.6.1 Employee Role in the Change Process

Equally crucial to defining types of change is the acceptance of change and how internal stakeholders react to change (Li et al., 2021). This is seen as a critical factor for successful change about organisation transformational change. An element often overlooked by stakeholders is managing employee participation in the change programme. Employee openness is essential, but generally, employee participation is critical in the execution of any change, as it seeks to create inclusion for them in the decision-making process to move to a new target state (van Fleet, 1995). It also helps the organisation to achieve better performance and overall employee satisfaction with the change process (Leary-Kelly, 1995).

It is important to note that employees also play a significant role in resisting organisational change. When employees resist change, it is easier to enact lasting change across a large organisation. Good leadership can help increase employee interest in enacting change (Khaw et al., 2021). To overcome resistance to complex organisational change, significant employee participation is required in building a robust change strategy which can aid in withstanding the resisting forces of large-scale and complex change (Vroom & Yetton, 1973). With employee inclusion in the change programme, various ideas can be generated and analysed, leading to more effective change implementation methods. This will most likely increase employee participation and commitment to the process and build the required motivation for employees to engage in the process of transformational change; this will most likely lead to a successful transition (Cummings & Molloy, 1977).

2.6.2 Impact of Leadership on Change Management

Transformational change can only be achieved with good leadership to support the engagement process, leading to better adaptation. According to Pierce et al. (2002), employee participation is vital to bring about lasting change, but the organisation's leadership should address issues regarding employee value and input to the change process. There is a need for leadership also to educate all employees, provide incentives for employees and, more importantly, support them through the journey of change. During the process of change, the management must demonstrate transparency and build trust with employees in the change process (Morgan and Zeffane, 2003). This will allow for greater employee involvement, providing them the environment to share their individual opinions on the changes to be implemented. Demonstrating good leadership aids in achieving successful change goals and gaining commitment from employees for the various change activities (Higgins, Judge, & Ferris, 2003). This can create acceptance of the change (Oreg, 2006). It also creates a good feeling among employees towards the transition to make it long-lasting and sustainable (First & Cable, 2008).

In addition, employee engagement will be more effective if they have full support from the organisation's leadership (Mathieu, Gilson, & Rubby, 2006). Therefore, the role of leadership is critical to transformative change. Northouse (2004) defines leadership as a method by which employees are influenced positively towards a particular direction for beneficial outcomes to achieve specific objectives. Leadership about change often focuses on the following variables: articulating a vision or strategy for change, motivating employees in the direction of change, building support or coalition for change, and keeping the momentum going through the transformation journey (Cummings and Worley, 2003).

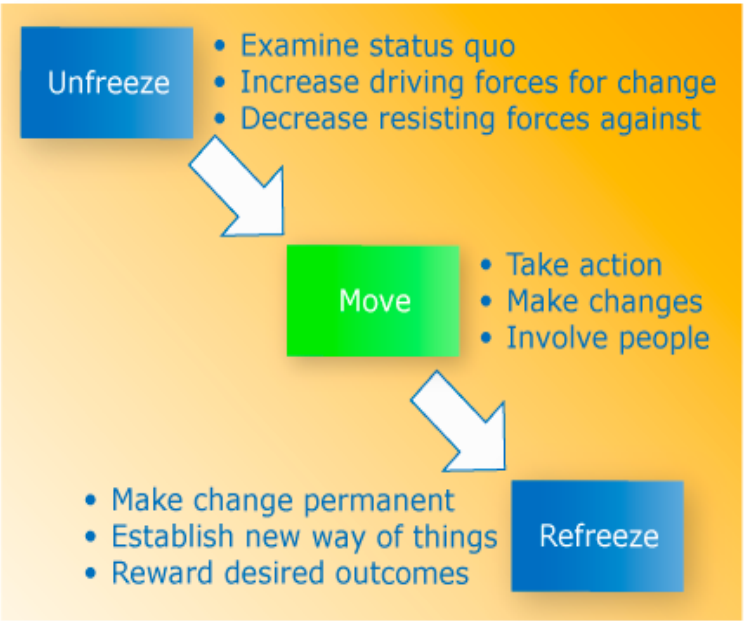

Fig. 2.8: Lewin Change Model (1947)

Relating this to Lewin's change model, developing a change strategy and motivating employees to move away from the status quo falls into the unfreeze category. Conversely, extending support for the change, managing the transition to the target state, and keeping the momentum going fall into the organisation's category of refreezing. The above freeze and unfreeze processes are relevant to achieving success. However, this contradicts Topolnytsky's (2005) view that two critical factors are the most important in any change: overcoming employee resistance and transparency and openness to change. He stresses that resistance to change often leads to adverse outcomes that can lead to failure.

Leadership in any organisation should build solid coalition and support for the company-wide change programme and motivate the various managers executing organisation change in their respective domains to overcome obstacles to change. Leaders should also understand other behavioural actions (Malik & Masood, 2015). Recognising the traction of change and charting the strategic direction for future change is also a critical variable. Research indicates several types of leadership that can impact the change process. The transactional leadership type is where an organisation can find intrinsic rewards for employees participating in the change programme to get their support and buy-in to achieve performance. This method of leadership

is popular in Africa, where the case bank is headquartered. At the same time, non-performing employees are also held accountable for their inactions or resistance to change. Bass (1985) describes transformational leaders as charismatic and intellectual; this type of leadership identifies the key stakeholders driving organisational change early.

As indicated previously, senior management involvement is seen as sacrosanct in any significant change; it is at the top of this list. Management support for any digital initiative, including complete transformation, is critical for the transition to succeed and for avoiding the risk of employee resistance, thus leading to failure (Abbas et al., 2021). The leadership communicating the changes effectively to stakeholders is also essential to form alliances and getting buy-in. The leadership should recognise and find incentives for the various senior and middle management teams driving the change initiatives. Considering these leaders are responsible for driving the changes to the different parts of the organisation, they will be responsible for effecting the change in departmental units, including new processes, structures and even a new culture. Their unwavering support is critical to a successful change programme (Alnoor et al., 2021). It is also clear that leadership style and staff engagement in the change process have some commonalities; the synergy encourages a positive direction for change in any enterprise. The transformational leadership style has been one of the essential success criteria for change; there is also a commonality between types of leadership and motivational factors for staff going through change (C. Caldwell et al., 2014). A good understanding of this correlation will further aid a successful transition.

On the contrary, Burnes (2004) views organisational change as a feature of normal organisation activities; and believes it impacts any organisation's strategies and operations. However, Leadership styles play a critical role in evolution, and the transformational leadership style tends to affect the organisational change process. With this leadership style, the leadership of any organisation changing will most likely engage with employees at all levels and share information and their knowledge whilst giving them the motivation and opportunity to make change decisions across all levels of the organisation (Laura & Stephen, 2002).

2.6.3 Role of Knowledge in Change

One of the catalysts of successful change includes knowledge sharing by employees across all levels of the organisation (McDermott & Snyder, 2002). The dissemination of knowledge across the various management levels of the organisation plays a critical role in change management (Hakanson, 1993; Foss & Pedersen, 2002). Such knowledge often includes, as part of DT, new technological infrastructure to be built, a new business and operating model to be adopted, new work methods, new processes, and a different organisational structure to be adopted after an organisation moves to the new target state (Cummings & Worley, 2003). Snyder et al. (2002), part of that knowledge sharing is a principal part of employee involvement in the change organisation.

Regarding employee involvement, it is known that competition is usually reduced when employees are well-equipped with information on products and services offered by the change organisation. The limitations of the competitor services are well understood when engaging

with curious customers on product differentiation. Therefore, an organisation should lean on capacity building for employees as it undergoes the change transition. This capacity-building process can help organisations create a dynamic enterprise (Foss & Pedersen, 2002). Management teams should also lean on knowledge sharing by employees through training to include skills, experiences with operations and passing on competencies to other employees to achieve competitive advantage as they move to a new target state (Ambrosini & Bowman, 2001).

Bordia et al. (2006) assert that organisational knowledge sharing within a company is firmly rooted in organisational behaviour. Knowledge sharing encompasses the individual, team and enterprise levels, but it starts at the employee level and organically spreads to teams and staff across the enterprise level (Bock & Kim, 2002). The collective term for the organisation-sharing process is knowledge sharing (Lin, 2007). When employees contribute to the change process, various types of knowledge generate a particular value for the organisation (Wenger, 1999). It includes the consolidated knowledge of products, processes, competitive landscapes and customer knowledge. This collection of knowledge is seen as explicit, which can be easily transferred as information in varying forms across the enterprise.

There is also what is referred to as tacit knowledge that stays internally with employees (Polanyi, 1995). In Lewin's change model, this knowledge type is called "codified knowledge". In other words, it is not tacit knowledge that employees can use to carry out their job function; it is difficult to pass on from employee to employee (Foss & Pedersen, 2002). When coded, knowledge can be transferred from one employee to another. However, tacit knowledge is often in employees' memory and needs to be more easily transferable (Polanyi, 1995).

2.6.4 Team and Group Impact

Theoretically, there are several ways of effecting transformational change impacting the entire organisation; these include working with change champions or influencers in achieving high-quality change (Vroom & Yetton, 1973). These influencers may not necessarily be senior executives; they can be lower-level managers with strong influencing capabilities. Another way of effecting change is taking the informal route by bypassing the formal processes, structures and procedures to achieve the required motivation and influence. It is the least effective way, particularly when driving significant organisational changes. According to (Beckhard and Harris, 1987), the commitment planning phase should create clusters of individuals and groups whose roles and commitments are explicitly clear within the change programme to gain support for every aspect of change. Furthermore, part of change management for teams and groups should also identify structures for managing change and overcoming challenges or risk factors that can affect the process. It will include the resources and materials for promoting change, competencies and particularly technological skills to help drive change (Beckhard & Harris, 1987).

2.6.5 Change Dynamics and Variables

Enterprises going through large-scale transition engage varying change management models to move to the new target operating model. Many of the change models reviewed indicated that

dominant leadership, significant employee engagement, effective communication and knowledge dissemination across all levels of the organisation play a critical role in enabling a successful change process (Mathieu, Gilson, & Rubby, 2006). Executives should navigate the challenges that can present themselves through employees resisting the digital changes across the organisation (Tourish & DiFonzo, 2004). Information sharing from the top echelon of the organisation right down to the operational level is critical. It serves as a significant catalyst for unfreezing change, as Lewin's (1947) change model indicates. Immersing employees in the plans for change makes all the difference in driving acceptance to reduce resisting change forces. This aspect of the change phase can help move any transiting organisation to the desired digital transformation state or remain in the status quo. However, it is essential to understand that no one variable in the changing mix can work independently to achieve successful change. Recognising that the above change dynamics are interrelated and intertwined is crucial for the leadership responsible for the DT change (By, 2005).

2.6.6 Summary of the Review of Change Models

Many models of organisational change exist today, and they all attempt to explain the effects of organisational change in their effort to make significant gains in strategies, processes, structures, cultures and even growth (By, 2005). These change theories, models and frameworks establish basic steps and principles that can be identified and applied. However, additional information should be considered in any significant organisational change to make the process more effective (Bouckenooghe, 2010). In the researcher's assessment, the management of change should allow for developing a model for specifically directing enterprise-wide change. Several change models were reviewed in this research, with emphasis on two models more related to the case: Lewin and Kotter models. Both models referenced that leaders need to recognise that change is a crucial element for any organisation undergoing significant DT; it is even more so with larger enterprises like the case bank operating across different locations in highly competitive business landscapes (Higgins, Judge, & Ferris, 2003).

Change is a constant, particularly in a rapidly changing financial service environment. As alluded to earlier in this study, many large DT projects fail due to varying factors, including mismanagement of change (Hussein et al., 2018). Financial service organisations are now at an inflexion point where any significant change should be managed delicately to avoid failure. An excellent area to start is planning the change process. Today, any large-scale change, particularly incumbent banks, cannot be traditional and rigid in approach; it has to be flexible and willing to adjust if resistance is to be avoided (Jacobs & Keegan, 2018). Therefore, this requires a modern way of thinking, a new mindset and new skills for the staff and the executives taking delicate strategic decisions.

2.6.7 Change Impact on Transformation

The driver of digitalisation is often the need to automate processes and offer digital products and services. However, DT occurs when there is a complete shift in the business to become digital, a shift in markets, and the close integration of people, strategy, business processes, structures and culture. It is recognised that DT is a mandatory change process for any institution seriously interested in competing and winning in this digital era. Financial service firms have

realised this fact, and many have signed up for significant change initiatives; in essence, the long and tedious transformational journey has begun, and there is no going back (Gerwin, 1999).

DT undoubtedly impacts the internal working mechanisms of any organisation and external influences, including suppliers and the supply chain process. The result leads to workplace transformation, creating better working environments and employee empowerment (Beare et al., 2020). The latter is a vital part of the digital transformation process, and it aligns with the fact that DT is essentially the ability and capacity to do business and compete in a new, revolutionised way, championed by business employees. However, technology alone does not trigger digital maturity for an enterprise; despite the allure of different opportunities driven by technology, exploitation of business opportunities requires a more inclusive mix of variables to achieve success (Ilmarinen & Koskela, 2015). Variables include significant tangible value creation and the convenient delivery of high-value products and services.

2.6.8 Application of the Kotter Change Model

In this new digital age, there is an urgent need to create a new organisation cultural shift in line with the transformation efforts that thrive on disruptive technologies (Rauser, 2016). The Kotter change model has significant advantages GTCO can identify with as it undergoes the change process. These include a step-by-step and clear direction for change, emphasis on employee engagement and the notion of carrying out proper planning before the change process. However, some will argue that the Kotter model needs to be more methodical for a DT change when adopted across all bank areas. Its sequence of steps may need to be revised, particularly for areas of resistance to technology implementation that can arise. These unplanned change events may be challenging to pre-empt, let alone plan for. Others argue that the model's top-down approach may discourage co-creation and auxiliary change plans that were not initially planned. Finally, some see the model as time-consuming (Rose, 2002) when implementing large-scale change, as in the case of GTCO, across many divisions; managers need to be agile to plough through the significant change process.

2.6.9 Transformative Change Effects

Macredi and Sandom (1999) noted that successful change management is a significant asset for any organisation looking to stay ahead of the competitive curve, even more so in a heated competitive landscape. In this competitive environment, traditional organisations like GTCO face significant challenges from external forces comprising regulatory, political, social and economic factors. The case bank is forced to compete with other challenges, including globalisation, technological innovation, and financial pressure on their bottom line and employee retention issues. GTCO is undergoing transformational change, which means significant alteration to how it does business, induced by external environmental and internal factors. (Jick and Peiperl, 2003) aptly define *transformation* as a complete organisational reorientation, while Verwey and Du Plooy-Cilliers (2003) assert that transformational change is a change that happens at the enterprise with each area of an organisation. The process is a top-down helicopter view from within the organisation.

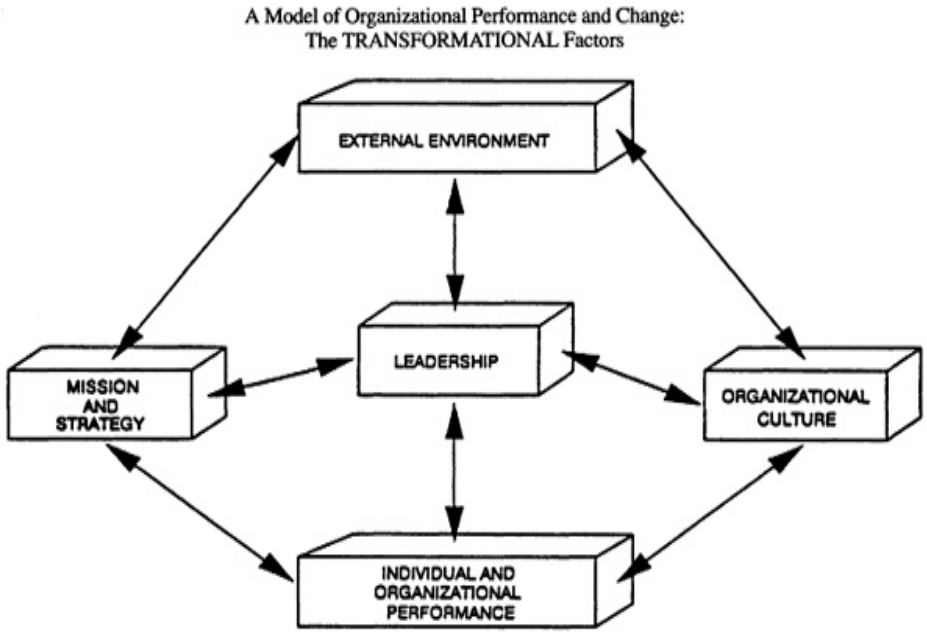

Fig. 2.9: Performance and Change Model

As seen in the figure above, certain factors of transformational change that will occur at GTCO are all interwoven. They include organisation performance and change processes, external environmental factors, such as competition, technological innovation, and rules, including regulations from the central bank, impact such large-scale changes.

2.6.10 Leadership Function in Change

Transformational leaders are seen to play a significant part in the changing structure and aid in engaging external forces outside the organisation. It occurs through regularly analysing the challenges from the exterior front and building a formidable strategy to counter and intervene. The factors in Fig. 2.9 include the organisation's external environment, missions and strategy, leadership factors, organisational culture and structural components, and the bank's hierarchical pattern and functional and authority arrangements. The last also takes communication for change and group relationships into cognisance. However, Stace and Dunphy (2001) argue that DT change involves an entirely new way of looking at strategies for the enterprise, including how it creates and captures processes from a DT perspective, winning the support of employees towards the process of transformation and redefining cultural values to align with the DT strategies.

2.6.11 Comparing Lewin and Kotter Models

In the researcher's view, there are similarities between Kotter's and Lewin's models, but they also have significant differences. One commonality that any organisation can apply is that employees should be aware of the reasons for change; this is an essential factor both models agree should be done before the change process is started. Kotter calls this "the sense of urgency", while Lewin refers to it as the unfreezing process (Pierce et al., 2002).

On the difference in both models, Lewin suggests that culture, which is also a critical component for change, should be considered when communicating the need for change to employees. On the contrary, Kotter suggests that, though culture is essential, it should be considered at the latter stages or towards the end process of the change programme (Kotter, 2012). The two change models above emphasise the need for capacity building, which is critical for any change programme, as employees will need to understand the new technology and how it functions across the new infrastructure. Kotter refers to capacity building by "empowering" employees to cope with the new change programme. Training is seen as good knowledge and how new strategy drives staff to shape the bank's structure and business processes. Lewin discusses this in detail in his unfreeze stage; he notes that an organisation undergoing the change process should have clearly defined roles and responsibilities as part of the change programme (Furst & Cable, 2008).

2.6.12 The Congruence Model

According to Nadler and Tushman (1989), sizeable organisational change is time-intensive and requires the cooperation of management and direction from the organisation's executives. The Nadler and Tushman Congruence Model might have been valuable for GTCO's early transformation journey. It might have helped diagnose the bank's exact change requirements and thoroughly analyse and evaluate if the variables making up its structure fit together. The model can also identify performance gaps in the transformation journey and how DT can address the deficient areas to improve efficiency, productivity and profitability. The model seems to aid the review of communication structures within the bank, enabling it to analyse and process the information required to transform more effectively.

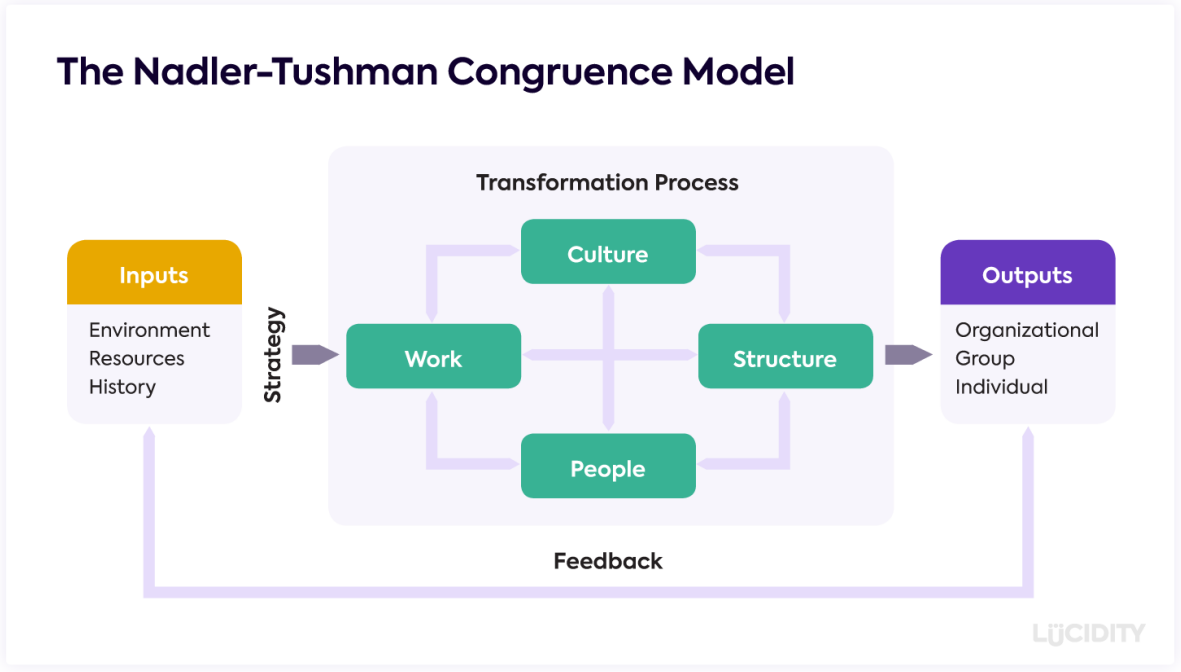

Fig 2.9.1 Congruence Model

The Congruence Model focuses on four elements that require significant changes as an organisation embarks on transformative change: people, process, structure and culture. Arguably, organisational performance after transformation will result from how the four variables above work together. The sequence of steps in the model helps organisations analyse and compare the status quo with the target state of transformation. It can form an important milestone in building a formidable strategy to deal with performance deficits or gaps arising after the change. Therefore, applying the principles of the model can result in improved organisational performance. Thus, it could aid the case organisation in unearthing inefficiencies and performance gaps in the DT process.

2.6.13 Model Limitations

Some limitations could impede GTCO from applying this model as it moves through a digital transition:

1. The model is more effective when viewed as a tool for analysing employee challenges rather than significant organisational change problems the bank faces.
2. Although it can be used to measure performance with the case bank's transformation efforts, it needs to address the real transformation challenges. For example, how does the model solve the issues of developing a new business model or adopting a new digital strategy that can fast-track growth in digital adoption? The model focuses only on a narrow change segment, not a total change agenda.
3. It is agreed that organisational culture and structure are critical components of change. However, the model does not recommend or recognise an ideal cultural or structural fit or set out specific action plans for resolving challenges after or during transformation.
4. Finally, it is recognised that any huge change profoundly affects any organisation's internal working mechanisms and external structure. However, the Congruence Model neglects the outer side of GTCO's change process.

The model focuses on an effective organisation as one in which performance is crucial and that having a good synergy with its people, process, structure, and culture is critical to successful transformation change; this fact is advantageous to the case bank. A case in point is dealing with bank customers, which is a crucial component of service delivery; with a structured plan, transformation in this critical aspect may likely succeed. Any change model that pays attention to customer engagement may not be valuable for a customer-engaging entity like GTCO.

Nevertheless, another limiting factor of the model is a state of destabilisation which occurs when one of the four critical pillars above is not synchronised with the others. It can have a profound negative effect on the entire organisation and its significant transformation ambition, ultimately lowering productivity and overall performance with the transformation programme. In summary, the Congruence Model can ideally be used to view all critical organisation elements that impact overall business performance after migration to the target digital phase. It can assist the leadership of GTCO in identifying and deciding which factors are congruent with other critical components. If all elements synchronise, GTCO can be on its way to a

successful DT, but the stark reality is that features in most complex large-scale DT programs often need alignment and synchrony.

2.7 Disruptive Innovation

Clay Christensen's model of Disruptive Innovation appears relevant when implementing disruptive changes, like the transformation case at GTCO. Christensen emphasises that large organisations compete with smaller agile start-ups in troubled waters because traditional organisations are complacent as leading incumbents. This complacency gives them the false assurance to continue pursuing the status quo, where they derive significant revenue. Consequently, they need to pay more attention to the seemingly smaller businesses and individuals seeking new ways to engage with their banks for optimal financial services. In the case of GTCO, this involves central government and large enterprise projects taking up premium services in return for significant profit margins.

The impact of digital native start-ups is aptly represented in the figure below, indicating the pressure from the FinTech companies in the African financial service industry aggressively competing for market share.

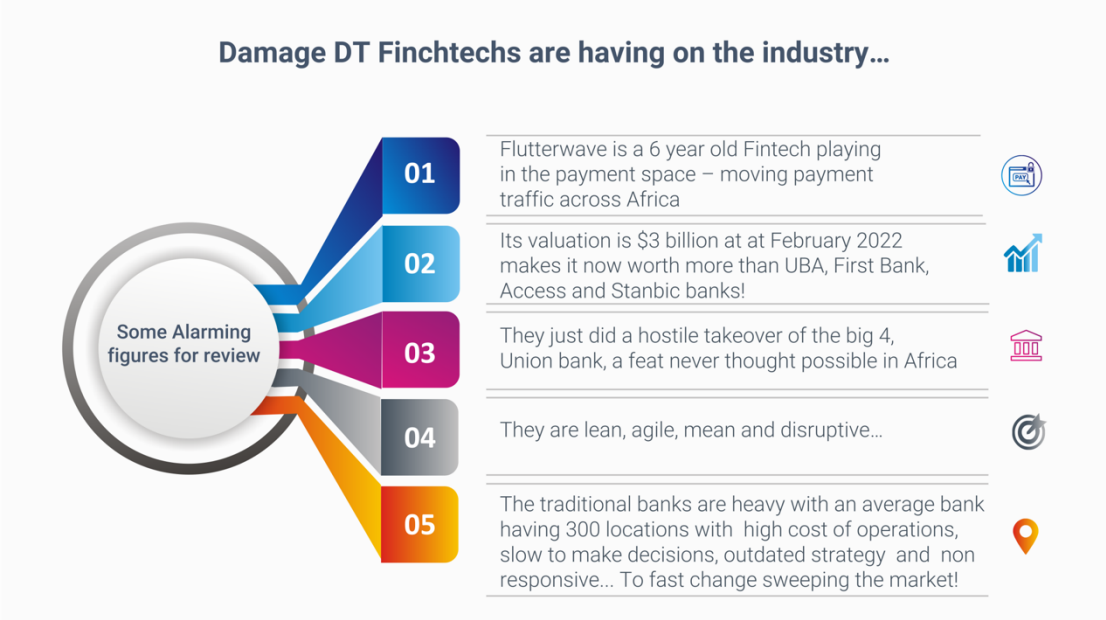

Fig. 2.10: Damage FinTech Companies Have on the Industry

According to Christensen, the advantage for smaller companies, including the Fintech listed in the above diagram, is that they are smaller and lightweight, with a business model built from the ground up to cater for a particular digital spectrum. Despite having a smaller market share, they may introduce a relatively simple and less profitable product initially. Still, over time, they incrementally evolve and modify products to grow to disrupt the status quo eventually. This is the case with most Fintechs operating in the African space and beyond; they came in unnoticed and offered to partner with the banks to ensure services, like payment services, payment confirmations, SMS services, and connecting banks to the underserved sectors. The banks

never took them as threats because of their small size, limited resource capabilities, and revenue generated. Still, they eventually grew to compete head-to-head with the traditional banks, and they began dislodging them from their prized market space. The competition from the smaller Fintechs is again explained in the quote below:

"The legitimacy challenge is confounding since digital models are characterised by low entry barriers and rapid disruptive innovations. While new entrants are known to benefit from their smallness in triggering gales of 'creative destruction' on their way to market dominance, incumbents can adapt if they deploy a relevant strategic posture by reorganising" (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

The Christensen model of disruption seems to fit into GTCO's scenario for transformation, particularly concerning how the bank should view the new Fintechs competing in the same space. However, the principles behind the Christensen model appear misunderstood within the financial service sector. Although incumbents are losing ground to the Fintechs, not all the disruptions coming from this space are innovative, and neither will every FinTech completely take over the financial industry. It can be argued that Christensen's model may have been overrated in its role in significant disruptive transformations, like the case of GTCO. The model, in the researcher's view, is helpful to help build a base with senior leadership driving transformation programmes, which can eventually lead to future growth after the DT journey is completed. Therefore, there should be a good understanding of the rudiments of disruptive innovation, the threat it poses and how to create value, grow and keep pace with the significant transformations in every bank area.

The Innovator's Dilemma, the book by Christensen, narrows innovation into three distinct areas. The first is that any technological change, like the DT programme at GTCO, is often of two types, disruptive and sustaining. For success, the management should distinguish between both programmes. The change organisation's resources, processes and values need to match the financial market it operates in. Otherwise, there may be no level of leadership or management that can save the organisation from failing even after undergoing the transformation process considering transformation projects, particularly specialised programmes, cost significant sums.

With the proper budget, it is possible to attain success, no matter the ambition and desire to transform. Leading banks, like GTCO, can quickly solve Fintechs' challenges by gaining grounds; they have the financial capacity. This can be through outright buyouts or setting up parallel businesses to compete directly with the Fintechs. Such organisations will have similar aspirations and business models as the new tech start-ups, one that can allow traditional companies to continue growing. At the same time, the new businesses with entirely new business and operating models also organically grow, with the longer-term plan of the former gradually winding down.

In his book Zero to One, Peter Thiel makes significant assumptions about the various technology types. Like Christensen, he refers to two kinds of technologies existing when

organisations like GTCO undergo technological change. The first is sustaining technologies, and the second is disrupting technologies. In the researcher's view, the DT programme at the bank is very disruptive, as it touches and impacts every facet of the bank's processes, people, structures and culture. Thiel argues that sustaining technologies focus on growing current technologies used by the bank by finding new ways to expand their performance capabilities through new functions. This is the case with several competing banks undergoing "transformation" They regularly deploy technologies that can ease the pains of doing business. Still, the deployment does not complete organization-wide transformation.

Thiel describes disruptive technologies as forces that significantly or radically transform the operations of any organisation, its external operating environment and the industry as a whole. Continuous improvements in technology only impact some of the above. Leading innovative banks do well with adopting or implementing sustaining technologies. Their success can be attributed to the fact that they have built up significant efficiencies over time, established business services and consolidated substantial resources and experience. This makes it easier for traditional organisations to safely increase sustaining technologies by building new layers on current technological infrastructure. However, some of the limitations of sustaining technologies include enabling change organisations to make safe and steady incremental progress but not at scale, allowing for complacency, and lack of imagination or vision of the change process. Another drawback is that larger organisations need swift responses and reactions to market changes, often resulting from extended bureaucracies and inefficient decision-making processes.

2.8 Significance of Business Models in Transformation

Understanding and reviewing a company's business model, as part of innovation, is essential for successful transformation. Business models form a critical component of DT, defining the overall strategy trajectory and how an organisation creates and captures value after the transition. Business and operating models are at the heart of transformation and dictate any organisation's change path. A company's business model is a complex system of related activities and processes that ultimately determines the direction and how it carries out its business operations or activities (Stewart & Zhao, 2000). In essence, a firm's business model is a collection of complex actions in a more extensive system with specific processes carried out to meet the market's needs in which the firm operates. It includes strategies on how the firm engages with its stakeholders and partners operating in the same market to create compelling value (Lehmann-Ortega & Schoett, 2005).

Without a systemic shift in rethinking strategy and how value is captured for an organisation undergoing large-scale change, there may be natural obstacles to contention. A rigid business model slows change in the right direction; the inertia to transform quickly has often led to the quick demise of many organisations undergoing the transformation process. One possible reason for this is that those innovative and disruptive start-ups tend to capitalise on more accessible access to market strategies, and, as digital natives, they tend to build their data-driven business models from the ground up, anchoring on new technological trends. This process is arduous for incumbents because of already established processes, systems, culture

and business channels. This challenge contradicts business model value creation and capture (Teece, 2018).

For the nimble start-ups, the combination of low entry barriers and a formidable business and operating model aligned with a technology trajectory promises the ability to compete fiercely and often overtake the incumbents to explore possibilities not already covered by the incumbents. These innovative firms tend to outperform and surpass existing markets or pursue unexplored business opportunities with their new business models based on exploiting efficient digital distribution channels, creating and serving new customer demand, establishing new forms of customer engagement and relationships, or any combination of the three (Li, Spigt & Swinkels, 2017).

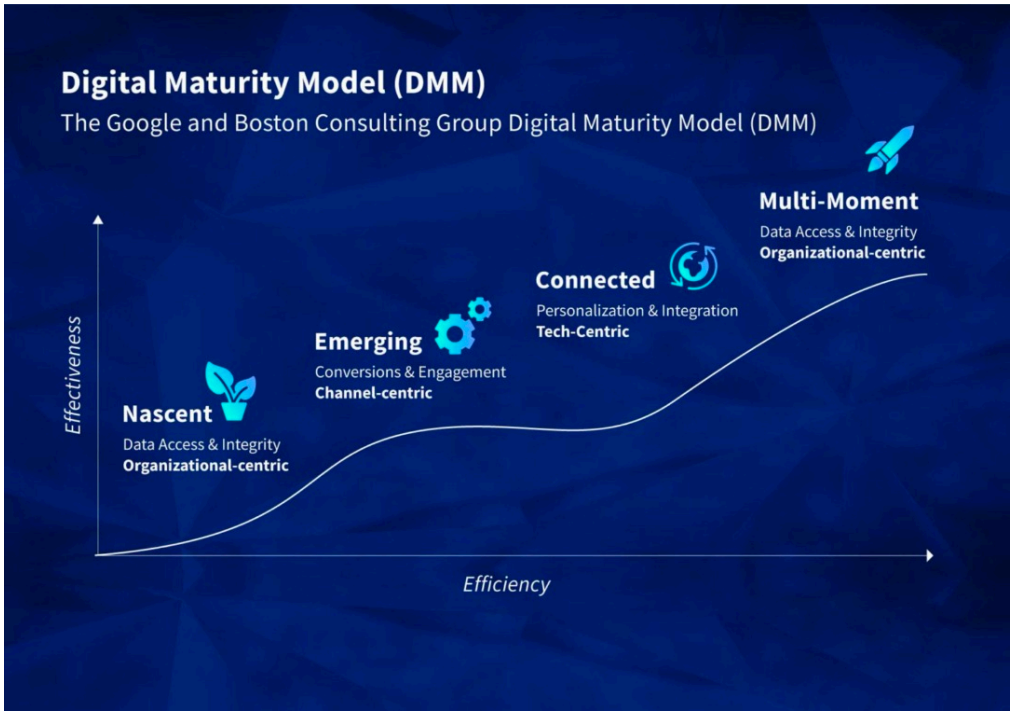

Fig 2.11 Digital Maturity Model

To overcome DT challenges, there may be a need to extensively review current business operations and internal and external systems, including how DT creates value and engages with customers to offer services. As seen above, these should be considered in depth as transforming organisations adopt a digital maturity model. However, the honest realities are the time, effort and certainty of assessing the above variables at scale before embarking on the transformation journey. Over the years, organisations contemplating business model innovation as part of DT have made many efforts to innovate their processes and product offerings to better compete with challenger start-ups and stay profitable. But most of them are still waiting for positive results. They have realised that business model re-engineering is a complex process requiring many complicated strategic decisions (Aspara et al., 2013).

2.8.1 Innovating the Business Model

Many organisations have attempted a series of innovative changes to their business models, all to refresh the status quo. However, business model innovation requires significant investment in people, processes, technology know-how, research and development, and these investments are usually upfront, with no guarantee of returns; all done to complement the efforts of radical and total business model change to make more profits and reduce costs (Moingeon & Lehmann-Ortega, 2010). This fact has worried organisations, as they realise the above is an expensive and risky path.

However, business model innovation is considered critical to a successful transformation process as it sets the pace of strategic direction for the programme. Organisations are keen to see how this concept can make a difference in the change process, particularly on a strategic decision-making level. One of the promises most financial services organisations are interested in is leveraging Business Model Innovation (BMI) to stay ahead of innovation, particularly from the competition from the FinTech companies; this has resulted in some traditional organisations looking to product innovation as part of its BMI initiative and how it fits into value generation and capture (Vicnjic, Wiengerten, & Neely, 2016). It is worth noting that product innovation is a standard practice in most organisations. Companies regularly release new products as part of their everyday operations. However, the challenge is that other organisations copy these products in just a few months, leading to an equilibrium in offerings. Therefore, this means there is no real competitive advantage due to replication by the competitor over time. However, it is difficult to replicate or copy innovation to a company's business model because the sum of all the parts of BMI is complex, multi-dimensional, personal to each company and hard to replicate across the board.

As indicated above, innovating BMI is unlike replicating a new product or service. BMI touches every area of an organisation from top to bottom, including management and other functions of the organisation (Velu & Stiles, 2013); this study emphasises BMI as part of the DT process. The promises and possibilities of BMI are high, which can lead to transforming organisations emerging as winners after the transition. As a crucial part of DT, any real innovation offers compelling competitive advantages; competing organisations undergoing a similar model shift may need to help replicate an entire operational process or enterprise system. Unlike product innovation, innovation at the business model level often translates to a sustainable performance advantage. However, one major contending factor with incumbents is their struggle to select a good mix of products and markets as they evolve in their business model (Snakes et al., 2016).

When it comes to restructuring value proposition as part of the strategic transformation changes, BMI undoubtedly promises significant value in that it can be a vehicle that allows the leadership of any organisation to resolve any trade-offs that may exist between innovation costs, which can be pretty high, and its valuable benefits. The above can be achieved by focusing on how business operations are carried out, including adding technological infrastructure as leverage to create increased organisational value. Furthermore, it includes the increased value from product innovation as part of the organisation's enrichment and

enhancement of processes and structure. However, it still needs to be clarified, as a need to understand how corporate mindset affects BMI in an organisation (Rogers, 2016).

Again, as part of innovating, an organisation's business model fits into the overall DT strategy. The added understanding is that BMI facilitates consolidating all business units and collapsing structures within the organisation to operate seamlessly as one entity; this includes connecting operational activities that ordinarily operate in silos from the various units together. In the case of a financial institution, it can be treasury, engineering, transactions or risk departments forming a new connection method. The above argument is valid as attaining digital maturity involves significant business integration. Therefore, the BMI approach promises to aid the transition to a new target state much faster. This fits into a strategy often seen as a way for the entire organisation to completely change its direction to become more effective and optimal in performance (Johnson, 2010).

An important question about BMI as it relates to any organisation undergoing DT to become more efficient is this: How does a firm increase the momentum of improving or changing its business model for the better? It is a question that allows for an internal review of the transformative components within the organisation. Therefore, change organisations can factor in the output, including value drivers from the review on the transformation road map agenda for change. The presence of value drivers tends to increase the value creation of any given business model (Casadesus-Masanell & Ricat, 2016). Any organisation considering a large-scale change process should realise that a vital synergy needs to exist amongst the various value driver components, such as complementary services that an original novel business model can fully support.

It is crucial to note that business models are often interwoven, with many intricate parts that should be carefully analysed and reviewed before adopting them as new business strategies for transformation. Consequently, this can be related to the organisation used as a case study that has sold the values of DT to its shareholders, particularly the promise of reducing cost, increased profits from selling through new digital channels, and a more efficient method of reaching customers. However, it remains to be seen if the new promises can be linked to a new model that works well for the bank as they evolve (Sebastian et al., 2017). Any organisation that makes the complex decision to embrace DT changes to its structure, including revamping and regenerating its business model instead of simply optimising individual components, will require systemic and holistic deep thinking to succeed; this can be labour-intensive, considering the efforts involved in the process.

2.8.1.1 Revenue Generation –A BMI Value Component

There are interdependencies between a company's business model and its revenue model. The latter allows for revenue generation for the business; it describes how an organisation distributes some of the values created by the new business model activities (T. J Teece. 2018). The revenue model complements the business model design, just as a pricing strategy complements a product design. On the issue of revenue generation, any organisation, as part of its business model development, should flesh out very clearly how it will make money after

migrating to a new platform business model. It may need to define a revenue model to complement its business model to include how value is created and captured. For instance, any entity responding to the competitor's market share and deciding to undergo the transformation programme requires systemic changes, which can be very risky and overwhelming.

Rethinking the current model and how it impacts transformation may not be at the forefront for most executive management teams. It is often the reality when there is resistance to the change effort; this means little attention is given to the process of change or transformation efforts. Management often focuses on deliverables rather than the impact of change to reduce resistance (Gardner et al., 1987). There is the school of thought that argues organisations with limited resources do not need to sacrifice innovation as part of the transformation process to achieve or increase performance prospects; instead, they should seek to analyse the opportunities offered by BMI to complement or substitute innovation in their products and processes (A De Massis, 2018).

However, others will argue that innovating as part of digital transformation requires a good size budget, and often most organisations need help distributing funds, amongst other challenges. Resolving any trade-offs between high innovation costs and its benefits may be achieved by focusing on how business operations are carried out. Leveraging experienced technical partners may be one method to create increased value in the organisation while increasing value from product innovation as part of the systems activity creation. However, before an organisation makes that decision, there is still a need to address several factors, including understanding the extent to which corporate mindset affects BMI in an organisation (Rogers, 2016). Therefore, more than leveraging product innovation to create value may be needed to achieve complete BMI transformation in any organisation. The case of Apple is a good example. Apple transformed its BMI by offering compelling innovations not just on its hardware products but also services tied to its products offered in partnership with its technical partners. This single effort created significant value for the brand.

The argument is that more than product innovation is needed to create the compelling value required to transform an organisation. There is also a significant gap in each company's product innovation value; the case of HTC is a classic example. It relied purely on product innovation and the sale of hardware products but could not monetise revenue from using those products, unlike the case with Apple. When the model strategy performances of HTC and Apple over the years are compared, it is evident that more than product innovation is needed to succeed; applying a well-thought-out business model innovation strategy is necessary to achieve true competitive advantage. This realisation is essential for executives of the case bank to consider when altering their current business model to cater for the wave of disruption the bank faces.

From research findings, BMI allows organisations to create value in a new market or create and exploit new opportunities in an existing market position. A classical case in point is Dell Technologies. It moved from the traditional build-and-stock model of computer delivery to a customer-driven model that included a build-to-order approach for efficiency and cost reduction purposes. This model enabled it to exploit new opportunities in the digital space,

engaging with a new target audience it could not reach in the past. Organisations like GTCO looking to radically change their structures and processes can take the subtle approach, an incremental one with minimal disruptive impact. It will yield good dividends for the bank; however, true transformation is often a radical approach which will have a transformative innovation impact on any organisation. The reality is that moderate changes can lead to economies of scale and significant improvements in efficiency gains, which can cut across various sections of the organisation. It can also achieve a more effective customer service offering to produce a competitive edge, but this differs significantly in disruptive innovation and a total transformation of an organisation.

The argument is that the most favourable environment for BMI to flourish requires adding compelling and novel activities to current service offerings. A good example is the integration of forward or backward operations in company expansion; rather than incremental changes to existing processes, procedures and structure. Another innovative approach is integrating all existing operational silos into a consolidated entity, including communications flow, technology integration and department policies to form a new connected organisational method. This BMI approach can aid the technological transformation efforts in change organisations. It can also be seen as a way for the entire organisation to completely change its direction towards a more digitally mature organisation (Johnson, 2010).

However, one question is pertinent here: How does an organisation increase the chances of improving or significantly changing its business model for the better? As indicated previously, it is essential to recognise the significant presence of value drivers in increasing the value creation of any given business model. Therefore, any organisation transforming should realise that substantial synergies exist amongst the various value drivers, and these are often complementary services with the promise to become more valuable when fully supported by an original novel business model. A new or modified business model can exploit new opportunities and increase profit margins, eliminating low revenues from an ageing business model. These are some reasons why the case bank undertook the transformation programme. Achieving this objective requires well-thought-out strategies, including aligning the various parts and sequencing the different moving parts as they transform.

2.8.1.2 The Effects of Dominant Logic

An organisation's mindset is critical when going through a complete revamp of its processes and operations; the term dominant logic covers this in some detail, particularly concerning how a change organisation's leadership agrees on the various transformation initiatives before they embark on the journey.

Dominant logic is the method and thinking patterns of decision-makers in any organisation. It covers the current thinking of any organisation's leadership, precisely the prevailing thinking and behavioural pattern of decision-makers based on experience consisting of several dimensions, including the level of application and how dominant logic prevails in the organisation. However, there is the argument that a firm's dominant logic can slow down an

organisation's ability to innovate and transform. Thus, a firm's dominant logic can significantly influence the business model innovation process. (Bettis & Prahalad, 1986).

Many theories have been applied to influence how a firm performs (Porter, 1980). Concerning how a firm's collective thinking patterns affect the business model, there are two main types of strategy: competitive and corporate. Research in competitive strategy generally focuses on markets, firm resources, and technologies that enable strategy and organisation performance. Research in corporate strategy addresses the firm's direction, specifically how management determines how businesses are structured and what companies belong to what portfolios. It also reviews how resources are allocated within the business and how they promote and manage the various business units. Other fundamental questions include how management plans the scope of their firm's transformation agenda, which is a significant objective of corporate strategy.

Looking at an organisation's dynamic capabilities to further understand strategy in more detail is an essential requirement for BMI. Strategy in itself is essentially a firm's ability to integrate, build and redesign its internal and external competencies to address a rapidly changing environment (Teece, Pisano, & Shuen, 1997), which seems to be the situation change organisations find themselves with start-ups implementing unique models and pushing into their established market spaces. Organisations with diversified operations tend to have more dynamic capabilities; in such cases, management decides when and how to deploy and keep capabilities across their business units and ultimately determines the consequences or effects of taking a particular direction.

A good case in point is the challenges of transformation that involve how a firm's management can decide on automating current manual processes; for example, what processes to bring online, what platforms to deploy and how to structure business in the new digital era. However, the management should be willing to assume responsibility for the outcome. If going digital works for the organisation, it should yield performance results, but if it fails, the management should also be ready for the consequences resulting from the failure. It is this dichotomy and complex challenge that any leader should face when undergoing a DT process (Christensen, 2016).

On the pain point and issue of scaling transformational changes across the organisation, Levinthal and Wu (2013) argue that there are added opportunity costs when management tries to effect large-scale changes across businesses within diversified firms. Feldman (2014) and Natividad and Rawley (2016) assert that legacy diversifying is connected with a decline in the operating performance of the divesting firms. They also argue that it leads to a loss of core capabilities accumulated over time in the company's original businesses. Literature on resource redeployment suggests a better understanding of management having the autonomy and freedom to redistribute resources across portfolios of multi-business firms like GTCO internally. The literature on resource redeployment also seeks to understand the value of executive management's flexibility to redistribute non-financial resources internally (Lieberman, Lee, & Folta, 2017).

2.8.1.3 Impact of Dynamic Capabilities

A common theme emerges from the literature on dynamic capabilities and resource redeployment on transformation: any organisation's active management can be to manage better its resources and capabilities that exist in the firm as it undergoes the transition process. For example, the management team may need to more efficiently subsidise or over-invest in a technology stack as part of the DT exercise at the expense of other business portfolios; this becomes a significant impediment to the success of the transformation agenda (Ozbas & Scharfstein, 2009) However, despite the adverse outcomes that may present itself, the underlying organisational function of management coordinating how resources to transform are deployed within the boundaries remains the same. How does the leadership set and oversee the scope of an organisation's transformation programme? The researcher believes this can include taking multiple actions, exceptionally inter-organisational routines (Lavie, 2006) and learning from other challenger banks (Lubatkin, 1998).

2.8.1.4 Application of Relative View Network Theory

Two theoretical perspectives can help conceptualise how management makes decisions, particularly about transformational change involving virtually all areas of the organisation. These are the relational view and network theory principles. The relational view approach argues that unique selection and combination of resources or capabilities can be brought together by organisational partners, especially partners with common interests, effectively leading to above-normal profits (Dyer & Singh, 1998). These interests and mix are usually called relational capabilities, and they ultimately serve as important sources of learning and knowledge accumulation, mainly when it involves longer-term engagement within management (Singh, 2009). Also, by critically looking at firm inter-relationships Dyer and Singh (1998) note that the relational view is in contrast to the above-normal profits principle, which claims that firms make above-normal profits from the industries in which they operate (Porter, 1979, 1980), while the Research Based View (RBV) approach notes that firms make above-normal profits from their combined resources. Concerning network theory, this implies that connections between companies, particularly their partners, can be a unique source of knowledge and strategic learning and, consequently, more value creation and capture (Zaheer, 2000).

2.8.1.5 Added Technology Advantage for Incumbents

Defining a new business and technology strategy for transformation requires the possible adoption of a platform business model by incumbents; the move is currently seen as key to success in any technology transformation initiative. This can be partly attributed to the advantage of third-party providers offering enriching services via the API platform interfaces to create additional value to the company offerings (Gawer, 2014), as well as multi-sided parties on the platform benefiting from the added value (Evans & Schmalensee, 2016). The platform business model provides an additional edge over the competitors due to its significant efficiency and product reach.

Traditional organisations not only learn from management's accumulated experiences to fiercely compete but also from their interaction with other competitors, including FinTech partners offering a diversified portfolio of digital platform services (Tsang, 2005). Leveraging strategic partnerships to strengthen services through partnerships with established Fintech companies operating a digital platform business model can be a significant competitive advantage. It is on record that incumbent organisations that have an existing relationship with target FinTech companies they seek to buy or partner with to offer compelling digital services always tend to outperform those that do not (Banerjee, 2010). Traditional banks that build more acquisition experiences tend to do better than those with less experience (Barkema & Schijven, 2008).

Acquisition of Fintechs by traditional banks can significantly reshape the digital ecosystem in which banks operate (Hernandez & Menon, 2018). One that views FinTech acquisition by banks as a means through which management can access and build valuable new resources and capabilities into their organisations. Furthermore, divestitures allow management to remove less useful resources to improve business portfolios and their overall strategy (Karim, 2016). From the relational view and network theory perspectives, engagements between firms based on business relationships matter a lot for developing capabilities and building knowledge within the organisation. The resource reconfiguration theory is relevant here. It points to the importance of understanding how management view and oversee the scope of the firm's operations across multiple portfolios; this is particularly true since their learning, domain knowledge and overall capabilities are often shared across the various business portfolios.

Digital platforms are flourishing. The reason may be attributed to the fact that they reduce transaction costs by using efficient algorithms to process large-volume customer requests for payments or providing economies of scale for users to access consolidated resources on a platform. However, platforms are critical in the business model design adopted by a transforming organisation, mainly traditional banks. There is a clear distinction between digital platforms and a business model employed by an organisation despite the complementary relationship between both. Most transforming organisations deploy some platform business model or another. Sometimes, the platform design type may need to be more cohesive and structured. This fact is even more prevalent across Africa, where stable and working banking infrastructure is a commodity. The infrastructure deficit is further explained in the quote below by the CEO of the case bank in an interview with World Finance.

"The lack of digital and electrical infrastructure, as well as lower levels of wealth than those found in more developed markets, means that there are some barriers to the full adoption of digital banking that are particular to Africa." GTCO CEO, Agbaje (cited in World Finance 2017).

In addition, the popularity and demand for platform-based services can be attributed to the prevalence and proliferation of affordable smartphones, reducing bandwidth costs and lower technology infrastructure components. But there is also the critical issue of trust, a commodity that takes time in the region and can significantly impact how fast bank customers can adapt to

using digital products and services. The issue of trust is emphasised further in the quotes below from an academic scholar as well as the CEO of the transforming bank:

"Another pronounced barrier to digital banking in Nigeria is the perception of trust. Trust is the perception of the probability that other agents will behave in a certain expected way. When digital banking emerged in Nigeria, many people were sceptical about adopting and trusting new models of e-consumption due to concerns about security breaches. (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

"Although the level of trust arguably has improved, many Nigerians still do not engage with digital banking services, mainly due to a lack of knowledge and awareness. Thus, while on the one hand, it can be argued that for most unbanked Africans, mobile banking provides great opportunities to go digital, on the other hand, it can be argued that their lack of digital knowledge, previous experience, and awareness limits could limit their adoption rate and usage. This is considering that for many Africans, the mobile internet is their first computer experience" (Agbaje cited in World Finance 2017).

"Nigerian digital banks are still evolving and face several barriers preventing their full adoption. The main obstacle to digital banking is that incumbent banks in Nigeria often encounter the awareness and knowledge of using digital artefacts, products, or services. The problem is not whether the products or services are available but to what extent Nigerians are aware of and ready to consume such products (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019.

Therefore, building trust, addressing literacy issues, and ensuring consumers in remote rural locations can get banking services will increase banking penetration. The commonality and availability of digital platforms allow banking services to be aggregated, providing digital avenues where customers can connect remotely to consume banking services more efficiently. This new opportunity also enables financial organisations to create more excellent value further. For example, major Cloud companies, like Amazon Web Services, are building massive Cloud infrastructures and investing significant sums in cognitive platform technologies, driving up competition and reducing the cost of these services. Generally, they cost a lot in infrastructure development for service providers, but this ultimately translates to lower access costs for the consumer over time.

One such value in adopting a platform business is capitalising on the network effects it brings; this occurs due to increased activity and participation of customers and other consumers using the platform for various services. Another benefit is that platform operators can generate more value as customers grow by generating valuable customer transaction data. The more useful data is generated from the use of services, the more value can be realised from the platform (Katz & Shapiro, 1985). The digital platform concept can be best explained and attributed to economies and principles of demand; more customers on the platform mean more users and more revenue. Therefore, a platform is seen to have network effects when there is a positive connection between the customers on the platform and the perceived value generated on the

same platform; value increases with the increased transactions. This principle is rooted in direct and indirect elements of the network theory**.**

As indicated, a primary function of platforms is the notion of direct network effects, which aims to derive value for customers by using the platform as a medium to allow users to interrelate with one another (Schilling, 2002). Examples of companies successfully applying this principle are Facebook, WhatsApp and Google. Another exciting concept mentioned earlier is indirect network effects; this essentially allows further value creation from connections and interactions between customers using a product or an array of products that may be third-party products, which means the more customers use a platform, the more chances of the platform attracting complementary products and services to enrich the platform, thus generating even more perceived value. The role of network effects is critical to digital transformation, and the researcher analyses this concept in more detail later in this study.

2.9.0 Data Analytics –Value Driver for Transformation

As part of DT, data analytics (DA) can also be applied to vast amounts of transactional data generated by banks, and this includes the ability to flag off irregularities and money laundering activities accurately. However, some challenges include thoroughly understanding how DA can be exploited to achieve value (Sharma et al., 2014). Most African banks still need help creating more value from the vast data assets in their custody.

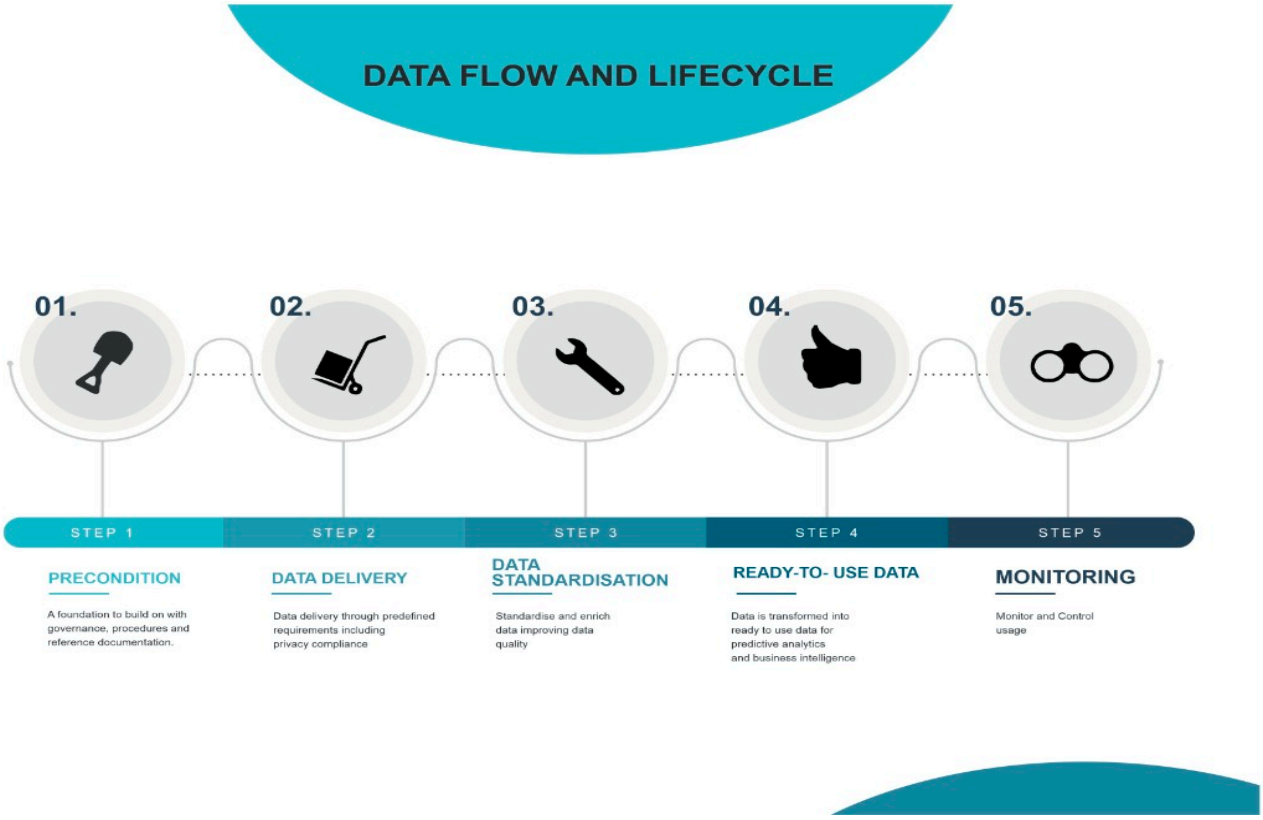

Fig 2.12 Data Flow and Life Cycle

Applying cognitive functions to enterprise transformation initiatives has been proven to be one of the keys to gaining competitive advantage, particularly for organisations in the finance sector. A good case in point is that of Ant Financials, a subsidiary of the Alibaba group of companies; they have mastered the art of consolidating vast amounts of real-time transaction data, cleansing the datasets in record time, warehousing and developing training models to perform complex statistical analysis to derive significant value for the end customer. According to the International Institute for Analytics, in 2020, businesses using data saw $430 billion in productivity benefits over competitors not using data strategically (Bernard Marr, 2020). Therefore, it is essential to recognise the significant value of Data analytics as a component of DT; it promises financial service firms more accurate and structured ways to strategise and differentiate from competitors.

Analytics is two broad categories: descriptive and prescriptive (Sivarajah et al., 2017). Descriptive analytics describes existing data in an enterprise employing business intelligence tools and techniques to understand better datasets collated. This type of analytics can help transform organisations learn about their business's current operational state based on historical data records. Data relationships and patterns can be discovered in this stage of analytics (Li & Musings, 2017). In contrast, prescriptive analytics is often used in making recommendations based on insights from the data analysed. This type of analytics aid in forecasting, predicting future patterns and subsequent states based on the data already collected. It allows transforming organisations to make decisions for the future state of their company (Sivarajah et al., 2017).

Data analytics also enables organisations to make informed decisions on winning more business and renew critical strategic decisions by leveraging vital insights from customer data, including where to open a bank branch or attract new customers as part of a growth strategy. Besides, customer loyalty has been a subject of debate. Most banks are trying to get customers' attention to avoid them moving to the competition; analytics allows new ways of retaining existing customers and expanding within current customer regions. Using insights from generated data can also radically reduce the cost of transactions, transform operational efficiency, increase the ease of doing business, and allow the extensive reach of banking services across local geographical areas, particularly in developing countries with limited physical infrastructure. The data intelligence concept will enhance competitive advantage if used appropriately within a robust data infrastructure (Mikalef, 2020).

Fig 2.13 Technology Trends

From recent technology trends of transforming banks, as can be seen above, it appears a company's ability to compete will increasingly be driven by how well it can transform digitally, but more importantly, how best it can leverage data and apply data analytics to sustain and increase its growth trajectory to gain significant strategic advantages over its competitors (Bernard Marr, 2020). Furthermore, as part of the transformation, data analytics makes it possible for financial institutions to collate personalised consumer data by building specific customer profiles and relevant information that can be used as a reliable source for customising existing banking products or releasing new ones (Brodski, 2019). They are eagerly looking to apply the technology to their business processes to optimise operations allowing them to move their companies to a higher operational trajectory.

However, this notion is yet to be comprehensively measured and proved at scale, despite many financial service firms being fully aware of the promises of business analytics. Financial service executives now see data science as critical in altering obsolete procedures, reducing costs, and improving competitiveness. Therefore, enterprise analytics promises to make a step-change improvement in industry competitiveness and maintain and improve on that competitiveness. Data analytics have opened up many opportunities for banks, providing them with the required edge to overcome limitations of distance and enabling them with vantage points that were not possible before such technologies (Brei, 2017).

Analytics can serve as a method to analyse vast amounts of transactional data to filter out critical business insights that can help the bank achieve a strategic competitive advantage with

the products and services they offer. Digital platforms, AI and analytics all work hand in hand as a powerful force for competitive advantage. Analytics plays a critical role in developing new digital products and services with the promise of generating more income. When one adds the mix of cognitive capabilities and the processing of vast amounts of data on a central platform, the result will be super-normal value added to the transformation efforts of banks.

Data Analytics is also crucial for the development of AI as well as other cognitive computing capabilities that can be deployed to achieve competitive advantage in an organisation. With the lowering cost of computing and storage, digitalisation is becoming much more affordable and has the potential to redefine business models within organisations; this includes the decision-making process that leads to strategic growth. With the advancement in computer software comes improvement in machine learning and better interpretation of data for effective decision-making, which provides a better enriched digital platform for data applications in value creation and capturing capabilities. Generally, data analytics has excellent prospects in the financial sector and will be a significant asset and leverage for traditional banks' transformation. Any form of sophisticated analytics challenges the traditional business models employed by the incumbent banks with a history of conservatism, particularly in exploring different methods of operation. Established banks frequently fail to seize opportunities through analytics, but with it comes a synergy between the various functions of the business that often creates an enabling platform to allow organisations access to real-time critical data.

As GTCO embraces these advanced technologies as part of its new business model, its digital service offerings will become more ubiquitous, although challenges will also be proportionately ubiquitous. With many structural and complex processes evolving, financial service firms must redefine how they provide customer services by adapting to innovations across business operations. The promise will offer palliative decision-making methods and redefine the concept of business models for the FSI space. The researcher needs to determine how fast the target business model deployed at the case bank will evolve or how it will change altogether.

The unknown is if the significant transformation changes will impede how transforming organisations serve customers. Equally unknown is technology adoption's specific impact on the organisation to achieve better strategic competitive advantage. Technologies hardly function in isolation these days; they are often intertwined with business operations to derive value. AI, for example, offers much promise when used in combination with data analytics; and the bank’s move to an AI-driven platform should be seen as a logical extension of the advancement of its data analytics capabilities. The primary reason behind this is that both technologies use similar tools for execution, including generating significant statistical data sets that equate to a higher value.

2.9.1 DT Challenges –DA Limitation Impeding Success

Many enterprise transformation programmes fail despite the great promises and the need to transform organisations digitally. Over 70% of DT initiatives at iconic companies like GE, Ford and Procter & Gamble that are worth 1.3 trillion dollars failed in 2019 alone (Robinson,

2019). Although analytics as part of the DT agenda seems to propel organisations to achieve more in reducing waste and leveraging business insights, as much as 80% of businesses still need to deploy big data or analytics strategies to compete successfully (Gartner, 2015; Asay, 2017). Many enterprises have joined the new trend (Ashayeri, 2016) of employing analytics to improve business performance, but it may only pay off for some of them (Marr, 2016). However, over 65% of companies involved in Big Data analytics reported below-average investment returns (Baldwin, 2015). The statistics suggest more is required to derive tangible value from Data Analytics or any technological innovation applied to a transforming organisation.

One of the ultimate objectives of DT for enterprises is to significantly gain insights into making better strategic decisions that will allow them to compete better. However, this may only be the case for some organisations for various reasons, including strategy, processes and impact on culture. For example, with a change in culture and value systems to align with the new business objectives of any organisation, the transformation effort will likely succeed. Areas of cultural effects and technological impediments have acted as barriers to the success of DT (Alharthi, Krotov, & Bowman, 2017). Some argue that companies' formidable cultural impact and organisational limitations impede transformation success. This is particularly true in organisations where strong values and traditions often dictate the trajectory of change. Significant change often reflects on the current business model employed by the organisation. Furthermore, a technological challenge to success includes the expensive enterprise cost of data infrastructure required to collate data, store, analyse and extract insights (Alharthi et al., 2017; Sivarajah et al., 2017). The need for more highly skilled staff is another major impediment; the latter could result from data and technology growing exponentially faster than staff skill acquisition.

Data analytics and transformation, in general, are already disrupting business models (Weill & Woerner, 2015). Many organisations with existing business models need to help realign their new strategy. Specifically, their business models on how to serve customers in new markets or offer higher value products to existing customers; in any case, organisations should adapt to constantly changing economic environments (Barnard Marr, 2016). As indicated previously, DT challenges include the traditional business models employed by incumbent organisations with a conservatism history; this has led to established financial institutions frequently failing to seize opportunities through the use of modern technological solutions, including DA or other components of DT (Weill & Woerner, 2015).

2.9.2 Vital Role of Infrastructure

Unreliable enterprise infrastructure can truncate the DT process. Findings from research carried out by IBM indicated that 70% of the companies sampled were fully aware of the importance of DA infrastructure. They considered it an advantage, but only 34% of the companies surveyed applied any tangible digital infrastructure within the organisation (IBM, 2022). Part of the reason needed to be improved or updated technology infrastructure. But the issues are more than just infrastructure; it is also about adequate online banking services regularly available to customers. The quote below further emphasises this fact.

A significant hindrance to adopting business banking services is the need for a more sophisticated demand side from customers, which often leads to the banks' unsophisticated provisions of digital solutions. It has dramatically damaged the digitalisation agenda and may have eroded equity. The deterioration of such relation-based trust could easily affect the acceptance of new digital solutions (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

Many African banks, for example, lack a robust infrastructure to power their operations adequately, one that eliminates failing customer transactions in segregated data silos. Most enterprise-wide area networks in the region struggle with achieving seamless generation and movement of data across the organisation's ecosystem, which consists of many stakeholders, including the new generation Z customers seeking better service and regulatory bodies looking to regulate these organisations better (Zott & Amit, 2013). The quote below further emphasises the infrastructure and digital banking issue.

It is vital to note that while investment in digital infrastructure leads to newer forms of positive relationships, other negative concerns exist. Some customers perceive digital banking negatively, concerned that it could be a mechanism which transfers risks to them, with no particular person to blame if things go wrong. They are used to the previous method, in which if anything goes wrong, they can hold someone accountable" (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

2.10 Platforms –Pivotal to DT Success

As discussed earlier, the idea of implementing a relevant platform business model to offer a boutique of custom services as part of the effort to drive growth is well-received by executive technology stakeholders. It is, therefore, essential to further understand the term digital platform to understand the value the phenomenon offers the case bank. In broad terms, a platform enables value creation by facilitating transactions between multiple users within an ecosystem. A platform or one of its products or services exhibits network effects; the more people use it, the more valuable it becomes to each user" (Church & Gandal, 1992). Powerful social media giants, such as Facebook, Apple and Microsoft, are seen as creating network effects and creating more value because, as platform usage grows from user adoption, it becomes more valuable to their users. This same theory applies to communication platforms, including WhatsApp and Instagram (Afuah, 2013; van Alstyne, Parker, & Choudary, 2016). However, achieving platform success from the above digital giants requires a stable digital infrastructure. Unfortunately, there are prevailing deficits in this space despite the great promise. The quote below further confirms:

Despite low scores in digitalisation, some African countries have demonstrated the potential to evolve rapidly. Although they are held back by relatively weak infrastructure and poor institutional quality, they have demonstrated their potential to become leaders in digital innovation in the future". (Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

2.10.1 Value Driver –Network Effects

Network effects are critical to successful transformation; their benefits will provide significant value to any transforming organisation. They create significant value on any platform business, including the typical platform-based businesses, previously mentioned technology giants, and any traditional banks transitioning to a platform-oriented business model. Direct and indirect network effects have been studied extensively, and they offer tangible benefits, from the enrichment of an ecosystem to increase profitability for the firm (Clements, 2004; McIntyre & Srinivasan, 2017). Direct network effects include value received from one-to-one interaction on any platform (Rochet & Tirole, 2003; Zhu & Iansiti, 2012). An excellent example is the Tik Tok platform; value is derived from a user's ability to engage directly with other users by transmitting video images.

With indirect network effects, data traffic travelling to the platform makes it more likely that complementary services or products can be adopted by users on the platform, thus increasing the platform's value (Boudreau, 2012). In the case of Apple, the more users engage, the more developer community that can be developed, and the faster the developer marketplace grows, attracting more developers to join the marketplace; this chain of actions makes the platform even more valuable. A platform's ecosystem is seen to demonstrate network effects; if it learns from the data it collects on users, it automatically becomes more beneficial to its users (A. Heins et al., 2020). Another case in point is Google: the more users carry out free searches on the engine, the more Google understands its users and offers them more valuable services and better experiences on the search engine; this increases the platform's value exponentially. Tesla is also another example: the more it enhances its algorithms by adding enormous amounts of valuable data points gathered from the sensors on each car, the greater the value to the drivers and the company (Bernardmarr.com, 2021)

The case bank realised the value of network effects and took deliberate action to build a strategy around providing more than primary online offerings for its customers. Services that will stand them apart from the competition whilst increasing revenues for the bank. Most transforming banks in the region realise this added value and are taking steps to invest significantly in digital infrastructure around their banking ecosystem because they know owning and operating a stable digital infrastructure will determine the type of value and digital growth that can be achieved from the DT process.

A multi-sided platform promises tangible value; the captured value is created from the transactional data network effects on the same platform using AI and ML (machine learning) models to enrich the data generated (Forbes.com, 2021). Creating this value for customers based on the platform model is what any forward-thinking organisation should be interested in as it powers through the DT journey. However, to win in a fiercely competitive space where many organisations employ the same platform business model as part of their transformation agenda, some level of advanced data-driven cognitive models can be built and deployed as an intricate part of the platform model to create unique value, this invariably leads to further competitive advantages.

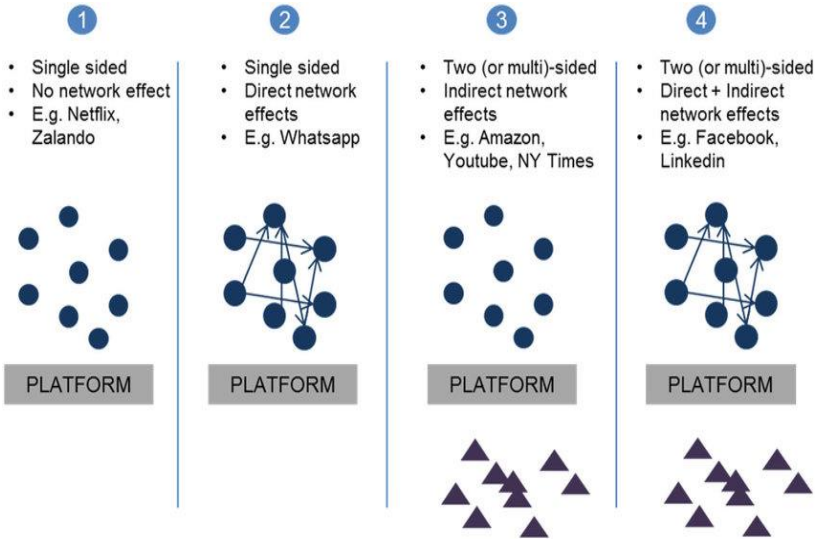

Fig. 2.14: Application of Network Effects

The deployment and use of digital platforms in banking are at an all-time high; this evolution is here to stay (Breidbach & Brodie, 2017). This trend is in banking and other industries (Sanchez-Cartas & Leon, 2019). As indicated previously, it has many benefits for an incumbent seeking to modernise and transform its value proposition; it allows for alternative revenue generation methods in addition to the traditional banking revenue model. The platform model allows for network effects, permitting additional value to be created and exchanged between an organisation and its customers on the platform's ecosystem (Amit & Zott, 2001). The more extensive the network, the more likely activities can be created, creating more value.

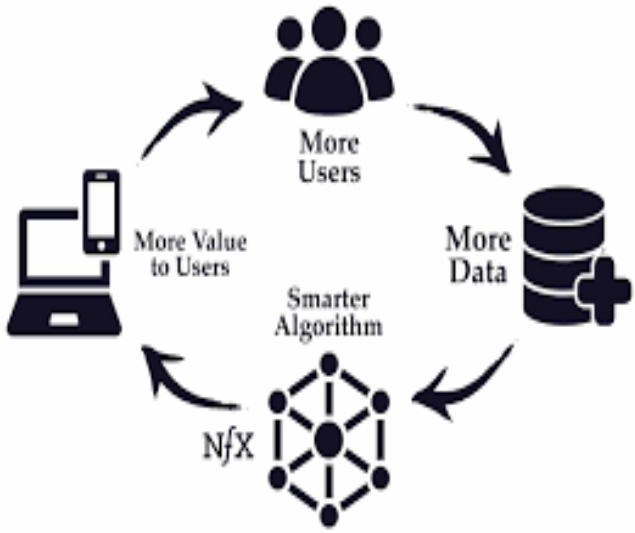

Fig. 2.15: Catalogue Impact of Network Effects

Any data-oriented business model creates additional value on any organisation's platforms, allowing for better predictions on applications on the platforms. High-quality data principally drive this value-creation process to achieve higher-quality results or outcomes. All this forms

part of the value network effects (Haftor et al., 2021). Concerning the business model concept that represents value-creating and capturing (Bieger & Reinhold, 2011), data network effects follow a similar path in that value is created from data generated by the platform and captured and distributed on the same platform. Despite the term network effect still being relatively new with little research carried out, its promise is of great interest in the vast possibilities of value it can create, particularly for the banking world.

The evolution and significant growth of the Internet and networks have spurred the need for various platforms. They show the significant value generated by multiple intermediaries on electronic transmissions, including a typical banking platform's supply and demand sides. Furthermore, two-sided systems (supply and demand) have generally evolved with digital platforms (Boudreau & Jeppesen, 2015). Thanks to realising network effects, their capabilities now go beyond the buy-and-sell transaction. A classic example is a typical bank product platform meant to attract customers to the product demand-side group; however, the platform will need to reach a specific threshold of bank users to make the platform or app viable; the more users on the platform, the more uptake of products and the more revenue the bank earns from the platform powering the digital products. This will attract the Fintechs seeking to offer additional value to the users on the platform; as they are onboarded, more products and services are offered, leading to more demand for users looking to use the list of growing services provided in collaboration with the Fintechs.

However, attracting that loyal base of the initial volume of users is crucial to the success and usage of the platform in the long run; in reality, attracting that commercial loyalty can be a challenge, and this is primarily based on the pain of creating regular awareness on the use of the platform (Boudreau et al., 2015). This becomes the aim of any bank undergoing transformation seeking to implement a platform-based model. The principle behind the platform business is rooted in direct and indirect elements of network theory. Furthermore, Gregory et al. (2020) assert that there is the emergence of a relatively new phenomenon called data network effects, which differs from the traditional network effects described above. This version of network effects emerges from the evolution of the AI and ML models applied to the platform mix by collecting and using the data generated.

A digital platform can generate data network effects if it also has learning capabilities from the data it consumes. It adds some value, reflecting the perceived benefits to the consumers. This learning function can be achieved from the cognitive abilities of models driving the digital platform. This principle of data network effects was demonstrated when Google bought the Nest Thermostat almost a decade ago for $3.2 billion. They invested in the ‘learning’ thermostat because of its valuable function of gathering data and learning from it to regulate electricity in homes. Any organisation seriously considering the digital platform approach as part of its DT initiatives should review and understand how customer data, including transactional data, can play a role in learning from data generated to add value. However, this is easier said than done and is a significant challenge that can impede the transformation process (Forbes, 2021). Part of the above challenge is regulation on data use and understanding the intricate value creation process, specifically, the data platform's ability to learn from the

data it consumes, exponentially increasing its function and user benefits. According to (Rausch and Krakowski, 2020), whenever users engage on a platform, they leave behind digital traces of data that can be tracked and harvested from the digital platform. The data can then be later collected and fed into AI and ML models to derive added value to improve the platform.

As mentioned, Tesla cars are a good data learning case in point; they have analytical models that learn from the data generated as the vehicles are operated (B. Karki, 2020). Based on driving operations and mobility, the cars generate valuable data insights. The datasets are inputted into the AI and ML models powering the car. The vehicle learns from the real-time data consumed by the models to provide better value services to the car's driver. The more the car is driven, the more personalised data is created and learned to offer the driver a better driving experience or new services of value (Gregory et al., 2020).

However, contrary to the above argument, (Clough and Wu, 2020) argue that data network effects focus only on value creation rather than on the critical importance of value capture, which is required for a transformation business model to be successful. They also claim that specifying centralised and decentralised users on the network is needed to attract a positive effect between two key components, namely the size of the network and the actual quality of data passing through the network. In summary, the value and importance of network effects hinge mainly on the relationship between users and the perceived value created and captured on any platform. This phenomenon is not new; it has existed for several decades (Belleáamme et al., 2016).

2.11 Extreme Promise of Artificial Intelligence

AI is a topical subject today, particularly in larger-scale DT projects. Many advantages have been recorded on how it can assist an organisation in deriving more value from the DT process. One of the reasons the banks transform is to create more value to stay competitive, and AI promises the ability to generate more value on the bank's data asset. Today, the application of AI is on the rise, particularly in the financial service industry, where a combination of technologies can be built to replace manual functions and processes in banking systems (Raisch & Krakowski, 2020). Advancement in machine learning models has also opened up new approaches to decision-making with executives, helping banks make faster, better and wiser decisions (Finlay, 2017).

This new phenomenon promises traditional banks a reduction of transaction costs for mass information collection, processing, communication and other activities, such as supporting critical decision functions for loans and prevention and credit risk mitigation. AI could add 13 trillion dollars to the global economy (McKinsey Global Institute, 2018). Such AI and ML abilities are made possible by the significant performance of computing, processing capabilities, storage and network technology advancement (Agrawal et al., 2018). The principle of this phenomenon centres on learning capabilities based on the ability to use data to drive system-learning potential (Author, 2009). The case bank, being innovative, has decided to adopt new digital innovations, including AI, to offer compelling value that the competition cannot provide. The CEO of the case bank said the following:

"Our strategy is to take advantage of the new opportunities born from the digital revolution by moving beyond our traditional role as enablers of financial transactions and providers of financial products to playing a deeper role in our customers' digital and commercial lives. We have created our in-house fin-tech division to pursue this strategy, actively seeking partnerships and collaborations with other Fintechs: Guarantee Trust" -Agbaje (World Finance 2017).

AI is a significant development part of the transformation efforts for financial service-sector organisations. The notion, which also refers to the capabilities of computers to acquire and build on knowledge without human intervention (C. Mc Mahon), could reduce the pitfalls of transformation and revolutionise the banking sector. However, the larger incumbents are still struggling to grapple with AI compared to their more-nimble competitors. AI has attracted significant investments of more than a 20-fold increase in project investment value estimates. It is on record that US start-ups have taken up most of the AI-focused investments; Chinese and European start-up firms are also in hot pursuit (Brooklings.edu, 2020). Although AI promises to bring about significant efficiency gains and revenue increases for traditional firms, the use and exploitation of this technology are still more with the FinTech competitors.

Furthermore, AI deployment as part of technological innovation in traditional banking is seen as modest; however, there is an upward trend in fraud detection, KYC processes and risk analysis despite regulatory requirements around data privacy and increasing concerns about cyber security in the banking sector. Some Western transforming banks have seen an increase in returns based on the impact made by AI in the Financial Services Sector (FSI) space. By boosting the productivity and efficiency of labour, AI could reduce operating and production costs, which can aid banks with increasing margins to stay more competitive with their rivals. The following statement further reaffirms it:

"Among the various IT breakthroughs of recent years, the advancement in AI is particularly remarkable. In short, AI refers to computers with cognitive skills similar to humans, which could result in immense efficiency gains for firms and their clients. The financial sector has been one of the early experimenters with AI technologies, not least due to its likely contribution to stronger profitability." (M. Lang, 2020).

AI refers to complex algorithms and systems that function by drawing conclusions based on the volume of data gathered and the environmental context they operate. They are smart enough to draw independent conclusions and take necessary actions partly due to the advanced trained machine learning models employed. Machine learning (ML) refers to computer programs that recognise patterns of logic and can predict the future based on historical data patterns, with the capacity to learn from the data consumed. Other components of ML include deep learning, supervised and unsupervised learning types and neural networks, which are also based on ML. AI functions optimally by consuming large amounts of information for better decision outcomes. Venture capital (VC) investment in the sector is an excellent barometer to measure capital investment in the industry, and this is on the rise, leading to steady growth in the sector.

In the last two decades, more than 400 companies in the AI sector have been acquired, with about half of that acquisition done in the previous six years. (Fortune Magazine, 2023).

The demographic change in how banking services are now offered has made banks think deeply about their technological innovation strategy and business models to adopt; with the growth of enabling technologies that power AI and digital platforms, bank customers in Africa, for example, are now able to steadily access banking services based on the evolution and development of updated digital infrastructure, including the maturing Internet through their mobile devices. This possibility was unheard of about a decade ago. The platform business model, in combination with a robust digital infrastructure with AI capabilities, create this possibility and potential to add more value to how customers engage with their banks. This technology reduces the need for heavy investment in physical bank branches and the physical capability to generate valuable transactional data from the brick-and-mortar branch outlets. The quote below further reaffirms the trajectory:

"However, due to the enormous cost of computerisation and networking branches, banks have adopted a multi-platform structure where branches are computerised and networked based on their perceived profitability. Rural branches considered non-profitable are either not computerised or have fundamental systems installed. (Bada, Abiodun et al 2004).

As indicated at the beginning of this study, data is the new black gold. However, transaction data is arguably the new platinum for the banks, further propelling digital platform-based banking services whilst creating compelling value. Other significant AI advantages are real-time identification and online fraud prevention. Credit card fraud is an industry-wide problem for banks globally; it makes up a large part of the cyber security issues in banking. However, AI-based algorithms have taken the lead by analysing many transactions for abnormality and detecting outliers. Another primary use of AI in banking is KYC. It is used for identity management and to validate and check for inconsistencies. Red flags are raised when there is a detection of any information that stands out. Customer engagement is a critical function of banking, and this explains the rise of AI-powered chatbots in assisting banks with better customer service. This technology's effective and efficient use reduces staff workloads and customer complaints resolution time. Furthermore, Investment banks using Robo investors are also on the rise. Research has shown that AI can provide better decisions on trade positions, thus increasing growth.

2.11.1 Profitability with AI

Profitability is vital to banks; this is why they are in business. AI could increase profits in two distinct ways. The first is taking over the volume of repetitive tasks done by bank staff, which will invariably reduce the need for skilled labour and improve efficiency and accuracy across the board. It can also significantly reduce compensation costs on staff manually carrying out specific types of jobs; these costs represent a significant bank budget spend. For example, GTCO can employ AI to solve risk issues, specifically political risk analysis, where intelligent models can be built to predict geopolitical challenges in new financial markets they decide to operate. To achieve this, valuable AI models can be trained to consume vast amounts of data

from news, social media, and other publicly available data sources to build a predictive model for a country's political risk assessment.

2.11.2 Regulatory Concerns with AI

The potential of AI in the banking sector is enormous. However, despite all the prospects of AI, some limitations can stifle this technology's use in the financial sector. One such issue is that of regulation. In Nigeria, where the case bank operates, the Government enacted the Nigeria Data Protection Regulation (NDPR), which regulates the use of customer data managed by organisations, including the banks. This regulation, made law in 2019, governs data use across all sectors. The regulation explicitly restricts the use of personal data by data controllers and data administrators (including banks) processing data that is not legally justifiable. It also limits the use of AI owing to the restriction on data consumption on certain types of customer information in making certain high-level decisions in the banking sector.

An extract from Article 3.1(7) of the NDPR regulation states thus: *"Where the Controller intends to further process the Personal Data for a purpose other than that for which the Personal Data was collected, the controller shall provide the Data Subject before that further processing with information on that other purpose, and with any relevant further information."***.** For example, in the case of a bank consuming customer data to provide AI-based personalised marketing service or a model consuming customer data as part of an internal automated processing platform, the regulation principles governing data consent are as follows:

5.3.1 consent is required: a) for any direct marketing activity, except to existing customers of the Data Controllers who have purchased goods or services) for the Processing of Sensitive Personal Data) before the Data Controller decides based solely on automated processing, which produces legal effects concerning or significantly affecting the Data Subject (13).

The above regulatory clause concerns many banks in Nigeria seeking to extensively deploy AI models, as they have yet quite to figure out how to get consent from their customers for data collected for automatic processing. Another concern with AI is that processing vast amounts of data is a part of AI, in that models consume these large amounts of information, including big data sets. The concept of "garbage in and garbage out" holds in this instance. If corrupt data is entered into an AI model, the result will be a model that learns terrible data, ultimately making poor decisions with grave consequences. For example, suppose there was a security breach on Big Data consumption (fake news information scraped online and consumed by an AI model). In that case, the actions taken by an AI machine can be influenced, and the outcome will not be desirable.

The issue of partial data is another topical issue with AI. A model learning from partial data will be biased in the decision taken as part of its output; AI bias has been a subject in the headlines with various governments, including the US Senate setting up hearings to understand the ramifications of AI bias. Furthermore, AI models are accurately precise, particularly in security; they do not work in isolation but with data consumption. Codes making up the algorithms driving the models could be kept in check to avoid hackers' interference. Any

compromise on the logic driving the models can become a significant problem for an organisation. However, as indicated earlier, AI models contribute to bank revenue increases in several ways. Algorithms can allow banks to deliver new products and offer better compelling products to customers, including increased sales, which can lead to significant profits.

Nevertheless, measuring the exact dollar value of using AI is a challenge; this could be from the need for more empirical data to support the evidence required to prove value considering the technology still needs to be fully commercially developed. Furthermore, it is also challenging to gauge and assess AI's potential in operational risks and associated financial costs to financial organisations. Again, fierce competition in banking has prioritised technology deployment, including banks that still need to be profitable. However, AI presents challenges, such as onboarding highly skilled staff to run complex AI models. This is a significant issue for African banks as their highly skilled staff regularly emigrate to seek better prospects, leaving a massive staff deficit. Although profitability has been an important issue for several African banks, including GTCO, if AI promises to revive profits by reducing operational and labour costs and replacing staff with trained models to do repetitive work, then there is hope for banks, mainly traditional banks with high operating costs, to become profitable again.

In summary, the contribution of complex technologies like AI to bank profitability should be considered. In an environment where competition in banking is growing, partly thanks to data-driven financial services providers, such as financial technology start-ups and the extensive technology firms that are challenging traditional banking business models, rapid implementation of AI technologies might be pivotal for incumbent banks to be competitive or better still to remain relevant to their customers (O. Kaya, 2019).

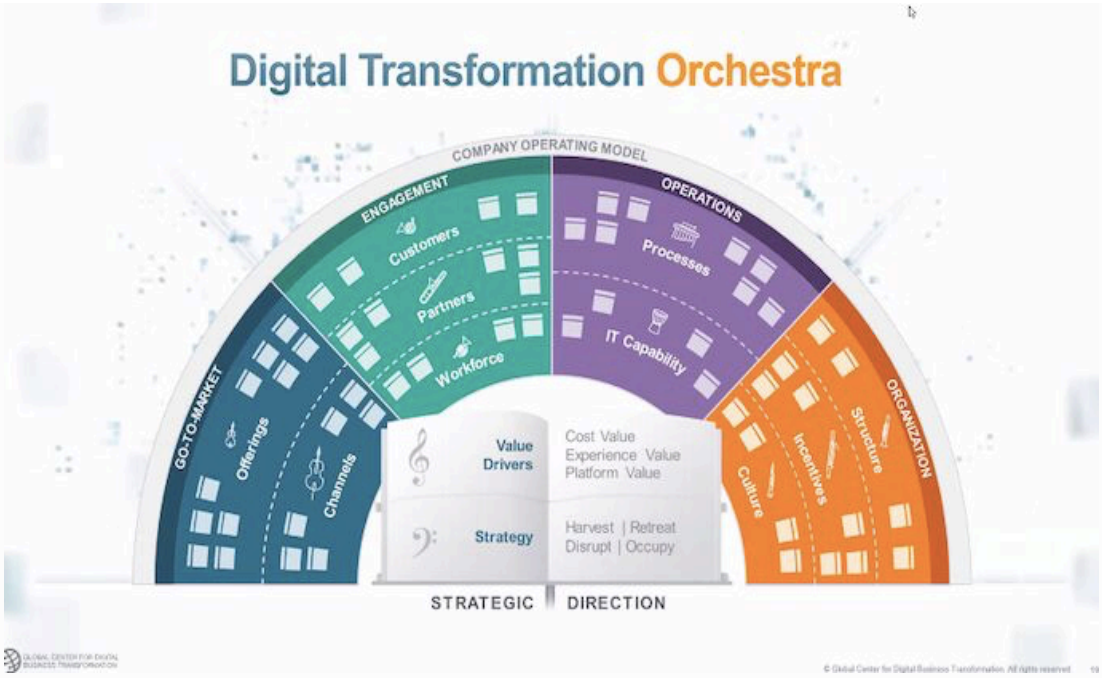

Fig. 2.16: Digital Orchestra Framework (Wade et al., 2017)

2.11.3 Digital Orchestra Framework (Wade et al., 2017).

The above framework emphasises that leaders play a crucial role in DT initiatives and should lead the transformation effort. Leadership can decide on what value is required from the DT process. This is best done by reviewing several strategic options available to the organisation before embarking on the DT journey. The framework emphasises that leaders play a crucial role in DT initiatives and should be in the driving seat of any transformation. It also highlights that leadership can decide what value is required from the DT process. This is best done by reviewing the various strategic options available to the organisation before embarking on the DT journey.

2.11.4 The Digitalization Piano

The Digital Business Transformation Framework, developed by Wade (2015), proposes that transformation should ultimately lead to change. As a result, performance improvement is achieved across the organisation through a foundational base that interconnects digital technologies with modern business models. Professor Richard Wade, a well-respected author and expert in DT, published the framework. He is a director and professor of innovation and strategy and a Cisco chair in DT at the Institute for Management Studies (IMD) in Switzerland. Wade developed two relevant frameworks: the Digitization Piano Business Transformation Framework (2015) and the Digital Orchestra Framework (2017). The former framework has a "Digital Piano"; it mimics the chords on a piano, with each key representing an area for digital change.

The Piano framework proposes that transformation should ultimately lead to change and, as a result, performance improvement is achieved across the organisation through a foundational base that interconnects digital technologies. This framework showcases how digital transformation organically leads to change across the organisation. It focuses on the critical change pillars within the organisation, including how the company creates and captures value. It investigates how internal structures and processes can be transformed. It also looks at a critical function of transformation: technology's role in the transformation process. Besides, it examines how an organisation engages the external forces relating to the firm.

One of the advantages of this model is its proven use in transforming the primary retail outlet Burberry into a more successful company. One of the benefits of the framework is the level of comprehensive details it applies to analysing change organisations. However, it needs more empirical evidence to test its success keys on the Piano. Another drawback is the heavy focus on the change organisation with a minimal emphasis on the external environments, like the regulatory authorities and their significant influence on digital transformation, particularly concerning customer data retention and use to generate more value.

The diagram below illustrates the seven critical areas for organisational transformation.

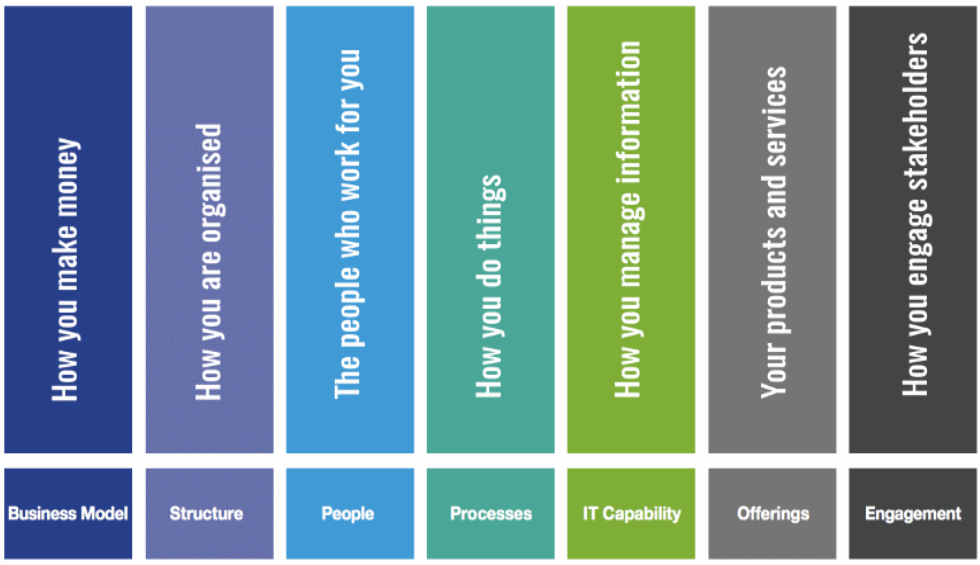

Fig. 2.17: The Basic Mechanics of the Digital Piano Framework

The Digitalization Piano Transformation Framework was designed as a road map for organisations looking to transform digitally. It attempts to unravel how DT can ultimately lead to large-scale organisational change when implemented across the seven keys, effectively leading to improved performance across the board. This is achieved by a mixture of radical changes in how a business creates and captures value and the implementation of digital technologies that can aid the new strategic trajectory chosen by the organisation as it embarks on the DT journey. Wade has written many books, including Digital Vortex (co-authored with Jeff Loucks, James McCauley and Andy Noronha), a multiple award-winning book and bestseller covering how organisations can best compete with disruptors coming into the market space, and Hacking Digital, which covers best methods on how organisations can best execute and fast-track their DT programmes.

What makes this framework interesting is its comprehensive and large-scale organisation-wide change scope as part of areas for effective transformation to achieve performance. The theoretical premise behind this framework is that any organisational DT programme should include a review and change to some fundamental areas within the organisation, including its people, processes, business and operating models. It covers how value is created and the methods used to capture it. It also includes changes to its structure, mainly how the company is currently organised as a business, its established processes, its technological capabilities utilised to support the business offerings and its engagement apparatus with external entities interfacing with the organisation.

2.11.5 Framework Limitations

The central part of the Piano framework covers the people at the heart of any DT; without people, there are no organisations. However, the level of people changes needs more depth. Culture is covered, a powerful but unseen component that should be understood in detail. Any transformation needs to align with new cultural values to succeed. The framework talks briefly

about culture and the need for organisational readiness as part of the transformation. However, it needs to go more in-depth about the exact cultural areas as part of transformation change and be more specific in the explanation key.

For-profit organisations are in business to make money, and any large-scale change potentially impacts the business model, as pointed out by Wade. Nevertheless, more than changing the business and operating model is required to ensure financial performance after transformation. The framework needs to include a detailed assessment of financial-related changes and how the transformation will increase revenue for any organisation embarking on this journey. Also, although it discusses involving external stakeholders in the business as part of the change, it needs to provide details on exactly how or what changes will be required and how they directly affect stakeholders.

2.11.6 Digital Piano in Action

In this categorisation of organisational transformation at Burberry, Michael Wade's Digitalization Piano was used to understand better the intricate areas for a transformation initiative, which helped develop a strategy for change at the organisation.

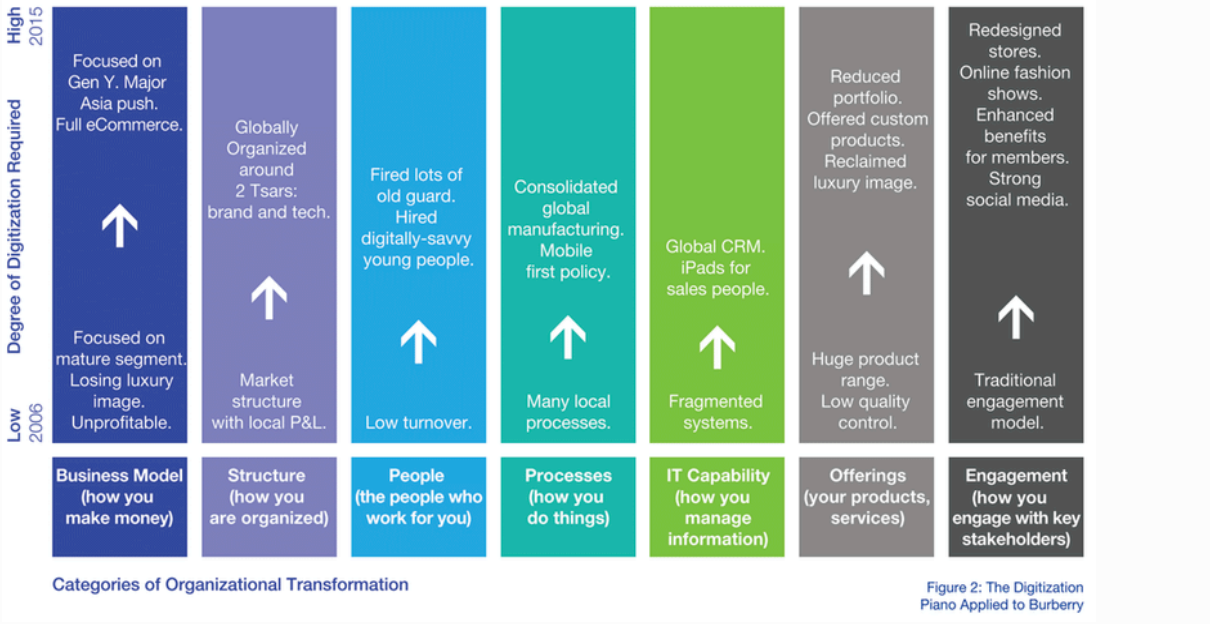

Fig. 2.18: Expanded View of the Digital Piano

According to Michael Wade, the digitalisation tool helps organisations understand why they need to transform and how to chart the way forward and explore how best to execute the transformation. Michael's framework breaks an organisation's area of value into very distinct sections called "keys", which comprise the following broad components: Strategy for Digital, including a road map for the journey ahead; Engagement and Enablers of DT within the organisation. Execution should include using multiple keys simultaneously as they move through the digital initiatives within the organisation whilst finding new ways to improve

processes and serve customers better to reduce overall business costs, which should involve using active methods to drive the new digital process across the organisation.

A fascinating thing about this model is that Wade focuses on the most crucial area for transformation first. He notes that, with a structured method of how a business creates and captures value, it can succeed in any transformation project. It is essential for the business to clearly articulate where it needs to focus its energy rather than chasing anything the Fintechs decide to take on. As part of the transformation journey, organisations should ask themselves questions about the customers they are targeting, the customer values they are looking to build and how they can deliver the values at a competitive cost.

According to Clayton Christensen, a business model should include I) a customer value proposition, ii) a method of making profits from that proposition, and iii) resources and processes involved in generating customer values. Other studies suggest that business models should be extended to include remuneration, and company locations, particularly the sales and marketing efforts required to generate value.

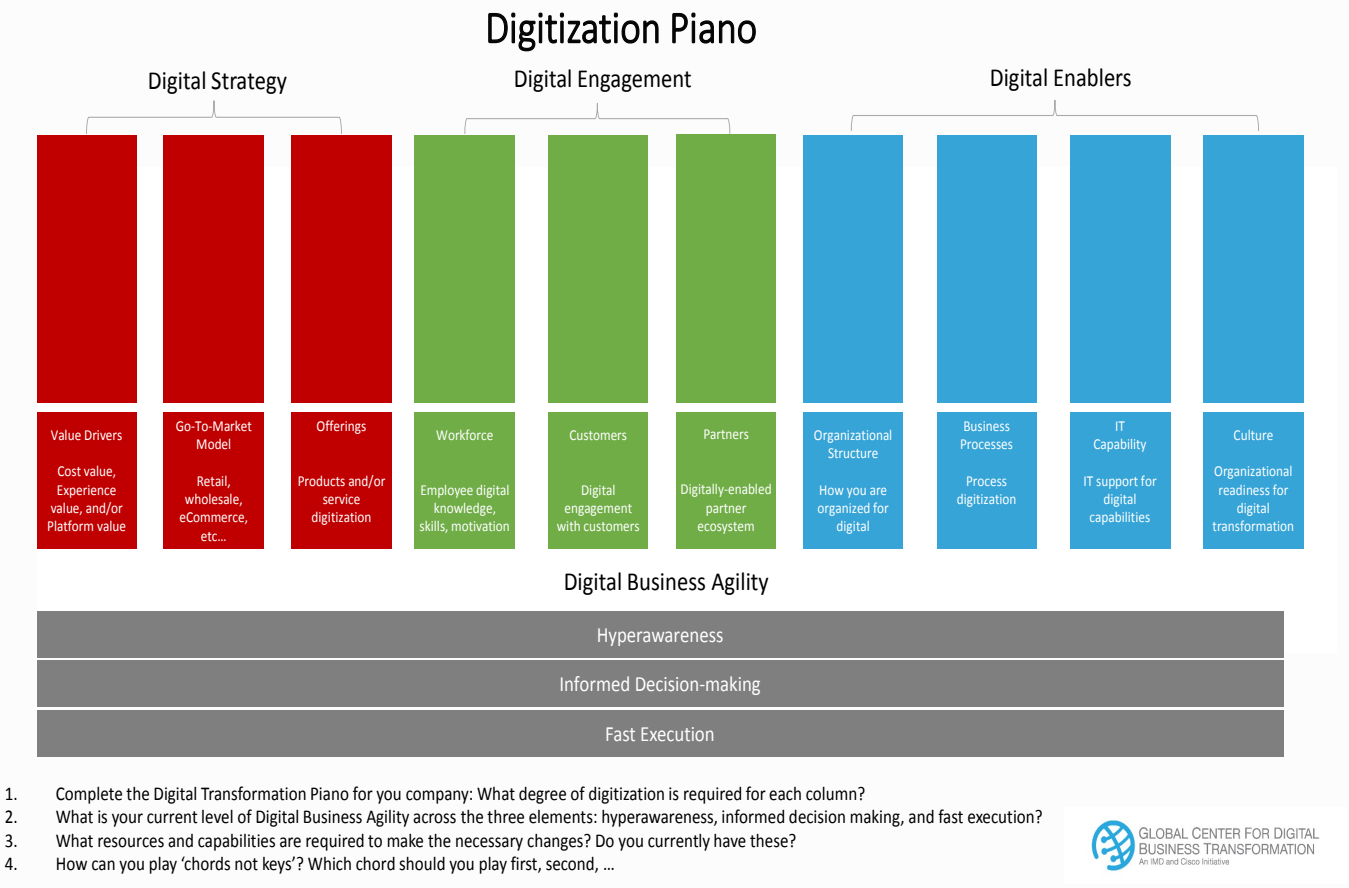

Fig. 2.19: Digital Piano –Burberry Version for DT (Global Center for Business Transformation, 2015)

The Digital Piano can help tremendously as part of the initial transformation assessment for GTCO. It gives a good direction on areas of an organisation to transform. The keys on the

framework also provide the sequential order within the various categories to follow as the organisation goes through the process, allowing the organisation to plan and manage the entire journey. However, knowing the areas that require transformation is more effortless than learning how to transform. Most organisations need help with the latter, another significant limitation of this framework. The challenge could account for why 70% of DT projects fail. The how and execution factor is the real challenge with transformation. Hence, this thesis examined how to overcome the challenges of change.

2.11.7 The Piano Aligned with DT

The digitalisation piano defines DT as organisational change through adopting and utilising digital technologies and new business models to improve overall organisational performance. First, DT enhances business performance by deploying digital technology as a base. The approach also suggests that not all organisations can significantly benefit from DT. Organisations that gain the full impact of transformation can see value from using digital technologies but may also undergo a significant change process that touches the organisation's core; strategy, people, process, structure and culture. Therefore, more than technology adoption is needed for the transformation journey.

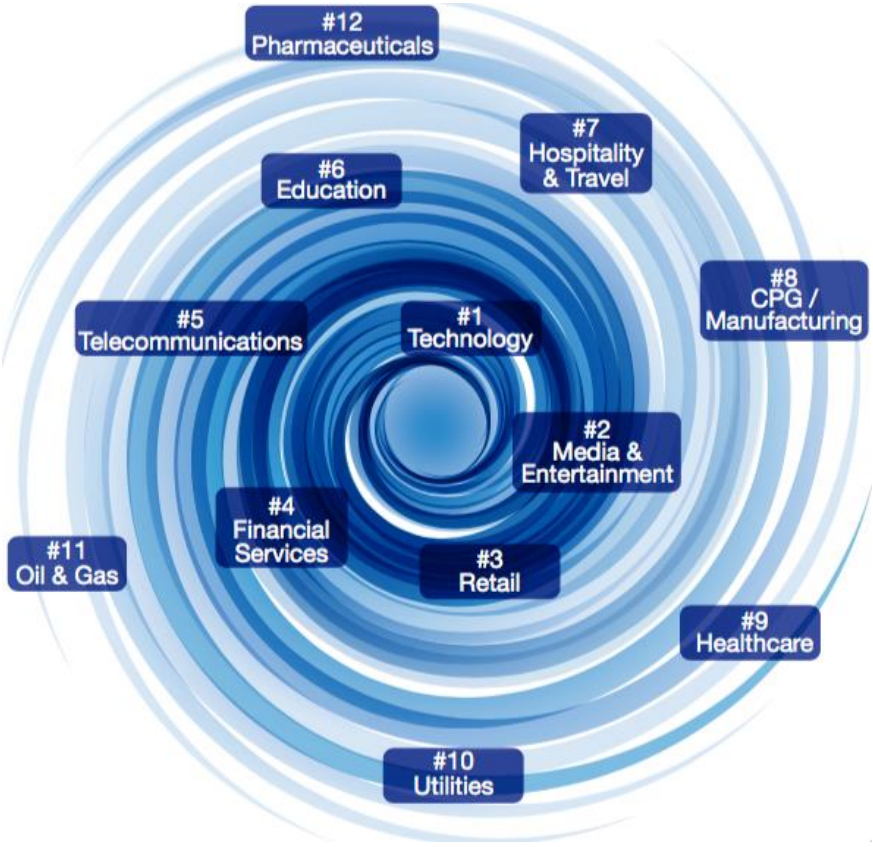

Fig. 2.20: Digital Vortex by Wade et al.

2.11.8 Disrupting with the Digital Vortex

Digital disruption is a significant reason Fintechs are gaining ground on the incumbents. *Digital Vortex*, which Wade co-authored with Jeff Loucks, James McCauley and Andy Noronha, explains in detail how digital disruption works, mainly how the smaller nimble technology firms compete and threaten the established players in the industry. It also focuses on how the incumbents can better respond to the threats by undergoing organisational change and applying technological tools to become more agile and enjoy organisational changes. When traditional and established businesses face disruption, companies need to understand the extent of the competitive change involved, especially technologies and the business model required to compete fiercely with the new disruptors before they respond to the threats at play.

According to Wade et al., digital disruption differs significantly from the traditional methods of competitive advantage. The differences revolve around two key areas: the pace of change and the impact of change involved in the process. Digital disruptors, by their very nature, tend to innovate at breakneck speed; they execute their new business models to rapidly gain market share with the capacity to move much faster than the incumbents that still implement outdated methods of creating and capturing value. The new start-ups operate with low overheads, deploying leaner models with technology that allows them to operate rapidly in multiple markets. Several variables in the Vortex play significant parts as disruption occurs. One of these is the velocity of innovative disruption.

This variable is responsible for the shock and awe within an organisation, particularly when innovative disruption hits an organisation. Having a good foundation of how disruption occurs allows traditional organisations to build formidable strategies to cope with the force of change before it hits them. Wade et al. illustrate this fact using the natural vortex principle in Fig 1:17 above: where the force of gravitational shifts, it pulls the business models, strategy, products and services offered by various industry-sector organisations to the centre of the Vortex; as it gains more momentum from the force, it further propels the objects at the centre of the Vortex, creating massive destabilisation and pandemonium across the organisation.

Wade et al. list several industries that will fall into the path of the digital Vortex. They also argue that objects (various industries facing disruption) of a company's structure that may not be significantly impacted by the extreme force from the Vortex can get propelled to the "eye of the storm". According to Wade, it can happen in a relatively short period; the force creates a separation of physical, mundane and traditional methods of operation from the digital capabilities that can be enriched with more potency to deliver services that compete with the disruptors. As seen in the digital Vortex in Fig 1:17, financial services are almost at the heart of the "storm" of transformation. Surviving this onslaught of competition and emerging from the Vortex unscathed will require resilience and developing digital business agility (Barbier, 2017). In the entire process of self-reflection, business agility should play a central role in the business strategy to radically transform.

2.11.9 Impact of Digital Agility and Failure to Transform

An organisation's hyper-awareness of its operating environment is vital to digital agility. It involves regulatory changes, changes in consumer behaviour and demand for digital services, and competition, including the scale and extent of FinTech companies gaining market share. Also essential as part of becoming more digitally agile is making informed decisions and taking all environmental variables into cognisance. Digital agility is, therefore, critical, as it helps a firm make the best decision in any situation. Another primary reason firms struggle to transition digitally is the lack of a strategy that spells out the digital journey from beginning to end. The Digital Orchestra Framework addresses this point, demonstrating how a company can achieve DT transition. Wade et al. point out that firms fail to digitally transform because of a lack of long-term strategic direction, for example, where an organisation wants to be in 10 or 20 years.

If a firm knows the answer to this question, it becomes much easier to plan towards that direction. A firm should understand how to move towards a successful transition. Nwaiwu (2018) confirms that a firm must focus on and enhance three significant areas of value creation when creating its strategy and planning transformation. These are; cost value, platform value and experience value. A firm should be able to articulate the above value creation gaps clearly. It can plan towards achieving value across all three areas to be successful in its transformation efforts. The above explains why the case bank and other transforming banks earnestly seek to change to dominate the new digital banking space—coupled with the fact that the African digital ecosystem is becoming more mature than ever, with the explosion of consumers subscribing to broadband services and a new Generation Z class becoming more present online. The time seems suitable for incumbent banks embarking on the transformation process. The quotes below further assert the above points:

Furthermore, despite sub-Saharan Africa being "one of the least wired parts of the globe, social media has increased interest in Internet-enabled services and triggered new business ventures". -(Taura, N. D., Ede, O. C., & Ogunniyi, O. (2019).

According to Wade et al., based on a survey of firms from different industries, the mean time taken to expect some significant level of digital change was about three years, which is historically compared to the more extended frequencies expected in the past. Clayton Christensen emphasises this fact in his book *Innovator's Dilemma*. He contends that traditional firms find it hard to innovate because of the same business model they have established, which has worked well for decades. Therefore, business models can be seen as a double-edged sword contending with the disruption that will continue from within the organisation or FinTech companies. However, one thing that remains constant is the momentum towards the "eye of the storm", firms being forced by the gravitational pull from the vortex at the peripheral to the centre of the vortex.

The advantages of incumbents centre on their established positions and brands gained over years of doing business. There is access to large sums of capital from the credit built over decades, a substantial customer base built over time so they can leverage on their position, and access to capital and high assets value to compete much better and faster than the start-ups.

Conversely, Fintechs are small, with limited cash flow, a low customer base, and an unknown brand still achieving and sometimes exceeding the scale of customer numbers traditional organisations hold but in a relatively short period. Despite this, FinTech companies have reached unicorn status relatively quickly compared to incumbents that took decades to get there.

2.11.10 Vortex as a Vantage Point to Transform

According to Wade et al., the barriers to entry enjoyed by the incumbents are no longer barriers holding back the Fintechs from competing. Within the Digital Vortex concept, objects (industries) cannot determine the movement within the vortex, as they can be flung to the centre relatively quickly. They argue that executives that may feel safe at the periphery of the vortex should not feel too comfortable as the force of the vortex, which cannot be predicted, can move them around at any time, causing chaos and destruction in the process. Predicting when the force of change will impact an industry is virtually impossible. The focus should be on how the value is generated and not the industry or process of value generation. This is evidenced by several industries aligning with others after amassing large numbers of customers and redefining their business models on how they create and capture value. For example, about the disruption in the banking sector, a brick-and-mortar building with many branches nationwide does not constitute a bank anymore; instead, it is about how services are delivered and the customer engaged using technology.

FinTech players without expensive buildings provide optimal banking services to customers nationwide, with minimal or no branch locations, significantly reduced staff strength and less capital outlay. They are penetrating the products and services offered by the banks using a close combination of new business models and technologies and automating services as they advance to offer compelling banking services unmatched by the incumbents. Wade et al. argue that the start-ups provide these services by leveraging technology and business models that allow them to avoid the costly regulatory requirements and substantial capital investments; this, therefore, indicates that it is not the value chain that matters but figuring methods of creating that value but at minimal cost and with a high degree of efficiency.

According to Wade et al., one innovative idea can completely redefine and disrupt a seemingly stable market. This makes it imperative for executives to understand where the real threat or competition will emerge from. Research indicates disruption often appears from a sector surprisingly different from the incumbent's. A good example is Amazon moving into financial services or logistics that differ entirely from what it started, resulting in a significant disruption arising from a bright innovation. However, another research by Wade and his colleagues confirmed the premature abandonment of the core. This occurs when a traditional incumbent decides to move into a new growth area and pays less attention to its current business offerings yielding steady and increasing revenue streams. This has been the case for many successful companies that try to spread wider but lose their established strategic foothold. Instead, they should use DT to automate processes to exploit the business areas they have yet to tap. These low-hanging fruits will be much easier to capture than developing an entirely new business model, which might require more resources and capital intensity in uncharted waters.

The Digital Vortex clearly illustrates the pressure on corporate margins for the traditional incumbents that require disruptive innovation to relieve that pressure. This points to the fact that traditional organisations can disrupt from within, which does not necessarily mean breaking entirely away from the old regarding how value is created and captured, but finding innovative ways of leveraging technology to offer the same value at a grander scale. The process includes looking inwards through creative thinking to get value in new ways. The vortex also confirms that firms often collide and disintegrate on their way to the centre core. This is usually not caused by technological innovation from competing forces but by newer business models that emerge, creating unique ways of delivering value to customers.

2.11.11 Other Possible Success Factors

A formidable business model developed due to great value, experience, and an extremely efficient platform business can help combat the effects of the digital vortex, where traditional organisations are thrust from the edge of the periphery to the centre of the vortex. When combined, cost, platform, and experience value are significant for success. It is the major success proponent for the formidable business models developed by successful technology giants like Facebook and Google.

2.11.12 Digital Piano –Some Limitations

The DT and its dimensions research have been conducted from multiple areas over time. However, the weaknesses identified in most research findings include focusing mainly on customer engagements and improvement of firm operations. However, as can be found in this study, DT goes beyond customer engagement and procedures; it cuts across the depth and breadth of the organisation, including strategy formulation, models to embrace, decision-making, efficiency gains across all process areas in the firm, and its people, process, structure, and culture. As noted by various scholars, the strategy for DT should be the starting point in the decision process that integrates all other parts of the firm and beyond. As part of the market entry strategy under DT, the firm can clearly define what and how products and services are offered and distributed on its infrastructure; the business and operating model requires extensive review.

In migrating from physical to virtual offerings, the firm can assess and mitigate a digital vortex scenario and avoid threats from competitive digital disruptors in the same space. The last three decades have brought about revolutionary technology transformation in the financial service sector (Gomber, 2017). Most industries, including banks, are being significantly impacted by digital disruption. As Bradley et al. (2015) explain in the Digital Vortex Framework, this is a period when digital disruption affects companies; the period also requires a systemic shift in business models and value chains to become more digital.

2.11.13 DT Misconception of Theoretical and Framework Application

The researcher found from the literature review that the issue of enterprise transformation is comprehensive and covers broad and varied scenarios, some of which are conflicting for the case bank to adopt. In addition, the researcher observed the diverse theories and frameworks in the DT space. Some authors captured the importance of the bottom line –the financial aspect

of DT; others focused on a shift in the business and operating model employed, while others stressed that internal structures should change first. Some other authors focused on taking an alignment view and assessing its resource and dynamic capabilities before moving. Finally, some authors argued that configuration theory, organisational learning theory and the complete re-modelling of the organisation's business process were critical to a successful DT process. However, scholars see the perspective on the digital transition process differently, and this depends on various contending arguments. Nevertheless, it can be argued that combining the above and varying fields of research broadens the scope of the DT space and provides more understanding of the transformation change within the context of the case bank. The quote below provides a unique perspective and further emphasises the argument.

"There may be difficulties with the implementation of DT, but hopefully, the benefits of DT against the hindrances and challenges can assist. With advances in digital technology, DT might become more successful in addressing its challenges to realise its global digital strategy successfully." (Keneilwe Maremi et al, 2020).

The above frameworks will be used as part of the research to narrow down the areas under review; it will also help reduce the scope of data review relevant to the study, allowing the researcher to focus on particular variables in the case company. The theories will help identify and test the facts' validity concerning the case bank's phenomena. It will also help channel the researcher's efforts when analysing, interpreting and validating the data gathered from the qualitative inquiry.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The research method was selected based on the form of research questions and the extent of control the researcher had over the series of engagement activities (Yin, 2009). Selecting this method of study involved the empirical investigation of a specific phenomenon within its real-life context (Saunders et al., 2009), and that particular phenomenon is a case study and review of the significant challenges of DT in the banking sector, with a particular focus on how the case organisation can overcome the hurdles and enjoy the benefit from transformation. Yin (2009) distinguishes between single and multiple case study designs. This study used a single-case study design to review and analyse the bank in question -GTCO, as it represents a critical and typical case type for this study. The researcher planned to test several theories to validate or disprove established and documented domain knowledge on the subject. In this research, Kotter's and Lewin's well-known change management processes and several digital transformation theories, including the Digital Vortex and Digital Piano frameworks, were applied to interrogate the various challenges of DT and the critical change factors required at GTCO. The researcher found the case approach of great value in developing an intervention framework for the case bank (Yin, 2009).

This chapter discusses how the researcher decided on the research approach, including the collation and multiple data analyses conducted to confirm and validate the findings. The researcher chose to study the case organisation for several reasons; one was the fact that GTCO is the dominant bank in the region in terms of size; secondly, the consistent application of technology and innovation within its operations was another critical reason. Furthermore, the exemplary and dynamic leadership style of the bank's management presented a unique and compelling case for the researcher. Before this study, the researcher interacted with the case bank in various consulting capacities and consulted with its competitors in the same industry. The combination of the above variables provided the overwhelming facts required for the researcher to develop a string of interests that led to the final decision to adopt the case study method for this research.

3.1 Research Approach

According to Harding (1986), qualitative methods are tools for collating research evidence as part of the inquiry process (Schwandt, 2001). As indicated earlier, the researcher spent considerable time deliberating on the case selected for this study, which was done in line with the case study research method (CSR). The researcher also decided on the case study path because of the conviction that the case method is best suited for business research (Jervensivu & Tornoos, 2010). This approach was in line with the ultimate aim of the thesis, which was to develop a business intervention for the case company post-research phase.

Fig. 3.1: Qualitative Methods of Research

When choosing the case study method, the researcher was particularly keen on an approach that allowed participatory observation of the case reality and how it reflects on research participants and the literature reviewed. (Halinen and Tornroos, 2005) Define case strategy as one or multiple business domains where specific domains and their networks comprise organisations that are interconnected primarily for business reasons.

3.1.1 Research Case Method

The CSR method is widely used within business and social research disciplines, and one of the reasons the researcher selected this particular approach was to overcome limitations arising from other research methods and the deficit in empirical research within the area of study (Bryman & Bell, 2015). One of the best-employed qualitative research approaches is arguably the CSR method, although some will argue that the approach needs to be better grounded and structured in its principles (Yin, 2002); this has often led to misconceptions on what a case study should really be and what sets it apart as a unique tool for research (Merriam, 1998). It is important to note that this case research includes the researcher's thoughts on several concepts, including epistemology, case study qualification, the actual case's design, gathering, analysing and validating research data collected from the inquiry process.

3.1.2 Methodology –Yin's View

The review of Yin's CSR method is more focused on the research design, emphasising the relevant case methodology as the only instrument of inquiry. According to Yin, previous attempts to apply the case study method needed a comprehensive and robust structure, including a gap in detailed social science methodology (Yin, 2002). On the contrary, Merriam's (1998) approach focuses on qualitative research with only a basic structure on application to case studies. It emphasises what makes a good case study research and explains how it differs significantly from other approaches.

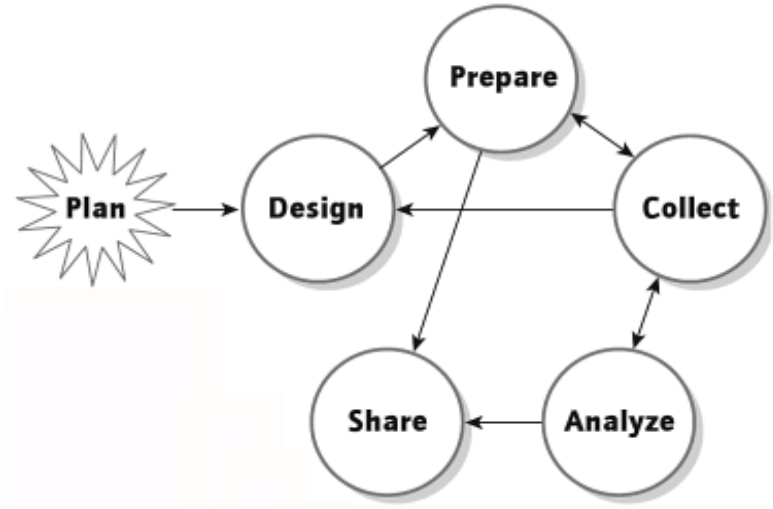

Fig. 3.2: Case Study Methodology

As seen above, The qualitative CSR method allows for extensive research exploration of varied phenomena, making it ideal for this transformation study at GTCO. Most researchers that embark on this research method must be made aware of variables that impact the final research outcome despite the time and effort employed in the research process. Therefore, it is essential to have a clear direction regarding the objective and method of any research. If not, the research results can become inaccurate and misleading (Baskar, 2014), so this inquiry approach is the most utilised method for qualitative studies (Yazan, 2015).

Although the CSR method dates back several years and there is documentary evidence of its significant value in literature, more must be documented on the specific ways to carry out an effective CSR (Hancock & Algozzine, 2016). A definitive road map on how best to approach case research will go a long way in illuminating the process without creating confusion for the researcher; this may be why some organisations find quantitative analysis more beneficial and possibly explains why they gravitate towards it. Another argument could be that numbers can be a straightforward method of validating a particular phenomenon, creating more popularity with businesses than the qualitative method (Eriksson & Kovalainen, 2015).

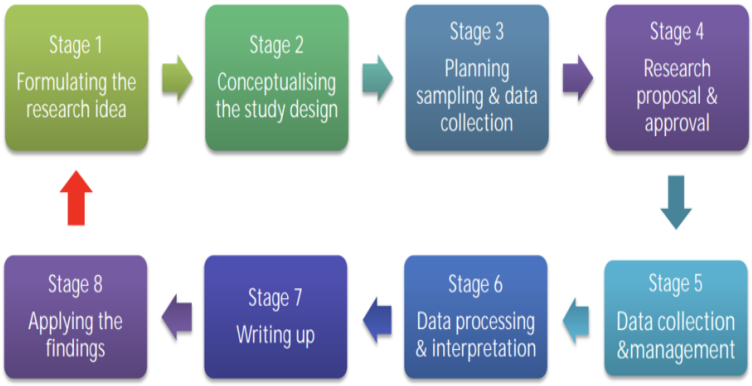

Fig. 3.3: Research Process and Steps

The qualitative research method, with its methodology variances, as seen above, is applied for extensive study in this thesis. Multiple data sources often provide a multi-dimensional prism for viewing the problem (Baxter & Jack, 2008). However, there is the argument that the approach needs more structure and methodological principles for detailed analysis (Yin, 2002); this often leads to inexperienced researchers getting lost in the CSR method and not getting complete outcome accuracy for their study (Merriam, 1998).

The case method is interesting because it takes an investigative approach backed by academic data collated over a period that ultimately provides a detailed non-subjective analysis of a phenomenon. In the view of Yin (2002), the CSR method is a research type that includes using empirical data collated in different ways. One of the benefits of this method is that it is not limited to any specific phenomenon. It can be extended to groups, organisations and communities using its extensive tools to identify and unearth critical processes and correlations between entities. Furthermore, causal effects and specific actions or responses can be documented and reviewed for clarity (Brewer & Hunter, 1989). This fact is a primary reason the researcher selected this method of inquiry and the fact that it allows for identifying an ideal strategy for research. This was particularly useful with the GTCO case, as the researcher had no control over the shape of investigative activities conducted at the bank (Yin, 2002).

Many theoretical and practical materials have attempted to describe how this method type can be used for research (Croswell, 2013; Merriam & Tisdell, 2015). However, despite the approach's popularity, the best of literature explains it in a very linear manner that needs more clarity and depth. Top scholars have yet to agree on how execution can be best carried out with this type of research (Yazan, 2015).

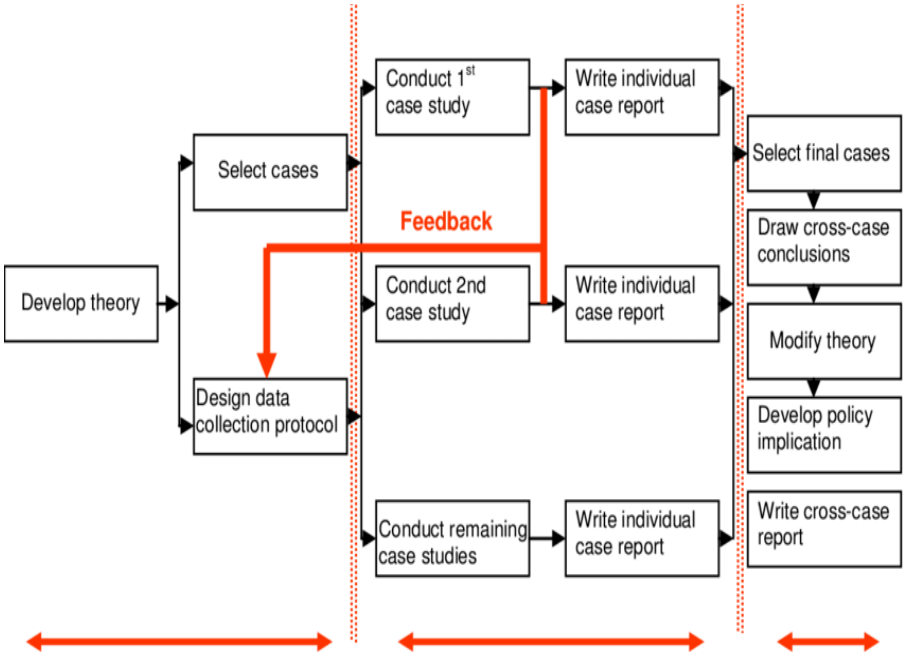

Fig. 3.4: Case Study Methodology (Yin, 2017)

Although specific authors have tried to break down the case approach process in some detail, as seen in the figure above, completely deciphering the research process is still challenging for researchers. Following the researcher's search, three respected authors emerged in the case method domain: Robert Yin, Robert Stake and Sharan Merriam; their works have significantly impacted academia. These authors have attempted to formulate the process for best conducting case research. However, most of the studies conducted by these authors are mainly theoretical, with minimal practical guides on case study application. Other authors assume background knowledge and competence in their approach to the case methodology; this can be a challenge for researchers with minimal understanding of the research method.

3.1.3 Philosophical Dimension of the Case Method

Several literatures argue that philosophy is the foundation for any case study research, as it sets the groundwork required for investigation (Wilson, 2014). With good preparatory work at the beginning of a study, other stages of the research will become increasingly more accessible. A thorough understanding of the philosophical dimension sets the stage for how the research approach can be carried out; this stems from an understanding of other related dimensions, including ontology, epistemology and paradigm dimensions (Denzin & Lincoln, 1998). The researcher invested time and effort to fully understand the detailed research mechanics of qualitative and quantitative approaches before a decision was taken to adopt the case study method (Maree, 2010). Numerical data research has its place in most inquiries, while the descriptive method has its place in specific investigations. Reviewing the advantages and limitations of the quantitative and qualitative approach was a good starting point for the researcher before embarking on the case study method of inquiry (Brynard, 2014).

3.1.4 Ontology Prism

When applied to research theories, ontology allows the researcher to understand the realistic view rather than pessimism. (Denzin and Lincoln, 1998) Argue that ontology investigates issues on the environment, including the very nature of man and its interactions with the universe. Fundamental questions are raised on the nature of the environment as humans concerning what can be considered tangible and what can be counted as facts and evidence (Moorehouse & Maykut, 2002).

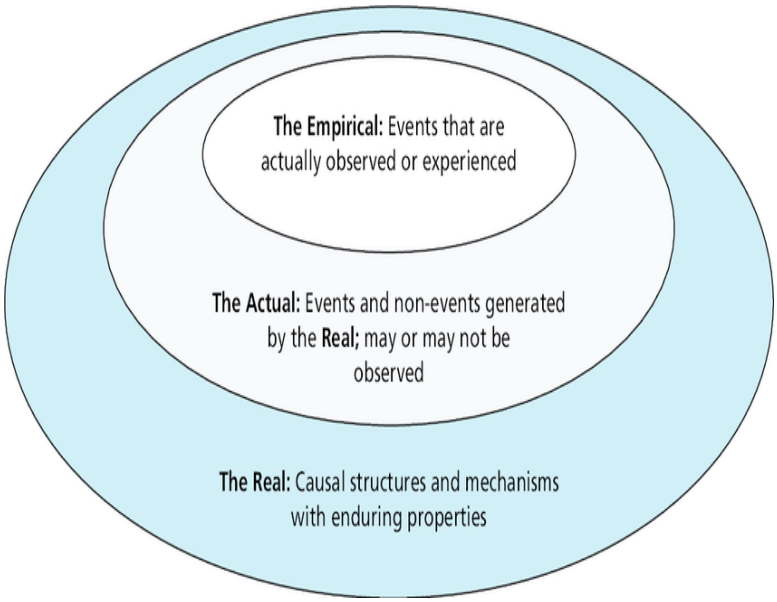

Fig. 3.5: Realist Ontology (Bhaskar, 1978)

3.1.5 Realist View

Ontology can be divided into two main components: realist and relativist. The former believes that reality does exist, but it is separated from or independent of the researcher's perspective and only works with the laws of nature, which include the laws of cause and effect (Guba & Lincoln, 2005). According to Britannica Dictionary, philosophical realism believes it "accords to things which are known or perceived existence, or nature which is independent of whether anyone is thinking about or perceiving them". *Stanford Encyclopaedia of Philosophy* (2019**)** states that:

"The question of the nature and plausibility of realism arises concerning many subject matters, including ethics, aesthetics, causation, modality, science, mathematics, semantics, and the everyday world of macroscopic material objects and their properties" (A. Miller, 2002).

With the case study approach, realism can be a significant advantage in case study research. It allows the researcher to consider all available research options rather than narrowly focusing on the worst possible outcome. It also allows the researcher to avoid any form of naivety with

the research outcome and to focus on the research despite other contending views that can otherwise create a bias (B. Hale, 2020).

Ontology	Realism	Internal Realism	Relativism	Nominalism
Summary	The world is 'real', and science proceeds by examining and observing it	The world is real, but it is almost impossible to examine it directly	Scientific laws are basically created by people to fit their view of reality	Reality is entirely created by people, and there is no external 'truth'
Truth	There is a single truth	Truth exists, but is obscure	There are many truths	There is no truth
Facts	Facts exist, and can be revealed through experiments	Facts are concrete, but cannot always be revealed	Facts depend on the viewpoint of the observer	Facts are all human creations

Fig. 3.6: Relativist Ontology (Graph by Easterby-Smith et al., 2012)

3.1.6 Relativist View

The case study approach is predicated on the relativist principle. Relativist ontology argues that there is no hard or actual possibility but only complex and advanced constructions (Guba & Lincoln, 2005). The notion of relativity is clear: there are no "truths". According to the Encyclopaedia of Philosophy, relativity is the notion that "all points of view or research arguments are valid"; no right or wrong. Relating this definition to research, it refers to the fact that there are no true or false conclusions deducted from the study process and that right or wrong conclusions can only be made about other things that present themselves in the research process. According to the relativist view, the general belief is that all things are created human.

Ontology	Realism	Internal Realism	Relativism	Nominalism
Epistemology	Positivism			Constructionism
Aims	Discovery	Exposure	Convergence	Invention
Starting Points	Hypotheses	Propositions	Questions	Critique
Designs	Experiments	Large surveys	Cases and small surveys	Engagement
Data types	Numbers & data	Numbers and words	Words and numbers	Words; experiences
Analysis	Verification & falsification	Correlation	Triangulation	Sense making; understanding
Outcomes	Confirm theories	Test and generate theories	Theory generation	Insights and actions

Fig. 3.7: Spectrum with Epistemology Transitioning to Constructionism (Graph by Easterby-Smith et al., 2012)

3.1.7 Epistemology View

The above diagram illustrates the correlation between epistemology and methods of investigation, including beginning points, actual designs and the various types of data, analysis and eventual case outcomes (Easterly-Smith & Abbariki, 2014). Epistemology varies and can have an impact on the research method selected. Views of epistemology are seen as objective rather than subjective. The former refers to a research situation the researcher does not influence; this facilitates descriptive observations and reporting based on unbiased research analysis. Objective research also avoids any form of an opinion or conclusive judgment by the researcher and primarily focuses on hard facts from the study. This view magnifies the correlation between nature, its origins and knowledge construction (Moorehouse & Maykut, 2002).

3.1.8 Case Study Research Approach

This research approach was selected based on the size of the company, its capabilities (both financial and technological), its dominance in the banking market in Africa, and its able and dynamic leadership. As earlier indicated, the researcher adopted the Case Study Research (CSR) mode of enquiry for this investigation to clarify the data transformation phenomenon at the bank.

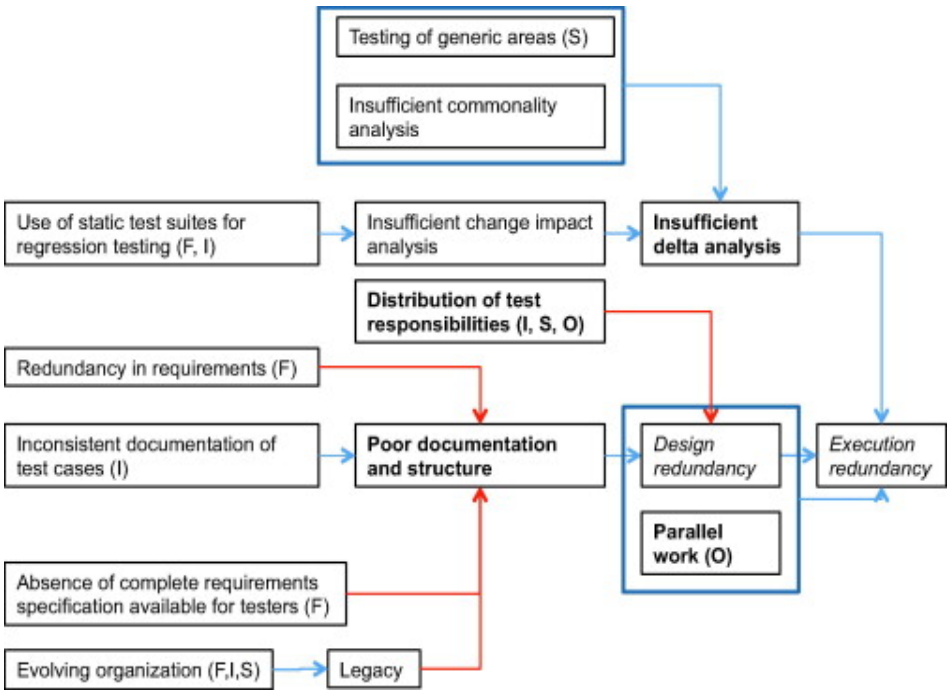

Fig. 3.8: Hypothesis Resulting from a Case Study Method

The CSR method assisted the researcher in thoroughly investigating the case organisation. As described above, the results collated can be analysed using a hypothesis method for validation. The approach applies science in investigating a phenomenon in great detail, and it is not limited to individuals but can be used for organisations as well as research groups and organisations (Stake, 2005; Burawoy, 2009).

It is a known fact that the application of science in research reduces possible errors in the research process. Single cases allow unravelling a phenomenon by diving deeper into the root cause (Fiss, 2009). This approach allowed the researcher to drill down into the challenges of transformation at the case bank, allowing for comprehensive analysis and intervention as required (Piekkari et al., 2009); this is in line with the depth and comprehensiveness of the Yin and Stake approaches (Stake, 1995; Yin et al., 1998). The researcher saw the tangible value of focusing on the single-case approach and conducting a comparative analysis of multiple cases.

Reaching out to a competitive organisation, Kuda Bank, to compare the findings was insightful for the researcher; it provided a more comprehensive analysis of the phenomenon. However, this was only one of the options; the additional step was taken to compare data and validate findings. The approach revealed the similarities and differences between studies done at the two contrasting organisations; the case bank was analysed as a single entity and contrasted with specific mechanisms from the comparative bank, leading to more valid theoretical conclusions (Vaughan, 1992).

What also made CSR attractive to the researcher is that the case context is not directly controlled but forms part of an investigative inquiry process; this is ideal for the DT case study, as it allows for flexibility in the investigation process. Another reason for the researcher going with this approach is that the process is purely qualitative, only requiring gathering samples to form experiments in a purely non-random method rather than any form of quantitative logic or interest (Stake, 2005). The data collected with this line of inquiry was based primarily on interviews, observations and containing archival materials (Mason, 2002; Flick, 2009). Triangulation was employed as part of the data collection strategy to build a detailed case description (Stake, 2005; Ridder, 2016).

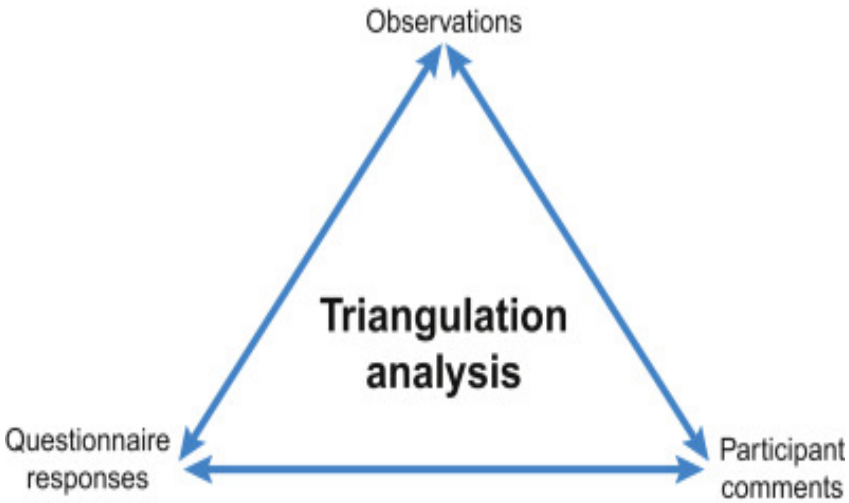

Fig. 3.9: The Process of Triangulation

The researcher adopted the data triangulation principle to ensure the data's validity and gain a different dimension on the phenomenon under review at the bank, primarily because triangulation increases credibility and validates research findings. It also reduces the challenges of verifying constructs, as several data sources can provide multiple measures of the same phenomenon. However, like any other research type, CSR has its challenges. Some scholars argue that the method lacks scientific rigour and that there may be some element of bias from the researcher, which can influence the final study result. It is also viewed as time-consuming and expensive to carry out. Other limitations of CSR include the dilemma in deciding to adopt the exploratory or explanatory option, choosing between building and testing theory, selecting case(s) for the research and deciding on the research strategy.

3.1.9 Case Design Mechanics

Yin's approach to case design is unique because it needs to follow a well-defined and conventional approach to a study. For example, he emphasises that having a hard-wired design is unnecessary for case study research; this aligns with his arguments that a chronological approach to case investigation is not yet fully available, which may be why some people perceive Yin's model as inconclusive, as it is seen to lack a detailed chronological approach (Yin, 2007). He terms research design as the logical steps that link empirical data to specific research questions and deductions. According to him, there are four principal design types: single, multisided, holistic and integrated. Selecting the right design option will largely depend on the type of research inquiry being carried out. Yin asserts that the strengths and limitations of each should be considered before a concrete decision is taken. He also places great emphasis on the different flavours of research design. These include the research questions, what the question proposes in terms of units of analysis, the evidence connecting logic to data gathered, and the merits of interpreting the research findings. Yin also claims that great emphasis should be placed on planning for data analysis to ensure a well-tested analysis process.

An often-overlooked challenge with the CSR method is that it needs more significant design considerations, unlike other fields like the psychological sciences that provide the selection of extensive experimental conditions and the capability to review various measures of research responses (Cochain & Cox, 1992). Furthermore, some researchers need to improve their judgment of case study designs by focusing on the method as complementary to other established approaches. A typical example of such is the use of quasi-experiments. Researchers viewed quasi-experiments as part of the case study method for a long time, which was later corrected by Cook & Cambell (1979).

It is clear to the researcher that all research types have some implicit, if not explicit, design connotations, one that links the empirical research with the initial inquiry, bearing in mind that research design is a high-level plan of moving from the research questions to actual research and, eventually conclusion of the case under study. Initially, formulating and designing research questions to its conclusion is comprehensive and cumbersome, with several elaborate stages (Nachmias & Nachmias, 2014). Some other scholars view research design as the plan

and trajectory that include questions, data gathering, analysis and conclusions (Philliber, Schwab & Samsloss, 1980). The researcher agrees with both views in designing an effective research plan.

3.2.1 Case Method –Generality of Use

According to Yin, the case under scrutiny is the research phenomenon to be studied by the researcher; this is separated into two distinct categories: defining and bounding the case. For the former, the typical case study emphasises the person as the subject matter (Bromley, 1986). This approach is more thorough, so the case method has been popular in medical research. Research confirms that case studies have been used extensively in researching clinical patients, but individuals are seen as the centre of attention for each study (Brice & Wallace, 2014). Case studies are not entirely designed to study individuals, though; often, case studies are conducted for teams, groups or even communities (Wang & Breyer, 2012). However, conducting case study research for groups or communities can be very complicated because certain preconditions in collaborative programme research can impede and distort case research outcomes. Therefore, the preconditions of any study should be clearly defined to avoid a negative outcome (Yin, 2002).

3.2.2 Expert Views on Case Study Approach

Stake (1995), in his definition of the case method, does not specify at what point data collection and analysis should happen. However, he suggests that research questions should be collapsed into two or three particular questions or investigative lines of questioning; this will provide the much-required structure for the engagement process irrespective of the option selected. He says the same principle of focusing on two or three research questions can be applied to the interview or direct observation process. Stake is also quite flexible in his reasoning on case design; this stems from the understanding that the research trajectory cannot be pre-planned (Parlett & Hamilton, 1972); the research path gains more clarity as the study progresses. However, Yin argues that detailed preparation should dictate the research path; failing to set a clear road map leads to a failed research process.

Merriam (1998) endorses Yin's more structured qualitative design method and provides clear guidelines for developing a detailed theoretical framework as part of the design process. In the researcher's view, inexperienced researchers may find Merriam's approach more favourable in navigating the often uncharted and stormy research design waters. Her structured stage-by-stage guide in fleshing out the research process can assist the amateur researcher with building a comprehensive theoretical framework.

3.2.3 Conceptual Perspective on Piloting

Concerning data gathering, different authors give varying techniques. Yin recommends combining qualitative and quantitative data-gathering tools to achieve the best outcome. While Stake suggests adopting the case under scrutiny should be the research phenomenon to be studied by the researcher and the qualitative approach for data gathering, claiming that this is the best practice to gain valuable data insights. Yin's approach is unique because he emphasises

the need to build a road map to prepare data before analysis can be done. This detailed methodological approach provides a level of certainty with the research outcome.

However, the data collection process is more than just a routine but requires thought and discipline in the data gathering and analysis process (Yin, 2002); this leads to his suggestion of embarking on a pilot case study before the actual research. According to him, it will help the researcher refine the plan for collating data using a more structured approach. On the contrary, Merriam and Stake do not see the need for piloting the case study, and the researcher agrees with this omission. The researcher also sees this as an additional laborious step that will not add significant value but will take up a more precious research effort. In the researcher's view, the best practice should be investing time and effort in piloting the data-gathering tools rather than the case study itself. By so doing, the pros and cons of each tool can be assessed before making an informed decision on what tool works best.

3.2.4 Case Study Instruments

According to Yin, a researcher should explore the following instruments before embarking on the case study journey: interviews, observations, primary and secondary data sources, physical documentation and physical abstracts that can contain evidence for the study. Reviewing the advantages and limitations of each tool before kick-starting the research case can better shape the research outcome; Also, each instrument has a set process that should be adhered to during research. Yin believes that a significant part of the data collected should be defined for analysis, as this affects the research outcome. However, Stake places little emphasis on this notion, which some will argue is a wise option. Although Yin's argument can be understood, when a large portion of data is not regarded as well-defined, it significantly impacts the data analysis process, potentially resulting in misleading and inaccurate research findings.

Stake emphasises the need to have skilled researchers involved in the qualitative process. However, the process requires background knowledge and a thorough understanding (Stake, 1995). The laborious process includes the researcher's understanding of the data that will be useful, ability to comprehend data analysis and understanding of how data translates to insight for maximum outcome. The approach taken by Stake is similar to Yin's in this regard; the former advocates that detailed process steps and guidelines be developed, but many will argue that, without good research skills, it will be difficult, if not impossible, to navigate research with laid-out processes and practical steps for execution.

On the data collection issue, there is a need to weigh the pros and cons of the qualitative and quantitative research methods (Merriam, 1998). However, her emphasis is more on the qualitative approach. According to her, the best results will be derived if the researcher follows the qualitative approach. Unlike Stake's qualitative approach, Merriam's approach seems more comprehensive in its road map on data collation processes and techniques to adapt to achieve the desired outcome. Merriam is meticulous about how interview engagements should be followed, including how best to structure questions and navigate the interview process. Yin's approach challenges the researcher by needing to be more detailed regarding the practical guidelines required for the interview process. A researcher, who may not be an expert, can get

stuck in the data-gathering process owing to a lack of comprehensive guidelines with the Yin model.

Of all the case study approaches reviewed, Yin's model is more practical and valuable to the GTCO case; it is more thorough and investigative. Merriam's approach also guided the researcher in navigating the intricacies of the various data collection tools. Furthermore, Yin and Merriam's combined approaches aided the researcher's data-gathering process. With well-structured research questions, the data collected might be conclusive. Yin's detailed steps in formulating the two or three research questions proved valuable for the researcher, forming the basis for the study in beginning the inquiry process.

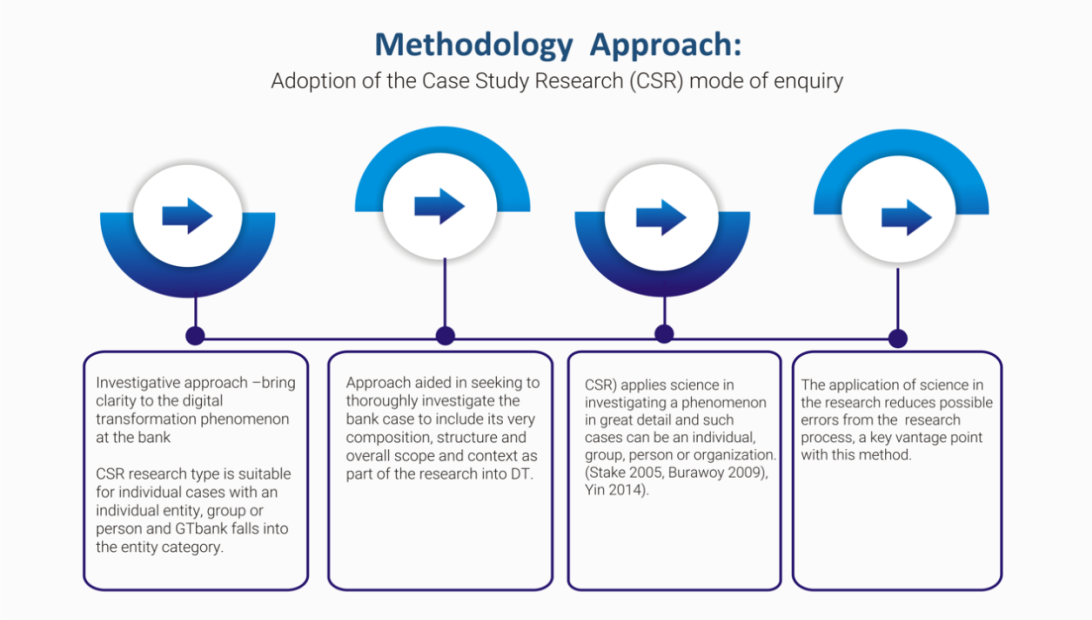

Fig. 3.10: Case Study Research Methodology

3.2.5 Qualitative Method for Data Collection

As noted by Stake (2005), the case study approach is constructed by qualitative data, such as observations, interviews, and documentation. After carefully considering the various research options and approaches, the researcher selected the qualitative method for the study's data collection exercise. The data were collected from internal staff members working in various departments and capacities and from external sources. The primary and secondary qualitative data collection methods were applied to the GTCO case.

Although some may argue that taking this option is more complicated, the approach provided a greater level of scrutiny and understanding of the data collected from persons interviewed and relevant secondary data collected on the bank's technology programmes as well as providing more insight into the leadership's perspective on innovation and change. The interviewer deployed open-ended questions to get comprehensive coverage of the facts. The secondary data collection method involved using facts and simple statistics from both internal sources at the bank. It also included external sources, including interviews with the bank's Chief

Executive Officer that have already been published in newspapers, journals and other third-party sources.

Questionnaire: This method was used to gather relevant qualitative data. The questionnaire combined various information to use while working on the project; a copy of the sample questionnaire is included in the appendix section of this study. A key advantage of using this tool was that the results were easy to understand and analyse as part of the coding efforts. Different versions of questionnaire formats were also used, including a semi-structured questionnaire, which came in handy as an interview guide.

Observations: This option provided a reliable resource for gathering qualitative data and was selected because it is often used to understand and analyse behaviours or data patterns. It allowed the researcher to identify patterns in answers to the various questions, mainly through facial expressions used to draw credible response conclusions. The observations are also documented using tape recorders and taking notes from each session. It is worth noting that the researcher adhered to ethical practices by getting approval to record the sessions before embarking on each exercise.

Interviews: The researcher found the Interview method very effective. Face-to-face interviews with bank staff were conducted, with some virtual meetings also conducted; this gave more depth and clarity to the entire data-gathering exercise. With straightforward research questions, there was optimism, and this method encouraged honest feedback from the interviewees. Furthermore, personal and unstructured interviews assisted the researcher in identifying participants' feelings and opinions. The first interviews with the case organisation provided practical insights into their transformation journey, which was necessary for the study to aid the researcher in understanding the intricacies of transformative change at the bank. The interviews gave the researcher valuable information about the application and practical experiences of the various technology initiatives. It also provided the required structure for subsequent discussions with Kuda Bank for comparison purposes.

The main advantage of personal interviews was to achieve one-to-one contact with interviewees. It also eliminated non-response rates, which can be an issue with other qualitative techniques. This approach also allowed for flexibility in the direction of the interviews. However, the researcher was aware of the limitations of interviews, which included the risk of deviation from the interview questions (Gill & Johnson, 2002). Another primary reason for selecting this technique was that it is ideal for collecting smaller data samples. Although the outcomes are also not scientifically measurable and quantifiable, they offer a complete description and analysis of the research topic without reducing the research scope (Collis & Hussey, 2003).

3.2.6 Interview Approach -Vantage Points

Data collection in any case study can be qualitative or quantitative; as indicated previously, some researchers use both methods in their inquiry primarily for the completeness of their study. Both approaches usually combine multiple methods, such as interviews, questionnaires

and observation (Eisenhart, 1989). In this study, the interview approach provided some freedom and minimal constraints with data gathering. In addition, the series of interviews with different departments was very insightful, as it focused directly on specific topical areas with DT.

However, despite the benefits, there can be problems with interviews, such as bias due to questions not properly articulated (Yin, 2009); some answers from GTCO respondents were vague, and the researcher believes this was because some respondents did not fully understand the context of some questions. Interviews can be categorised to help further clarify the questions by adding levels of structure to the interview format; this may be done through semi-structured questions. According to Saunders et al. (2009), semi-structured interviews, also known as in-depth interviews, can be helpful as it allows for a list of themes and questions to be covered in more depth, promoting flexibility, as the order of questions may vary (Saunders et al., 2009).

3.2.7 Applying the Interview Method

The qualitative interview questions were arranged and presented in the current research categories, including the role and job function within the organisation. Next was the focus on specific questions regarding the role of digital technologies and the technology initiatives as part of DT. The final section focused on the transformation, including the various organisational changes. The questions of the second theme aligned with Lewin and Kotter's change models and elements from the digital transformation frameworks reviewed, including Michael Wade's Digital Piano, Digital Vortex and others.

Part of the interviews were completed by sending out questionnaires and engaging over the phone due to the COVID-19 pandemic rules. The interview process took approximately 45 minutes for most, while a select few executives who were very passionate about the topic took over one hour; as senior executives, the researcher allowed them to share relevant and non-relevant information as part of the inquiry. All interview questions were sent to the various interviewees on request before each session; this allowed all interviewees to clarify specific points before the actual interviews, and as indicated earlier, the selection process for interviewees was done based on their role in the company and their knowledge and expertise on the case topic.

3.2.8 Pros and Cons of Interviews

The researcher reviewed the interview tool extensively, including the decision to use structured and semi-structured formats but decided to use the former; the term semi-structured interview refers to communication between the researcher based on pre-defined questions that allow the engagement with specified answers. Ideally, this type of interview is best suited for complex situations like case organisation, where teams in different departments are interviewed, and they get the chance to be candid with their response. However, there are some criticisms of this line of inquiry. One such is the cost of conducting interviews and the time to carry out the function (Johannesson & Perjons, 2014). This played out in the interview process with the case bank, GTCO and the comparative interviews conducted with the digital bank Kuda.

The time factor and administrative challenges impeded the researcher's engagement with banks' senior and lower management staff. Senior management had very little time to spare, it took a long time to get them interviewed, and as indicated earlier, they took up more time to express themselves on the general trajectory of the DT programme. The researcher had similar issues with the lower-level departments; most were very busy tackling operational matters and asked for a single Zoom session where they would all attend a group to save time and effort. Nevertheless, the researcher explained the limitation of this approach, which included the possible biases group interviews presented and issues of reliability and accuracy of the results. They agreed to go with the individual interview approach. All interviews were conducted with similar and different questions based on the specific role at the banks. This process was comprehensive, albeit taking more time to cover the various interviews.

Fig. 3.11: GTCO Interview Held across Various Ranks and Departments

The diagram above summarises the interviews conducted; the researcher successfully conducted the various interviews to gather the required respondent information, which was done flexibly and accurately (Bryman & Bell, 2011). It also allowed the researcher to present follow-up questions, effectively widening the research scope. A benefit of follow-up questions was to broaden the possibility of pursuing ambiguous statements while allowing the researcher to understand the response perspective in further detail. (S. Desai et al., 2019). The questions designed for this were structured and semi-structured; the researcher recognised that knowledge levels, experience and competence vary from one person to another, even within the same department (Bryman & Bell, 2011). The researcher personally conducted all the

interviews at both banks; this process was challenging and time-consuming (Bryman & Bell, 2011).

3.2.9 Observations from the Interview Process

The researcher took direct responsibility for the following: 1) ethical clarifications and question structure, 2) leading the interviews, asking prompt yet non-sensitive security questions, 3) direction and control of the interviews, 4) ensuring additional questions to avoid ambiguity and unnecessary time consumption, 5) asking further questions for clarity when required, and 6) taking additional notes from the interviews. This approach increased efficiency during data collection and allowed for a less stressful process (Bryman & Bell, 2011). All interviews were conducted with an average margin time of 45- 60 minutes, and this included potential interruptions from the customer operational activities that arose from time to time, particularly with the operational, business intelligence, and platform management departments, as well as with the bank's leadership. The latter took up more time per session, as mentioned previously.

The researcher conducted interviews with the executive management of both banks physically; the benefit of the former was that there were minimal interruptions which helped with the flow of the questioning process. It was made possible due to the schedule agreed with the executives; they mostly avoided distractions during the interviews. The interviews with all other middle- and lower-management teams were conducted using Zoom and physical meetings at the various departments. The researcher recorded the conversations and, as indicated earlier in this study, got the express approval and consent of the participants. The transcription process followed; this approach of conducting the transcription soon after the interviews helped to maintain consistency in documentation and better understanding for use in the analysis process (Bryman & Bell, 2011).

All interviews with the executive management at both banks occurred in the corporate head offices. As mentioned, most interview engagements with middle and lower levels of management and operations were conducted online. The interviews with the executives at the head offices presented difficulties, particularly concerning getting to their offices or waiting for free time to see the executives despite the scheduled interviews. The interview data provided rich information, but the observation technique provided additional information needed to be recorded. According to Symonds and Brown (2016), the presence of nonverbal cues as part of observation helps understand emotions. The researcher was able to deduce more observable information not present in the answers.

3.3 Interview Preparation

The interview script developed by the researcher was first tested with a small group of interviewees. The feedback from that process informed the development of a more robust script. Some of the feedback received from the first sample interviews included comments like "the questions are too many; make them short and succinct"; "Great questions but separate them into categories, as each department will not be able to answer certain technology-related questions"; "Best this was sent as online questionnaire; this way we take out time to answer".

One crucial observation is the significant difference between using interviews and sending out questionnaires. The face-to-face interviews were very productive and effective. The researcher was able to ask follow-up questions to get what the bank had achieved with its transformation efforts. The interviewees were quick to go into great depth on each question asked. The only challenge was when interviewing the executives; most of them were very busy, and there were some interruptions during the interviews. Though they apologised profusely, the interruptions continued. For a bank like GTCO, where service is a priority, even the executives never allowed the phones to ring out during the interviews; they kept taking the calls as we proceeded with the interview process. However, this mode of qualitative data gathering was arguably the best as it gave the researcher time to ask for further clarity on vague answers.

3.3.1 Questionnaire Application

Understanding the case challenges is critical to provide answers from the interview process; this allows the researcher to ask more profound questions to gain clarity (Saunders, 2016). A decision was taken to use an online questionnaire application (Survey Monkey) for the data-gathering phase for some interviews because most of the staff worked from various office buildings, and gathering them all in one location took much work; this also proved effective and convenient, as the researcher only needed to send out Zoom and questionnaire links to the participants' emails. The copies of the questionnaire were filled and returned within weeks. However, the challenge with this option is that the researcher had to regularly call and email the respondents, which led to setting up Zoom sessions to validate questionnaire answers.

Also, the output received from the online questionnaire was limited and less dynamic than face-to-face meetings; the latter allowed the researcher to seek further clarification. However, the researcher gathered valuable data about the research from about 40 respondents, albeit in different formats. Some responses were more-descriptive, while others just went to the point and answered in summary. The data collected was spread across various themes relating to the impact of DT, including the challenges and barriers to successful transformation. One such was resistance from staff who felt they needed to fit into the new target organisation. Another challenge was the ability to interview customers who opposed the move to digital banking; they preferred visiting the bank and their account officers regularly visiting them at their offices for certain complex banking services. The researcher should have gotten to engage them during the interview process, but it was outside the scope of this study.

3.3.2 Use of Other Tools

The amount of information and transcripts analysed, coded and recorded was time-consuming and challenging. The researcher used several tools that made gathering and organising the information collated over four years easier; this included software research tools, including Mendeley and Endnote reference managers. Excel was initially used for coding, but due to the sheer volume of datasets, the researcher had to move to NVivo; this was also used for data coding and analysis, allowing the researcher to break the sections of the interviews into themes, aggregate dimensions using various codes to find patterns (Saunders, 2016). This process would have been even more difficult without the NVivo coding software.

3.3.3 Interviews –Preparation Process

The selected interviewees needed to fit into the category of people with the right experience to share in the study. Interviewees were compiled through a network of contacts at the bank. These comprised people from various areas of the organisation, from C-suite executives, heads of business departments, team leads to engineers and customer service staff. Coordinating the multiple interviewees took some time to structure; scheduling the series of interviews and questionnaire completion was also challenging. Furthermore, the researcher ensured the interviewees had deep business knowledge and a good understanding of the transformation programme at the bank; this made it much easier for them to answer questions during the interviews (Creswell, 2018). It gave good balance and weight to the information received by the researcher. The comprehensive nature of the questions meant that only experienced staff could comfortably answer the questions. The researcher was particularly impressed with the responses of the two very senior executives of the bank; despite taking up more time, they were able to provide beneficial information for the study. We scheduled each interview with both C-level staff for 40 minutes, but the schedule was exceeded significantly.

The sessions with the executives lasted for over 1:20 hr each, and at the end, they wanted to keep going as the questions were interesting to them, and they felt proud being able to contribute to the research. Approximately 50 interviews were initially planned, and the response was about 80%; the result was impressive and surpassed the response rate the researcher anticipated. Reaching out to 50 persons and conducting interviews with about 40 persons was significant; reaching a good target was a compelling interview strategy (Saunders, 2016). Interviews with the senior executives were also recorded (with their consent); each recording lasted over an hour, as indicated previously, despite planning for 45 minutes each. Furthermore, the researcher attempted to use a voice-to-text conversion tool (Otter) to transcribe the recordings. However, the interpretation needed to be more accurate, though over 80% were transcribed correctly; the researcher had to transcribe the remaining 20% manually, which was fair and less time-consuming.

3.3.4 Consent and Right to Withdraw

The researcher duly informed all the persons interviewed of the inquiry participation options and advised them they had the right to withdraw at any given time during the process; the researcher also did the same with the questionnaire sent out electronically. A copy of the consent form is in the appendix section of this research, and as indicated earlier, they were also advised to record the conversations. Furthermore, all participants were informed that individual interviewee names would not be documented in the qualitative process; all the participants gave their permission and agreed to use the feedback information only for the study. Names and other personal information were deliberately excluded from the analysis as agreed with each participant.

3.3.5 Addressing Reliability and Validity

The general idea behind the data-gathering process, including the interviews, was to allow for data collection in the most effective manner. There was concern about subjective bias, which comes up with interviews, as indicated by (Bryman and Bell., 2011), but the researcher was

aware of this fact and made a conscious effort to avoid it playing out. Ensuring the interviews were recorded with consent also provided significant reliability and consistency to the study.

The acid test for any research work includes the internal and external validity of the construct, reliability (Yin, 2009), and the data analysis test for validity and reliability. The researcher carried out the latter, confirming the evidence of the interviews conducted with the case bank. The study followed the principle of linking the initial research questions with the conclusions. As part of the data quality, the researcher conducted tests in the bank's challenging areas of change and transformation; this followed how a change in people, process, structure and culture, for example, leads to a successful DT process (Yin, 2009).

3.3.6 Ethical Considerations

The consent to conduct an interview and record the conversations was considered critical and required before interacting with all staff members, including the executive management of both banks. The content of the interview questions was constructed after a clear understanding of the questionnaire requirements. The researcher deliberately avoided personal questions that were out of scope and unnecessary to reduce redundant information and time wasting. The researcher emphasised this study's ethical areas and conformed to the recommendations of social distancing (Folkhalsomyndigheten, 2021).

3.3.7 Validating Data Gathered

Validating researcher data played a critical role in the analysis process. The perspectives on data validation differ considerably among authors, according to Stake. Yin takes an approach that asserts that constructs are fundamental to data validation. According to him, research quality requires the above process to ensure a successful research outcome. He emphasises that the researcher adopts construct validity by gathering data from multiple sources as analysis evidence, including pattern matching. Yin's data validation model provided a mechanism for conducting a series of tests that can be applied to various stages, including the design, data collection, and analysis phases.

However, Stake's approach differs in that it emphasises the challenges of data validation in detail; this was useful for the researcher in the triangulation process. Merriam's perspective on data validation is that several assumptions on qualitative research prevail. One such is that the process is multi-dimensional and changes rapidly over time. Another is that there needs to be a suitable method for validating data; the process is fluid and evolving regularly. Her approach believes that the validation output presents enough clarity that the study is extensive and transparent and that the case method approach helps to navigate the myriad of data and multiple avenues of inquiry. The various case study approaches studied clarified how best to embark on the data validation journey, allowing the researcher to mix and match techniques to gain the desired outcome.

3.4. Data Analysis Phase

3.4.1 Data Analysis –Further Theoretical Analysis

According to Yin, data analysis involves the researcher extensively reviewing, labelling and testing both quantitative and qualitative data on the subject matter. He believes some knowledge is required to carry out his descriptive guidelines. However, the challenge is that the competence he describes is subjective. The diagram below clarifies the types of data analysis plans available for detailed analysis.

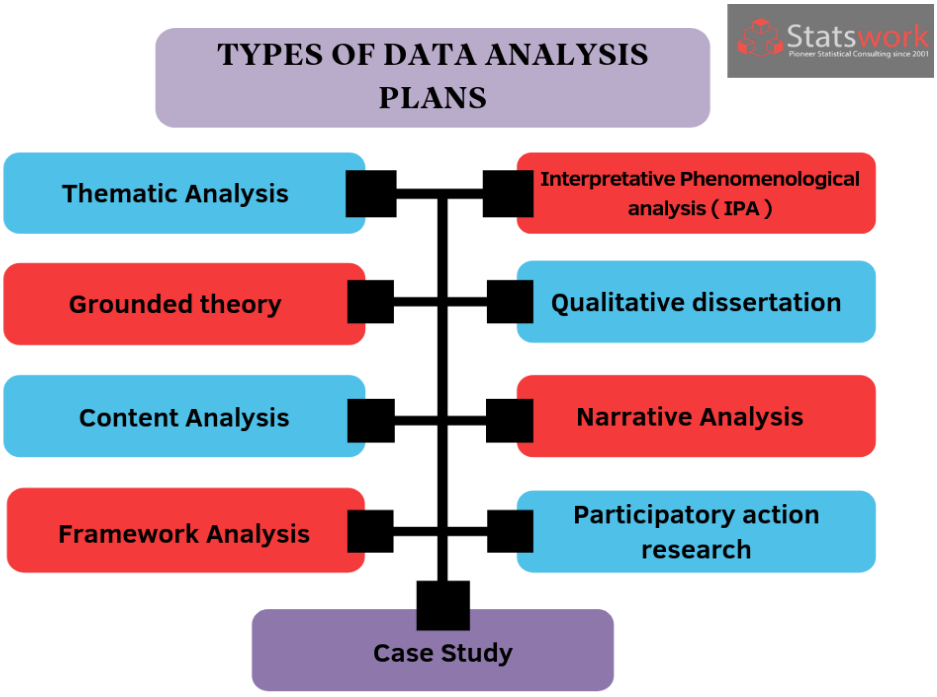

Fig. 3.12: Multiple Approaches to Analysis

Concerning the GTCO case, Yin's guidelines need more clarity. He mentions the need for highly structured principles as part of the tool but also notes that the case study approach needs comprehensive archives of past research. The researcher struggled with understanding these guidelines, as they were vague in interpretation.

3.4.2 Evaluation of Perspectives

Although Yin addresses the vagueness in clarity by emphasising the need for a good-quality study that includes validity, thoroughness and reliability before the analysis process, there must be more clarity to progress independently with the case study tools. Meanwhile, Stake's understanding of data analysis differs from Yin's interpretation. He defines data analysis as a way of providing data with an initial impression, and according to him, “once the data has been refined extensively, better data quality is achieved”. Stake's idea of having protocols in place

for analysis is also an advantage to CSR. The researcher found this extra level of structure instrumental in avoiding vagueness.

3.4.3 Stake's Argument

However, Stake's views on the data collection and analysis stages were a limitation for the researcher, who needed clarification and felt a linear approach was suitable. The researcher viewed completing the data-gathering stages as cumbersome before embarking on the analysis stage, although it helped the researcher focus on one stage before moving to the next. Furthermore, Stake's emphasis on adopting the initial protocols and then focusing on the analysis process rather than a combination provided the researcher with some modular structure.

3.4.4 Merriam's View on Data Collation

Merriam's view on data collection and analysis is comprehensive (Merriam, 2009). She said, “Combining both efforts simultaneously may result in lower-quality research output”. Furthermore, one advantage of her model is Merriam's detailed attention to how data can be collected and analysed. However, one requires some investigative skills to understand her thorough process, which can be ideal for small projects that do not require deep analysis. For the level of detail required for this transformation study, combining both stages (data collection and analysis) may lead to missing out on vital information that will involve a more sequential process and valuable research time required to unravel the various datasets collected.

In the researcher's view, the level of devotion to data management makes Merriam's approach interesting. This approach is similar to Yin's and was particularly useful to the researcher in guiding how to manage the data collected. Merriam also includes specific details on how to search for repeating data patterns; this significantly reduces duplications in coding efforts; her approach provides a descriptive step-by-step process for data analysis as part of the qualitative process. The researcher found this helpful in sifting through the vast primary and secondary data collected over time to gain insights into the findings and recommendation stages.

3.4.5 Marshall and Rossman's Perspective on the Analysis Process

Marshall and Rossman (1999) assert that data analysis integrates order, structure and clarity into the data collected from various sources. They emphasise that the process is painstaking, laborious and requires effort but also enjoyable. The researcher agreed with this view, as the entire data analysis process was laborious, complicated, and initially unstructured, with little sense made from the data collection output. But as the analysis phase continued and further iterations were conducted, a clear pattern evolved from the unstructured data analysis process. According to (Schwandt (2007), this process is often complicated and long-winded, with no apparent direction at the outset. Furthermore, data analysis requires the researcher to take a logical approach to the entire inquiry process (Best & Khan, 2006). The researcher agrees with both suggestions.

3.5 The Role of Experience and Judgement

Morrison (2012) states that data analysis relies heavily on the researcher's experience and judgement, which is critical in interpreting the data gathered. The researcher agrees with this point of view because he is familiar with the case bank and the technology under scrutiny. The background experience in Digital Transformation provided confidence to the researcher in the entire inquiry process. It helped with the research design, expressly how the questions were framed. It also helped with the interview process and the analysis and interpretation of the data sets collected.

3.6 Walkthrough of the Data Collection Process

Tuckman and Harper (2012) argue that the data collection and analysis process should be seen as intertwined if the researcher can arrive at a successful, positive research outcome. This view contrasts the views of (Morgan & Kruregar, 1998), who note that analysis and interpretation are structured, systematic and sequential. Data analysis is interpreting and understanding research by unravelling similarities, logical patterns and consistent themes in the data. It integrates data collection and analysis as one inseparable entity. It is not a one-off but a continuous process with multiple iterations (Nieuwenhuis, 2007).

Gibbs (2007) argues that the analysis of qualitative data transitions from the current to the target state is conducted by a careful analytical process to find valuable information. Patton (2002) argues that the analysis process is transformative; it begins with analysing and filtering large volumes of unstructured data and moves through multiple phases while reducing the data volume as the iteration process continues, ultimately resulting in a framework. As part of the analysis stage, the researcher focused on initially organising the data gathered to make logical sense of them (Best & Khan, 2006). The researcher then labelled the data with some unique descriptions. This phase involved providing some footnotes on each interview, side thoughts and comments from the participants that helped make a better judgment on the data.

The researcher then moved to the analysis stage, this involved interpretation of findings and review of responses from various participants. The researcher also searched for correlations in the data to make sense of the findings and generate insights; this is in line with the argument of (Patton, 2002) on how best to interpret data gathered from various sources. He states that there should be thoroughness and efforts to ensure that the readers of the research have a good understanding of its focus. Scot and Usher (2011) assert that the coding process, piecing relevant data with similarities, should be applied to better understand the data collected. The researcher spent considerable time understanding the types of data collected and how they relate to the research questions developed; this provided the much-needed clarity and direction for interpreting the results, which led to an exciting point of bias. It was tempting for the researcher to draw early conclusions from the initial data collected; this would have been judgmental and could have led to inaccurate analysis.

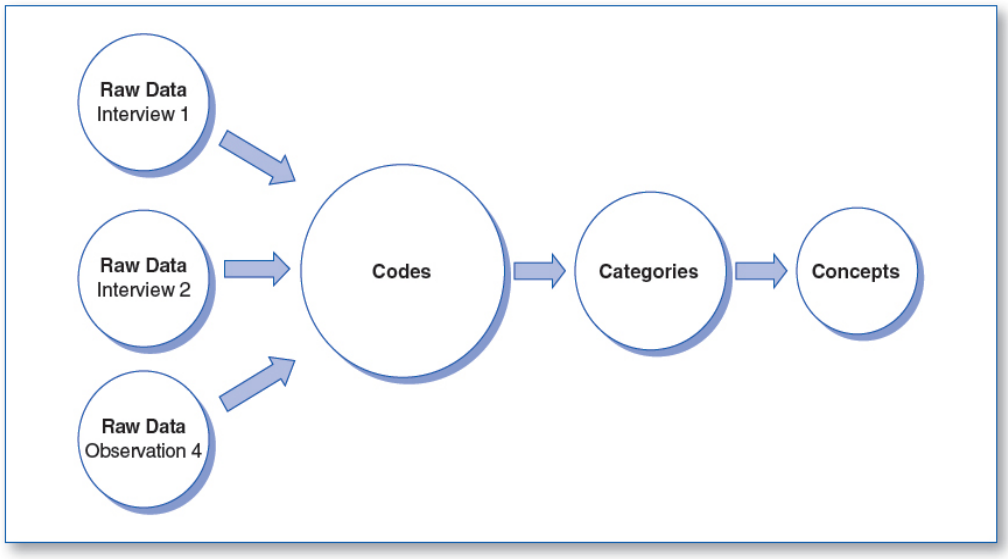

Fig. 3.13: Data Reduction and Sampling

3.7 Data Sampling

During the data sampling process, the researcher realised that there was an inflexion point where data could no longer be reduced despite all the filtering and categorisation. The diagram above clarifies converting raw unstructured interview data to clear concepts. The collated datasets were reviewed, refined, and trimmed to make rational and meaningful inferences. Quickly categorising the data and separating the valuable information helped the researcher with the accuracy of the analysis conducted as part of the qualitative process. As indicated previously, the primary purpose of this study was to identify new knowledge in the digital transformation space that reflects and can be effectively utilised in the financial service sector (Watling & James, 2012). Achieving this required a tactical plan and theory development (Miles & Huberman, 1994). Documentation of the study was a critical part of this research; it was tasking and included constructing various arguments based on the results. This process involved using data from the interviews, observations, literature, and secondary data to form a new intervention for the case bank.

3.8 The Sequential Process of Analysis

In the view of (Creswell, 2013), the data analysis stage can be in the form of sequential circular steps. The researcher engaged in the first circular data analysis before progressing to the following circular process, piggybacking from one circular step to another (Schurink, 2011). Noting that there are divergent methods and options in how data analysis can best execute with no exact perfect method. This argument is similar to that of (Partington, 2003). Furthermore, from the researcher's experience, it is evident that there is no particular method of data analysis; the process can differ from project to project. As indicated earlier, an audio recording was adopted for the interviews conducted physically and online with the consent of the participants. Notes were also taken for further analysis, but doing this was a bit of a challenge, as keeping with the pace of the conversation was an issue. The researcher found legibility of the information documented in writing had implications for interpretation during the analysis phase.

3.9 Coding Element

According to (Saldana, 2016), “A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and or evocative attribute for a portion of language-based or visual data”. Information collected from the qualitative process included interview transcripts, participant observation, notes, and information from the literature. Part of the data to be coded during the first coding phase also included spatial and complete sentences.

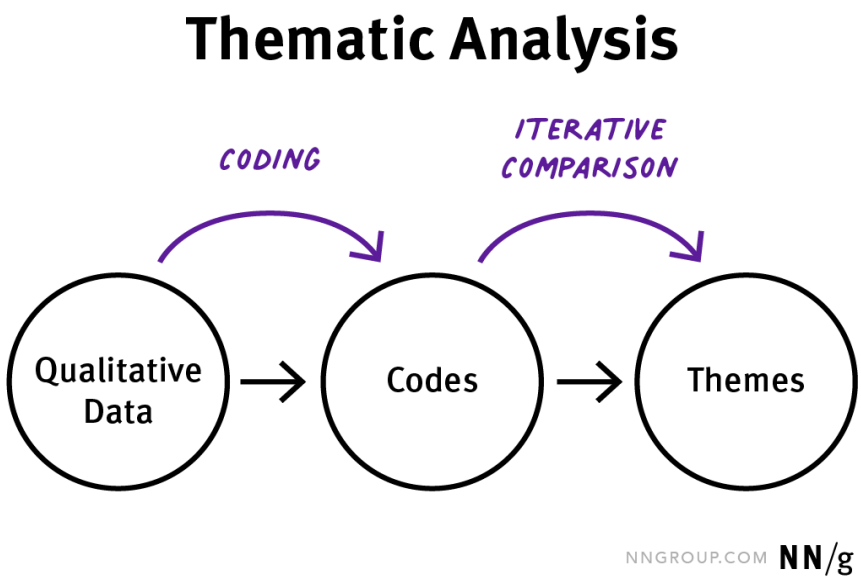

Fig. 3.14: The Thematic Analysis Process

For the second coding round, as part of the thematic analysis process, portions of the data collected were similar to the first. Still, more detailed texts from the interviews were involved. The potential themes from the data collected were highlighted and labelled, along with responses about particular themes. As for the transcription, the researcher initially operated the data extraction process using a manual method and, over time, used an automation tool; a catalogue was used to distinguish between related themes and subthemes adopted. However, information was entered into NVivo 12 over time for better analysis and interpretation conformity (Denscombe, 2014).

Furthermore, it was important for the researcher to consider some essential coding caveats relating to understanding specific patterns and regularity in the data collected; idiosyncrasy, for example, is seen as a pattern (Saldana, 2003). The researcher also avoided pattern variations in the data (Agar, 1996). The various datasets were coded and categorised based on how participants answered the questions, which included their personal beliefs and thoughts on the various questions. The researcher also realised that when searching for patterns in coded data to categorise them into sections, certain sections were sometimes grouped because of similarities and differences. "Grey areas” of similarities with blurry boundaries were also

recognised (Tesch, 1990). Hatch (2002) also asserts that one could envisage patterns as important commonalities that can also feature differences. According to him, a pattern often includes data with commonalities and variety. In the current study, most of the above played out; some responses had many similarities and differences.

3.9.1 Coding Challenges

The coding required the researcher to put on the analytic lens, but how responses are perceived and interpreted always rests with the filters on that analytical lens. In the case of the interviews with the executive management staff interviewed, there existed a good number of commonalities in their responses. However, upon analysing the lens, it was evident that disparities existed in the answers to similar questions. The researcher spent significant time at the level of personal involvement as a participant observer during the interviews; body language from respondents provided additional insights into answers. During the fieldwork, little emphasis was placed on the filtration of the information gathered by the researcher due to time constraints.

However, following the interviews, the researcher's field notes' details and structuring were crucial in making sense of the responses (Fretz & Shaw, 1995). Furthermore, most of the researcher's coding was done during and after collection and fundamental analysis (Miles & Huberman, 1994). The act of coding is the beginning of a more laborious process of research and understanding any particular study. In essence, coding is not simply labelling; it is about linkages of the various facts from the data collected. According to (Richards & Morse, 2007), "it leads the researcher from the data collected to the reasoning, and on to all the data about that reasoning."

3.9.2 Observations on Coding

In the view of (Coffey & Atkinson, 1996), coding is the art of bringing disparate data together and sifting through to make sense of it and, thus, a trajectory to more inquiry. The very first iteration of coding is often inaccurate; it is usually rough and unstructured to a great extent until subsequent iterations, further refining and focusing on features of the interview information is required to generate categories, themes, and concepts. In this study, the researcher initially confusingly used codes and categories. Later in the analysis, the distinction was made that both components were significantly different parts of the analysis. Literature confirms that qualitative codes form a type of pattern by grouping similar types of codes. The researcher found a clear pattern in coding the data collected from the qualitative inquiry. This process helped facilitate and develop categories, further shedding more light on analysis and relationships between various data points.

As indicated earlier by the researcher, coding essentially means grouping items in a structured method to make the data collection form part of a better classification process. When codes were applied and reapplied to qualitative data, the researcher went through the coding phase, which meant combining similar items and linking them to other parts of the datasets to make sense of the information presented (Grbich, 2007). Bernard (2006) states that basic coding begins the analysis, the process of searching for commonalities and dissimilar data trends to

help understand and form a clear picture of the reason for the trends. Coding enabled the researcher to structure the data codes in compartments, each silo with similar types of information.

Fig. 3.15: The Steps to Data Collection and Analysis

The researcher employed content analysis to review the various datasets, and as indicated previously, collected datasets were categorised into different themes, coded and compared to reduce repetition and inconsistencies; this approach produced effective results for the study. The researcher also dedicated time and effort to focusing on data consistencies and contradictions. As part of the coding process, a framework was developed to aid in indexing and segregating data into various topics. Getting good-quality data required the researcher to spend more time gathering, documenting, organising and verifying relevant information that formed the basis of the study. It is important to note that structuring and categorising the data is one of the essential steps of data analysis, and it leads to the formulation of a practical framework or model that can be used as part of the intervention for the thesis.

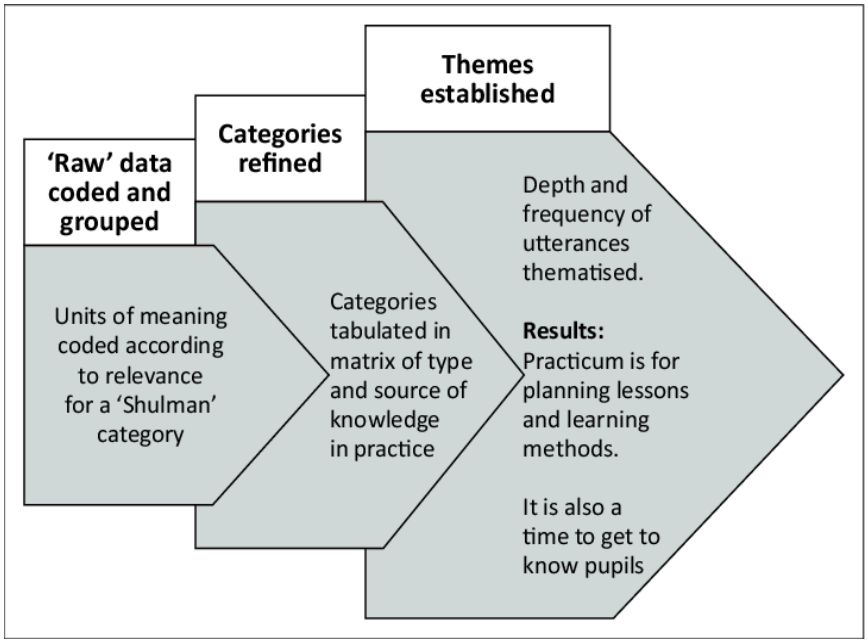

Fig. 3.16: Data Transformation Categories

The multiple-level coding process helped the researcher with the preliminary steps in data analysis. It aided the data preparation for the more comprehensive data analysis, which formed part of the higher-level analysis process (Punch, 2011). The researcher identified and understood the tangible value of coding, as it provided the needed data structure and conformity. All notes and interview transcripts were thoroughly reviewed over multiple iterations to ensure clarity before documentation. It helped clarify the data collected before the labelling process began. Furthermore, this pre-coding process played a significant role in the actual coding process, including identifying and separating categories using colour codes and unique themes.

The coding process included separating similar categories before providing labels for identification, described by (Neuman, 2011) as collating and identifying similar contents into themes for further analysis. The researcher further decoupled the higher-level codes into sub-themes to reduce duplicates and ensure all categories were covered, and this included the provision of themes that were in line with (Neuman, 2011), who notes that the coding process should be in three distinct phases open, selective and axial coding. According to him, open coding involves labelling categories based on footnotes and other documented background information, including transcripts. The researcher applied this principle to the data and emphasised consistency, frequency, and actual wording from the rough notes and transcripts developed. The researcher also used the axial coding approach to the study by analysing the initial first-level codes developed and then filtering and grouping data according to logical patterns and similarities.

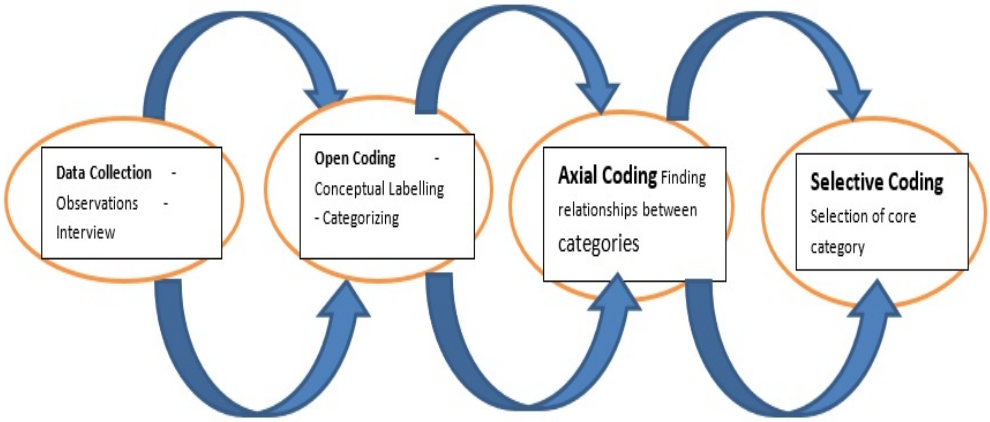

Fig. 3.17: Data Collection Including Axial and Selective Coding

However, Saunders (2009) argues that data can be collated into three forms: summarising, categorising, and structuring, and this can all be done together to support the interpretation of collected data. This process helped the researcher reduce inconsistencies and allowed the data to be easily grouped. The researcher also explored selective coding by analysing all organised codes and checking for further discrepancies and similarities. The process provided for more comparison and revealed some patterns that required further decomposition to achieve more transparent relationships between the various themes. The researcher later reviewed the codes and reconfirmed what was valuable to the research. Codes of value were removed from the collated list to reduce "noise" in the datasets. Every interview in this study was also summarised in combination with the categorisation and labels to distinguish departments and job functions. Finally, the datasets were quantified and categorised in terms of answers from the various teams and their confirmation if the case bank was so far successful in its DT ambition (Tuomi, 2002).

3.9.3 Case Study Description

According to some scholars, there is no tangible description of case studies because one author's definition will significantly differ from others. Stake (1995) argues that a case approach should be seen as an integrated bounded set of systems that require an object-oriented approach rather than a linear method of inquiry to gain further understanding. According to him, a case study should be a complex method that is specific and integrated with moving workable components. It is important to note that the methodology section of this research included several important case study research components, such as a detailed perspective from a philosophical lens on the various research approaches. The research concepts were also presented in detail to include the multiple methods of inquiry available with this methodology. The philosophical approach gave the researcher the foundation and trajectory to gain clarity on the GTCO case study.

Stake's view is in tandem with Yin's; they both argue that the case method is perfect for programmes with multiple internal components. Stake gives four critical reasons or moving parts that should be present in a case method, and according to him: the research should be emphatic, total or inclusive, and empirical, and the ability to articulate and interpret the findings is essential. According to Yin, having a holistic mindset and reflecting on the correlation between the phenomenon and the research context is critical. He also emphasises the need for researchers to define their studies on observations and material facts collated. Yin further argues that the researcher must have strong interactions with the subject under investigation, which aligns with the principles of epistemology. He further claims that empirical reflection is also vital to the subject under study, claiming it promotes scrutiny and avoids misrepresenting factual information from the inquiry process. The researcher agrees with Yin’s argument and position.

CHAPTER FOUR

RESEARCH FINDINGS

4.0 Introduction

The research section is devoted to the overall findings from the data gathering, collation and review phases. In it, the researcher showcases and discusses key findings of the second-order theme's data collected from the case organisation. As indicated previously, the qualitative research approach was selected to interrogate the challenges and provide a method to best overcome the uphill task of the case bank GTCO in driving and delivering a successful digital transformation programme (D. Dolgorukov, 2020). The process involved observations, extensive interviews, a detailed questionnaire response dataset, review and summation of secondary data regarding the inquiry. The researcher collated findings from the various areas on the questionnaire instrument using a triangulated method to verify, validate and review the authenticity and quality of the data.

The researcher found the use of the case study approach relevant to the inquiry. In the method selection process, it was realised that many technology-related studies were case-based. The relevant frameworks reviewed were highly conceptual and not reflective of the challenges faced by traditional regional banks. This made finding common ground for a single source of truth challenging for the researcher. Furthermore, the researcher found that the literature reviewed needed to be more comprehensive regarding qualitative facts on this study, and there is the need for clear empirical research evidence for banks in the African region; this implies a deficit in the research space for DT in the African financial services industry.

4.1 Data Analysis

4.1.1 Data from the Interviews

To extensively examine the fundamental factors impeding a seamless digital transformation process at the case bank, the researcher designed a series of interview questions and targeted 50 interviewees but ended up conducting interviews with 34 staff members responding to 10 questions, totalling 340 responses. The list of interviewees included C-suit executives, middle managers, and engineering and operations staff. The initial high-level analysis revealed the transformation challenges with specific pain points at the case bank.

Fig. 4.1: Interview Data Gathered from the Qualitative Process

Below is the list of Challenges and Pain Points discovered from the analysis process:

- Leadership challenges
- Change management issues
- Lack of education for rural customers, making up a majority of customers, ineffective and inadequate digital platforms
- Inertia from staff and customers
- Inability to move away from brick-and-mortar stores to an entirely digitally transformed state
- Cultural issues with customers
- Government policies on the use of customer data
- Online security and fraud issues
- Deficit of highly skilled staff –brain drain syndrome
- High cost of operations –power is the highest cost of running digital operations.
- Immature infrastructure -Higher speed networks, such as 5G, not readily available to consumers -Slows down adoption for critical services like communications -video banking, and epileptic connections when transacting.
- Open banking concerns –security and seamless connectivity to third-party providers, CBN regulations and security concerns.

4.10 Gioia Methodology

The researcher employed the Gioia Model in sifting through the multiple themes from the data; this was initially broken into first-order codes, second-level codes, sub-codes, theoretical categories and then aggregate theoretical dimensions. This process was laborious but advantageous for several reasons. In particular, it aided the analytical method of converting the interview and questionnaire results into distinct categories of codes, themes and aggregate

dimensions. In the course of the above process, the researcher deduced specific outcomes from the qualitative inquiry. The results from this method were broken down into the following aggregate dimensions, as seen in the diagram below.

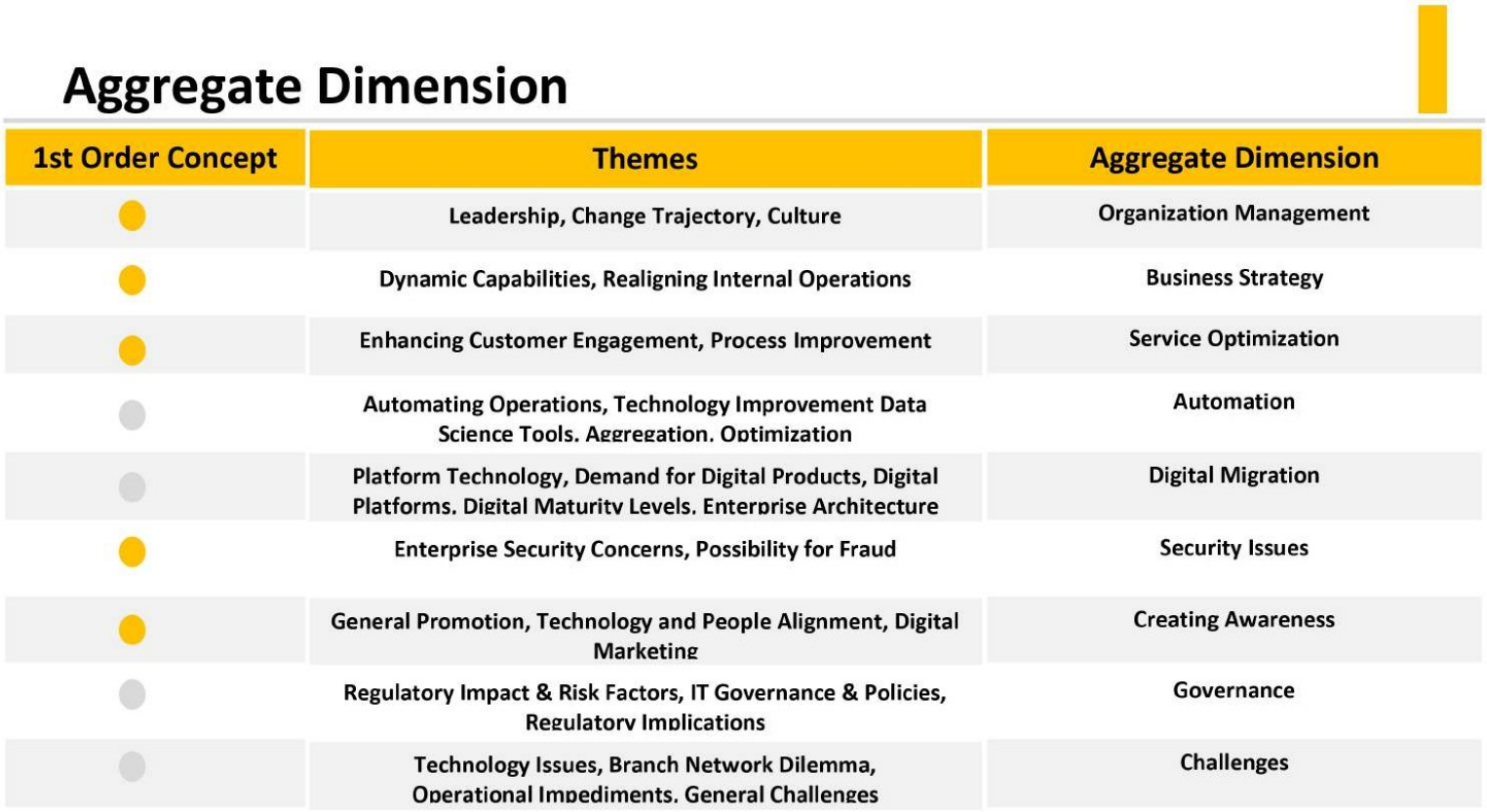

Fig. 4.2: Aggregate Dimensions, Themes and Codes

The nine aggregate dimensions were further decomposed to include the codes and related themes from the data labelling and subsequent analysis stages.

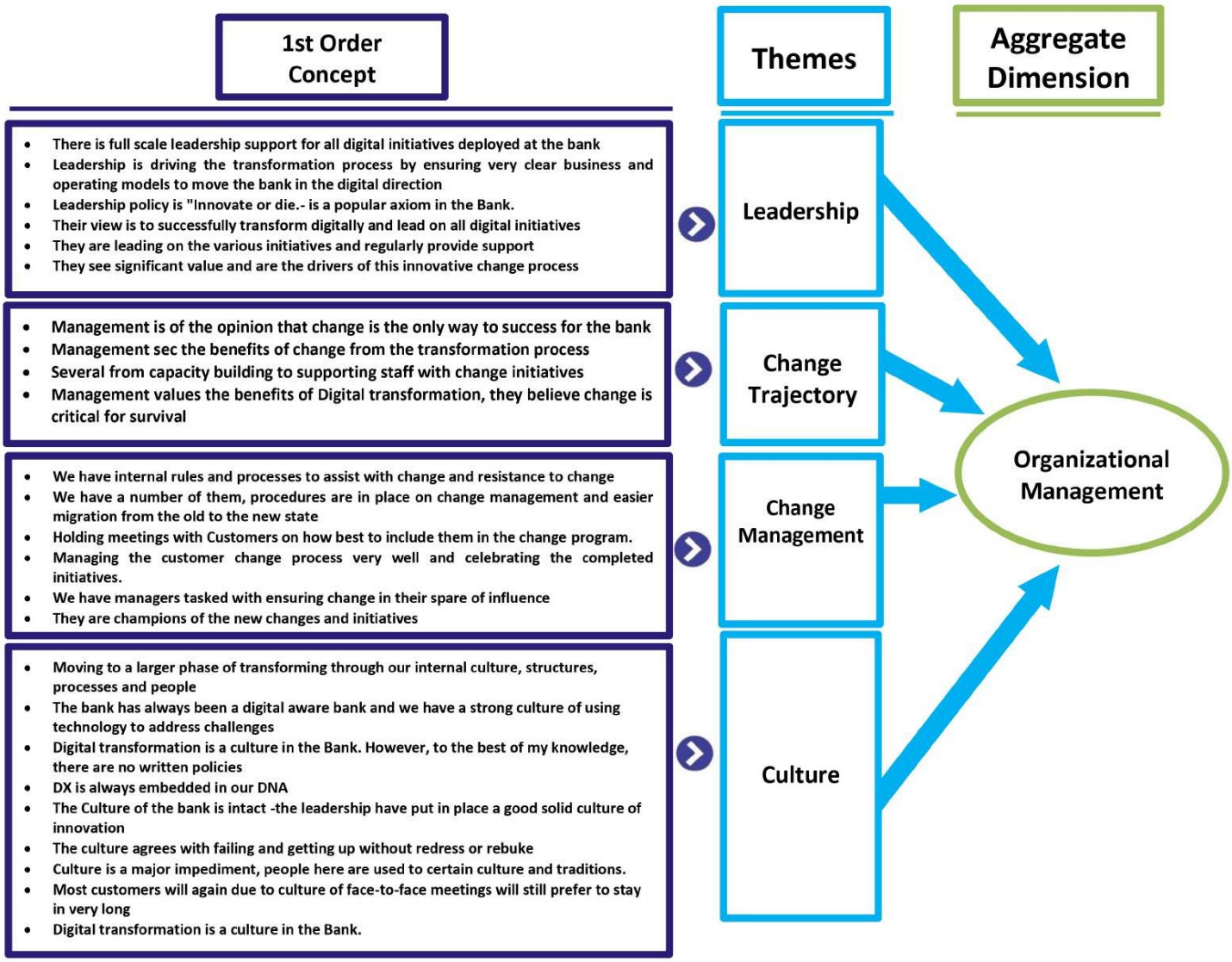

Fig. 4.3: Organizational Management Aggregate Dimensions

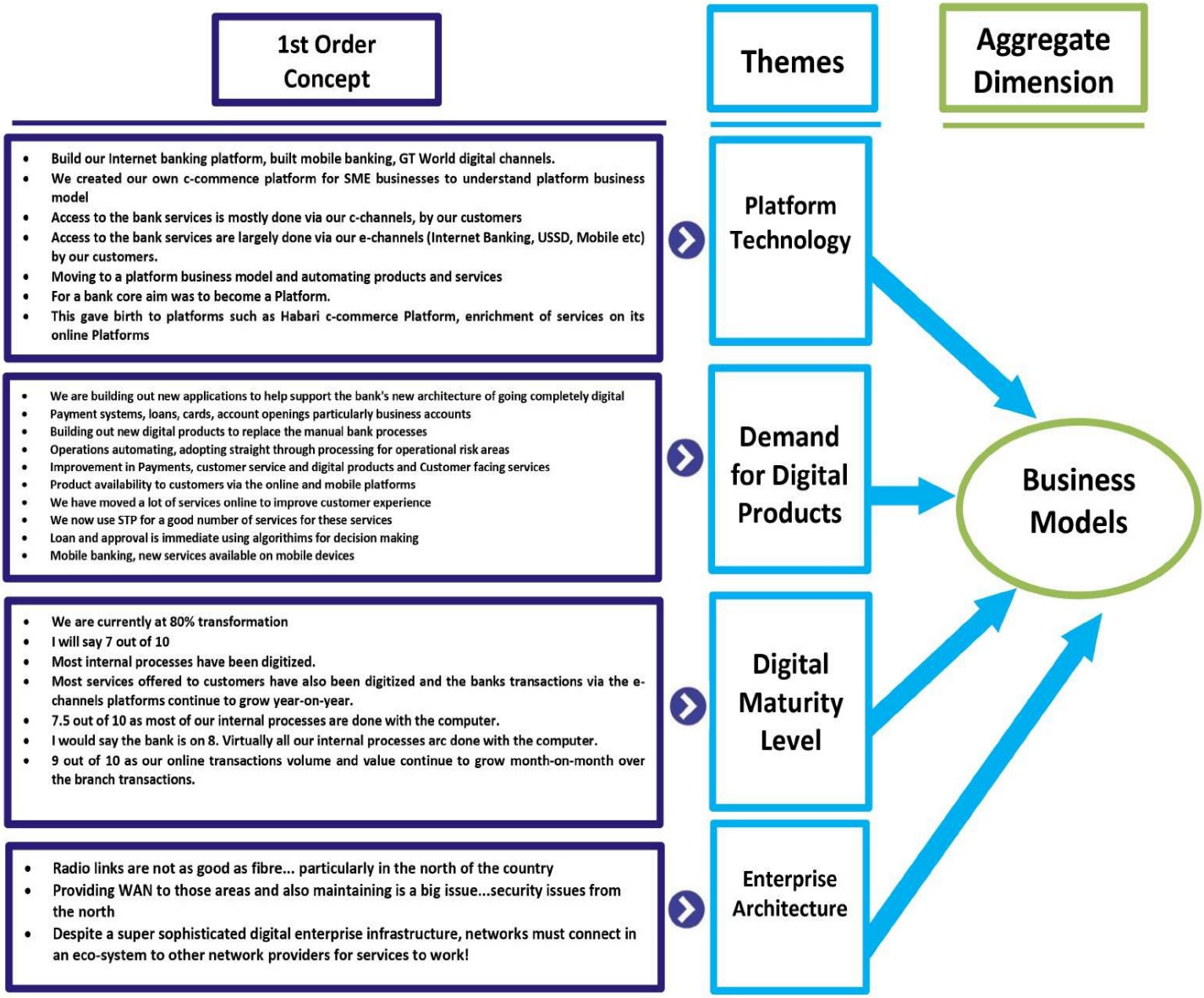

Fig. 4.4: Business Models Aggregate Dimensions

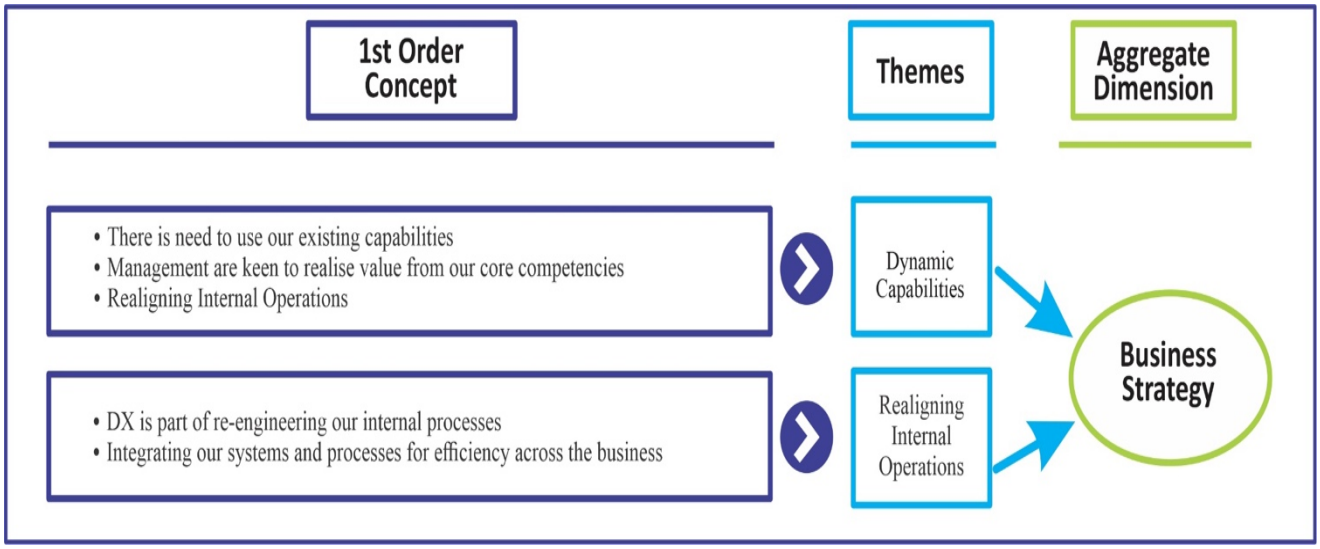

Fig. 4.5: Business Strategy Aggregate Dimensions

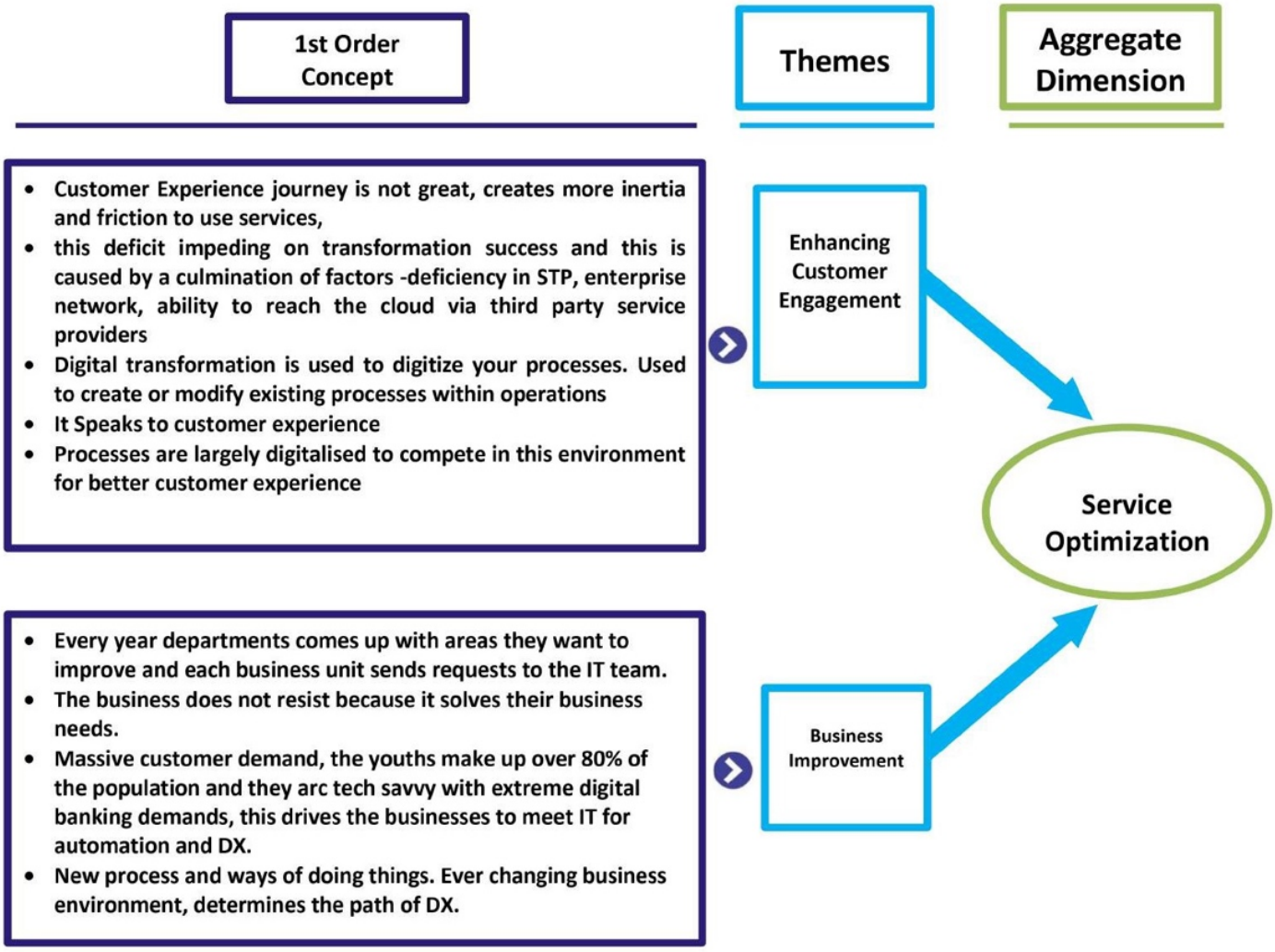

Fig. 4.6: Service Optimization Aggregate Dimensions

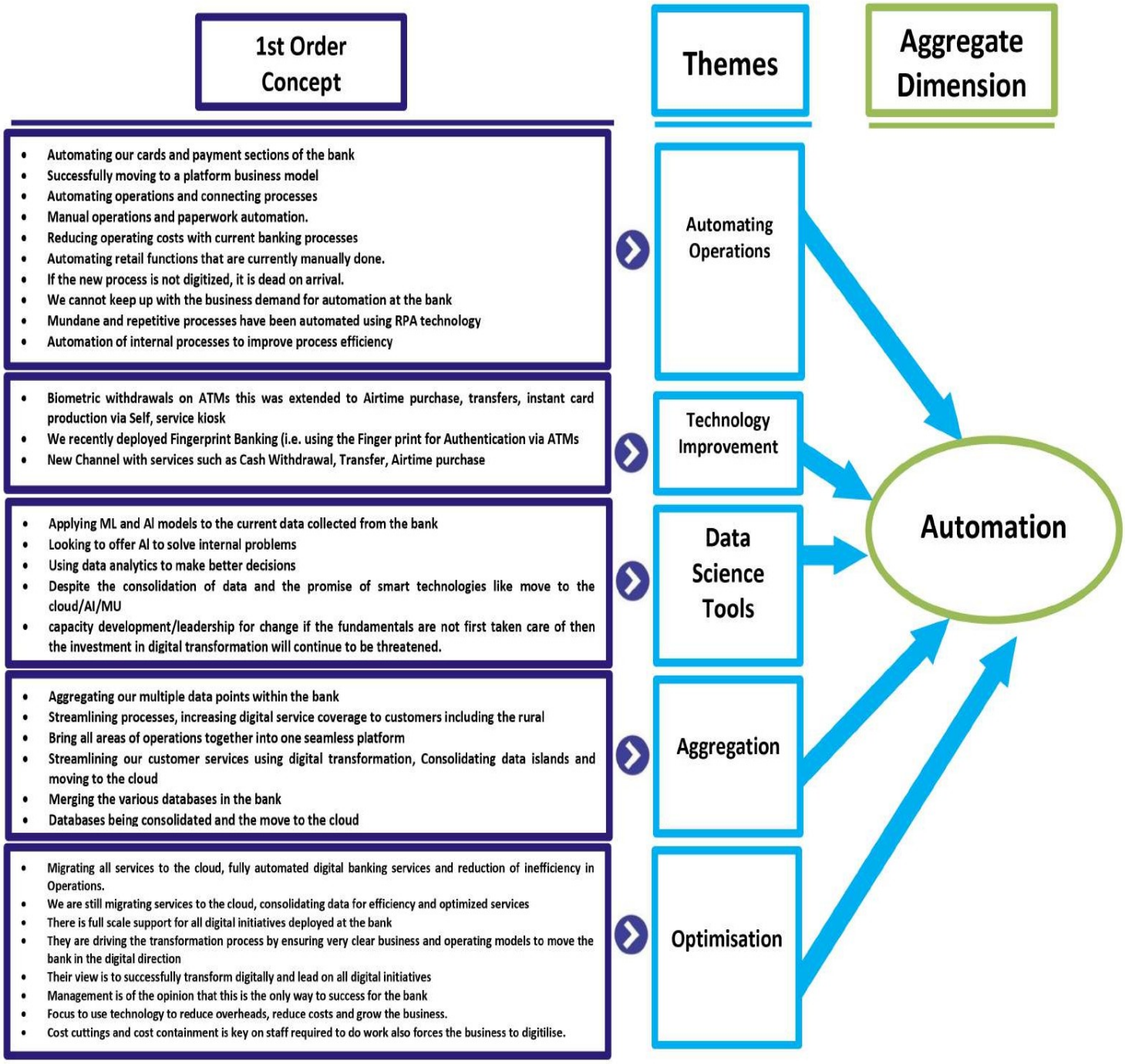

Fig. 4.7: Automation Aggregate Dimensions

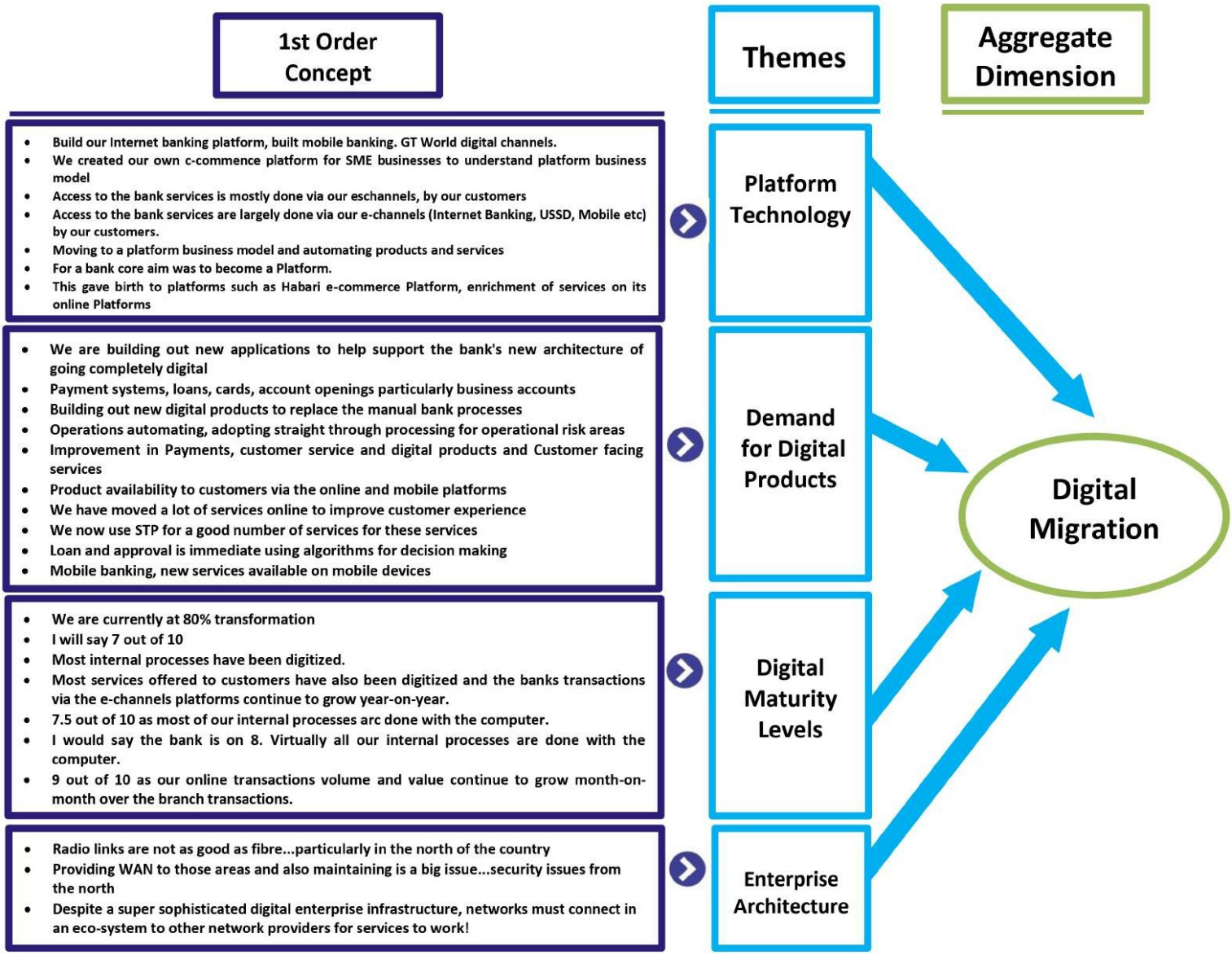

Fig. 4.8: Digital Migration Aggregate Dimensions

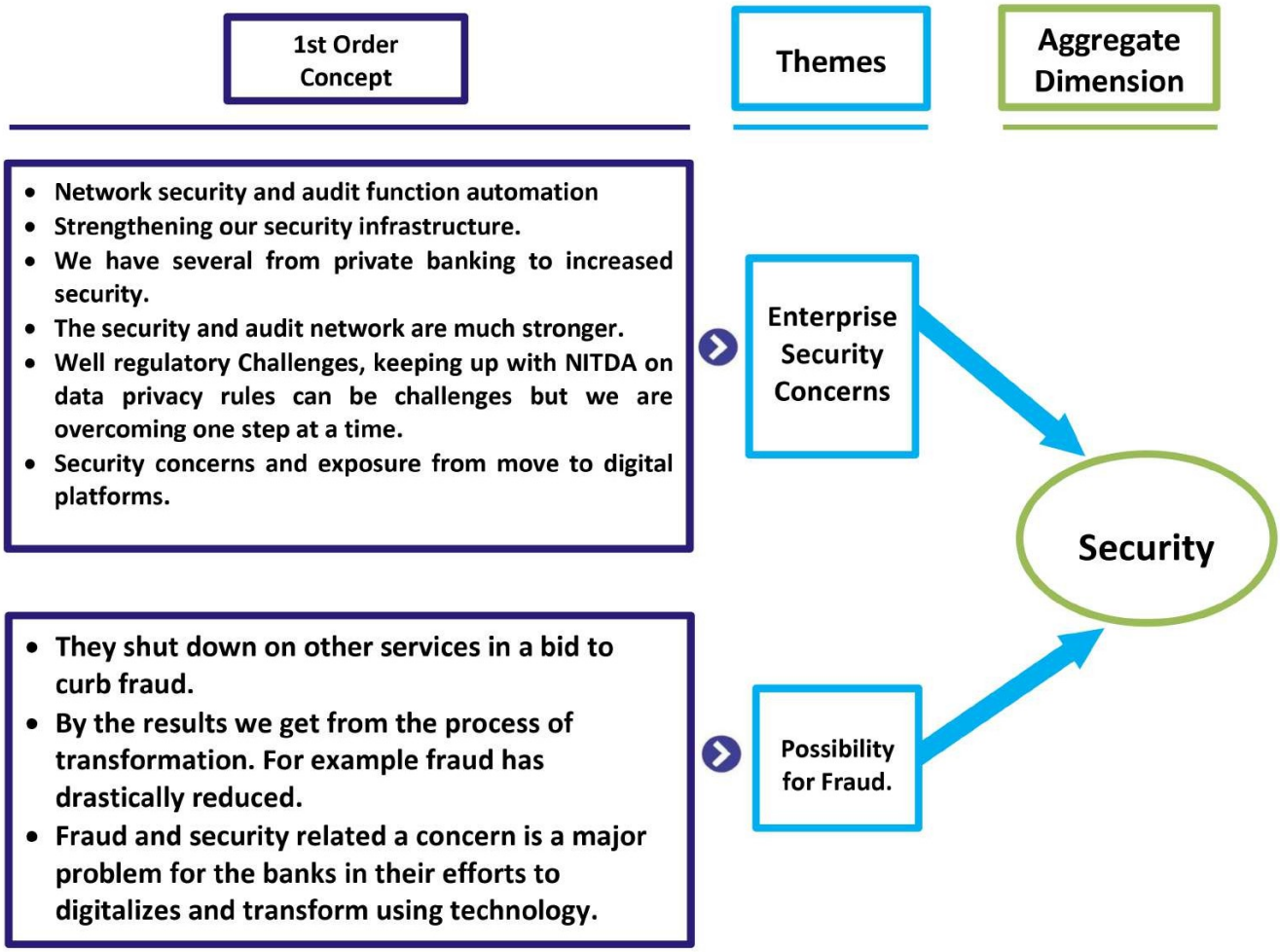

Fig. 4.9: Security Aggregate Dimensions

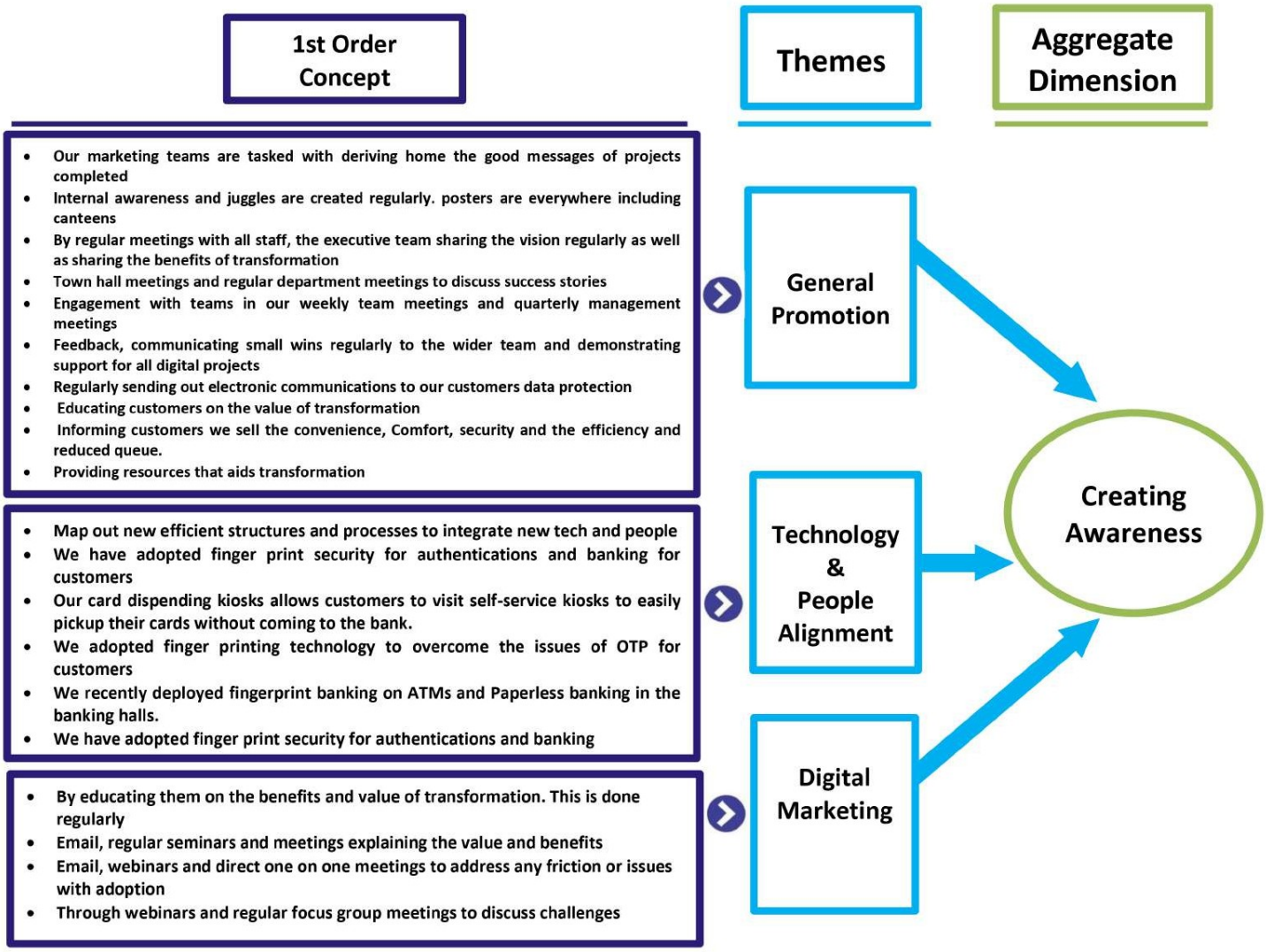

Fig. 4.10: Creating Awareness Aggregate Dimensions

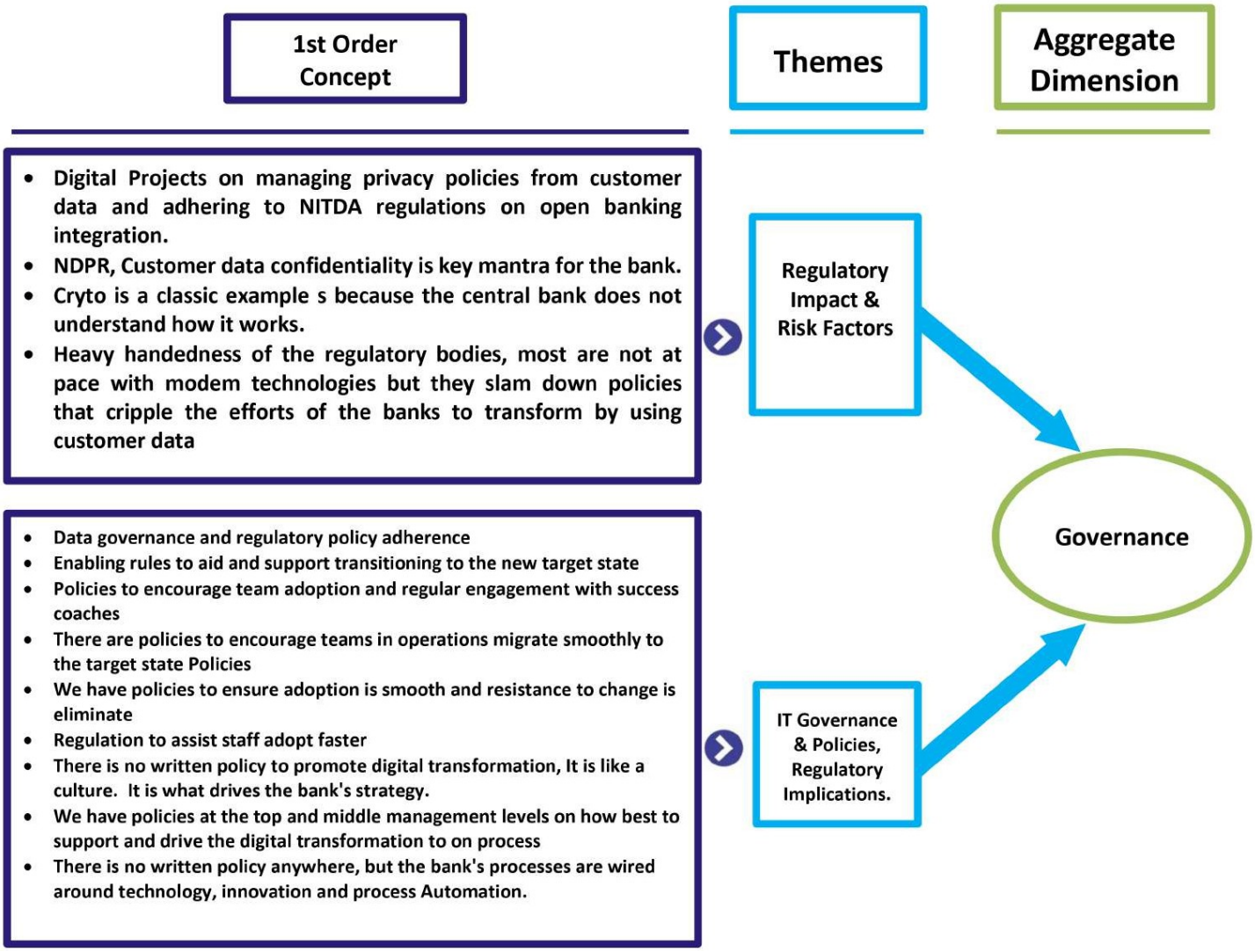

Fig. 4.11: Governance Aggregate Dimensions

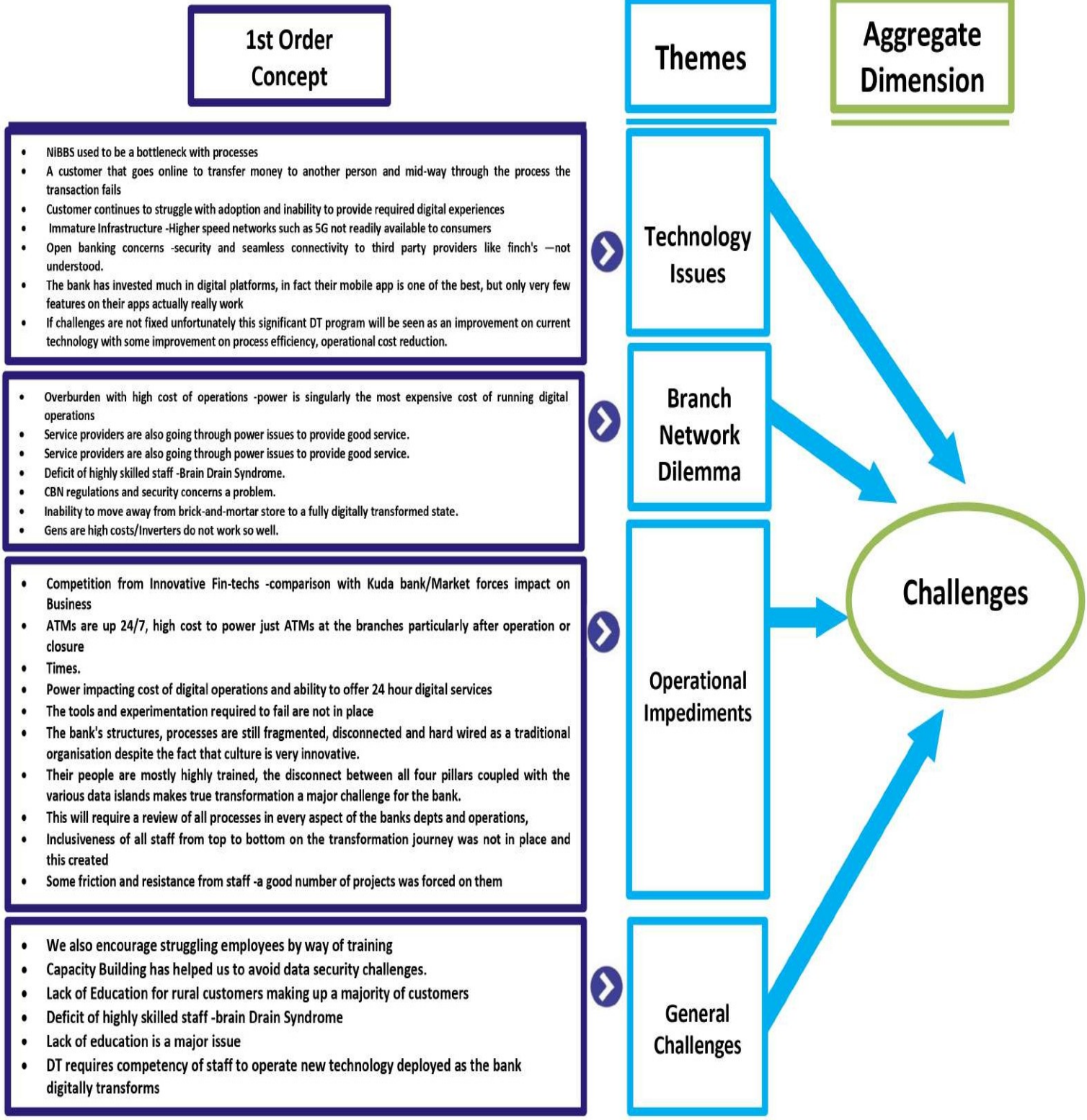

Fig. 4.12 Challenges Aggregate Dimensions

The high-level filtration of the datasets was further analysed, but this time in greater detail and as indicated earlier by the researcher; this phase of the analysis included passing data collected through the Gioia methodology. Concrete themes were generated from the structured and semi-structured datasets analysed and subdivided into granular themes, as seen below.

The outcome was the following areas**: *Organisational Management> Business Models> Business Strategy> Service Optimisation> Automation> Digital Migration> Security Issues> Creating Awareness> Governance> Challenges,*** and these are expanded into the various first-order tables, as can be seen in subsequent pages below.

Organisational Management

Following the analysis phase, this theme was the first that was visible to the researcher, and it consists of the following second-order themes: *Leadership, Change Management and Culture*.

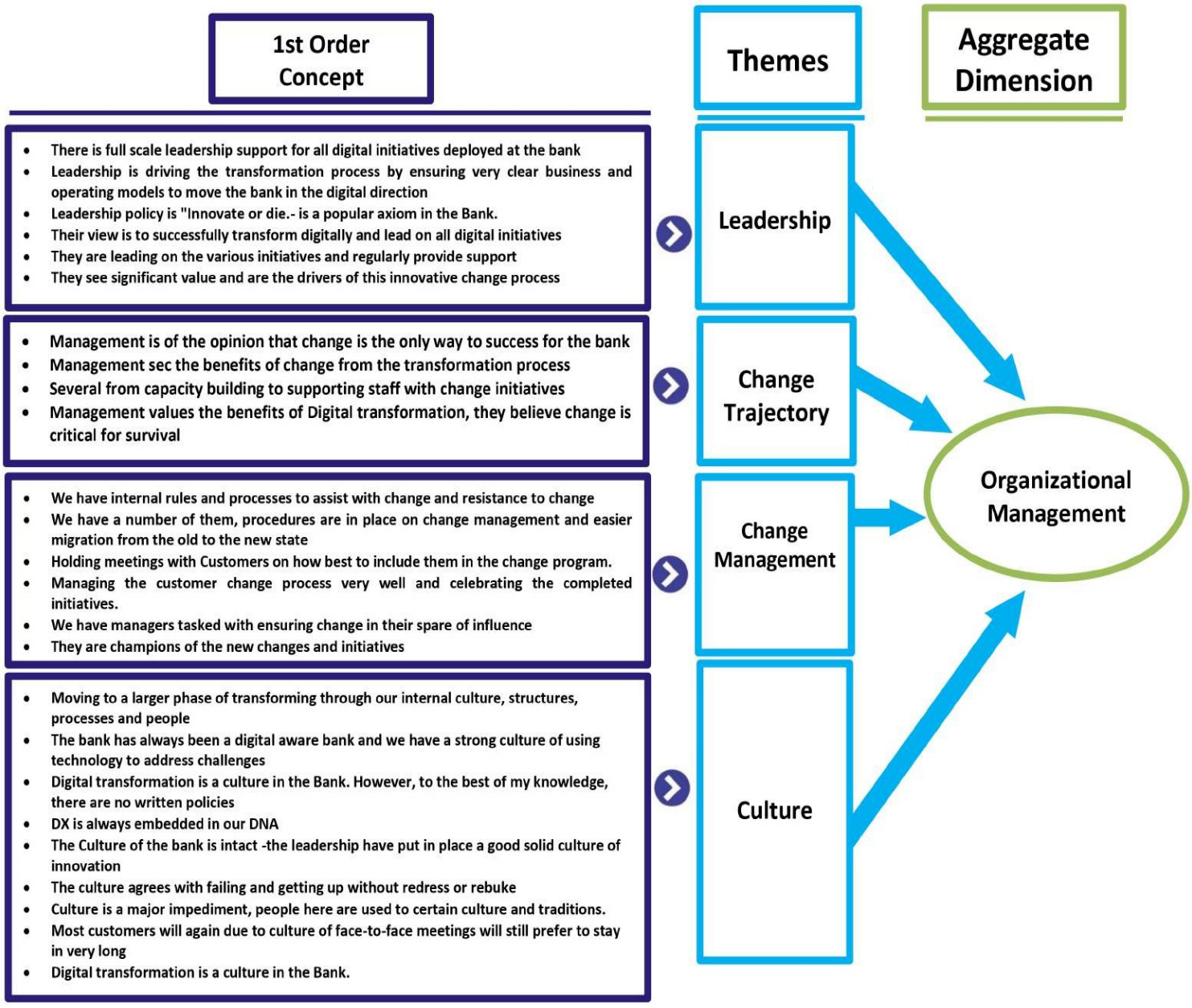

Fig. 4.2: Organizational Management Aggregate Dimensions

Aggregate Dimension: Organisational Management

Themes: **Leadership**, Change Trajectory, Culture.

4.1.2 The Role of Leadership

The leadership theme was the first identified from within the organisation management aggregate. This function of leadership is critical in any change initiative, (Hess, 2016) mentions the crucial role of actors in management playing a vital role in the process of selling digital transformation within the case organisation while also looking at overcoming the massive challenges of exploiting to achieve transformational changes; this brings the researcher to the point of understanding that, without the management having trust and measurable value from the use of technology innovation to transform, they will not fully support the transition process. They will most likely remain in a state of inertia, which can ultimately threaten the transition to the target state (Chatterjee et al., 2002). It was found from interview data that almost half of the executives interviewed were technology savvy, and the leadership was willing to embrace the new change direction. Response data further confirmed that the executives knew of DT's benefits and value to the case organisation, but they need to be more sceptical about fully adopting the new direction.

For the tech-savvy executives that responded, it was clear that leadership was essential, and, despite understanding the benefits and implications of DT, response data confirmed they were not so clear on how to execute the bank's DT objectives. In the researcher's view, this may be a result of not genuinely understanding the market impact of change and how well customers will respond to their new way of digital product offerings; However, the interview also revealed the leadership's understanding of the value DT brings to the bank; an executive echoed this, labelled RO5 when asked the following question:

"Can you describe how adopting digital transformation has become an effective strategy?

"Implementing the bank's vision would not have been possible without Digital Transformation. With the adoption of digital transformation, we have served our customers through flexible and robust multi-channel platforms that enable them to carry out transactions from the comfort of their homes, in line with our vision statement. This has helped to increase our customer base, transaction volume and value, customer loyalty and so on."

The researcher interpreted the response as the bank's leadership doing all it could to ensure a successful transformation process. Senior management support is crucial to the success of any large change initiative, as it impacts the main pillars of the bank. This was also echoed by the responses below from RO1, RO2, RO3, and RO4, respectively:

"There is full-scale support for all digital initiatives deployed at the bank Support for DT initiatives. Their view on transformation is clear, to ensure the bank radically transforms in a short space of time. They (management) are driving the digital transformation process by developing clear business and operating models to move the bank in the digital

direction. Management's view is to ensure the bank is digitally transformed in a relatively short time frame."

The above confirms that the bank understands leadership's function in transformative change. However, executives, although keen to transform, can be a significant hindrance. They can play a pivotal role in the success or failure of the transformation process. The latter will be imminent without leadership support for such projects (Rasmussen & Ulrich, 2015), implying that specific management levers can make or break the transformation process (Tawse & Tabesh, 2017). Gupta and George (2016) affirm that valuable insights generated from the transformation process are of little value if the management fails to see the value.

4.1.3 Consequences of Inaction

There appeared to be full leadership support in the DT program case organisation, but there were some challenges. One was the level of leadership inertia and action to move the organisation to a new target state. One such concern is the ability to confidently overcome inaction and adopt a business model that will address current traditional customers and service offerings for younger generations coming onstream to use the bank's services. This disconnect in leadership limited progress with the transition process and impeded the organisation from seeing the value of transformation, and resistance and inability to act was confirmed by the statement below from RO6:

"Some senior stakeholders of the bank are still in the digital transformation phase, and they resist the new platform business model method of engagement."

The statement re-affirms the struggle to identify a suitable business model endorsed by the bank's leadership to address the issue of how they can continue running a successful business and adapt to a new method of serving customers digitally. The transformation process will be more straightforward, with a concrete leadership position on the ideal business model. It is clear from secondary data collected on the bank that they have been successful in the model adopted over the years; annual reports year on year shows how fast the bank is growing using the traditional banking method, which is why it has become the leading bank in the region.

However, as it embarks on the epic journey, its strategy should focus on true transformation and ensure the leadership seeks to ensure the various automation initiatives work across the sections of the bank. More effort will be required in this area to drive the process through. Also, despite the leadership's talk about eliminating silo mentality and aggregating digital infrastructure, response data shows this message is usually not executed and followed through to the field managers and their respective teams; significant silos still exist with the bank's operations, as indicated from secondary data collected as well as the information received from the interview process, this creates some disconnect between senior and middle management and also reduces the impact of transformation in aligning people, process, structure and culture (Nadler and Tushman,.1989). Furthermore, despite the plans to consolidate data from the various offices, the critical pillar of success must include the above. However, the bank's leadership may need to take more ownership of the transformation process to ensure this

happens and not be seen by operational staff as just a message. This observation is, however, contrary to the view of R07, as can be seen in the extract below:

"The Bank management places so much value and appreciate Digital transformation, so much so that its last five strategy was hinged on it. For a bank, its core aim was to become a Platform. This gave birth to platforms such as Habari e-commerce Platform, enrichment of services on its online platforms (USSD, ATM, Internet and Mobile banking), Ndanni, SME Market HUB, etc. However, I believe there is room for them to do more to ensure close coordination of the various projects."

The researcher deduced from the data collected that the management has the will to succeed in becoming truly digitally mature through the DT program. However, execution and driving the various initiatives for successful transformation can be improved. A dominant focus on visionary leadership and capabilities from a digital perspective is critical to successful transformation (Nufer Ates et at., 2019). But when the researcher compared this argument against company leadership culture and the working environment of the bank, it was seen to have less impact.

4.1.4 Crucial Role of Functional Leadership

Leadership and management of change play a critical role in the decision, direction and execution of any DT programme (Tim Stobierski.,2020). This means that senior leadership's attitude is essential to the success of any such programme. Digital Transformation also requires a complete shift in the existing management views and how it adds value. It cannot be seen as merely an enabler in the organisation but as a critical component that forms its core (Jean-François Martin 2018). As can be imagined, the last two decades have witnessed a shift in the importance and value technology brings to any organisation. Once seen as a back-office tool, technology has found its way into the corporate business strategy of most organisations, including banks requiring senior leadership to navigate the change process.

However, achieving successful transformation requires the leadership in changing organisations to align technology and business strategy, see them at par with one another, and ensure that they are integrated into a holistic digital business and organisation-wide strategy (Bharadwaj et al., 2013). For example, adopting a structured and optimised data-driven decision process based on the vast amounts of data the bank generates will transition GTCO to a more efficient decision-making organisation (Mazzei & Noble, 2017). In addition, based on the interviews with the executive and senior management on the technology vision, it is clear that the leadership requires a paradigm shift in the digital mindset of the bank to navigate the DT journey.

R07 commented below in response to this question: *"How is data insight generated playing a role in achieving the bank's overall vision and mission statements?*

"Data and analytics are interdependent to provide insight into customer behaviour and preference. The bank leverages analytics to draw insight from customer transactional data and

feedback to strategise on its products and services development. The bank has a dedicated Data Analytics and Products & Promotion team working with other stakeholders to develop innovative products to serve its customers that are not only transactional but are also lifestyle-related and provided as a platform for customers."

The response confirms the commitment to using advanced technologies to model and generate insights to offer compelling value, which will help achieve a competitive advantage. However, technical knowledge or domain-specific champions are required to lead successfully on advanced technology innovation (JM Howell, 1990). Therefore, GTCO should rethink its leadership knowledge of the tangible and holistic possibilities of going digital across the organisation. In the past, traditional leadership programmes focused heavily on soft skills. However, in this new era of DT, bank management will need to decide to become more technology advocates to equip and build the bank to better compete in the new digital world. For example, a case study on Asian banks by (Sia et al., 2016) found that using hackathons to educate senior management on technology proved effective.

4.1.5 Leading Technology Initiatives

For most bank executives, the main concerns are achieving and sustaining profitability, sustaining growth, building a reputable company providing digital services and achieving growth (C. Davis. 2021); identifying one technology or a set of technology initiatives to drive such success is crucial for managing banks. However, Today's management ecosystem is rather multifaceted and often very complicated. The "one-size-fits-all" approach is no longer the case. Instead, as part of the transformation initiatives, several areas within the organisation require a unique set of technologies to achieve success. Bank leadership knows this but can act by taking on bitesize or modular technology initiatives that can readily demonstrate value. This awareness was echoed by RO8 when asked how management leads the change process with innovation and technology:

"We have a strong leadership critical to success; we also try to enable stable rather than radical transformation. This way, our gains on the small changes build confidence for the bigger ones."

When asked how management values technology innovation at the bank, R11 said:

"Innovate or die, is a popular axiom in the bank. No new idea, no matter how beautiful it appears, would fly if it is not digitised. Management values the benefits of Digital Transformation, showcased at various management meetings like the IT Steering Committee, Monthly Performance Review, and Business Performance Review."

Management is aware of the value of transformation and the changes to make for a successful technological transformation. Still, they need to figure out how to do this enormous task. Massive complexity is involved in the DT universe, and the executive's role with solid experience in how technology impacts the organisation is critical for success (Dremel et al.,

2017). Therefore, executives influencing or leading technological transformation should adopt openness in responding to challenges, particularly those of change (Bennis, 2013).

Considering the significant challenges of DT, the urgent demand for a completely new method of managing new technologies in the enterprise requires new sets of unique skills chief executives and other executive leadership teams should have (Singh & Hess, 2017), which is particularly true if they are required to lead complex technology innovation. If this deficit is not addressed, the effect can be a complete failure of the transformation process. Also critical is the role of leadership in driving the new integration policies across the organisation, considering the importance of policies in supporting structural change; this is in line with literature that has indicated the fact that DT is rapidly changing organisations' structural processes in traditional banks (Hansen & Sia, 2015).

Furthermore, it is essential to realise that most technology deployments are often change management issues requiring the leadership team's participation rather than the participation of the technology team (S. Liazu, 2022). Therefore, business directors and managers can be at the leadership forefront of the transformation project, including all technology and business change initiatives. The leadership plays a critical role here, requiring them to authoritatively manage organisational conflicts arising from the transformation process. As indicated earlier and from the data analysed, the researcher observed inertia in the bank's leadership to take the risk to drive transformation properly. Despite believing in the tangible value of change, taking concrete action to move forward is significantly lacking.

Aggregate Dimension: Organisational Management
Themes: Leadership, **Change Trajectory**, Culture.

4.1.6 Pace, Progress and Trajectory of Change

The speed of technological innovation in the financial service industry is the most defining reason for DT (J. Marous, 2022). This contrasts with the slower pace of technological change decades past. However, the fundamental parameters that define the swift pace of change are yet to be clarified in depth. They include the speed of product launches and the effort and resources required to move a product to production; furthermore, digital infrastructure is also a contending force in the above equation. One of the key findings in the industry was the speed of technological change to move to a target stage rapidly (Michael Wade, 2016). However, this notion seems disproportional for most regional banks in the sector, particularly the accelerating pace with new digital capabilities deployed yearly, and this is the case for the GTCO.

RO9 asserted that the rapid change is why the leadership of the bank are aggressively pressing for innovation and total transformation of the organisation, as indicated below:

"Our business and IT strategies are built with digital transformation in mind.
Nobody in the bank (the leadership) will approve or support a new manual process, no matter how innovative, if the new approach is not digitised."

R014 further states that the challenges associated with the transition process:

"As a technology-driven bank, our focus has always been to use technology to reduce overheads, reduce costs and grow the business, and we have done this successfully. So, then the bank decided to transform completely digitally; it was no surprise to most as we already saw the value from small-scale transformations, but moving to a larger phase of transforming through our internal culture, structures, processes, and people took a completely new mindset and paradigm shift to execute. So far, we are doing well, powering through the transformation journey."

4.1.7 Transformation –Structural Changes

According to Vial (2020), digital transformation covers multiple organisational initiatives to trigger structural and contextual changes. For example, GTCO and other traditional banks introduced new roles and responsibilities, such as Chief Digitalization Officer and Chief Data Officer (Horlacher & Hess, 2016), to foster digital growth across the enterprise and others, including Alat Bank, a subsidiary of Wema Bank PLC, decided to create a new digital organisational entity (Raabe et al., 2020). In contrast, others moved to radically change the corporate culture within their enterprise (Duerr et al., 2018). Managing and implementing the various large change initiatives across the organisation have often defined success or failure that involves applying technology innovations and building stable enterprise networks and digital platforms to enable integrations of crucial components.

However, incumbent banks should recognise the new and constantly changing requirements and adapt accordingly for a successful DT. Integrating the various processes within the organisation to achieve tangible transformation will require total re-engineering of the organisation (Majchrzak et al., 2016). Furthermore, culture plays a critical role in the transformation process, and people generally adhere strictly to cultural norms. However, if the norms are not in sync with the planned change trajectory, it becomes a friction problem for DT. R1O highlighted the vital role of culture:

"Culture is a significant impediment. People here are used to particular cultures and traditions; getting them to move away from that to a new model can be challenging."

4.1.8 Organisational Change Factors

It is on record that large financial institutions like GTCO find transformation very daunting; their sheer size complicates the process of evolving to a more digital organisation despite the prevalence of technology products in the market. Adopting change and applying innovation requires an accurate search for critical factors that make up any organisation's limitations and deficits between the current and target state. These factors may include culture and people. Technology ultimately transforms the culture in any organisation. It also alters the way people think across the organisation. To achieve proper transformation removal of cultural frictions that may exist is essential, as noted by R11 below:

"We have mechanisms in place to deal with cultural issues. We also have success team leads in every department who provide regular information and support to employees."

It is important to note that change in large transforming organisations presents a new set of unique factors, including challenges to the executives leading these companies, particularly in the financial industry (R. Carucci, HBR 2021). This new reality requires adaptation in line with the current digital era. However, despite significant resistance to change, which most organisations undergoing transformation face, transforming organisations should realise that change will remain constant, and this is particularly true for the financial service sector, where forces of change are the new norm and with increased frequency. This was in line with the famous quote from The Greek philosopher Heraclitus of Ephesus when he quoted the following: *"The only constant in life is change. Yet when change happens, we are often surprised. We are all human".*

In Africa's financial sector environment, the overall trajectory of the sector and the urgency to remain relevant inspires the need for transformative change in most traditional banks. Still, executives are also mindful of adhering to central bank rules and regulations guiding their transformation. For example, complying with regulatory requirements, including data privacy regulations, is urgent. R12 and R13 confirmed this point:

"Digital Projects on managing privacy policies from customer data and adhering to NITDA regulations on open banking integration is mandatory. We have rigorous policies on data usage and customer data disclosure. These policies are in line with NITDA regulations, and this gives confidence to our customers."

The above response emphasises how the bank manages regulatory-related technology changes in an increasingly challenging regulatory environment. It validates that the case organisation is aware of the external regulatory forces shaping the industry and its impact on company-wide digital strategy on transformation. Academic literature further suggests that a robust strategy is critical to successful transformation (Weber & Weber, 2001). This includes recognising that planning change and analysing the outcome of change are similar success factors for any DT initiative. However, some will argue that, although necessary, more than leadership should be recognised as a critical success factor for transformation. According to (L. London et al. Mckinsey Article, 2021), a deep and diverse team is required to help drive the changes across the organisation, a view different from the earlier arguments.

Aggregate Dimension: Organisational Management
Themes: Leadership, Change Management, **Culture.**

4.1.9 Role of Culture

As indicated previously, many firms in the FSI space need to improve their transformation efforts to achieve dividends from the process. However, this has been a challenge for several traditional banks that have failed in successfully transforming. This failure often stems from a need for more attention to organisational culture. It can also be caused by inertia in culture,

internal resistance to technological change, or rigidity in attitudinal matters (Hartl & Hess, 2017).

The above was noted by R15 when asked the following question: *"What is the resistance to Digital Transformation change as a result of new technological innovations?"*

"Culture is a major impediment; people here are used to certain culture and traditions, so moving away from that to a new model can be challenging."

The bank's culture is at par with top international banks, consistently enforcing a technology culture across the business. Although credit must be given to the various teams, including the chief executive, for implementing the company's current culture, the leadership should realise that an alignment of culture and the transformation programme should occur. There should consistently be a solid culture of innovation and a relentless drive for disruption of the status quo to successfully transition to the leading bank in terms of innovation and technology; this cultural change will help move the bar toward reducing the friction with transitioning.

The response from R17 and R18 confirms this when asked: *"What is the resistance to Digital Transformation change as a result of new technological innovations?*

"The bank has always been a digital-aware bank, and we have a strong culture of using technology to address challenges."

There is the culture of "no room for failure", which seems to be the general culture from the top down across the organisation. However, a failure culture is frowned upon in Africa, cutting across all industries (G. Marange, 2018). So, despite the relentless efforts of the bank to drive innovation, it can get blocked at the senior level due to cultural reasons. One observation made by the researcher is that the case bank lacks the tools and willpower to allow experimentation as part of innovation. When asked how the bank accommodates experimentation and tolerance for failure, this was glossed over, and the reasons may be centred on the overall African culture of not celebrating failure or unsuccessful attempts to succeed, as indicated earlier.
The response from R19 and R20 below supports the researcher's position:

"We have several policies from employee training to experimentation of various initiatives enabling policies for experimentation and training. The culture of the bank is intact. The leadership have established a solid culture of innovation and relentless drive to disrupt the status quo –but the tools and experimentation required to fail are not in place."

"So yes, the culture agrees with failing and getting up without redress or rebuke from the leadership. However, failure is not tolerated at a bank that strives for excellence –so there is the dichotomy and inertia to fail –this does not encourage staff to try innovations for fear of rebuke. This dampens the drive to transform and impedes actual transformation despite the significant investments in technology and capacity building."

The above fear of failure is a significant reason why experimentation does not flourish at the bank and all other traditional banks in the region going through a transformation which hinders the freedom to try new things; the staff, particularly the technology staff, cannot experiment new ways of working that can be of great value to the bank. As indicated earlier, there seems to be a dichotomy and associated inertia from the fear of failure; the fear of rebuke does not encourage staff to try innovations. So, even though the bank's culture aligns with its technology transformation ambition, the reality of low tolerance to failure impedes the will of the staff to experiment, one that will create more technology value that can benefit the business operations. This can ultimately dampen the general motivation and drive to transform.

The African culture and lack of exposure in some quarters, particularly for the customers living in rural areas, is another problem the bank contends with when looking to bridge the digital divide. Lack of education is another major issue. Despite all the investment in promoting digital transformation and the move to digital services, some rural customers resist adopting digital services and will not want to change the physical interaction for all banking-related services for online banking, and R21 noted this:

"Many bank customers live in rural areas and will prefer branches, but this costs the bank massive overheads to retain those brick-and-mortar stores."

Despite the proliferation of affordable mobile devices that can be used to access banking services, lower cost of internet bandwidth and availability of digital banking services, most customers still prefer to stay in long queues to talk to bank staff physically. As indicated above, This cultural challenge plays out in most services provided nationwide, from government to other private sectors.

4.1.10 Data-Driven Organization Culture

As mentioned in this research, digitalisation is only a technology-enabled process, but DT is a significant organisation shift to an entirely new direction that technology enables. This considerable change process should also involve a shift in company culture, including realising the digital capabilities required to drive the new direction. Several components in this study stand out concerning company culture. One is that a data-driven integrated systems approach to cultural change is critical to the transformational change process (Dremel et al., 2017). In the introduction of this research, it was stated that data is a valuable resource that fuels the DT process and, as such, it is a critical enabler of the DT process across the GTCO enterprise. Therefore, there is a need for a complete shift in how data is operationalised, collected and disseminated across the GTCO enterprise to achieve synergy and consolidate its data from various departments and subsidiary islands. The bank can develop a new culture of using and sharing information in daily operations and routines (Llopis et al., 2004). The executive management should also realise that going digital with technology and enabling data-driven processes and procedures should be a core component of a tactical, long-term strategy that brings financial value to the bank (D. Cordero, 2019).

A complete culture shift may create a conflict between the new digital natives who may not have much bank experience and the older, non-tech-savvy but experienced staff (Kohli & Johnson, 2011). The bank should address this conflict as it journeys through the transformation process to avoid a roadblock and friction between the staff members on the two sides of the spectrum. They can achieve the above by becoming aware of and managing the cultural conflict that may arise; therefore, creating a friendly and effective strategy for the coexistence of old and new staff members is critical to establishing a seamless transition process (Kohli & Melville, 2019).

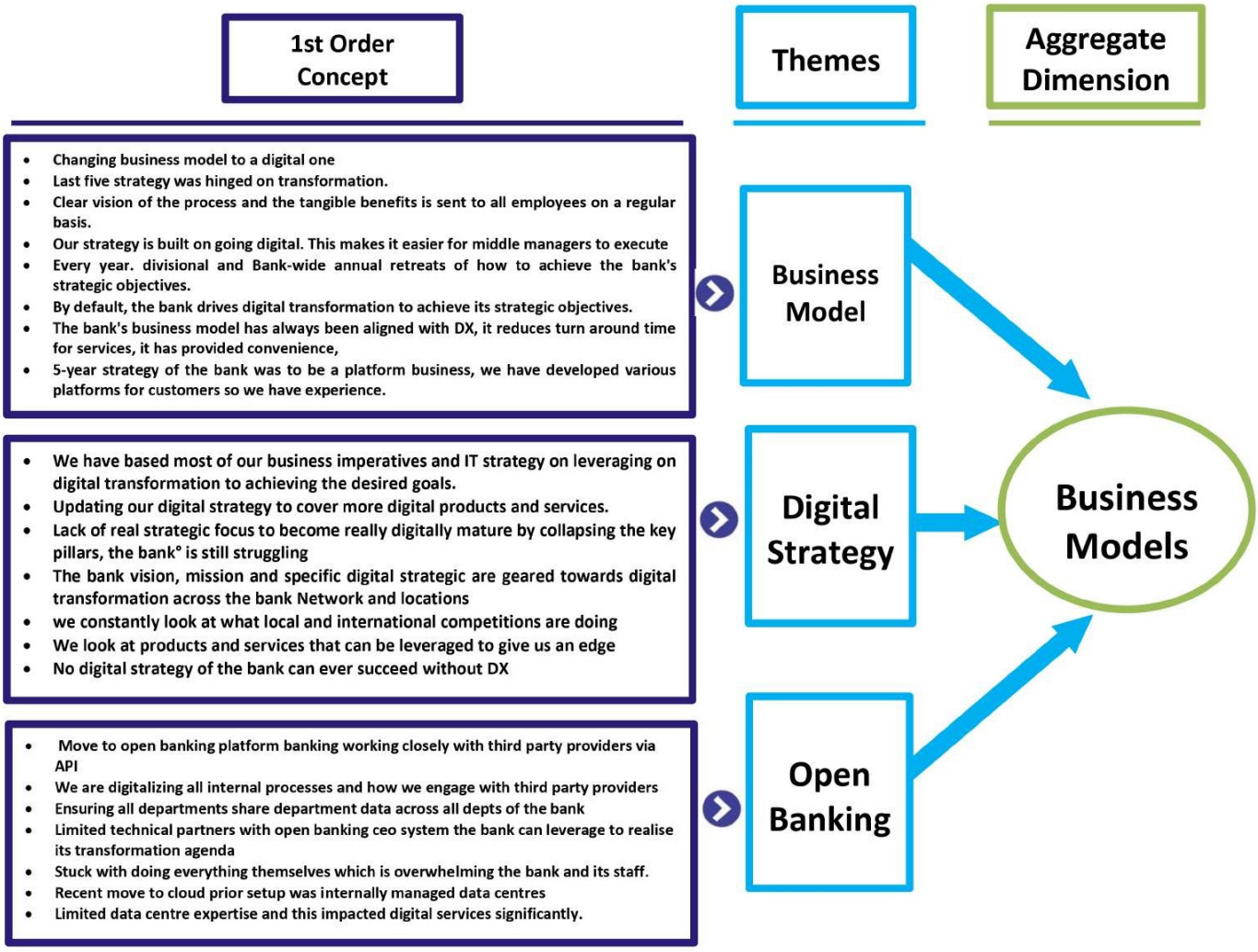

Fig. 4.3: Business Models Aggregate Dimensions

4.2. Business Model

4.2.2 The Struggle to Create Value

The case bank, GTCO, has arguably built the most successful bank in West Africa based on a successful traditional business model that has worked for decades. However, it needs help re-aligning its business model strategy to embrace the new business and technology environment.

It is grappling with technology, including how best to consume customer data sitting at various data islands, analyse and then generate significant insight that will add compelling business value. However, the bank is headed in the right direction and has started analysing customer data to create more value with its digital products. R23 pointed this out in response to the question:

"How are data analytics and AI used in strategy development, execution and corporate planning?"

" In today's business world, developing strategy without data analytics is like building a house in the air. It is bound to fail. Customer data analysis provides insight into a preference for products and service, helping the organisation develop strategies targeted at their customer needs."

The above indicates that the bank understands the benefit of using valuable insights to provide compelling digital products and services that will move the bank to greater heights. However, having a good understanding of the benefits of innovation is one thing; understanding how to execute to achieve value is another thing, and this was also confirmed by R24 when asked about the deployment of another technological innovation, AI, in transforming the bank to generate more business value. The response was as follows:

"AI is not a mere technological tool but an intuitive platform to observe and make an organisational impact in real-time. As a result, it can go deeper than mere data collection and aggregation. There is a real opportunity to take analytics and business intelligence to an entirely new level to reinvent operations and enhance customer understanding. Most big organisations, like Apple Inc., use AI to add value to customer support services.

From the response, it is clear that the bank understands the potential of complex new technologies like AI, the need for data aggregation, and many others, but how to use the tools to create business value seems to be the issue; this is why the right strategy is critical to success. Strategy requires an understanding of value-creating and capturing value to make profits. Moving away from the current business model by either replacing it entirely with a disruptive technological stack and business model that cater to the new digital offering or modifying the current model to fit into the new norm is a risk most bank executives may not want to take due to the severe consequences of failure. Therefore, if changing business models, the new model can first be established and allowed to take root before abolishing the existing one. Clay Christensen highlights this point in his theory of Disruptive Innovation. According to him, this is a process by which a product or service takes root initially in simple applications at the bottom of a business value chain and then relentlessly moves up the market, eventually displacing established competitors (Christensen, 1997).

4.2.3 Understanding the Transformation Phenomenon

The bank's leadership should reflect on the term transformation to understand how it can significantly benefit the organisation fully; business transformation has become a buzzword in

the banking technology circles with little effort employed to understand how it can be achieved fully (U. Shibbir, 2019). Therefore, the case bank should realise the essential nature of evolving digitally by developing new business models to transform the organisation to become more agile and efficient and better serve customers. Achieving transformation will give it an advantage over its competitor (Schwartz, 2001). As Wade et al. (2019) noted, the banking sector falls into the category of vulnerable sectors to be affected by DT. Understanding the business and operational areas to innovate and transform is critical for its success. The bank is already taken significant steps in this direction. R25 attested to this in response to the following question:

"What bank areas have been significantly impacted by the transformation process? Building out new digital products to replace our previous manual bank processes."

R26 had this to say:
"Quite a bit, from operations to banking payment systems to customer service areas."

From the above response, the bank focuses on the critical areas that will allow transformation to yield compelling value in the organisation, with the significant effort exerted in this direction. This indicates that the bank is aware of the impact of disruption in the industry and is determined to be caught off guard. According to Professor of Innovation and Strategy at IMD, Michael Wade, the sectors significantly impacted by disruptive innovation have mostly stayed the same in the transformation focus areas. Financial service firms have moved closer to firms that urgently need to undergo the DT process to survive. However, it is also apparent that the banking sector is vulnerable to threats of failure if transformation is not carried out judiciously, and the leadership of any transforming organisation must recognise the above significance. They should be brought along the innovative technology journey to understand the myriad of new technologies to be adopted as part of transformation (Schwertner, 2017). One must reflect on how technology affects various functional business areas to create compelling value. This realisation will impact the new business model adopted across any transforming organisation.

Transformation requires the current realignment of operational processes to fit into the new target business and operating models; this includes automating business processes to develop new capabilities that will ultimately align with the new strategic direction of the bank's objectives (Barnir, Gallaugher & Auger, 2003). It will allow for easier identification of new opportunities not present with the traditional business model. It is also in line with developing a model that captures a modern-day customer requirement that includes convenience, security, minimal to no workflow processing errors and the ability to create more value that incorporates the ability for customers to receive personalised products and services from the bank (Markovitch & Willmott, 2014). However, to meet the high expectation of modern-day digital customers, GTCO may need to look beyond a simple strategy of automating its processes and deploying state-of-the-art AI/ML-powered platforms driven by analytics for decision-making. It should consider looking at the ultimate goal of any business, which is how to reduce costs and increase profits in a sustainable way that fits into the requirements of the local market (M.

Rounaghi, 2021). The bank leadership knows the benefits of cost reduction while powering on with the DT program. R27 stressed this:

"We have been deploying various transformation initiatives for several years, and the process is ongoing. We are still migrating services to the Cloud, consolidating data and looking to offer AI to solve internal problems. Manual operations and paperwork automation, reducing operating costs with current banking processes."

Achieving the above will require the ability of the bank leadership to develop a robust business model; it also requires a competent, capable and reliable workforce to operate and drive the new technology transformation efforts. Education and developing strategies for innovation centres to attract regular talents can drive and manage the data and AI-driven platforms to gain a competitive advantage (M. Iansiti, K. Lakhani, 2020). The case bank understands this benefit and adopted a working strategy by investing in learning centres.

R28 had this to say:
"Educate, educate, educate…we spend time in regular training supporting staff education to aid faster adoption."

4.2.4 Capabilities –Effects of Business Model

Still, on technical capabilities, highlighting key areas relevant to the transformation process can benefit the change effort as part of digital strategy formulation. An excellent first step is the capability and ability to scope, design, build and implement technologies like a digital enterprise network or migration to the Cloud as part of a new platform business model (Li et al., 2017). The business model strategy plays a significant role in deploying technological innovation as an organisation transforms; this effectively may require the transforming organisation to understand the impact and implications of the technology deployed to develop a robust strategy successfully. A case in point is the impact of network effects when implementing a platform business model. Direct and indirect third-party network effects can help in realising more value.

Forming strategic alliances to derive more value through synergy with other providers to provide more intrinsic value can be an option for review as part of a new business model. Executives leading transformation should realise that they run a business. Rather than focusing on corporate-only matters, they should also be cognizant of their environment and how dynamic changes can profoundly impact the organisation (Kohli & Melville, 2019). This new understanding or awareness will help the leadership of any change organisation identify novel ideas and allow them to think critically about how to fine-tune their new business models to become much more effective (Berman, 2012). Communicating the intrinsic value to stakeholders of a transforming organisation will reduce friction and resistance to change. R29 shed more light on this:

"We regularly promote the business benefits and tangible value, which includes increased revenue and easier working environment."

It will be interesting to see how the dynamics will play out with the case organisation as it looks to redesign, transform, hold on to market share and then grow its new digital products and services; this is made more difficult with central bank regulations changing rapidly. It is also worth reflecting on how digitalisation or complete transformation will evolve, particularly in the banking sector, which is unknown; even the pace at which it occurs is largely controlled by varying forces often outside the control of any organisation. One thing is sure: the DT at GCTO can be seen as a disruptive change, irrespective of how technology will evolve, one that can be defined as a complete change in a company's current business (Parviainen et al., 2017). However, this presents the possibility of staff and customer resistance. Some customers need to cope better with these changes at the case bank. This was highlighted by R30 below:

Resistance has come from some staff worried about their jobs or ones who don't believe in the new change. Some customers need to cope better with the changes and new ways of engaging with the bank.

Change organisations can adopt a business and influence model that works as they move through the transformation phases (T. Basford and B. Schaninger. 2016). There is also a need to protect the new incubated digital structures from the "harmful" older business model and ensure the new model focuses on targeting a new crop of customers rather than the existing customers from the traditional model (Gans, 2016). Furthermore, the realisation that pre-existing knowledge on technology disruption suggests that, to succeed in integrating and commercialising disruptive innovation, organisations like GTCO may need to build a firm that is separate from the traditional business lines but also connected in some ways and not alienated (Bower & Christensen, 1995), (Tushman, 2016). When a new organisation is created with no ties to the existing one, management often sees innovative technologies as genuinely novel and as a proven business opportunity (Gilbert & Bower, 2002); but when the old and new are intertwined, this same "novel" business opportunity can affect and harm the traditional business (Tushman, 2016). Furthermore, separating the old from the new can show the disconnect between current and new target states; this helps management balance its views on disruptive innovation and determine if it is a threat or a sweeping unique opportunity the organisation cannot afford to lose.

4.3 Strategy Concerns

4.3.1 Need for Dynamic Capabilities

Transformation requires large-scale change, which impacts the strategic direction of a change organisation (R. Todnem, 2005). As part of strategic changes, the operating model design may need to align with the new digital framework because digitalisation will always mandate modernisation for any organisation. However, the desired customer experience in a digital world may only be achieved by changing the business and operating model to the same level as the organisation's new direction concerning products and services. In addition, digital native giants with business models built from the ground up, like the giant technology firms or the up-and-coming Fintechs, like Kuda Bank, have managed to cut down go-to-market time and

fast-tracked the process of developing new products, which is in contrast to the time consumed in this process by traditional banks, like GTCO. This creates added value as the rapid time they take to launch new products or their go-to-market speed is an overwhelming competitive advantage (Bharadwaj et al., 2013).

The response data confirms that the case bank needs help to catch up with the fast product release process and administrative delays in optimising current operations. The interview data also indicated that red tape, bureaucracy and regulations on using customer data; and adopting the new platform business model hold back most of the quick decisions required to move the bank forward; R22 and R23 confirmed this:

"The use of customer data is an issue the bank is still tackling. Customers and regulators know the risks and monitor our actions very closely. This awareness has created friction with our customers and slowed the adoption of services for fear of personal data loss. Some external stakeholders of the bank are not yet in the digital transformation phase and resist the new platform business model method of engagement with them."

Earlier business transformations were concerned with the silo transformation of specific departmental technologies for daily operations (Dremel et al., 2017) or the automation of specific processes within the larger organisation. However, today, the case is different; robust business models that cover the full spectrum of value creation and capture are required for true transformation (DJ Teece, 2022). In this new age of DT, developing a suitable method of creating and capturing value is critical; this reflects in the pace of product development as well as product release in an ever-growing digital ecosystem that involves multiple third-party providers engaging in the same platform universe (Bharadwaj et al., 2013).

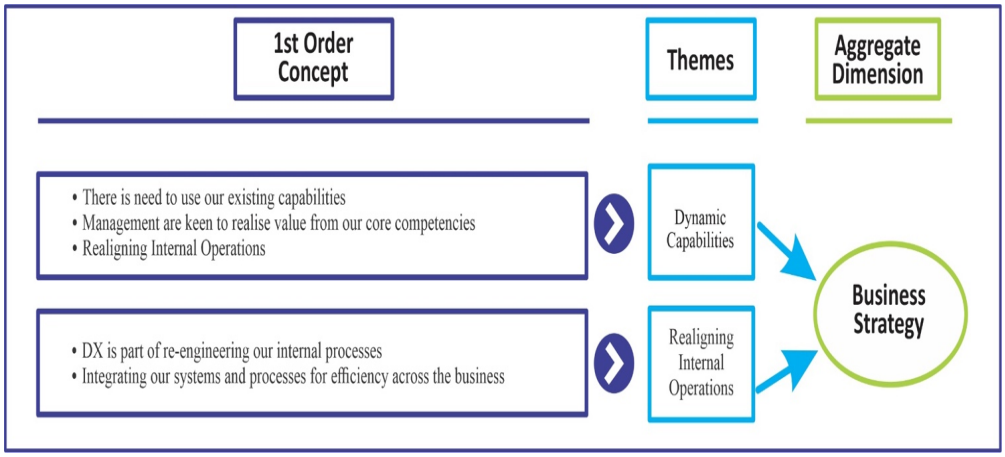

Fig. 4.4: Business Strategy Aggregate Dimensions

The case bank can consider adopting the dynamic capability approach with its transformation efforts, which includes the ability of the organisation to integrate, build, and reconfigure its internal and external competencies to address it is rapidly changing environment (Teece et al., 1997); this involves organisations understanding its capabilities that enable them to create

routines to better fit current technology disruptions through three main areas, namely the ability to sense, seize and transform (Winter, 2003).

Adopting dynamic capabilities during transformation involves several strategic changes and significantly improving the effects of innovative disruptions across the organisation (DJ Teece, 2022). It differs considerably from the notion of planned capabilities, which most traditional organisations have practised for years. It also worked well for the predictable incremental changes firms experienced over time ((DJ Teece, 2022). The case bank must realise that to handle the overwhelming, unexpected competition from digital Fintechs; a shift may be required to adaptive competencies, enabling it to manage the barrage of current innovative disruptions better. Furthermore, ambidexterity and dynamic capabilities may explain specific needs and requirements for transforming organisations; this can eventually lead to success (Dutta et al., 2012).

Competency is a strategic leverage that any transforming organisation can use (Pavlou et al., 2006). Extensively reviewing internal processes and avoiding focusing only on serving traditional customers should be addressed in transforming organisations. There may be a requirement for flexible business models that cater to the growing Generation Z looking to embrace digital banking services much faster than traditional customers, mainly when it is on record that many banks make the mistake of shifting entirely to a digital state. Therefore, to deploy a business model that caters to all customers, the case bank can investigate executing a "mix" of capabilities and talent into its company-wide structure as part of the transformation process. Explicitly considering the significant role of digital talent in driving change within the organisation (Davenport et al., 2020). R31 said the following to aid this argument on the role of policies when responding to this question:

"What policies are in place to promote digital transformation adoption at the bank?"

"Several policies to attract digital talent and encourage change are in place to support the programme."

However, despite having the right policies in place and supporting the technology change process, the bank may need more to attract other digital talent in achieving a successful transformation programme.

Aggregate Dimension: Business Strategy
Themes: Business Model, Digital Strategy, **Realigning Operations**

4.3.2 Realigning Internal Operations

Significant changes in an organisation may require major alterations of various internal and external components, including re-engineering its structure and internal processes to meet the new needs of the modern firm in support of digital efforts (Ken Corless et al.). Furthermore, deliberately integrating process flows within the various departments and promoting data sharing across the board; may also involve adopting the same integrated systems approach and

consolidating all systems within the organisation into a larger entity. A change organisation may create new business functional units to align with a completely new business model; or a mix of the existing and new models to help manage the transformation effort (Hess et al., 2016). Adopting a new model may require considering firm-specific capabilities and a combination of solid leadership across various organisation segments (J. Dias et al. 2017).

As indicated earlier in this study, the financial service sector has been rapidly changing and becoming more flexible and less conservative, partly due to the significant disruptions it has experienced from smaller and more innovative firms. The trend has left bank executives in positions where they must make ad hoc decisions that can quickly change the organisation's trajectories, particularly in operations and management capabilities. However, driving transformation does not only rest in the hands of the executive team; it requires capabilities and competencies of both the executive management and in-house organisational capabilities of the bank (Li et al., 2017). R31 stressed the vital leadership requirement in the first part of the comment below:

"We have strong leadership, which is critical to success. We also try to enable stable rather than radical transformation. This way, our gains on the small changes build confidence for the bigger ones."

When the above is considered from a management perspective, it is evident that a robust, action-oriented leadership and management strategy and a clear implementation roadmap are necessary to keep up with the transformation efforts. From a transformation perspective, the concept of management capabilities is an exciting area to review. (Yeow et al., 2018) examine this in their dynamic capability theory. The study's findings indicated that dynamic capabilities might inherently support the transformation process by altering a company's digital strategy in the direction of its planned trajectory. This process propels the wheel of transformation alignment in the right direction (Li et al., 2017).

Fig. 4.5: Implications for not Transforming

There are implications for banks avoiding the risk of change; some banks have decided to play it safe by not going through transformation for the risk of disturbing current success. The above diagram clarifies the fate of such banks in Nigeria. They may likely be left behind while the transforming banks propel forward, leaving an ever-widening gap (Jay Udeh 2019)). However, as indicated earlier by the researcher, there is a need to manage the ambidexterity issue in terms of fusing traditional and modern competencies in the transformation journey. Many financial service companies may need help to balance achieving breakthrough innovations and joggling the traditional steady improvement of operations; this may contribute to why many transformation efforts fail (Babbar et al., 2023).

Aggregate Dimension: Service Optimisation
Themes: **Enhancing Customer Engagement,** Process Improvement

Enhancing Customer Engagement

Findings from the qualitative process confirmed the state of affairs with current customer engagements at the bank. During transformation, a vital segment to consider is interacting with company stakeholders, comprised of the customers' interaction or journey with the company, suppliers, and internal staff resources. This is because customer experience is critical to the DT process; without happy customers, no revenue exists; this has become one of the most important aspects of focus (Ehrlich, Fanderl, & Habric, 2017). Also, considering the vast array of partners of the bank, it is therefore essential to ensure collaboration in terms of customer engagement, incorporating suppliers of products and services, technology partners as well as digital partners assisting in providing banking services.

Often much emphasis is placed on technology and firm capabilities during transformation; the process has essential components that aid the transformation process. However, they can

also be more sufficiently transitioned (Larjovuori, Bordi, Makiniemi, & Tammi, 2016). DT is mainly about people; they are the resources that drive the transformation wheel. Therefore, continuous engagement with the workforce is essential; this area may need more attention during the DT process to ensure a successful change programme (G. Dreni, 2023). Leadership can also be critical in a successful transformation; as the researcher indicates, structure and operational process realignment can benefit large-scale change. Having a DT success' barometer' to measure the above can help management measure progress on each initiative to indicate how successful the DT initiatives are. In line with the above, the researcher asked the following question:

"How do you know whether the digital transformation works at your organisation?"

R32 responded thus:
"It's working because we can see success using new technologies and tools deployed as part of the transformation efforts."

This answer was consistent across the various persons interviewed, and other findings in combination with the above answers showed a measure of the transition's success.

Enhancing Customer Experience –Digital Channel Optimization
Digital channel optimisation increases efficiency and customer satisfaction on all digital platforms (M. Chapman, 2023). One such benefit is that customers can seamlessly engage with the various touch points and reduce data duplication across multiple points, from entry at one location to going online and requesting the same data again online. Therefore, consolidating data entry points across various engagement channels can increase customer satisfaction and improve experience. This is an essential function of digital inclusiveness for any transforming organisation. Although multiple channels of contact with a digitally transformed organisation may require interaction with the customers in diverse ways, providing consistent customer experience by democratising data at the various locations and digital channels is an essential transformation process, one that can help improve the marketing of products to the end customer (T. Harland, 2022).

Therefore, any transforming bank going through the change journey should consider establishing consistent messages at the branches and online via its mobile and online banking platforms; this can include consistent digital banking messages when customers visit its branches or ATMs or use its banking app. GTCO seems to be progressing in this direction with consistent messaging. However, there may still be a need to create a more unified technology integration between various business units, allowing for a more effortless multi-touchpoint experience for the customer.

Benefits of Multi-touch Points
Complete transformation requires positioning to provide customers with the services they need; this helps maintain good customer relationships, and deploying a robust multi-touchpoint strategy may also be essential for excellent customer service delivery. Furthermore, joining a

third-party financial ecosystem to offer various value-added services to customers can create more value and significantly increase customer loyalty (M. Klus, 2020). Part of digital financial maturity includes customers' ability to connect via third-party financial providers to receive compelling services through their bank interface. Integrating with third-party service providers can enable transforming organisations to generate valuable data traffic driven via multiple providers connected to the organisation's digital channels; this can lead to collaborative efforts between banks and service providers, thereby providing the propensity to increase overall brand value.

Aggregate Dimension: Service Optimisation
Themes: Enhancing Customer Engagement, **Process Improvement**

4.3.3 Process Improvements

In the opinion of (Tushman 2016), the idea of combining steady improvements and seeking to expand operations in new areas goes back to the "Exploit and Explore strategy", which allows for success in the long term. Tushman believes that organisations must maintain a series of breakthrough efforts by continually focusing on small but steady improvements to the business in terms of technology deployment or efficient and optimising operational processes. These organisations can also explore new opportunities to make them relevant in the long term.

Therefore, to succeed in the longer-term transformation effort, there may be a need to maintain current incremental improvements and apply what Tushman terms 'architectural innovations', ensuring making technological gains significantly alter some sections of the business. For any transforming organisation, this can be an audacious task that can be a challenge; for example, it can be a laborious process to expand automated digital services to a significant number of customers outside metropolitan areas whilst maintaining the status quo of servicing traditional customers. To achieve the tangible value of digital inclusion automation, the leadership should be cognisant of how digital can provide business advantage not just to the metro customers but also to rural customers using its products and services. R32 addressed the value of such automation:

"Practically, every area of the bank is impacted by the digital transformation process. From automating internal processes to improve process efficiency and reduce turnaround time to providing optional self-service options for some services, customers can initiate requests and get served without recourse to the bank staff. A good example is an ATM card request. A customer can obtain an ATM anytime, including weekends, via the Card Kiosk service without going into a bank branch."

According to data collected during the qualitative process, the bank is taking steps to continue with process improvements and embarking on a journey to address breakthrough process improvement across the business. However, many incumbent financial institutions contend with realising tangible gains from capital investments made in digitally transforming their organisations, whilst some see particular benefits from the change process (D. Seacombe, 2023). Part of the technical transformation layer requires organisations to deepen the

automation process, align with the move to the Cloud, invest significantly in the platform business model, and ensure complete data integration across all business operation functions. However, the payback for the high expenses may be seen as marginal, further discouraging others from following the same path. Further steps may be required to see improvements across the board and to start realising some gains from the transformation initiative; this can reduce the chances of failure, mainly if the focus is on eliminating a silo mentality, a move away from the various departments working as separate entities, elimination of the lack of data dissemination across units and countries of operation (P. Awasthi 2020). Other DT considerations include overcoming the limited interconnect between the various business units and the technical teams and the misalignment between managers executing strategy and the technical and business teams.

Therefore, an integrative approach is required to achieve true digital maturity, which may need designing a set of collective measures based on specific improvement objectives that holistically allow for large-scale transformative change. Incumbents can also utilise their management business knowledge and experience capabilities in framing suitable governance measures to aid the transformation efforts to achieve tangible returns. However, the continuous integration of processes as part of the bank's DT effort appears to be yielding results, as revealed by R33, who was asked this question:

"What bank areas have been significantly impacted by the transformation process?"

"Yes, it is certainly working very well. We can see results from operations improvement and fewer loan defaults due to analytics used in vetting customer loan applications."

The bank is seeing some returns in various forms, as described above. However, a successful DT program still requires holistic change across the multiple functions of the business and its subsidiaries; this may include a complete alignment of the critical components; people, process, structure and the organisation's culture (C. Gerrald., 2016).

4.3.4 Avoidance of Incremental Process Change

As indicated previously, Digital Transformation goes beyond simply automating processes; the technology associated with transformation can be used for strategic innovation that cuts across every organisation area, including business and customer engagement. However, the vast value of DT can be compromised if used to give old processes a "facelift" rather than aiming for a complete overhaul and remodelling of the organisation's architecture. Therefore, change organisations should focus on something other than tempting discrete technology deployments at the expense of large-scale changes that can propel them forward. Furthermore, traditional banks need to be able to compete aggressively with the Fintechs that are rapidly entering their space; and they can do so by researching primary ways of embarking on impact-bearing transformation initiatives rather than simple departmental technological projects, which can include; developing a spirit for fostering regular agile experimentation of new technologies regularly to create innovative products that customers can consume. Furthermore, designing a robust business strategy considering technological approaches for integrating service across

programmes and organisational boundaries can offer compelling value. Often traditional banks are keen to invest in the latest technologies to keep up with competitors. However, they must consider the more critical issues of business alignment and integration of diverse processes across multiple business units and subsidiaries.

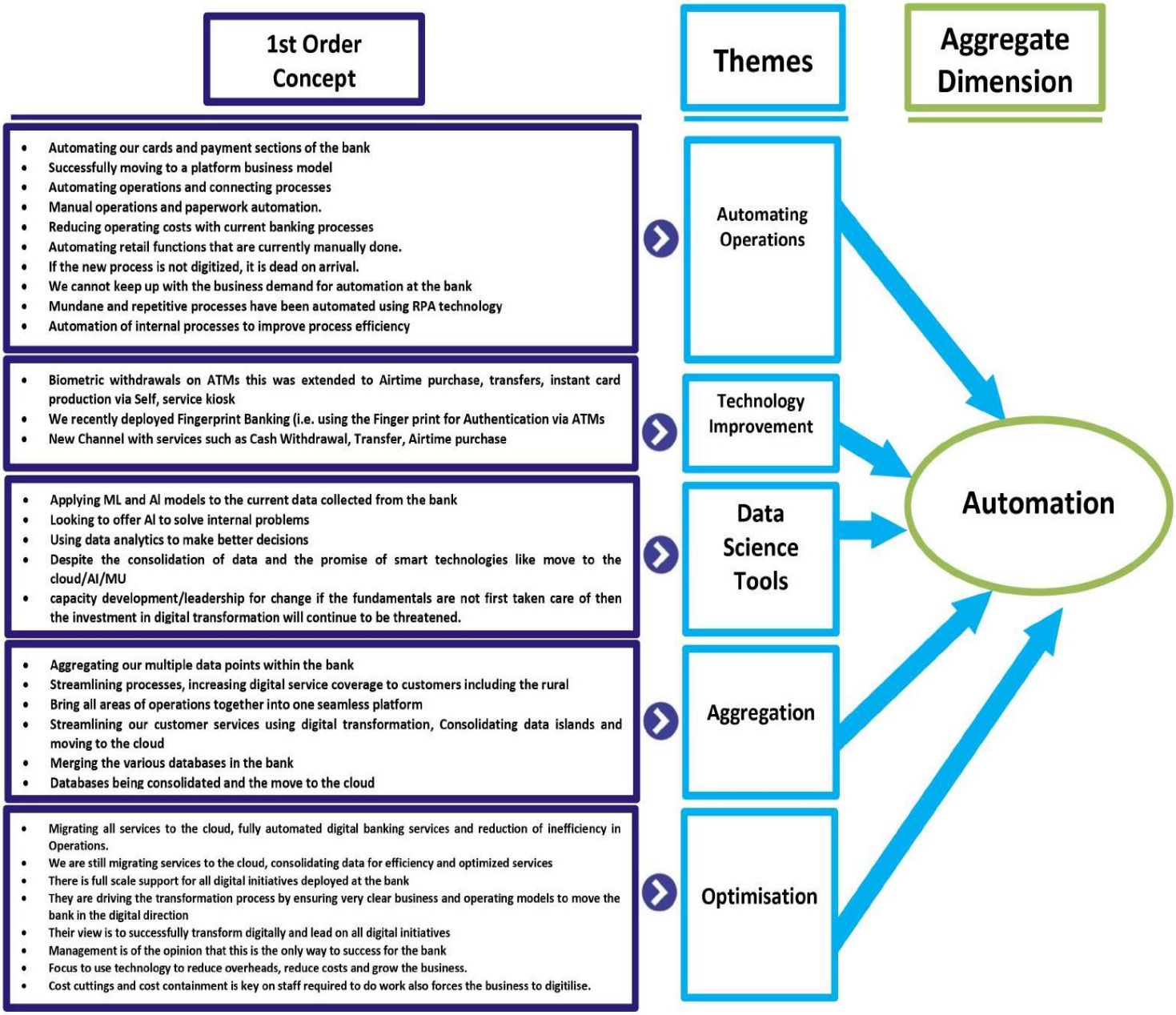

Fig. 4.6: Automation Aggregate Dimensions

Most financial service firms know the benefits of automation and the tangible value of its related technologies. The experience of incremental digitalisation and automation of processes has produced consistent value over the years in several industries, including banking, where a record number of financial organisations have realised great value. This may have come from deliberate new policies designed to reduce the human component of work through a focus on automation, particularly in back-office operations and straight-through processing (STP).

Furthermore, improving efficiency and accuracy with attention to cost reduction helped propel the transition process. However, with transformation, the focus on automation has geared up a few notches and has now moved from incremental back-office automation to an aggressive approach to front-office processes. The immediate need for back-to-back advanced and intelligent automation, with includes lowering costs and promoting efficiency, has also moved most financial services firms to significant investment in Robotic Process Automation (RPA) to become more digitally mature as an organisation. R34 expressed the considerable value of automation:

"With the bank's strategy on cost containment and constant increase in workload, the only way to go is the digital transformation of processes. So long as there is evidence of benefits to stakeholders by reducing their pain on the job, there is little resistance. The process owners usually request process automation from the Technology Team, and the volume of demand bank-wide is usually high."

The new direction of complete automation aligns with a closely-knitted structure and culture, and how people interact and share information can add significant value to any transforming organisation. Transformation is arguably about people within the organisation (. It may potentially distinguish GTCO from other competing banks and is a far cry from previous digitalisation efforts, where automation generally meant replacing human labour with systems without altering work processes or consolidating department data and operations. The automation approach fundamentally changes the game, specifically how the various methods and techniques deployed integrate the organisation to become more interconnected across multiple departments. The benefits of process automation translating to innovative products and services were highlighted by R35:

"As mentioned earlier, digital transformation is in the bank's DNA. There is no written policy anywhere, but the bank's processes are wired around technology, innovation, and process automation. Every year, divisional and bank-wide annual retreats (top management, including the CEO, are involved) on achieving the bank's strategic objectives. What are the outcomes? Innovation, process Automation, new technology-driven products and services. Hence, by default, the bank drives digital transformation to achieve its strategic objectives."

4.3.6 Value of Process Automation

In Africa, banking can be seen as stressful and mundane but an essential part of life. When delving into digitalising customer products and services, for example, realising the value of automating and digitising the end-to-end journey for the case bank is essential, particularly for stakeholder ROI. Observing the digital journey for some products and services offered by GTCO revealed that some work well while others need further improvements. This may be one of the benefits of DT; it's a journey where corrections can be made on the transition journey.

An excellent example of this digital journey is the "Know Your Customer "(KYC) process; it is often long-winded and takes a long time, with several documents requested before approval. Automation technologies can reduce the KYC period to just days or even a few hours,

increasing customer satisfaction significantly and drastically reducing inefficiency in traditional operations. The reduced processing time can equate to more requests being accommodated in the same timeframe; this process can drive productivity and reduce operational costs. The bank's head of digital strategy (R36) gave further insights into their automation process in his response below: *"What areas of the bank have been significantly impacted by the transformation process?"*

"Practically, every area of the bank is impacted by the digital transformation process. From automating internal processes to improve process efficiency and reduce turnaround time to providing optional self-service options for some services, customers can initiate requests and get served without recourse to the bank staff. A good example is an ATM card request. A customer can obtain an ATM anytime, including weekends, via the Card Kiosk service without going into a bank branch."

As a leading digital bank in the region, it must be acknowledged that GTCO has progressed significantly in its DT program, deploying various technology tools to alter business operations to deliver compelling value to its customers more efficiently. However, despite the value of the technology improvements, GTCO can still approach DT from multiple dimensions. Transformation should take a holistic approach to all processes, including products and services and how customers engage and interact with the company's services (G. Dreni, 2023). Transforming banks can make concerted efforts to review their entire banking customer journey by redesigning and removing redundant cumbersome, and unnecessary processes and providing only required workflows to reduce customer stress. Fusing this with intelligent data and having a good handle on customer data is often crucial for success, and its use to provide excellent services can be critical in the new age of competition.

Therefore, as part of its transformation, transforming banks embracing a new radical approach to simplifying the complex and often time-consuming process flows can be of significant value; this can be done by taking a holistic approach to organising internal functions that cut across all departments. However, measuring these transformative changes is essential to determine success or failure. When R37 was asked the following question:

"How do you know whether the digital transformation is working at your organisation?" he responded thus:

"We can see tangible results as we move through the transformation journey, customers are no longer queuing to use branch services, most are automatically moving to our new digital channels, customer calls have reduced significantly, and resolution of complains has reduced and for this latter, it's because our customer care team now have full visibility into all activities appending in a customer's account, a feat that won't have been achieved if not for total digital integration of all customer-facing service."

As the researcher emphasised, automation is a significant part of the transformation process. Any traditional bank transforming can review its current process bottlenecks. Furthermore, the

various business units may need to integrate systems, working as one entity with data-sharing capabilities at the forefront of the change process. If not, the DT programme may be seen as a simple improvement on current technology, with some upgrades on process efficiency, operational cost reduction and new technology. However, from the various interactions with the interview respondents, it is evident the bank sees the value of automation; this is also clear from the performance results it is getting from the business and the fact that the leadership also sees how this innovation can transform the bank to give the advantage it needs to win.

Aggregate Dimension: Automation
Themes: Automating Operations, **Technology Improvement**, Data Science Tools, Aggregation, Optimization.

4.3.7 Technology Improvement

Most technological capability assessments include; the actual maturity level of Cloud platforms, the state of infrastructure, and the pace at which the structure and processes within an organisation are aligned towards a new direction (C. Boulton., 2021). Data analysis from respondent data collated confirms that technology is critical in the transformation process, cutting across all large-scale changes; this is reflected in the various definitions of the term DT. Lanzolla and Anderson (2008) assert that DT plays an active leverage role in the transformation process through migration to platforms, embracing big data, mobile technology, Cloud computing and application-driven digital environments (White, 2012). Cloud and platform businesses have fast-tracked and disrupted the DT process for most bank departments, creating new business opportunities that never existed with traditional business methods (Vey et al., 2017). The above emphasises the actual value of data generated from the various technology platforms that can provide more compelling value to customers, this increasing growth for any traditional bank transitioning.

“In response to *"What are the main growth drivers resulting from the application of data analytics and AI?"* R39 noted that:

“Demand for customer-centric products, Internet of Things (IoT) and Big Data. The deployment of the above technologies is certainly helping automate the bank's processes and driving the transformation effort to a new trajectory.”

Homing in on the technologies like data analytics, critical insights generated from big data processing are shaping how decisions are taken to optimise customer operations.
(P. Nguyen, 2023).

When asked, "*On a scale of 1 -10, how will you rate strategy value addition using data insights from the analytics and AI team?"* The response of participant R40 was, "I will rate it 7".

It indicates a steady trajectory in the direction of the bank using data-driven analytics modelling to transform business operations. It is on record that the global pandemic significantly affected all sectors, including banking; people experienced a dramatic shift from working in the office

to remote working, further necessitating the move to digitalisation. Most businesses could only work remotely using makeshift digital infrastructures they never planned for. In addition, the economic and environmental changes from the pandemic triggered disruption and new emerging business models, and this aided the ability to achieve breakthrough customer experience and maintain the status quo with all other business-related activities.

The significant unplanned change situation made the more digitally mature organisations strive while the less-mature ones, making up the bulk of transforming organisations, struggled to compete. The more mature organisations have mastered technologies like AI and ML and have witnessed value growth, particularly in securing the new digital network of platforms, unlike their less mature competitors. The role of Machine Learning and AI was echoed by R41 below in reaction to the following question:

"What digital transformation initiatives are currently deployed or planned?"

"Strengthening our security infrastructure, applying ML And AI models to the current data collected from the bank network."

R42 was asked: "What *areas does AI add the most value in the bank?*

The response was: "*Around hotlist of cards, statement request, and other account detail information."*

However, this differs from a business model that involves the application of AI to resolve complex operations and product issues the bank faces. Hess (2016) argues that DT can ultimately result in a change in the bank's business model, particularly around data insights, with an impact on structural changes leading to a change in how products are offered to consumers. So, despite the promise of intelligent technologies, if the fundamentals, including data infrastructure, are not first taken care of, the investment in more complex innovation, including AI as part of digital transformation, may not materialise.

Christensen (1997) asserts that new disruptive technologies, like DT, would provide varying values, including existing traditional technologies, serving only a niche market at the early stage of transformation. Regarding technology deployment as part of the DT process, the latest research focuses on flexibility with information technology and the deployment of new digital infrastructure as a collective part of a new target state (Sebastian, 2017). However, the issue for the case bank and other traditional banks going through the DT process may be in establishing and thoroughly understanding the "how" and strictly "where" technology integrations, including digital platforms, should be deployed into the broader organisational structure. This is a big challenge the case bank should confront with the planning of its operations to make the transition successfully.

The above was emphasised by R 43 in reacting to the following question: *"How do you and the team leverage digital transformation in general business and operations planning?"*

"GTCO can be considered a digital bank because about 70% of its customer-facing products and services can be accessed online. We build self-service platforms where customers can log on and make transactions or requests without visiting any of our branches. We serve as an enabler for the bank's business by providing and supporting digital platforms to its various divisions, groups and units to service their customers.".

Aggregate Dimension: Automation
Themes: Automating Operations, Technology Improvement, **Data Science Tools**, Aggregation, Optimization.

4.4 Data Science Tools

4.4.1 The Rise of AI and Analytics

Introducing innovations around data-driven analytics and AI to banking can create value in better products and services, improve the experiences of the average bank customer, and increase governance, ultimately leading to increased governance capabilities for the banks (H Margetts., 2022). An example is that the increase in the collection and consumption of third-party secondary data may require new security standards in authentication and transaction processing areas, which can be a challenge to any transforming organisation. Beyond the generation, collection and consumption of data, retention and transmission across the enterprise infrastructure, AI will ultimately depend on how fast an organisation can attain digital maturity. This requires deploying and value derivation from the automation of various business functions. The leadership and senior technical staff of the bank understand this significant value, and this was mentioned by R44 when asked:

"What is management's view on the use of AI?"

"To them, this drives our STP loans, but that aspect was done using simple ETL programs, a little heuristics and smart design. This is partly true; AI has driven the bank's STP processes to full automation, and adding this technology stack to the current ecosystem will create more value across the board."

AI, process automation and other innovative technologies are intertwined and are being considered for deployment at several critical points at the case bank. Responses from senior and middle managers confirmed that projects that allowed key processes around product and service delivery might be re-engineered and automated. However, the middle managers and operational staff argue that it was simply wishful thinking on the part of the executives, adding that discussions have been held, and design meetings were also held. However, leveraging AI technology across all fronts has yet to be traction.

After engaging with the various heads of department to ask more questions on new project execution methods and style of DT project engagements, some noted that technology standards like agile are the latest buzzword, but in reality, agile has been used only in some projects.

Others argue that the bank has yet to record significant gains in customer satisfaction or efficiency from using the agile method. Similarly, in data analytics and AI use, there is a big push into this area; technical teams have grand plans to deploy AI-driven analytics for better decision-making, but in reality, they have struggled to integrate these technologies into their core services at the bank; this is partly due to a dearth of competent staff and connected systems that provide a holistic framework to all organs of the bank's core processes.

Although the bank is looking to develop unique and distinctive value propositions that will allow it to attract the top talent needed to run the new data-driven technology business, the premature state of the above initiatives may have hampered the development and growth of DT at the bank. Many bank operations still need to be more cohesive and vulnerable to the FinTech players with the ace card in recruiting top talent, the right technology infrastructure platform, and the willpower to advance new channels offering digital services.

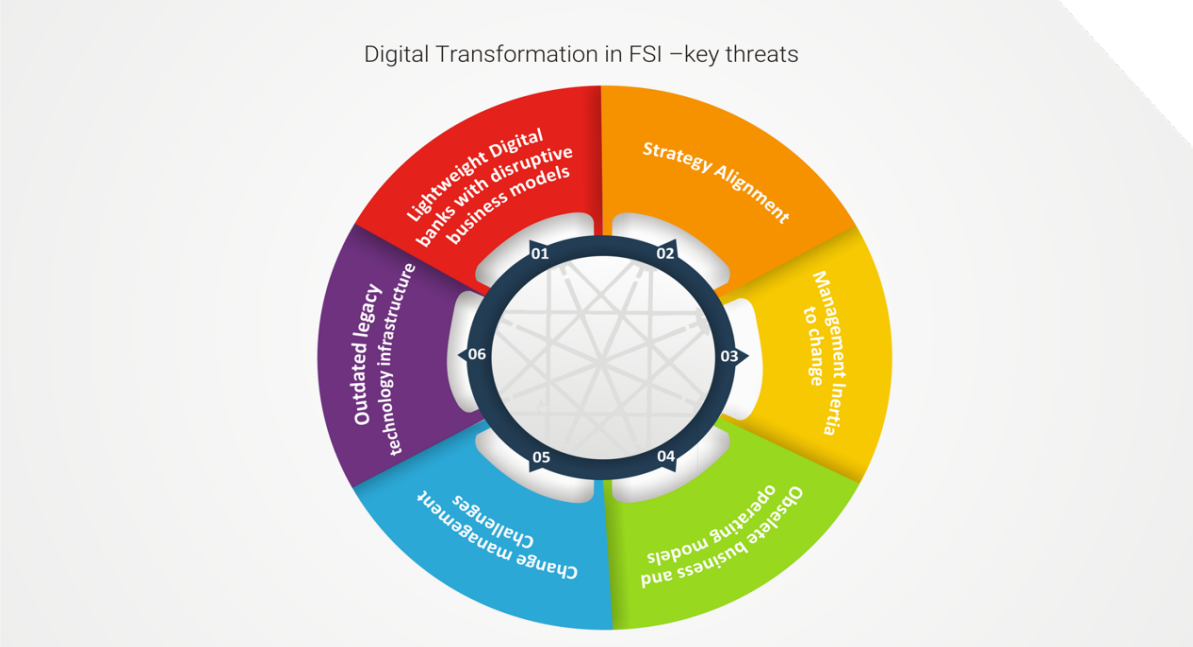

Fig. 4.7: Key Threats

It is no surprise that FinTech companies with great ideas have started operations relatively quickly and are gaining significant trust and traction in winning over new customers with compelling value propositions; this may indicate that the digital natives in the region are craving business opportunities that can achieve first-mover advantage before the traditional businesses take them on, and this may be important for incumbents to succeed in a contentious space. Like the case bank, most regional incumbent banks are significant and resilient but slow to respond to such threats. They should do all they can not to give away the first-mover advantage (Grover & Kohli, 2013). The answer may be using innovative technology that propels them to new heights (M. Kabir, 2019). The use of AI at the case bank may need to be more extensive; furthermore, management's perception of its use to create value could be much

higher, and the cold feed from leadership could be because of the concerns of security and ethics. The bank's current thinking concerning AI was also revealed in the response of R45 to

"What are the limitations of using AI technology in shaping operations?"

"There are AI gaps in acting exactly like human beings, but the industry is progressing. Again, the issue around ethical usage is still a global concern."

The leadership understands that AI adds a lot of unfair advantages to business operations, but it appears they still need to be comfortable embracing the technology wholeheartedly. As indicated above, ethical reasons are some of the concerns of the case bank in progressing with the use of AI on a commercial level. However, if not overcome, this challenge may impede how fast the bank can compete with the FinTech companies disrupting the space. The fact that the bank only uses AI minimally was further emphasised when R46 was asked the following question:

"What AI initiatives are currently deployed or planned?" the response was:

"Using human linguistics to accept requests via email and then process these requests on behalf of the bank's customers."

The above answer somewhat confirms the perception of the bank's attitude to AI and maybe also indicate that the bank's middle managers and the business are either oblivious of the potential of AI, unsure how it can add value to the bank or are very cautious about applying AI to sensitive functions of the bank for ethical and security reasons. These views or concerns may impede the use of the technology to achieve significant transformation.

Digital Transformation requires driving transformations beyond the limited boundaries of products and internal optimisation to significant changes that will invoke transformation of the very core of the bank, where the business and operating model is radically redefined and remodelled (P. Verhoef, 2021). Incremental or significant changes in a few departments could not be called DT or digitalising some elements within the organisation. To further compound the problem of real DT, there is a real need to tackle the issue of silo transformation occurring at the various sections of a change organisation (Li et al., 2017).

4.4.2 Role of Big Data

The ultimate objective of technology transformation for enterprises is to gain value from the business significantly; this could be efficiency, growth or customer satisfaction (18), and it can best be achieved through business insights from Big Data in making better strategic decisions that will allow organisations to compete aggressively (Mikalef, 2020). Using valuable data insights from a new platform economy or the automation of internal processes, for example, can drive far-reaching strategy decisions, ultimately leading to better performance across the board. However, it is also essential to understand that the lack of an ideal data strategy in

execution can lead to further technological barriers, producing expensive enterprise data infrastructure costs required to collate data and store, analyse and extract insights (A.El-Ramly, 2022).

Great efforts are now being applied by transforming organisations in the methods for transformation and the overall management of the digital process; in increasing organisational value. However, only a few transforming organisations have succeeded in the process of large-scale change. One organisation that weathered the storm and successfully transformed its strategy and business model is IBM. It understood this advantage and capitalised on it by restructuring its business strategy and transitioning from a hardware organisation to a more fluid software and service firm (Sivarajah et al., 2017; Alharthi et al., 2017). The adoption of innovation has allowed it to survive the storms of change. One such innovation was applying Big Data analytics technology to create significant advantages (Duan et al., 2018). Big Data analytics spurs innovation and allows the enterprise to analyse its business environment better to improve product and service offerings and move to newer markets to drive its competitive advantage over other firms. R47 confirmed some of the benefits of this technology:

"We have several from private banking to increased security to moving service to the Cloud to data analytics."

Response data confirmed a need for more specialist technology skills, partly attributed to the region's brain drain effects (S. Firsing, 2016). Therefore, there is a need for highly skilled staff to ensure the application and management of technologies like Big Data to avoid a significant problem, which could result from data generation growing faster than staff skill acquisition. This human resource deficit is a significant problem for most banks and can be classified into two distinct areas. The first is the technical class of staff that understands data science. This includes the technical capabilities for managing digital processes across the enterprise and the extensive knowledge of how data is gathered, cleansed, insights generated and cognitive capabilities like AI or machine learning applied. The second category of skilled staff is those with skills to manage the data and use the insights generated (Wamba et al., 2017; Gupta & George, 2016).

Aggregate Dimension: Automation
Themes: Move to Automation, Technology Improvement, Data Science Tools, **Aggregation**, Optimisation

4.4.3 Aggregation –Consolidation of Services

Digitisation vs Transformation
Over the years, GTCO has invested heavily in technology in its various forms to stay ahead of its competition, as evidenced by its ascension to the top bank in West Africa (3). The approach of steady technology investment ensured the purchase of many applications and other technology solutions to drive innovation to its peak. Nevertheless, not all investment was transformational, as the bulk focused on digitisation and not DT. New capabilities are required

in complex areas like data science to consolidate data across subsidiaries and transform technology operations across multiple countries. R48 pointed this out:

"We have a road map I cannot share, but included as part of the transformation is consolidating data in different bank sites, using analytics to solve ATM network issues, using data to solve customer loyalty and retention issues."

Capability is a critical variable in any successful transformation effort; However, competencies alone are insufficient to deliver the total value of DT, and they go a long way in helping in that transformation journey. Therefore, transforming organisations can consider investing in competencies around digital agility as part of the general culture of the organisation. A dimension that can also be explored is building an integrated digital platform that pulls together all data and associated services required by the customers with a collection of integrated data and processes. This effort can generate valuable data and move the bank towards digital maturity by eliminating data islands and disconnected and disjointed coordination across various business units. This effort will lead to the democratisation of data, which is also an essential pillar of transformation. The distribution of data generated from the digitalisation process across the organisation creates significant value; this can help with business strategy on new digital platforms, particularly in removing and consolidating operations and structures across all organisation fronts. R49 emphasised this fact:

"Change management and adopting and using the new platforms; silo mentality even after integrating the various data islands; streamlining our customer services using digital transformation; consolidating data islands and moving to the Cloud."

A transforming organisation's structures and processes may need to be more cohesive, connected and fashioned like a digital organisation. For GTCO, even though culture is quite innovative and the people are primarily highly trained, the integration between the four core pillars, including; people, process, culture and structure and the various data islands, makes true transformation more of a reality for the bank. Data consolidation and an integrated structure still need to be solved at most African banks despite the effort to innovate and transform (M. Maja., 2022). This was well-captured by R50:

"The bank's structures and processes are still fragmented, disconnected and hard-wired as a traditional organisation even though culture is very innovative and their people are mostly highly trained; the disconnect between all four pillars coupled with the various data islands makes true transformation a major challenge for the bank. This will require a review of all processes in every aspect of the bank's departments and operations, same with the structures and aligning these with the people and new technology drive culture of the bank for DT to be successful."

Despite the intention to digitally transform and integrate business processes, culture, people and technology, a digital divide and significant digital immaturity exist across some departments, divisions and subsidiaries across various regions. R51 had this to say:

"So, after the review of the various processes ad structures, as part of the alignment, we may map out new efficient structures and processes, close down the multiple units that are not necessary, merge others but done with a view of information and data sharing as well as business alignment."

4.4.4 Value of Data in Transformation

Today, incumbent banks are desperately looking to adopt a modern and formidable technology blueprint that allows them to compete with FinTech companies (K. Mills HBR 2017).
A holistic data architecture may be required to achieve synergy and integration of the various business units, considering data is the lifeblood of any modern organisation.

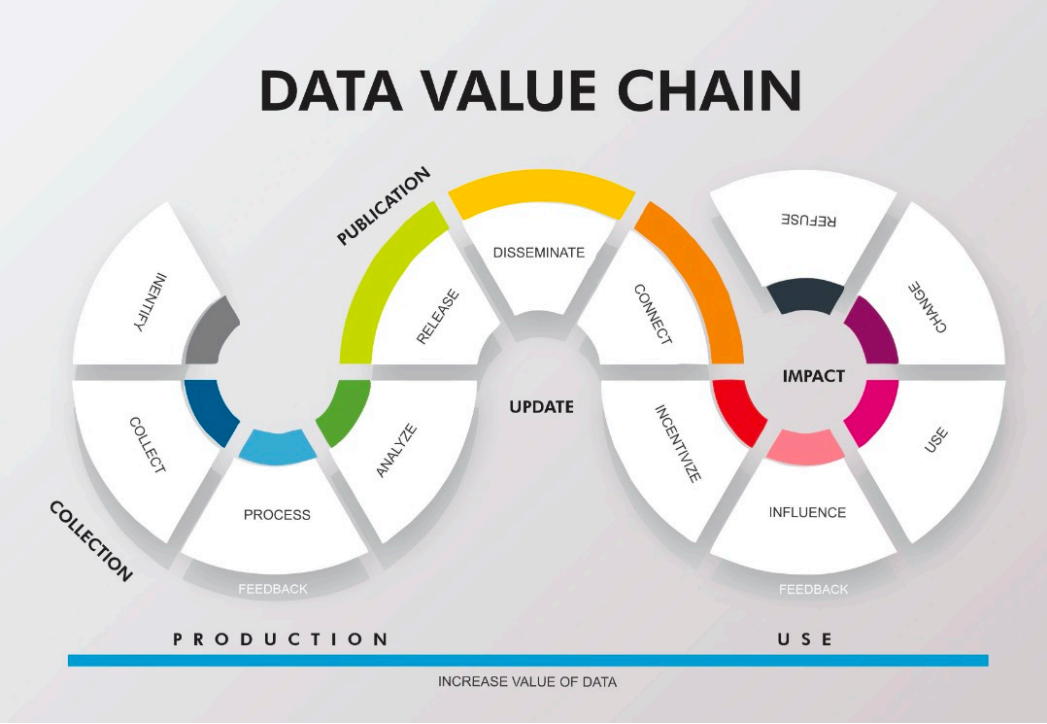

Fig 4.8 Data Value Chain

Datasets that can be structured, shared and processed using cognitively capable models can be powerful weapons for any (M.Yildiz, 2027). This data architecture makes it easy to integrate and share data through sophisticated Application Programming Interfaces (API) using sophisticated modular architectures. The foundation of simplified modular platform independence can set the stage for flexibility and responsiveness to future banking requirements based on rapidly changing customer requests (Zikopoulos, 2013).

4.4.5 Integrating Organisational Structure

As indicated earlier by the researcher, transforming an organisation involves making significant changes to an organisational structure. In the past decade, working in silos was part of the newer matrix of a functional organisation, where productivity was achieved by working in smaller disparate groups. This work structure has evolved over the years; it requires excellent

collaboration to succeed (V. Bhalia, 2022). However, transformation is more about integrating rather than teams working individually. Consequently, to successfully transform, an organisation requires a complete shift in organisational structure, which involves moving away from the silo mentality of the past to heavily integrated processes, departments, and data sharing with closer people interaction. Integrated structures also allow data fluidity from one department or division to another, making a cross-functional organisation more effective (E. Gaspary, 2018). The more integration in an organisation, the better informed it can be to make strategic decisions in real-time. This fact can be witnessed in more mature digital organisations like Google, Facebook and Amazon. They have highly inter-woven processes, with massive data sharing across all business units; traditional banks will need to move to that level of maturity to achieve true transformation.

Aggregate Dimension: Automation
Themes: Move to Automation, Technology Improvement, Data Science Tools, Aggregation, **Optimisation**

4.4.6 Real Impact of Transformation Efficiency

Concerning how DT impacts an organisation, it is evident that optimisation by eliminating manual and inefficient processes and moving to automation plays a pivotal role in several aspects, such as customer service, productivity, growth, and employee satisfaction. Technology also allows for more accessible ways of staff engagement; the ease of working enables them to work more efficiently and conveniently than they did in the past. This new work method requires capacity building, acquisition of a new set of skills and training to enable employees to cope with the new technology-enabled change.

An MIT Sloan Review study analysed how over 4000 business executives, managers and analysts perceived DT within their organisations. Findings from the study indicated that over 80% of them saw operation efficiency and better customer experience as priorities in the initial stages of their DT journey (Kane et al., 2015). Other studies viewed DT and digital disruption as two separate topics, but, in reality, they are intertwined (N. Furr et al., 2019). From the data analysis conducted by the researcher, it is evident that the DT at GTCO adds compelling value but one that can induce disruptive changes within the organisation. However, this may lead to initial friction and resistance from customers forced to move to new digital services. R22 confirmed this level of disruption:

"Some external stakeholders of the bank still need to be in the digital transformation phase, and they resist the new platform business model method of engagement with them."

The same MIT Review above, conducted in partnership with Deloitte, indicated that 76% of the participants noted that enabling digital technologies significantly disrupted their specific industries; this may be attributed to the new value offered by the change disruptors and irresistible values the incumbents struggle to offer (Rogers, 2016). For a traditional bank to achieve a similar " grand scale" transformation effect, it may need to strengthen its business model to become more digital, redefine how it engages with customers to offer a compelling

customer experience, and ultimately move to a platform business model to achieve efficiency, provide products and services to the growing list of rural and Gen Z customers demanding newer channels and more convenient methods of engaging with their banks (Weill & Woerner, 2013).

According to (Hagberg et al., 2016), the main potential of going digital in all its forms lies in discovering new business models that offer tangible value. Digital Transformation triggers disruptive technological change and produces new ways of engaging customers (S.Nadkhani et al., 2020). The incremental technology deployments over the years have created a culture of innovation and confidence that is aiding the DT process at the bank. R52 clarified this:

"As a technology-driven bank, our focus has always been to use technology to reduce overheads, reduce costs and grow the business, and we have done this successfully. So, when the bank decided to transform entirely digitally, it was no surprise to most as we already saw the value of small-scale transformations, but moving to a more significant phase of transforming through our internal culture, structures, processes and people took a completely new mindset and paradigm shift to execute and, so far, we are doing well powering through the transformation journey."

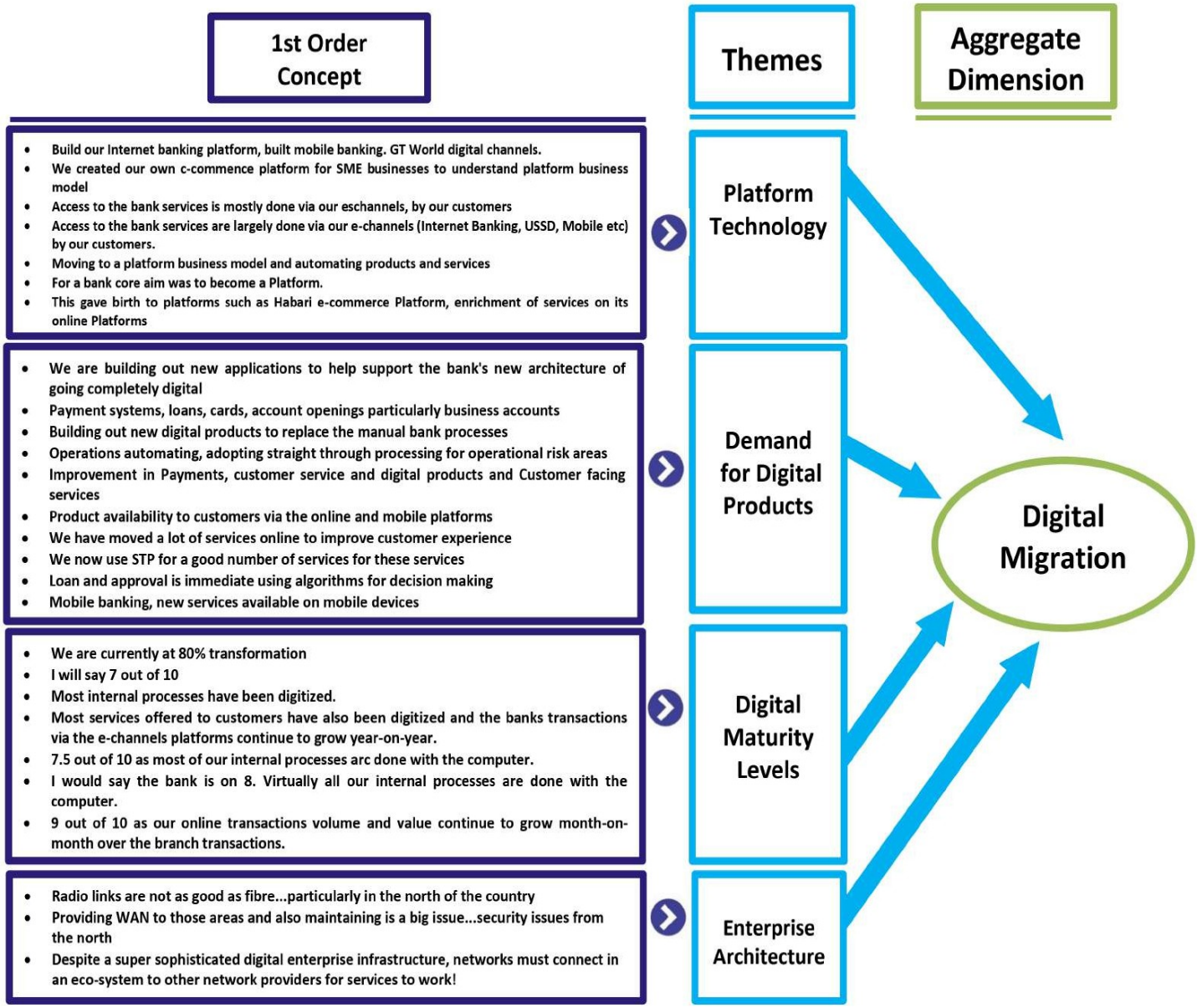

Fig. 4.8: Digital Migration Aggregate Dimensions

4.4.7 Platform Technology

Moving to the Cloud and partnering with third-party vendors using open banking technology is another area that creates added value to the platform-based business model employed by incumbent banks (Brodsky et al., 2017). The platform business model is built on Cloud technology, a significant component of digitising and transforming business services. It allows for seamless data sharing between banks and third-party financial service providers. The ecosystem potential created will enable banks to compete better, allowing consumers to gain from the broader spectrum of competing digital services. Some main benefits for incumbent banks are that Cloud allows for infrastructure scaling, direct access to modern application architecture solutions and the need to meet local legal regulations, such as policies governing localised consumer data storage, usage and protection. The Cloud also limits barriers to market entry by eliminating the need for expensive hardware purchases, but it also reduces inefficiencies within the business (J.Frankenfield., 2023)

R53 confirmed the value of Cloud for the bank:

"Migrating all services to the Cloud, fully automated digital banking services and reduced inefficiency in operations."

Literature on the platform business model focuses on the evolution of a multisided business model. The digital marketplace, the platform business model with buyers and sellers on two opposite ends, allows value to be created and captured from the new model (Pagani, 2013). The digital value chain for transformation is distributed mainly in how value is created and captured by consumers and third-party providers.

A traditional bank competing with GTCO recently invested $30 million in replacing its banking core platform, and this platform is fully functional, with rich features in terms of how value is created from its customers. However, it is a proprietary platform that locks out third-party vendors from participating in its ecosystem; this contrasts with a competing digital bank, Kuda, which decided not to invest large sums in a core banking platform but adopted an API-based open banking approach to assessing digital services which meant spending only a few thousand dollars to integrate with the banking core provider operating an API service-based solution and paying monthly fees as the bank gained more customers using its digital services. The CAPEX is significantly reduced, enabling the bank to offer lower transaction costs to its customers.

Taking the above approach means Kuda Bank only gets charged for sessions and utilisation on its platform, not a large one-time fee plus hefty support and maintenance costs, unlike the much larger banks. Kuda can decide to connect with several open-based providers to offer a distributed method to provide value to its customers (Evens, 2010). The distributed approach of creating and capturing value makes it nimble and lightweight and allows it to challenge traditional banks with heavy and inefficient business models. It is an attraction that will earn it

more customers than the traditional banks, which heavily invested in high capex projects charging its customers high fees to offset its high expenditure.

The above is the new world of DT, where digital platforms can create and capture services and margins in ubiquitous ways (El Sawy et al., 2016). The trajectory for value creation in this new digital era is shifting fast from value chains to value networks. Many traditional banks are exploring the multisided business model in more depth, as that is the future of the platform business model, which may become essential for any bank undergoing DT. In such scenarios, banks like Kuda are offering "free" banking charges and free access to specific products and services as part of their offerings. However, they capture revenue from high-interest accounts or premium banking services in a different service layer (Bharadwaj et al., 2013). The innovative model allows them to deploy the freemium business model to attract the customer base but charge for certain services in the second layer.

Given the preceding, one can argue that the control of value generated in this digital era is less controlled by competition, industry boundaries and dynamic capabilities of the firm but more controlled by the consumers on any given platform, who determine the dimensions of value to be created and captured (Keen & Williams, 2013). Furthermore, the significant impact of DT on a traditional financial institution may confirm a move away from its current business and operating model. Therefore, traditional banks going through the DT journey may need to engage their customers with the most crucial aspect of the transition at every opportunity to create more value from the new digital method of capturing value (Berman, 2012). This allows incumbents to explore new ways of generating profit from the digital ecosystem they are creating.

Organisations that focus on truly understanding their customers regarding financial potential, actions and possible prospects will succeed under the current conditions of digital competition. In this sense, winning may require traditional banks to focus on operational agility to better understand their rapidly changing customer requirements. Achieving the above for a traditional bank can be challenging, mainly when dealing with how best to cater to existing and new technology native customers. As such, to successfully transform an organisation, separate and often parallel structures can be an option for exploration. This model provides services to the new technology-savvy customers entirely independent of the traditional business lines (Bower & Christensen, 1995). However, to provide technology-related services to new digital customers, some structures can best support DT, but not all; there may be a need to take a significant step in technological innovation with current services offered to customers. For such structures to work, they need to consider leveraging third-party infrastructure in offering consolidated services to the end customer. R54 emphasised this point:

"Despite a super sophisticated digital enterprise infrastructure, networks must connect to other network providers in an ecosystem for services to work! So, a bank network relies on telco networks and Internet service provider networks, which also transcends to the customers. When those networks fail (they do quite often), the services or customers make by customers also fail. This, again, is a major challenge."

To deploy technologies that seamlessly support transformation, an agile and scalable platform or enterprise infrastructure may require to enable the continuous deployment of new technological initiatives (Sia et al., 2016). Of relevance here is the suggestion by (Resca et al. 2013) of a platform business model that allows multiple layers of third-party products to be deployed for delivery to customers. Furthermore, DT requires a new approach to offering digital services on a platform-based model (El Sawy et al., 2016).

Considering the new architecture supporting the flow of digital traffic and data generation, both within and outside the transitioning organisation, it may be essential to recognise the traditional approach to designing systems that allow full integration with third-party providers. Any traditional bank transformation should also remember and balance the advantages and limitations of the various transformation initiatives, which can include consideration of flexibility in its IT structures to succeed. The executives of any change organisation may also consider some basic questions, such as Why we are undergoing the process? Why now and not later? Are we looking to create a new structure or radically change the old model? What types of communication and integration will occur between the old bank model and the new one to be adopted? (R. Dale., 2023).

4.4.8 Market Forces and New Rules of Engagement

Digital Transformation covers the emergence of digital platforms, networks, and new product and service ecosystems, allowing them to become increasingly interconnected with their competitor (Majchrzak et al., 2016). It also repositions the existing boundaries laid out by traditional brick-and-mortar business models; this further leads to cross-boundary competition (Sia et al., 2016). Dominant logic associated with traditional banking methods seems less effective now in this new era of DT (Sabatier et al., 2012); it is more so with rivals unheard of but now disrupting the banking space (Vey et al., 2017). Furthermore, the emergence of the multisided digital business models adopted by traditional incumbents is now seeking to change the game, starting by entering spaces they did not anticipate occupying and then evolving to create a more efficient and agile organisation.

Furthermore, Fintechs are significantly disrupting the financial services sector by deploying unconventional models and technology innovations to offer services traditional banks struggle to provide. A classic example is a fast-growing regional FinTech based in Nigeria, Flutterwave, a relatively new start-up valued at $3 billion (14). They move payment traffic for banks across Africa and connect with payment gateways globally to ensure seamless payment services across Africa and the West. It recently bought over the second oldest bank in Nigeria, Union Bank, a feat unheard of in the history of African banking. Its business model is lightweight and nimble, allowing it to continue catering to the digital natives and offering unique banking services to traditional customers, a classical Christensen model. The approach will enable Flutterwave to win on both sides of the spectrum by providing complementary payment services but competing for the same traditional bank customers. Therefore, as incumbent banks emerge with new technology network models with more intelligent cognitive capabilities like the Fintechs, the value of digital platforms can be realised for transforming banks (15).

4.4.9 Leveraging Economic Scaling with Technology

Banks have always used the strategy of economies of scale to remain competitive; this includes reducing operational costs and becoming more efficient in delivering services (World Finance, 2023). The same principle has stayed the same today; technology allows banks to scale and invest large sums into creating awareness for digital products and services on new channel platforms. It also allows them to mine the vast amounts of data customers generate on their platforms to provide valuable insights and much better services to their customers.

Economies of scale on digital platforms are a significant advantage to banks that undertake transformation. It can be seen as leverage in competing with other traditional banks and the rising FinTech firms (W. Kenton, 2022). Another critical variable is innovative technology solutions, including significant investments in technological infrastructure, platform-based banking, Cloud, data analytics and cognitive data capabilities, like AI and ML modelling, which are crucial to generating compelling value. Given this, incumbents can ensure that the technology stack deployed across operations is straightforward and user-friendly, particularly for employees who need more technical experience and are only concerned about doing their jobs.

4.4.10 The Value of Agility

Speed in service delivery is a value-add for most organisations (J. Simonsson, 2021); any transforming organisation should consider significant investments in designing its organisational and technical architecture to ensure speed with technology that drives agility in service and operations. Achieving the above may require a structured architectural blueprint that works for both technology and the business and supports data dissemination, integration, transfer and analysis. Furthermore, organisations that continually commit to upgrading their digital and operational architectures can deliver fast and effective services and match the competitors' pace and performance. A good practice can include significantly changing their technology stack and redefining their business model.

It is a known fact that Neo-banks with established Cloud infrastructures and flexible applications infrastructure can automatically update product information across the organisation in relatively short timeframes that can be days or weeks (26). Conversely, incumbent companies may require much more time to rebuild technological functions to address similar issues due to their older legacy architecture; this raises the question of why Neo-banks move so fast and adapt to technological and environmental changes that traditional banks will find challenging to make within the same time frame. Another reason could be the differences in enterprise architectures and underlying organisational design and capabilities, which are intrinsically connected to the business and operating model employed by the incumbents.

Enterprise infrastructure in most traditional financial institutions reflects an ancient era which could be more demand-driven and designed for scalability, particularly for rapidly releasing new and diverse products and services (N Bezi, 2022). In hindsight, legacy infrastructure

deployed at most traditional banks could have taken the following digital transformation innovations into cognisance: platform models with API calls to multiple third-party vendors, connectedness in infrastructure in a central data ecosystem powered by AI and ML advanced models that can allow for swift lending decisions but that was not the case, perhaps most banks were not thinking about transformation at some point in their future. Legacy architecture and infrastructure is a significant contention point for the incumbents. The case bank has realised the deficit in the current infrastructure and taken steps to upgrade to achieve business benefits, particularly in the area of modernising infrastructure to generate relevant customer data, as pointed out by R54 below:

"Yes, it is certainly working very well. We can see results from improvement in operations and fewer loan defaults due to analytics used in vetting customer loans."

Aggregate Dimension: Digital Migration
Themes: Platform Technology, **Demand for Digital Products**, Digital Platforms, Digital Maturity Levels, Enterprise Architecture

4.4.11 Demand for Digital Products and Services

One advantage of the transformation process is the ability to offer, create and capture new values from existing and new customers (S. Kraus, 2022). Any significant change and disruptive innovation in products and services may only be achieved with due planning and using suitable approaches for execution. As part of applying technology to innovate how products and services are shared, transforming organisations can consider offering compelling products made possible by transformation. Typical examples in the financial service sector are the automation of processes, including the innovative move to digital payments, such as digital wallet technology, how direct payments to suppliers can be made seamlessly between bank accounts, electronic payments to individuals and digital accounts linked to retailers. The case bank has taken this approach, as explained by R55:

"…automation of banking services, changing the business model to a digital one, updating our digital strategy to cover more digital products and services."

Successful FinTech companies have dramatically reinvented the relationship between customers and financial service providers (C. Basdekis, 2022). One reason they are overtaking the banks could be their ability to develop new digital product initiatives, which is in their agile approach to responding to new customer demands; this has set them apart from the traditional banks that are slowly reacting to these compelling new engagement channels (K. Munir et al. 2019). FinTech companies have leveraged their digital positions by establishing formidable customer relationships via various social media channels. They have also mastered using digital channels to get rapid customer feedback on how best to improve the quality of service. Traditional banks, however, need this nimbleness and agility, and by the time they recognise a failing service, it is often too late, and the customer has moved on to the competitor; this may be one of the reasons why the case bank decided to embark on the transformation journey; to be able to build in that level of agility in its response to customer demands.

Transformation is a high-stakes game for most large organisations. To compete against the new digital banks, incumbents can adopt a radical change approach to several areas, particularly its people, processes, culture and structure. As part of the technological changes, their enterprise infrastructure may need to be updated to allow regular, modular and continual changes. A good starting point may be reviewing various architectural frameworks available to transform banks and selecting the design that fits their transformation aspirations. This may lead to the need for an ideal enterprise infrastructure model that includes a central integration platform that allows for lightweight systems and processes that can efficiently to executed and rapidly released.

Furthermore, an approach may include reviewing how previous core components were managed. These components include business model, business operations, capabilities, technology infrastructure services and how communication was handled across the organisation. Understanding the above may create the right design and best practice model.

Aggregate Dimension: Digital Migration
Themes: Platform Technology, Demand for Digital Products, Digital Platforms, **Digital Maturity Levels,** Enterprise Architecture

4.4.12 Digital Maturity Levels

According to the stages of digital maturity, five principal components determine an organisation's maturity as it transforms from the status quo. They are organisational structure, internal processes, technology architecture or blueprint and technology implementation (Aslanova., 2020). Organisations far from digital maturity are often characterised by data units separated by silos, technology applications that are not cross-functional, cross-departments or one that centralises access across the depth and breadth of the organisation (S. Henderson et al., 2016). The answers differed when asked about the current digital maturity level at the case bank. Some scored the bank high on the spectrum, while others scored it low. Here are some responses by R57:

"I would say the bank is on 8. Virtually all our internal processes are done with the computer. Access to the bank services is largely done via our e-channels (Internet Banking, USSD, Mobile, etc) by our customers. Online transactions volume and value continue to grow month-on-month over the branch transactions. Most internal processes have been digitised. Most services offered to customers have also been digitised, and the bank's transactions via the e-channels platforms continue to grow year-on-year."

It is clear that the perception of the current level of maturity of the case bank differs, but one crucial point is clear, and that is the need to become more digitally mature; this involves companies having integrated departments and divisions that are heavily focused on data modelling and analytics. In the researcher's view, the case bank is still maturing. Specific areas where the case bank can offer compelling digital services as it matures may include developing a detailed data model strategy that covers the use of data and how it moves across the enterprise

(F. Muhammad, 2022); this may be a step in the right direction when developing a secure platform model. However, the lack of a detailed data plan can impact customer data integration across the various business units and the practical realisation of value to help reduce cost, sell more products and compete more effectively against the competitors. This fact was confirmed by the feedback from the respondent (R88):

"Yes, there are plans to consolidate data, but the critical pillars of success remain in fusing its people, all its structures collapsed into one, its processes and its culture."

The researcher's impression of the current digital maturity level at the bank is based on the data gathered from the qualitative process. Attention was on the state of digital platforms, physical infrastructure, progress with migration to the Cloud and the pace at which the structure and processes are aligned to the bank's new direction.

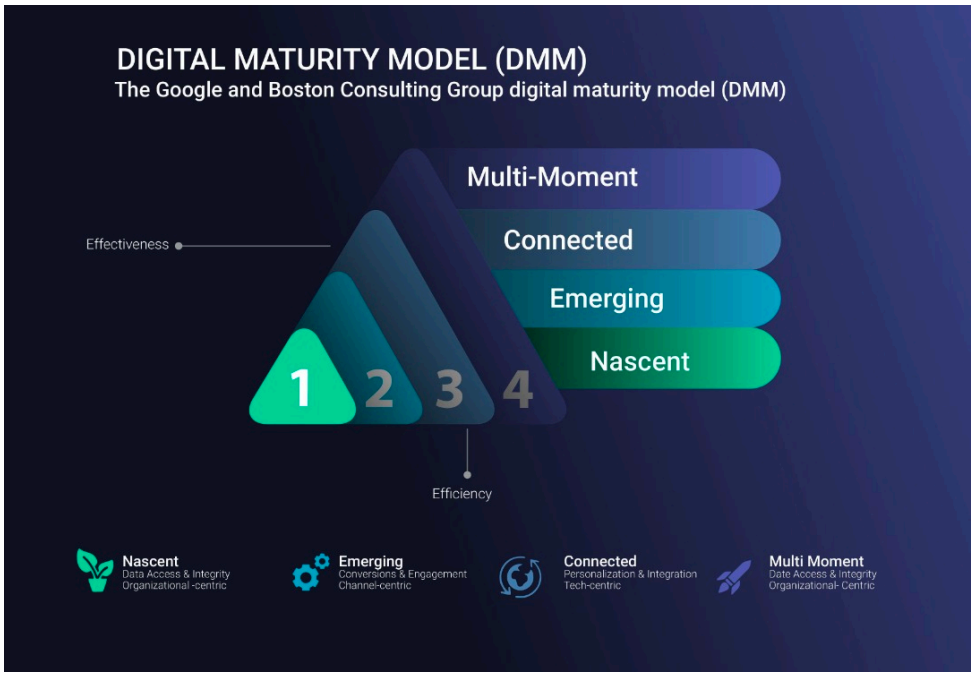

Fig 4.9 Digital Maturity Model

4.4.12.1 The Role of Data in Attaining Digital Maturity

Technology advancement has led to native digital companies, including banks, going through a faster transformation process to enable them to launch products very quickly. Some have embarked on measures to adopt the digital model above. This situation may place the case bank in a tight corner, as they currently employ a hybrid model of holding on to over 300 physical branches. It is important to note that overall, the widely discussed increase in banking digital sales as a percentage of total sales owed more to branch declines than to actual digital gains (S. Khon et al., 2022). Virtual services may now be under extreme pressure to accelerate their products to market faster.

Furthermore, the research found that the value of enterprise data and its consumption are rapidly changing. Banks have realised that their greatest assets are no longer the cash in the balance sheet but the generation, accumulation and utilisation of consumer personal data (H.

Hannila, 2019)**.** Realising the high value of data to the financial service sector is essential in this new technology-driven age (Ng & Wakenshaw, 2017). To realise the importance of its data, the bank is looking at developing new technology strategies using its current data assets. The interview indicated this when R58 was asked, *"What is the role of data and artificial analytics in driving your strategy? Please give some examples.*

"The role of data is key in strategy formulation and execution. Data can reveal trends and metrics from raw data that ordinarily would have been lost in the mass of information. It helps to get insight that can be used to improve operations and processes in an organisation. AI (AI) takes it even further. AI is an artificial creation of human-like intelligence that can learn, reason, perceive, or process natural language."

The impact of the massive quantity and quality of data generated from the digital transition will determine the success or failure of firms moving in the digital direction (Bharadwaj et al., 2013), which will ultimately be the game changer in the consumption and use of big data. Also necessary is the secure retention of enterprise data held by the bank, and they appear to be heavily invested in secure enterprise storage for use with data collected across the enterprise.

When R59 was asked, *"How is data from various sources and departments collated and stored?"* The response was "extracted at EOD, near real-time and aggregated on the data warehouse".

This may imply that the bank has begun the data consolidation process by moving extensive data sets into a central digital warehouse from the various department silos, gathering data, and performing some form of statistical AI modelling. R60 was asked this question

"What kinds of AI processes are currently in place?" the response was "Natural language processing."

When asked further, *"Does the bank use AI in making decisions?" "Please explain how?"* the simple response was "No".

R60 is an IT engineer working with the bank and may need to be fully aware of the advanced tools used to process data. However, there was a consistent response to "natural language processing" (NLP) as using AI; this indicates that some of the bank's technical teams understand the full potential of AI. This could be why the bank sees real value in advanced innovations creating additional value for its operations.

Aggregate Dimension: Digital Migration
Themes: Platform Technology, Demand for Digital Products, Digital Platforms, Digital Maturity Levels, **Enterprise Architecture**

4.5 Role of Enterprise Architecture

According to Garner (2019), almost 50% of all financial services organisations are either in the beginning stages of their transformation journey or working on it. Organisations with solid enterprise architecture plans are not only able to assess their changing needs, but they are also able to react and engage much faster than non-transforming organisations. Furthermore, successful technology disruption, which DT is, requires a new design plan with significant interconnectivity across diverse platforms connecting the enterprise. How transforming banks create and capture digital value may be heavily influenced by how stable their enterprise architecture is designed (D Plekhanov, 2022). However, many incumbent banks engaging in various transformation initiatives are not necessarily equipped with the tools required to manage the type of complexity transformation presents (S. Mouzas, 2022). Enterprise architecture as a standard template cannot support the ability to plan, process and execute technology deployment using a common theme across all areas of the organisation. It may include the ability to design and build platform microservices and a service-oriented architectural blueprint supporting agility with all business operations.

Executing a robust enterprise architecture blueprint as a foundation for technology roll-out to support the transformation process can significantly improve time-to-market for organisations releasing digital products. It can also fast-track data integration with third-party providers working with transforming organisations. It can equally speed up other elements of digital integration, including faster data integration, while ensuring control across all operational areas. According to McKinsey (2020), over 70% of US consumers migrated to digital platforms during the pandemic, a significant jump from the status quo. Achieving this may require building and fortifying a robust, stable digital infrastructure to handle the vast data and transaction traffic increase. Network stability is a significant concern, as pointed out by response R61 when asked about the infrastructure impediments:

"Immature infrastructure –5G not readily available to consumers –slows adoption for critical services like video banking and epileptic connections when transacting."

It is also essential to understand the challenges of current ailing architecture to build the right modular platform to power advanced innovations like AI, ML and powerful data analytics. In addition, today's complex digital platforms deployed by transforming banks may require custom designs that allow seamless connections to third parties sending out or pulling in vast amounts of transactional data. The new modular platform based on the DT initiative of the bank may promise much better performance. It can address several performance issues faced by the bank's older legacy infrastructure. One of such challenges is the vast amounts of requests going and coming from connected APIs to a large number of third-party eco-systems, making real-time digital communication difficult with the traditional architecture, thus creating a bottleneck that will impede the services offered. Unfortunately, such delays and performance issues can cost a bank its reputation if not carefully managed.

Another drawback with traditional technology architecture is that most are top-heavy, with all applications and services built to connect centrally around a single repository system. This

design type makes it difficult for vast digital requests to be executed all in real-time (F. Jacques et al., 2017). Integrating technology at the foundational design and planning phases can allow organisations to handle modern technology requirements better. The above has led to the argument that introducing knowledge-based systems in the workplace can aid the process of an organisation absorbing new technology capabilities. Ultimately part of the crucibles of transformation can be the ability to provide a robust digital infrastructure that permits heavy digital traffic.

Incumbent banks may focus on delivering new multi-faceted digital platforms and corresponding channels and develop the ability to offer customers the same if not more, products and services. However, with great benefits usually come high costs, the required investments, and the complex nature of building digital enterprise platforms is significant. The cost of integrating the organisation's people, processes, culture and structure into one entity is phenomenal (B. H Leso, 2022).

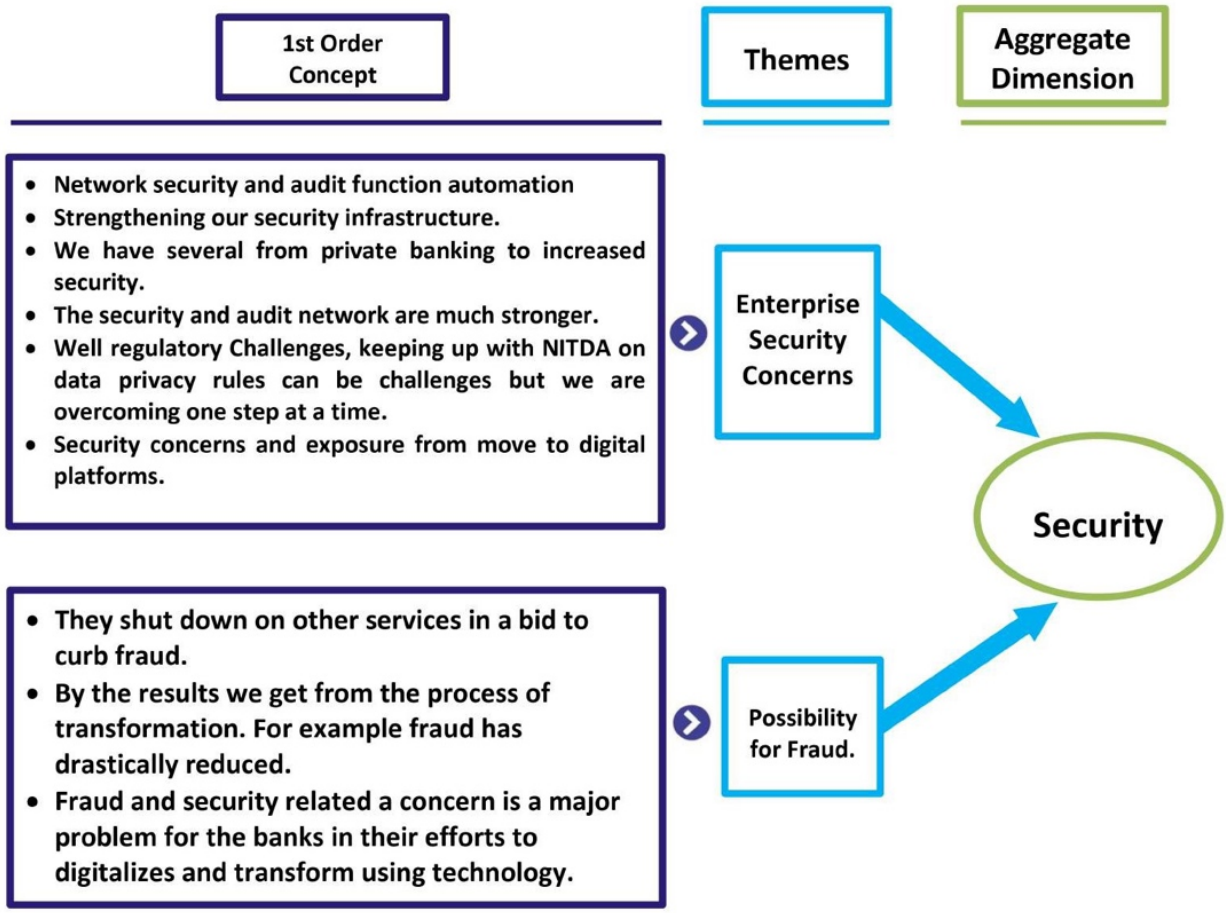

Fig. 4.9: Security Aggregate Dimensions

4.6 Emerging Security Contentions

As highlighted earlier, one of the significant challenges transforming companies may face with executing technological initiatives is the security issue for their technological infrastructure.

Security is seen as one of the most critical challenges with DT, particularly for large financial institutions (World Finance, 2023). Securing a new digital enterprise is a significant challenge any bank will grapple with; the traditional simple and legacy networks built in the past were relatively modest and easy to secure. However, migrating to a more secure modern and complex digital state requires high levels of security with connectivity to multifaceted devices; this is a challenge incumbents must address as they move to a newer enterprise.

Moving to the digital platform model requires securing data transmitted on the platform, where virtually all data and services hosted on the Cloud with connectivity to third-party infrastructure are protected. This presents multiple security challenges and makes vulnerability a severe issue. Furthermore, frequent news on significant hacks and security breaches on digital platforms is all too familiar, adding a new level of complexity to any transformation. Therefore, protecting and avoiding attacks on a massive scale is essential for any bank leadership as they migrate to new digital infrastructures. The case bank seems to be doing a lot in terms of using advanced technologies to ensure security on its new digital assets; R62 pointed this out:

"Strengthening our security infrastructure, applying ML and AI models to the current data collected from the bank network. Open banking concerns –security and seamless connectivity to third-party providers like Fintechs –not understood, CBN regulations and security concerns a problem."

Network and infrastructure security has always been a topical issue in the wide use of enterprise technology (Beyzanur et al., 2017). In the developing world, security against fraud is among the greatest threats to enterprise data collection and use. This leads to the fear of security breaches being a significant hindrance to adopting DT and automating sensitive financial processes for banks (World Finance, 2023). Therefore, transforming banks, in general, should be fully aware of the resulting transformation process and its impact on security, including a thorough understanding of how DT can allow them to achieve or enhance their current security arrangements. However, it opens a broad range of questions on security vulnerabilities that can present themselves during and after process automation and service digitalisation, all part of the efforts to transform the organisation (Palmer, 2021).

Aggregate Dimension: Security issues
Themes: Enterprise Security Concerns, **Possibility of Fraud**

Another major challenge is fraud and security-related concerns. It is clearly understood by the banks that the more services they move to their digital platforms, the more exposed they are to security vulnerabilities. R63 mentioned this point:

"Fraud and security-related concern is a major problem for the banks in their efforts to digitalise and transform using technology. It is clearly understood by the banks that the more services they move to their digital platforms, the more exposed they are to security vulnerabilities. As a result, they either have stringent policies on extending digital services or shut down other services to curb fraud, which affects adoption and drives customers back to

the brick-and-mortar stores. All areas, fraud control and availability of all products sold by the bank online Operations and SME business units."

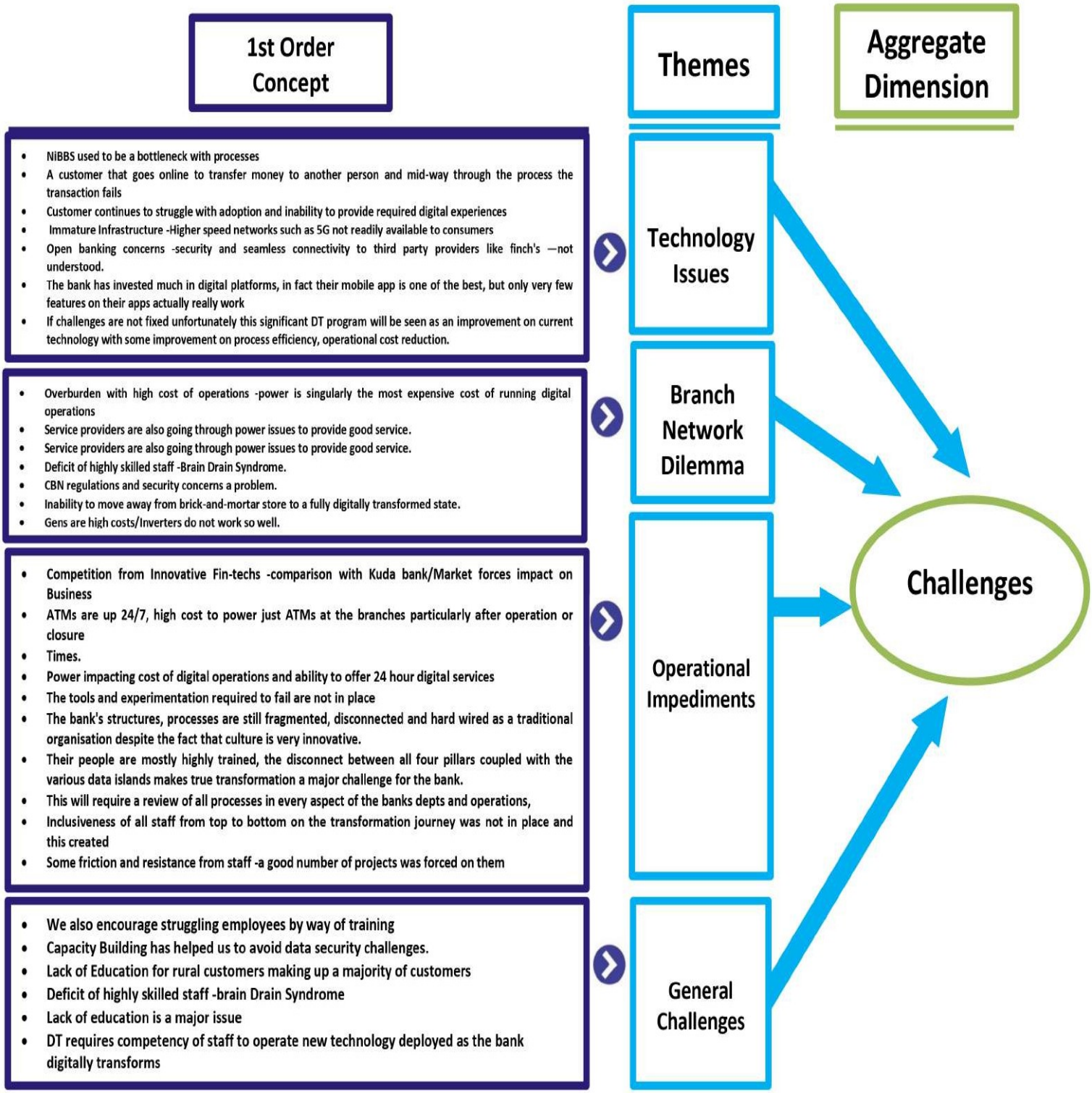

Fig. 4.10 Challenges Aggregate Dimensions

4.6.1 Technology Issues

It can be assumed that the existing knowledge on DT within FSI is widely documented and

available to practitioners to draw valuable knowledge. This information can also be seen as necessary for how the DT process can be thoroughly executed. Most traditional banks are overloaded with the problem of legacy technology and rigidity in structure driven by obsolete business and operating models (Leonard- Barton, 1992). Interview data confirmed that the case bank may face these and several other challenges in its DT journey. This may require an evaluation of its current strategies as changing organisations evolve to offer new digital products and services.

Aggregate Dimension: Challenges
Themes: Technology Issues, **Branch Network Dilemma**, Operational Impediments, General Challenges

Branch Network Dilemma

Two-thirds of bank customers still prefer to visit a brick-and-mortar branch to transact business (F. Jacques, 2017). However, this philosophy may go against the bank's new digital transformation direction strategy. As an incumbent with significant branch networks spread across Africa, GTCO may decide whether to keep its current branch assets, completely move to digital or adopt a hybrid model.

In developing countries, many customers still prefer to walk into a bank branch to perform their transactions (S. Khon et al., 2022). Culturally Africans, maybe due to trust issues, may instead have a face-to-face meeting than virtual meetings. This has been proved by the low productivity and engagements in virtual meetings, the unnecessary need to drive for miles to attend a meeting and the frequency of branch visits despite the ability to transact online from the comfort of their homes or businesses. Incumbents must recognise these facts as they transition to offer more products online and less through the physical branches.

"The bank management so much value and appreciate Digital Transformation, so much so that its last five strategy was hinged on it. For a bank, the core aim is to become a platform. This gave birth to platforms such as Habari e-commerce Platform, enrichment of services on its online platforms (USSD, ATM, Internet and Mobile banking), Ndanni, SMEMarket HUB, etc.".

Many customers desire physical engagements rather than virtual ones with their bank; this is seen as one of the prevalent banking issues presented to incumbent banks transforming (N. A Windasari, 2021). Their ability to satisfy current customers may still be heavily attached to the local branches. The need to service a new crop of digital natives via a digital-only banking platform is a significant dilemma, as mentioned earlier in this study. This is one of the issues standing in the way of traditional African banks successfully transforming. The misconception is that the bank branch network will go extinct with transformation.

As evident from studying the case bank and the observation with other banks, this will likely only happen for a while, particularly in Africa, where the strong culture and literacy rates dictate how customers engage with their banks. Furthermore, it is essential to realise that digital technology will only partially replace all banking processes built over decades. Although a

good number of them will be automated, there will still be some processes that will still require human interaction and approvals. Technology innovations will undoubtedly act as an enabler but will most likely complement the high stakes and complex business functions. The challenge of fully transforming can lead to the problem of the strategic decision-making of keeping branches or going completely digital. This is even more worrisome considering that at least 20% of African bank customers still prefer physical branches for transactions (G. Drenik, 2023.)

This is a significant challenge most traditional banks face due to the high overhead costs of running their expensive branch network. Also, many bank customers live in rural areas, and most may prefer to visit physically for all transaction-related activities. However, the high cost of running the branches is a massive overhead for retaining those brick-and-mortar stores (F. Jacques et al., 2017). Also, due to the need for a real strategic focus to become fully digital, some banks still need help onboarding rural customers to use their online banking services. However, low illiteracy rates and low internet and telco network penetration impede progress.

Another major impediment is the need for more sensitisation and education of staff and customers on ongoing transformation initiatives. Most staff need help with adoption and more technical skills to drive the technology required for transformation. This affects fast adoption by customers both in the cities and the rural areas and may be one of the significant challenges with weaning off the rural customers from the expensive physical branches. However, there is much effort in creating awareness among business owners at the case bank. The response from R65 captures how business owners drive innovation at the bank:

"The business owners are usually carried along in every new technology initiative. Sometimes the initiatives are borne out of process improvement from the process owners. They are part of the testing, so they can see the benefits of how it will improve their working experience even before go-live. So, adoption becomes easy."

The impact of change or the effects of change friction is another major issue of contention with staff and customers. Some staff members may not be adopted because of fear of losing their jobs, while others may just be scared of being exposed as not competent; as a result, they avoid and systematically resist the new changes (A. Damawan, 2020). The culminating effect may significantly impact the bank in deriving value from the technological investments as part of the transformation to a new technology-driven target state. Furthermore, when bank staff are uncomfortable with new technology driving digital banking, for example, uptake may be impacted. This potentially has a catalogue of effects on the overall product and service sales and the bank's overall growth. Part of that adverse chain reaction can be the need for more will for customers to embrace digital banking, consequently reinforcing the continued need for them to visit the physical branches.

One of the main opportunities for DT in the banking sector is the possibility of offering new banking that cannot be achieved using traditional banking methods. With DT, there are new opportunities to reach more customers in an optimal and cost-efficient (Butler., 2020)

The case bank has realised this value and, as a result, embarked on building a formidable strategy to achieve it. Furthermore, DT makes it possible to serve customers in remote locations through diverse digital channels. In today's digital era, services are no longer bound by specific branch locations but can be assessed through distributed digital infrastructure, including model technologies. Digital Transformation brings about radical transformations of internal operations, and they become more optimised, and the need for bank branches is significantly reduced.

Aggregate Dimension: Challenges
Themes: Technology Issues, Branch Network Dilemma, **Operational Impediments**, General Challenges

4.7 Operational Impediments

4.7.1 Overcoming the Challenges

Organisational transformation in banking has shown to be a rough ride, particularly for retail banks faced with regularly changing customer and market demands and requirements (Baskerville., 2020). The significant disruptions from the Fintechs are adding to why traditional banks are under extreme pressure to adapt and radically innovate. The above forces justify the urgency for transformation in how traditional banks function and serve the modern customer. Some incumbent banks have been struggling with this process for a long time. They have tried re-modelling their businesses to capitalise on the challenges and opportunities emanating from increasing threats. Still, these efforts seem to have failed.

Going through the transformation journey can be a big challenge for GTCO. (Kane et al. 2015) describe this state as an organisation achieving transformed processes, complete skills engagement and a new business model. Achieving digital maturity takes time and great effort. One of the biggest impediments faced by banks in the African region to reaching full maturity is a lack of clear digital strategy, competing DT initiatives, significantly limited technical skill competencies and security concerns about moving traditional banking operations to fully digital (Kane et al., 2015). Another challenge may be the need for more technical staff that can work on the technical components of transformation to ensure a swift transition. R66 recognised the "shortage of manpower" as a challenge in response to the question below:

"*What are the challenges of achieving technology deployments?*"

R67 was asked: "*How is the bank overcoming challenges of digital transformation to ensure a smooth transformation process?*" The response was:

"The regularly educating customers do this on the value of transformation; we sell the convenience, the security and the efficiency to provide them regularly. Why stay in a 2-hour queue in the hot weather when you can transact and engage from the comfort of your home or business? This is whatever push to our customers, and slowly and steadily, they are moving to the new technology platforms."

When asked the following:

"*How is the bank overcoming the challenges of digital transformation to ensure a smooth transformation process?"* R68 answered:

"Getting necessary stakeholders is involved right from the conception and planning. Also, stakeholders are involved in the testing to ensure it meets the required objectives before deployment. After deployment, it is communicated to touch points (for customer-facing initiatives), relevant stakeholders and sometimes on the bank's intranet."

The above indicates some more prevailing challenges the case bank faces as they evolve through the digital transformation journey to become entirely digitally mature. These are issues that need to be addressed to achieve complete digital maturity.

4.7.2 Organization Knowledge Sharing

Digital Transformation represents a large-scale change in an organisation that impacts all areas, including the organisation's people, processes and overall structure (Schwarzmuller et al., 2018). It also affects how organisations learn from the transformation process. Without the core capabilities to build and share inherent knowledge from insights generated from data consumption, for example, usage becomes demanding concerning the decision-making process in any enterprise (Gupta and George, 2016). Even though transformation seems part of the new way to create and capture value, mainly through technology to offer customer services, developing a robust knowledge-sharing process can be challenging for change organisations. This often occurs with difficulties using existing data and how this is disseminated across the enterprise to serve customers better. Furthermore, regulation on the use and transfer of data complicates the process even more. On the preceding, R69 asserted that:

"Government policies on the use of customer data is a challenge. The bank is constantly investing in digital transformation programmes, including digitalising new products and services, bringing all data into a central platform."

R23 said this about customer data:

"The use of customer data is an issue the bank is still tackling; customers and regulators are aware of the risks and are monitoring our actions very closely. This awareness has created a district with our customers and slows down adoption of services for fear of personal data loss."

Transformation is a significant challenge, but when the bank includes the regulatory issues mentioned above, the latter further compounds the problem of creating the integrated, synergistic entity required for seamless data sharing across the various business units.

4.7.3 The Connected Digital Ecosystem

Despite having a sophisticated digital enterprise infrastructure, networks must connect to other network providers in an ecosystem for services to work seamlessly and for value to be realised. Bank networks in the African region heavily rely on telco networks, Internet service provider networks, fibre cable providers and third-party application providers to effectively service their customers distributed across the various regions of operation. However, there can be significant challenges in deploying technological infrastructure in a connected ecosystem with multiple providers; this impedes the services offered to customers. This fact is enunciated in the excerpt below from R54:

"Imagine a customer that goes online to transfer money to another person and mid-way through the process the transaction fails and then fails due to a fault with the telco network, and to resolve these issues can tackle up to a week by visiting the bank and queuing up. No customer will be interested in going back to experience the same process but will rather stick to what works, and again, this is to visit the branches."

"All these factors make the brick-and-mortar stores more attractive due to the compelling reasons and, unfortunately, challenges the transformation efforts made by the bank, which continues to struggle with adoption and inability to provide required digital experiences and closing down costly branches running on generators across the country."

The above is the reality for many transforming banks and may confirm why digital services fail to function as expected despite investing significant sums in new technology platforms; they partner with FinTech providers to create more value-added products, they subscribe to significant bandwidth capacity but when the service providers fail, the bank's online banking platforms can be brought down, and critical services become unavailable. When those networks fail, customers are not encouraged to embrace digital, and they default to conventional banking. Unfortunately, this vicious circle may defeat digital transformation efforts.

Another major impediment is the availability of a regular power supply. Most African regions still contend with a stable and available power supply, which is required to enable digital services to function correctly (16). This power deficit can significantly impact the cost of digital operations and a financial organisation's ability to offer 24-hour digital services to customers. The views of respondent R69 reveals this:

"Power impacting the cost of digital operations and ability to offer 24-hour digital services but renewable energies and flattening cost of bandwidth and mobile devices will help. Overburdened with the high cost of operations, power is singularly the most expensive cost of running digital operations."

Several research studies in Africa confirm power to be one of the region's highest single cost factors in business operations, a significant impediment Western banks undergoing DT need to experience (R. Puliti, 2022. World Bank Article). So, despite the most expensive innovation, the best leadership styles and the collapse and integration of structures, processes and a

realignment of people and cultures to create efficiency, without regular power, none of the benefits of DT can be realised; this peculiar African problem is what several traditional banks have to contend with as they journey through the transformation process.

4.7.4 Integrating Technology Processes

Some transforming organisations run on obsolete technologies, such as outdated applications and systems architecture designed decades ago to cope with minimal transaction traffic (H. Hayretci, 2021). For some, their enterprise infrastructure was designed for something other than the new digital era. This makes services suffer, creating a bottleneck in providing adequate digital services to growing customers. Most back-office systems holding the bulk of transaction processing for traditional banks may also need to be more functional and flexible (L. Buzzachi, 1995). They may need more capacity to cope with the volume of automated processes offered by digitalisation. The transition from the old to the new digital era can be stressful for many organisations with a high failure rate to transform; therefore, developing and integrating the right technologies is essential to enable a seamless transformation. This is considering the commitment of significant investments in building new digital infrastructures, designing modern applications and automated processes, integrating with external third-party financial providers to create a comprehensive digital ecosystem, and investing in a new level of security solutions to handle the new complex digital enterprise.

A primary consideration for any transforming organisation includes how the significant infrastructure and architectural changes will fit into the new target operating model post-transformation; this is a substantial point for consideration. Furthermore, many traditional banks built their business operations using technologies and methods that simplify internal processes within their organisation; they tended to develop systems and processes that could allow them to perform transactions and seldom only update these processes incrementally. But business, operations, and infrastructure may need to be designed under a new digital model with a unique outward interface focusing on customer experiences and seamless delivery of digital services via new channels. The assertion of R69 below buttressed this:

"We can see tangible results as we move through the transformation journey; customers are no longer queuing to use the branch services, and most are automatically moving to our new digital channels. Customer calls have reduced significantly, and the resolution of complaints has reduced. For this latter, our customer care team now has full visibility into all activities appending to a customer's account. This feat won't have been achieved without total digital integration of all customer-facing services."

The new enterprise infrastructure of any transitioning bank must be seen to support its growing capabilities as it promises to expand its products and services to uncharted territories. However, fragmented processes by incumbent banks can lead to multiple newer ways of accessing customer data. This also opens traditional banks to a level of risk they were not exposed to in the past (17). Overcoming the risk factors can enable achieving an organisation's business capabilities. Moving from legacy systems to modern technology infrastructure can also enable better competition with other digital banks (A. Frohman, 1982). One of the biggest contentions

with legacy systems is modularity in systems and applications. So, when a significant functional change is required, months can be spent building an entirely new function that may need to integrate better with the existing systems. Unfortunately, this can be time-consuming and highly inefficient at best. In today's rapidly-changing digital world, incumbent banks with an integrated architecture can regularly and rapidly update their technology components in line with business capabilities without significant impact on their platforms. If not, overall digital business growth and addressing future requirements may become a significant problem.

4.7.5 Dependency on Technology

Most incumbent banks rely heavily on technological innovation to execute their DT initiatives. From the data gathered by the researcher, there is much excitement in the area of automation and the application of innovation in product offerings, particularly in promoting new digital services online. This is a consistent key theme from the various interviews. The feedback from the qualitative process revealed the bank's direction in translating technology into specific consumer products. R70 had this to say:

"In the Nigeria banking industry, GTCO is synonymous with innovation, and virtually all the bank's products are technology driven. For instance, GTCO Quick Credit is purely online and can be accessed from start to finish without recourse to the bank. Again, the birth of this product was based on data analytics of retail customer loan behaviour."

However, the bank and other transforming regional banks may still need help to adopt and apply this technology within their banking ecosystem. Due to infrastructure and regulatory challenges, their widespread use can still be questionable, and full-scale customer adoption may still be a significant problem. From the research, everyone's view on the transformation process differed depending on whom the researcher interviewed, and this varied perception may have a bearing on the realistic level of transformation. In assessing the current level of digital transformation at the bank, the responses varied across staff, from the C-suite to operational staff, as indicated below:

"We are between 7 and 8/10"
"I will say 7."
"Maybe eight over 10."

"Most internal processes have been digitised. Most services offered to customers have also been digitised, and the bank's transactions via the e-channels platforms continue to grow year-on-year."

"7.5 out of 10. Most of our internal processes are done with the computer. Our customers mostly do access to the bank services via our e-channels."

The above implies good progress with digitalisation, but it also reveals that the level of current digital transformation is subjective depending on who was interviewed. Some junior staff interviewed seemed more optimistic about the digitalisation progress; this could result from

wanting to please. The executives were more modest, depending on the department the C-executive headed. The C-suite executives in technology roles were more optimistic, while others in the business were more pessimistic in their responses. But one profoundly notable point observed by the researcher was the misconception across the board in the terms "digitisation" and "digital transformation". The researcher observed that most people believed there was no distinction between both terms, which may be a significant challenge for any transforming organisation. This negative perception can lead to heavy investments in technology innovation, including expensive automation projects, which is the right step in the right direction. However, it still does not address all components of DT. More emphasis should be placed on education on achieving real digital maturity, collapsing business structures using technology, providing a sense of culture and managing the people side of transformation. In the researcher's view, this is a significant bottleneck most traditional bank leadership teams must address to transform successfully and reap the total dividends of DT.

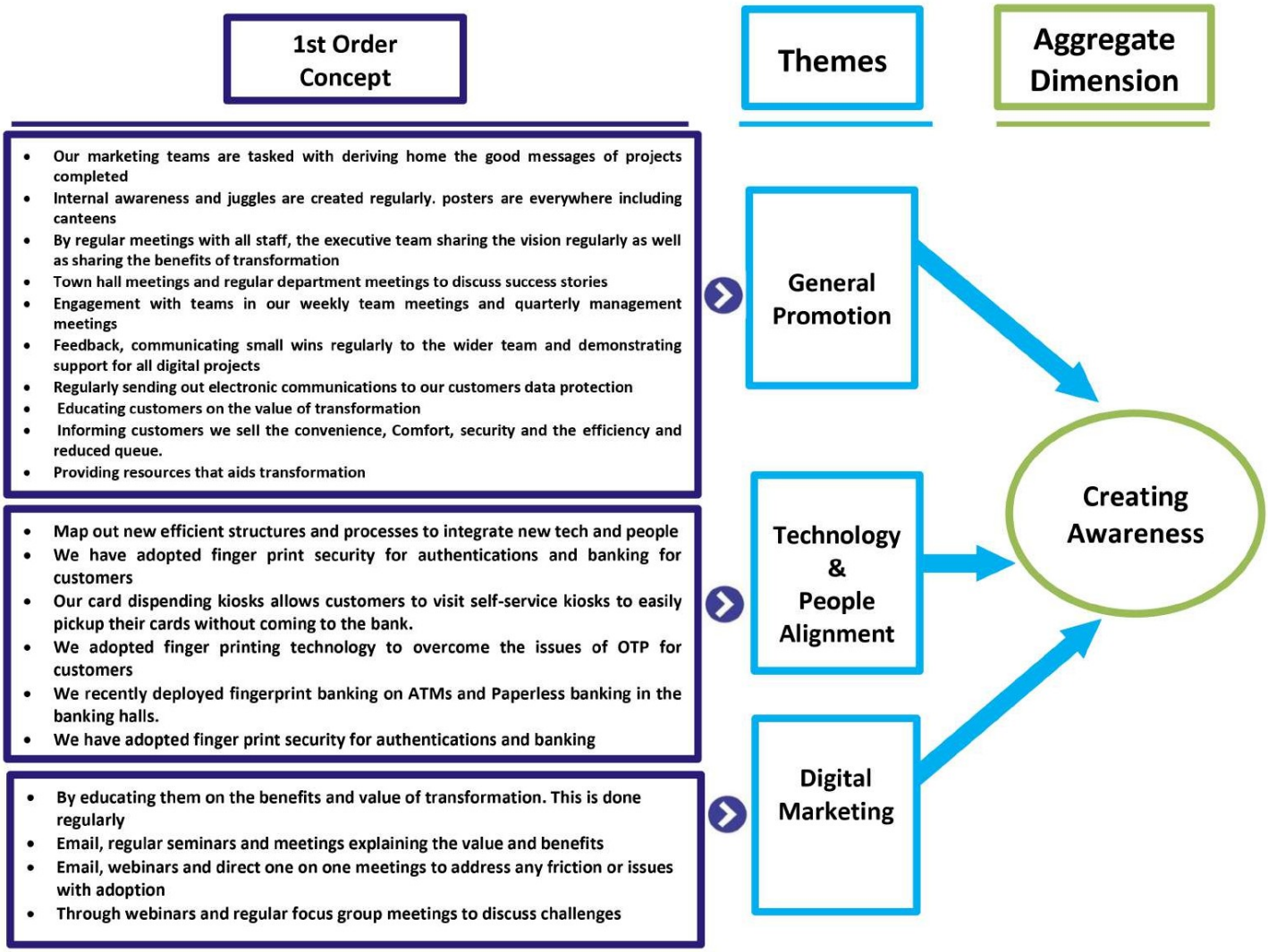

Fig. 4.11: Creating Awareness Aggregate Dimensions

4.7.6 General Promotion

It is essential to realise that technology alone cannot bring about benefits and gain from transformation initiatives. However, mapping out specific gain areas and a complete shift in the business and operations are also important. This area includes promoting services and creating awareness of new transition plans for staff and customers. Utilising data science to create compelling insights can add significant value to the business. For example, suppose insights are generated from the work done by the data scientists. In that case, it is only helpful if the business can execute and benefit from that insight generated. The data engineers are outside sales; they can only work with the sales and marketing teams to ensure efficiency and effectiveness in their current work processes. Therefore, close collaboration of multiple teams across the transforming organisation can result in tangible performance gains.

R71 commented on the bank's efforts in driving DT across all critical business processes
"What policies are in place to promote digital transformation adoption at the bank?
"There is no written policy to promote digital transformation. It is like a culture. It is what drives the bank's strategy. No matter how innovative, nobody in the bank will approve or support a new manual process. If the new process is not digitised, it is dead on arrival."

R72 had this to say on the marketing efforts to promote DT across the board:

"Our marketing teams are tasked with driving home the good messages of projects completed, instilling confidence. The bank invests significant time and effort in marketing the success stories with various initiatives, which helps build team confidence. The effect of this, if done successfully, is a reduction of the resistance to the change process."

The bank sees value in creating awareness for the transformation efforts and promoting successful projects completed, building confidence in staff to reduce resistance and enabling them to continue embracing the new trajectory. This may require closer collaboration between the bank and its stakeholders, including customers, to create the necessary awareness of the change programme.

Aggregate Dimension: Creating Awareness
General Promotion, **Technology and People Alignment**, Digital Marketing

4.7.7 Technology and People Alignment

Technology competence is a rare commodity in Africa due to the brain drain syndrome and, unfortunately, a significant deficit for the banking sector. Most traditional banks cannot provide the rich experience offered by digital banks principally because they need teams with the right skill sets to engage, manage and operate the sophisticated technologies deployed across the business. The experienced teams join the Fintechs or relocate abroad; this is exacerbated due to the declining economic situation in some African countries, including Nigeria, where the case bank is headquartered (19). Therefore, the investment in people (customers and staff) and capacity development to build the required knowledge for managing new sophisticated digital

infrastructure are imperative. This was noted by R73 while discussing the implication of not educating:

"Some staff do not understand how to use the new technology, low educated customers, like artisans who cannot comprehend how to use the new services."

A digital work environment created as part of DT should be seen as flexible, adaptive, compliant and geo-location antagonistic (White, 2012). However, one of the most notable outcomes of the new digital environment is how best to bridge the digital divide arising from a rapidly growing skill set deficit emanating from the workers from the traditional banking era and the new digital savvy staff employed to operate the new DT operations (Kohli & Johnson, 2011). Capacity building, digital resources and technologies can significantly fast-track process automation and optimisation, boosting productivity. However, incumbent banks, like GTCO, should also be aware that staff may not keep pace with the rapid pace of DT roll-out and may sadly be left behind. This creates another human resource and productivity issue transforming banks may contend with, one that can trigger a negative internal challenge within the organisation. Therefore, these critical factors must be carefully reviewed, focusing on the trade-offs and how best to overcome the conflicts.

Aggregate Dimension: Creating Awareness
General Promotion, Technology and People Alignment, **Digital Marketing**

4.7.8 Role of Digital Marketing in Modern Banking

Research indicates that many bank executives believe that their customers will utilise social media as their preferred channel of engaging and communicating with the banks (H. Schmidt, 2021). For leading banks like GTCO, this can be an opportunity to build a social media strategy around this belief, capitalising on this new modern form of communication with their customers, particularly considering the vast customer reach on the major social media platforms. Some level of integration with these platforms is essential to successfully engage customers through these digital channels to create loyalty and promote products and services to promote the bank's services further. Internally, extensive promotion may also be required to sell the DT initiatives to staff and customers to gain their buy-in and reduce friction with the various projects. R74 commented on this marketing:

"Regular engagement to sell the value of transformation and regularly holding meetings with the various stakeholders on how best to include them in the change programme. By involving the various stakeholders, we noticed they are much more supportive, which drives adoption faster."

It is evident that promoting the various DT initiatives before they happen elevates fear and may allow staff and customers time to digest the planned changes; it may also allow them to deliberate, ask questions and gain feedback before the change process begins. Promotion using social media channels is arguably the most efficient delivery method in today's technology era. However, there are some demerits with using specific channels to reach customers, despite the

promise it offers. Therefore, any transforming organisation must weigh the benefits against the risks, including harmful exposure associated with these digital mediums. A complete assessment and significant due diligence may be required, including regulatory checks that can affect customer data privacy before embarking on an agreed promotion trajectory.

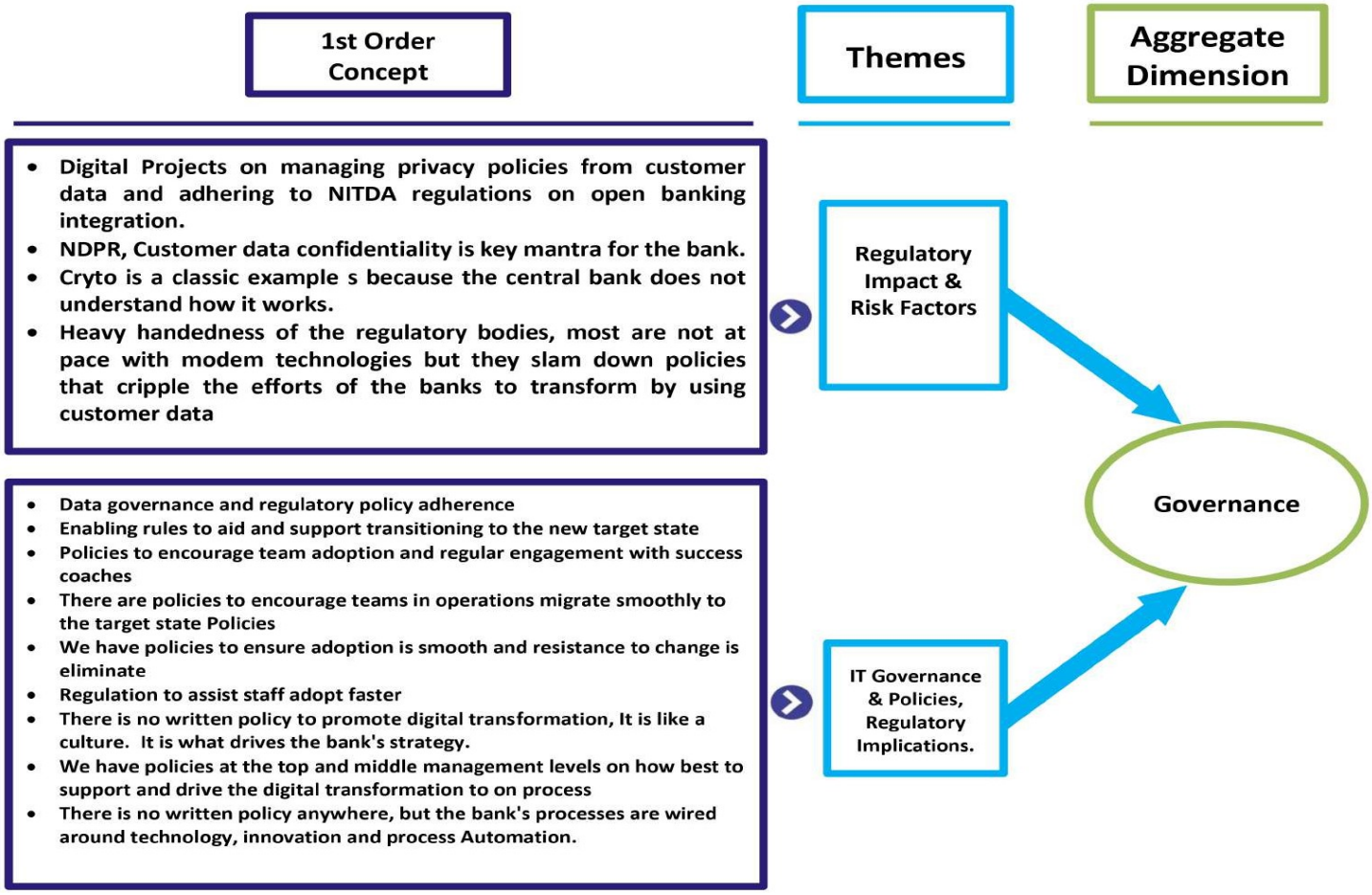

Fig. 4.12: Governance Aggregate Dimensions

4.8 Governance

4.8.1 Regulations Impact

Regulators often demand financial service companies like GTCO operate in a more complex environment owing to rapidly-changing technology, globalisation, and local environmental and regulatory challenges, amongst other factors; this makes transformation more of a challenge for any traditional bank (T. Alatovic et al., 2021). Newer-technology firms and other non-traditional competitors pose new forms of competition, making success after transformation even more difficult. Over the years, regulators have become more resilient and responsive to changes, even as technology disruption increases. They quickly take punitive action, which can mean heavy fines and sanctions for offending organisations (20).

Therefore, the dilemma of growing and investing in transformation and facing the wrath of the regulators if they get it wrong is a significant problem for incumbents. In the current complicated operating environment, any transforming organisation must navigate and find clarity regarding the ever-increasing policies and regulatory requirements to effectively compete in the current climate while executing its DT strategy. This regulatory concern was addressed by R74 and R75 below:

"Well, regulatory challenges, keeping up with NITDA on data privacy rules can be challenging, but we are overcoming one step at a time."

"Another major challenge with the DT process is the heavy-handedness of the regulatory bodies, most are not at pace with modern technologies, but they slam down policies that cripple the banks' efforts to transform by using customer data."

The response above reaffirms why regional African financial institutions should carefully consider the varying legal and regulatory frameworks, economic and technological infrastructure concerns, cultural requirements and different types of competition characterising each country, they operate in as they transform. These factors make the change process more complex and the challenges more enormous. Consequently, some regulatory authorities have used global policy practices to identify which frameworks and processes best suit their local market. Traditional banks should be aware of this and must design their transformation initiatives to align with the strategy of their respective organisation, one that allows them to overcome the ever-challenging regulatory environment.

4.8.2 Regulatory Risk Factors

Many traditional banks are looking to transform digitally due to promises on offer. However, they should consistently exploit customer data without contravening regulatory rules. Local banks in Nigeria face stiff fines for breaching the Central Bank of Nigeria's NDPR regulations on digital transmission of unauthorised consumer data and other anti-money laundering requirements. The effects of hefty fines significantly reduce the experimentation of novel products and services using customer data. Furthermore, Global bank rules and regulatory requirements on data security, consumer privacy, and ethical use of customer data pile more pressure on regional governments to enact new privacy laws (KPMG, 2019). These actions make consuming and sharing data with third-party stakeholders increasingly challenging. These regulations may explain why regional banks are slow to evolve into digitally mature organisations, an essential requirement of DT. Respondent R77 said this on government policies:

"Regulatory challenges and keeping up with NITDA on data privacy rules can be challenging, but we are overcoming one step at a time."

It is essential to realise that data and its governance are critical components of transformation in the African region (F. Ibikunle et al., 2012). However, there are other challenges faced by regional incumbents, and this includes difficulties in building a robust pan-African target data

infrastructure, allowing regional banks to truly analyse and harness enterprise-wide data as part of the transformation process; this is required to run their digital platform more effectively, enabling access to data in the various sovereign countries of operation, and moving sensitive data across the digital ecosystem becomes possible. Therefore, in dealing with the regulatory challenges of transformation, provisions must be made for the above, particularly processes involving the use of customer data.

Although regulatory agencies are challenged to stabilise the financial environment these financial players operate, they have a duty of care to manage how banks use sensitive customer information strictly. With clear visibility of digital processes and bank operations, it is easier for regulators like the Central Bank of Nigeria to keep a close eye on the digital activities within the banking system. One of the challenges regulators face in their efforts to support transformation is gathering data on the various technological developments in the digital space; this can impact how well innovative banks like GTCO are regulated in complex regulatory areas.

4.8.3 Knowledge Deficit Syndrome

Transforming banks should inevitably seek to improve capability and competency in managing today's complex digital infrastructures. Regulators must also do the same upskilling to ensure their employees can effectively monitor and regulate the banks (OECD, 2019). Suppose the banks struggle to understand and monitor the activities of such processes and models. In this case, the regulators will suffer a similar fate, mainly when regulating complex technology solutions. The resultant effect of the above is more significant risks to the bank customer and the industry.

Furthermore, any organisation transforming should consider improving its internal processes, including its reporting elements, as part of integrating a new technology platform. It needs to plan to incorporate more contemporary reporting frameworks and better management of enterprise data generated through reporting. This allows organisations to build new technology systems that enable the regulators to monitor and analyse the vast amounts of transactional data and third-party vendor data streaming through the bank enterprise infrastructure. Following the above processes will strengthen incumbent organisations through the DT journey.

4.8.4 Regulatory Impediments

Although the Central Bank of Nigeria and other financial regulatory bodies have made significant progress in recent years in regulatory policies and reforms to guide financial services firms (21), however, specific reforms to tackle emerging technology and new business model risks are still evolving globally; it is more so in the developing world, including Africa, where the case bank primarily operates; this has been exacerbated by the explosive growth of data generation and the need to make data available to all business areas. So, although data democratisation is golden regarding the immense value it promises to transform organisations, effectively regulating its use is currently a shortfall for most financial service organisations.

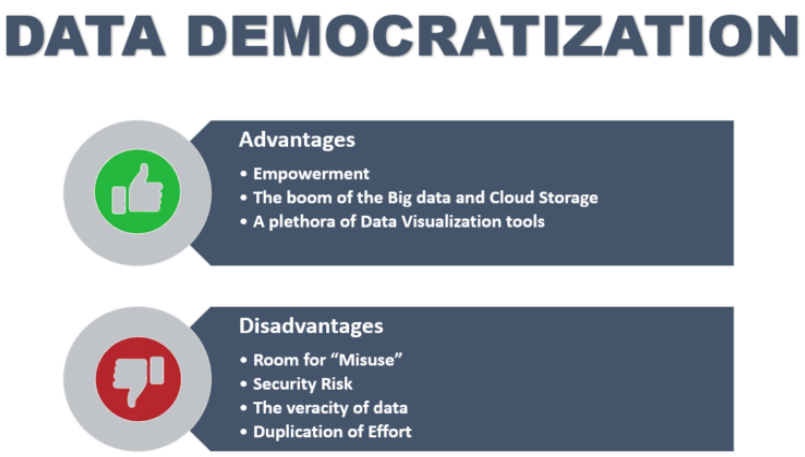

Fig. 4.10: Democratisation of Enterprise Data

There are issues of data misuse, ethics and compliance with regulatory requirements on the use of data. Although excited about the possibilities of data democratisation, transforming organisations are also concerned about not breaking the rules set out by regulating authorities with little underlying of the often-complex technology innovations. This dilemma and concern can stifle rapid go-to-market deployments of game-changing technologies that can add significant value. R79 had this to say:

"Regarding the challenges of regulating new technologies deployed by traditional banks, complexity is usually around advanced AI and data modelling algorithms. African regulators need help balancing how best to offer governance without becoming overbearing and suffocating innovations that can potentially disrupt the market and benefit consumers and the economy."

4.8.5 Central Bank Position

Central Banks in Africa took an innovative approach towards digital policies and a tailored approach, particularly in addressing cybercrime challenges by enacting specific acts for the banks to follow (21, 22). But owing to the need for a comprehensive set of policies and guidelines, several privacy and data protection gaps are prevalent in the policies; This can impede how fast innovative transforming banks can grow and how much confidence they have in investing in very sophisticated digital platforms requiring consumption of vast customer data.

However, one key area of innovation for the banks is the harmonised digital identity policy adopted by several African countries; this promises to significantly reduce fraud in banking which is a major headache for most banks globally (23). Whilst progress has been achieved in terms of a harmonised national identity plan in most African countries, a significant deficit in achieving a genuinely functioning digital ecosystem still needs to be addressed. Achieving a successful harmonised identity system may require combining complex technology components, including sensitive Government and financial databases, enterprise networks,

security agency platforms, multiple government regulators and more. With a robust digital ecosystem championed by various country governments, achieving the grand identity plan will be possible (24); this invariably impacts the areas of DT programs at larger financial services organisations like GTCO operating in multiple countries. Therefore, banks undergoing DT raise critical questions with their stakeholders, including Governments and Central Banks regulators, on how best to ensure a risk-free unified identity platform.

Aggregate Dimension: Governance
Themes: Regulatory Impact & Risk Factors, IT Governance & Policies, Regulatory Implications

4.8.6 The Need for IT Governance

Transformation, including the required organisational changes, is often partly realised by the organisation's IT governance; this is well-grounded in technological change (Brown, 1997). "IT governance comprises the leadership, internal structures and processes that ensure that the organisation's technology extends the organisation's strategy and objectives." (De Haes and Van Grembergen, 2000). Furthermore, in theory, IT governance principles are established to describe different organisational designs, organisations' approaches to managing DT, and how they address the specific components in technology transitions. Several studies have described technology governance fostering continuous organisational change (Hinsen et al., 2019). Its principles have been used to describe the coordination of multiple DT initiatives (Gregory et al., 2015) and its role in successfully managing DT projects (Brown, 2013). Therefore, incumbents, including the case bank, should implement appropriate IT governance principles because IT governance, if not managed effectively, can enable or create significant inertia in executing DT (Tiwana & Konsynski, 2010).

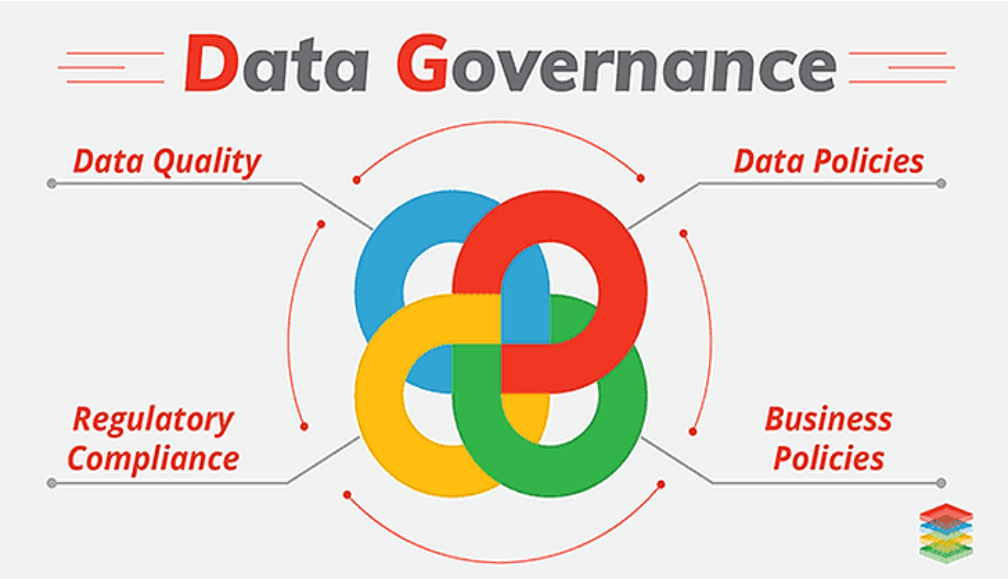

Fig. 4.11: Data Governance

In today's competitive financial environment, the value of governance cannot be downplayed, as seen in the above data governance diagram, a subset of IT Governance. Research conducted

on over 500 executive leaders confirmed that about 49% of the corporate organisations were planning some level of governance related to emerging technology, and only 8% of the participants already had established technology governance models in place (J. Little, 2020). In contrast, the others had a significant deficit in their governance model and strategy, which may point to poor governance with large-scale and extensive transformation programmes. However, financial organisations conducting DT initiatives must understand the right behaviours and balance with the control, management, and, more importantly, governance of all technology deployments and overall DT initiatives to succeed.

The point was emphasised by R81 and R81 while commenting on what hinders DT from happening seamlessly.

"Government policies on the use of customer data"

"Data governance and regulatory policy adherence"

Governance is often understood as one that involves a top management team championing the governance processes across the organisation. However, that is usually not the case, particularly in the banking sector, as governance can be applied holistically or in niche operational areas. Governance model structures differ and can be made up of five key structure types, namely: centralised, federated, balanced, distributed and agile models (J. Macey, 2013). This is captured in the figure below:

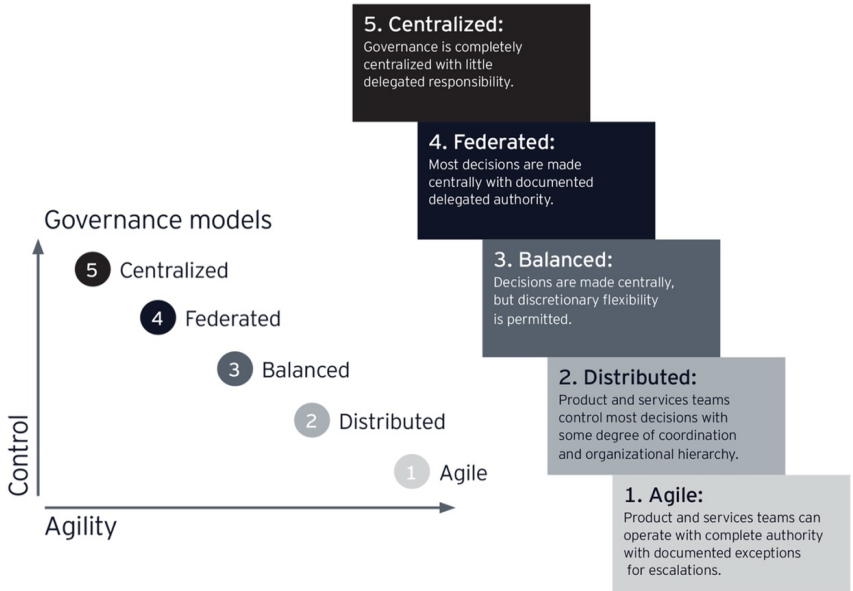

Figure 4: Different types of governance models

Fig. 4.12: Different Types of Governance Model

As traditional banks transition to digital operations, they must consider what governance model will work for them as they journey through the transformation process. Executives of the bank testing various governance models for suitability for the different technology initiatives usually become champions in empowering their managers on how best to apply the proper governance structure. Models with minimal control often require executives to allow more trust, particularly in decision-making. By holding back on control, executives can realise the gains of delegation, including significant business alignment and better decision-making. This is often the case that governance models with minimal agility have a more focused structure whereby the leaders executing the model tend to exert more control, including in the decision-making process (25). One of the advantages of this approach is that good decisions can be effortlessly filtered across the change organisation. So, it offers efficiency in delivering decisions across operations.

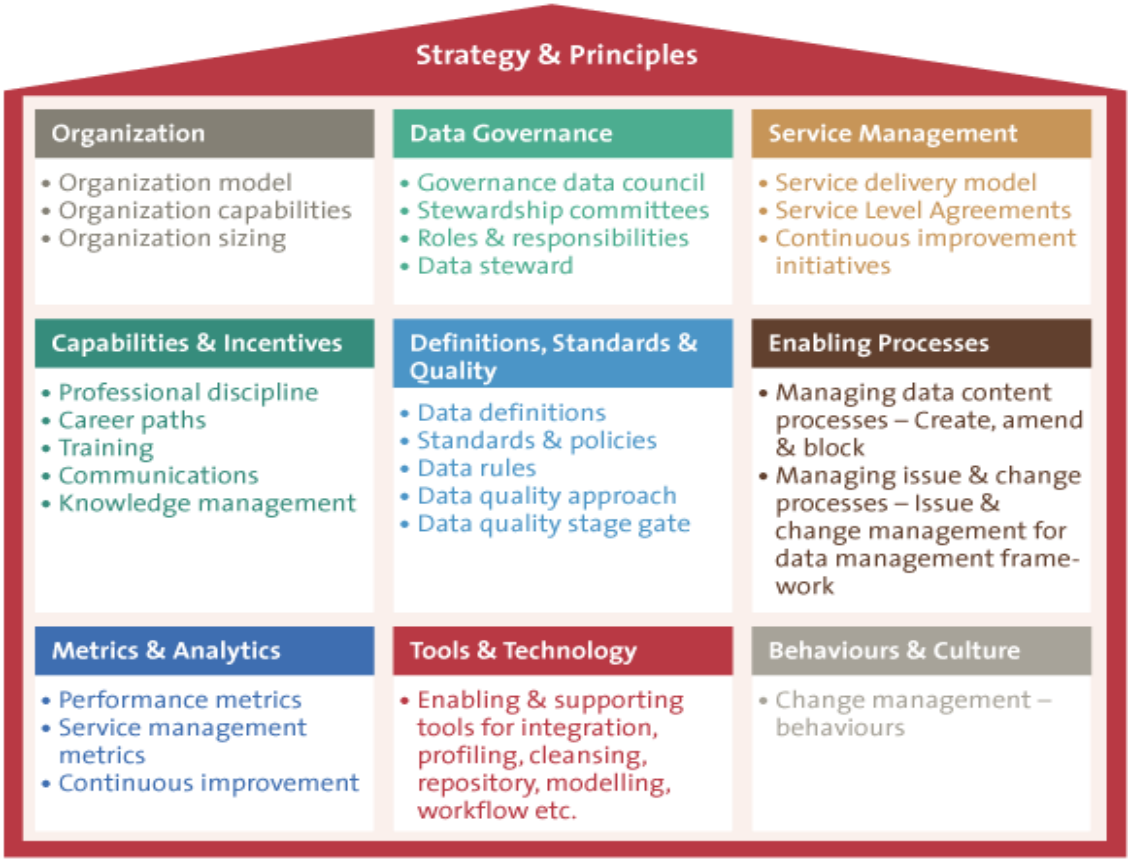

Fig. 4.13: IT Governance and Strategy

Any effective governance strategy should allow for quicker, more effective decision-making and brings about new ways of better decision-making structures (D. Forbes., 1999). To effectively implement a successful governance model, transforming banks can follow an approach adapted to their specific situation and strategic direction towards DT. Any governance model the leadership decides can also be self-governing to allow for changes or adjustments to its internal elements, including the organisation's corporate strategy and

department priorities. It can also be sensitive to external factors, like the competitive financial market, regulation around data and technology, and political and social issues. Furthermore, the ideal governance model should be performance-driven to ensure the DT initiatives are on track and can bring about business value. It is essential to note that governance is often associated with significant bureaucracy.

However, an effective technology governance model can aid the DT process. It can also allow consistency, transparency and accountability on essential technology decisions related to the transformation process. These collective decisions must align with a transforming organisation's overall corporate strategic priorities. A robust governance model requires setting up the proper structure as indicated earlier and also involves designing efficient feedback mechanisms that adapt to changing transformation conditions (S. Baret et al. 2013). As the transforming organisation landscape changes to include changing technology integrations, the technology governance model selected as part of decision-making must also be fluid enough to sustain the required oversight without impeding agility (R. Joshi, 2020).

Aggregate Dimension: Governance

Themes: Regulatory Impact, Risk Factors, IT Governance, **Regulatory Implications.**

4.8.7 Regulatory Implications

The defining characteristics of any bank today are change and uncertainty (C. Baum et al., 2020). As indicated earlier in this study, the financial service sector is undergoing tremendous changes; banks are going through significant uncertainty in their operating environment. Regulators also need help to keep up with the pace of technological change. Banks like GTCO have started the DT programme to address internal, external environmental and social impediments, competition, and obsolete technology infrastructural issues. As incumbent banks race to transform digitally, they face several challenges, such as increased complexity in operations and how they can best offer innovative digital products and services to customers; and a growing need to address eternal environmental issues, including regulatory concerns and how best to serve customers after DT. To compete in this new digital age, transforming banks should understand the ramifications and impacts of data privacy regulation. Understanding these privacy policies, for example, is essential in understanding how to serve customers better in an ever-complex open banking environment. R82 confirmed this:

"Digital projects on managing privacy policies from customer data and adhering to NITDA regulations on open banking integration."

Regulatory reporting on financial technology is a topical subject; currently, there are no set global standards mandating how banks should report on the social aspects of their banking operations. However, some forms of regulations in the EU clarify operations for financial services companies (B. Petzold, 2020). The US regulators, for example, are studying current regulations and how they can best account for complex technologies, including the application

of AI and Machine Learning models in consumer finance and how these technologies can mitigate sensitive topical issues, like bias in lending decisions (J. Melzer, 2023). African regulators are also grappling with understanding the more advanced technologies. However, over the years, they have been able to develop basic policies for FinTech companies and banks to operate (A. Perumall, 2022). However, this process will continually evolve as new technology innovations are discovered. Therefore, regulators should constantly develop and maintain an edge to keep up with the rapid speed of innovation.

CHAPTER FIVE

ACTIONS FROM THE FINDINGS

5.0 Introduction

The goal of the recommended actions in this chapter is based on the data from the research findings gathered from the qualitative process. They were collated as a call to action for the case bank; to enable them to improve the function of digital transformation change (71). Further objectives of these actions are to provide the case bank, other transforming regional banks, and future academic researchers with a clear and realistic trajectory for subsequent review and exploration. It is also meant to act as a barometer for practitioners looking to research specific transformation challenges in the financial industry domain. The qualitative processes yielded significant data, which had to be refined several times to reduce duplications and irrelevant data. Based on the researcher's detailed analysis of the datasets derived from the various respondents, the detailed order concepts, themes, and dimension aggregates were designed. They will be discussed further in the findings section.

The diagram below summarises the key findings from the study, covering the primary pain points the case bank is currently experiencing. The findings below result from the specific research question: "How can GTCO best navigate the challenges in their digital transformation journey to become one of Africa’s fully digitally matured banks?”.

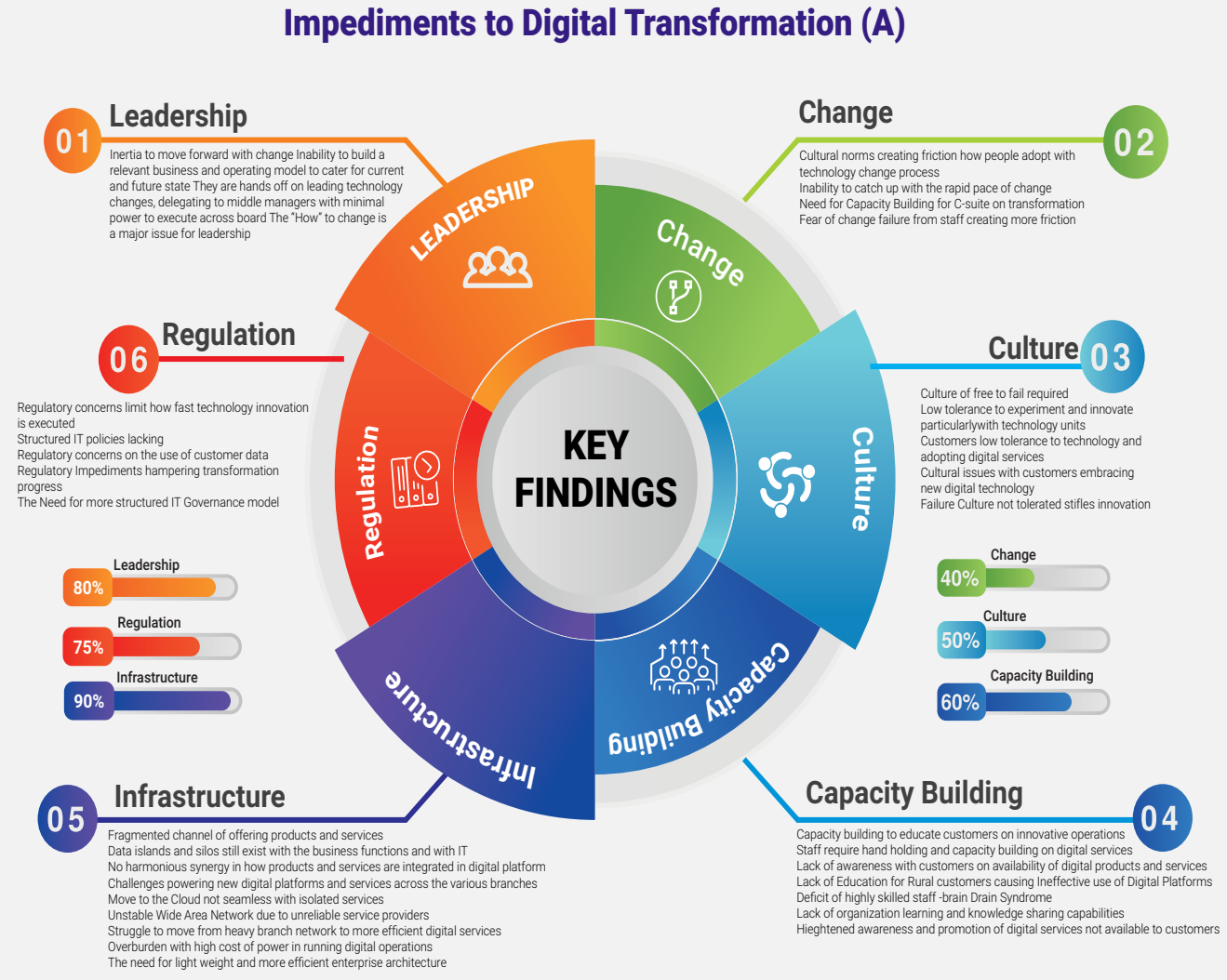

Fig. 5.1 Frictional Areas –Summary of Key Challenges

Based on the interview data reviewed, the following pertinent technical questions may need to be answered by the leadership of the case bank:

• Will the bank operate a centralised or decentralised infrastructure type?
• Will the bank keep its flagship branches, or will it be strategically reduced to only serve certain pockets of customers considering the high cost of operating the branches?
• Will it downscale on current remote branches, given the high illiteracy rates in the rural areas?
• Will ATM networks be reduced or increased to bridge the digital divide?
• Can customer service experience be increased using higher-end ATM networks as possible customer touchpoints?
• How will online and mobile banking be improved to reach the new digital and non-natives?
• Will the above be wrapped around a new business spin-off as part of digital banking, or will this be part of the current traditional operations?

A summation of the above questions and research data analysis from the findings confirmed the following recommendations for overcoming the current transformation hurdles.

5.1 Customer Service Improvements

To compete in this new digital battleground where customer experience and a seamless customer journey are crucial to winning, continuous innovation of digital and business processes is essential to ensure optimal support for new products and services (P. Warburg, 2022). This is to avoid the significant pressure of being overtaken by the digital native organisations fighting for market share. This understanding will set it apart and ensure it can compete and be on par with the new digital FinTech entrants. Furthermore, customers across all sectors can expect a fully immersive experience, and this may be due to the recent pandemic that has driven everyone towards a low-contact and low-touch economy.

Financial institutions that remain within the traditional domain will most likely be pushed to the edge by other competitors and aggressive FinTech that may have yet to have a strong appeal with customers but now offer convenient solutions, seamless efficiency and an excellent service experience. However, despite the need to deploy innovative technology solutions to address critical transformation impediments, digitisation and technology innovation, in general, are mere business enablers in the new economy (W. Miller, 2016). The real focus for transforming organisations should be leveraging technology to offer compelling business benefits to achieve growth, optimal customer experiences, and provide adequate service convenience as part of new value creation**.**

5.2 Winning with Advanced Technology

The significant impact of innovative technologies, like big data, advanced analytics, and AI, deployed as part of the transformation initiatives is almost guaranteed to be more profound and broader than steady but incremental technology upgrades (M. Mariani., 2020). Complex technologies, like advanced analytics, when used to achieve hyper-personalisation, for example, can ultimately be a game changer for incumbent banks to win against the competitor; therefore, traditional banks that can pivot quickly and embrace such tools as well as more complex technology solutions including AI and ML models, stand to win over the fast-growing FinTech start-ups. Moreover, one reason for the new entrants gaining value addition is their ability to embrace innovative technologies, including moving to a more efficient Cloud-based model, one that also generates a significant amount of valuable data that can be used for further competitive advantage to serve customers better, leading to increased revenue and more satisfied and loyal customers (J. Marous,2023).

5.3 Establishing Strategic Partnerships with Third Parties

It has become common for financial service organisations to realise the need for strategic partnerships and to forge them as they evolve into a more digital state. Some successful change organisations are investing in new Fintechs or external entities that offer specific digital financial services in fields outside the banks' areas of expertise; this can be done to shift business models to provide services in new domains. Two sectors in the financial service sector that stand out for banks applying disruptive innovation are the areas of mobile point of sale

(POS) and peer-to-peer (P2P) lending services (Deloitte 2015). Traditional banks have earned significant reviews by partnering with Fintechs in the above spaces. Furthermore, newer technologies have allowed banks to partner with specialist FinTech companies to offer compelling lending and payment services that were once a challenge before the transformation (I. Romanova et al., 2016).

5.4 Integrating Organisation with Technology

It is the researcher's view that the technological transformation of any organisation should start with the business and operating model, one that can drive change across other areas of the organisation, because a significant part of DT is about optimising the business to achieve more excellent value. Achieving this is a challenging task. However, one tactical strategy transforming organisations can take the ambidexterity route in their business model formulation and technology implementation (27). They can seek to build two parallel strategic technology teams. The first can continue incremental changes with the current legacy technology infrastructure. The second can be dedicated to radical transformation and achieving increased agility across the operations, looking for new ways to offer compelling digital services to customers. This effort can enhance effectiveness across functions allowing the current business to continue growing while the new is also allowed to strive. Both businesses can most likely have technology departments as they deploy technology innovations to operations. However, communication between two IT teams can leave open whilst having a separation of jurisdiction between both IT departments; this avoids stifling the traditional business and encourages the new digital business to develop independently (K. Stoiber 2020).

5.5 Prioritising Performance Objectives

Providing economic value from the move to the digital transformation initiative should bring demonstrable and sustainable economic value for any organisation (S. Dieffenbacher, 2023). Otherwise, there may be questions about the reason for investing significant sums in the transformation effort. One reason that leads to a failed transformation effort is that some good transformation initiatives still need to be rolled out. However, they are often done without a clear plan or view of how the various efforts will be converted into economic value, and this makes organisations struggle with achieving tangible objectives in the long term. As previously indicated in this study, going through a transformation process is laborious due to the multiple complexities involved in the journey.

It is, therefore, critical to ensure that value is derived from the various initiatives, including enhancement, integration, and customer engagement, and the ability to achieve strategic competitive advantage. Increasing the organisation's current revenue and growth is also essential; with DT, the expectations can be higher (Accenture, 2021). Digital transformation is driven by several factors at most incumbent banks, including effective customer engagement, increasing adoption of new digital platforms, creating new compelling products, optimising product and service prices for faster adoption and, more importantly, growth (F. A Moreb, 2021).

5.6 Further Considerations

Having spent significant time studying the case bank and analysing the findings from data collected from the interview process, the researcher extensively reviewed and extracted critical recommendations to propel the DT program forward, eliminate the current challenges, and achieve digital maturity for the organisation. In building a scalable and resilient digital enterprise, it is essential to derive compelling value. One of the best ways to create value with DT may be centred around managing the new black gold – data (28). There is a need for transforming organisations to understand how first to build an enterprise infrastructure that can hold and manage the massive amounts of data generated across the organisation, a process that will allow them to consolidate, analyse and extract operational and customer datasets for valuable insights (Faroukhi et al., 2020). There may also be a need to critically understand the entire data lifecycle and functional areas required to add value within the organisation, particularly areas around bringing all complex moving infrastructure components together to run a sophisticated digital enterprise (E. Curry., 2016). Achieving the above requires well-thought-out technical and business strategy.

Developing and communicating a clear business strategy throughout the organisation is critical, one that should be driven primarily by management. This strategy may include highlighting the transformation of products, services, and processes as part of the new business model. To achieve a successful transition and complete digital maturity, the traditional business and operating model of vertical integration may need to co-exist with other models (M. Benson Rea., 2013); this may allow regional banks to defend their existing business operations and seize new opportunities in the digital space. By not focusing on just the traditional value chain model, they can grow and scale in new digital markets while lowering the cost of growth.

5.6.0 Recommendations

5.6.1 Keeping Branches Network Relevant

Bank branches, as gathered from the interviews, still have a significant role to play in the banking industry (M. Abbott, 2023). It is known that bank branches will steadily decline over time, and transforming banks may decide to slow down on opening new branches, despite this strategy working well for decades with the traditional business model. With the growth of digitalisation, they may only be needed in strategic locations where the bank still has many traditional customers who need to be willing to move to digital channels. However, due to low transition rates for customers migrating from the branches to digital, there may still be a need to focus on establishing critical super branches, specifically in strategic locations and ensure offering complementary digital services at these locations. These branches can keep serving traditional customers yet to be converted to digital.

The research also revealed that many digital natives still use bank branches for more complex banking services. However, they still favour digital experiences and want to deal with their banks through digital channels for basic banking transactions. However, one of the challenges

with the branch operations can be the limited number of staff at the branches with detailed knowledge of more complex transactions, like business loans and mortgages. To tackle the problem, some transforming banks are slowly beginning to wean traditional customers towards the new target state by automating their scaled-down branches and providing digital terminals with rich product information (29).

According to Deloitte Insights, most customers still prefer to visit a branch over transacting on a digital platform when opening new bank accounts and when trying to take a complex loan (Deloitte, 2019). This statistic cuts across all age groups and customer segments, aligning with the researcher's findings on the prevailing customer need for physical branches to enable them to carry out more complex transactions. As mentioned previously, it is evident that branches still clearly have a role to play for various customer demographics using banking services. However, as the migration to digital banking continues, that role may gradually shift to meeting the evolving needs of those customers. One strategy that may help achieve the above may involve slowly moving away from routine day-to-day transactions, such as checking bank balances, deposits and withdrawals, and migrating those services using digital technology (J. Marous, 2023). This strategy can provide bank staff the time to assist with other more complex services required by their customers while aiding the bank's technology expansion process.

5.6.2 Leveraging Incumbency to Compete

The interview findings further indicated that digitised branches are a very effective way for banks to differentiate themselves from FinTech companies, as the latter will have the disadvantage of interacting only online with their customers, which may be a challenge with the current low digital receptivity. Change organisations can leverage this limitation from the FinTech companies and transform selected branches into fully-fledged digital bank locations. Any bank customer entering a branch and looking for advice before purchasing complex financial products represent a good opportunity for banks to build better customer loyalty and experience. That is why highly-trained staff with the right capability can be trained to offer detailed product information to those customers; this may require the ability to provide the right resources through digital channels and new technology platforms connected to these physical outlets, which the traditional banks have in abundance.

5.6.2.1 Fast-tracking Branch Automation

Currently, only a few super branches are automated at the case bank. To successfully serve the traditional customers and attend to the new digital natives, branches need to b**e** automated as much as possible; this may involve fusing the old with the new. Although this can reduce employees, a highly trained team can provide quality advice to customers buying more complex financial products or services. Currently, very few branches have highly-skilled staff and self-service machines that can allow for transactions for day-to-day services.

5.6.2.2 The Need for Personalisation

According to the response data collected by the researcher, GCTO and most incumbent banks currently provide limited personalised banking services for their customers. The interview data also revealed that it offers some form of business intelligence through a dedicated unit, offering

reporting and general insights. Currently, most banks get information from their customers through different interaction channels. The data generated from the process can be precious because it allows them to get a detailed customer profile. The ability to harness this data in real-time can provide significant. This process may provide more understanding of customers' requirements, including their lifestyle, demographics and preferences. The compounding effect can be the ability to offer customers compelling financial products and services.

5.6. 2. 3 Inclusion of Bank Locations in the Omni-channel Strategy

Providing consistent experiences at the branches and online digital channels can be essential for increasing digital adoption. Research shows that good interactions between customers and their banks create better user experiences, and it may require consistent messaging in both digital engagements and physical branch locations (M. Baeujean, 2006). Maintaining consistency in the digital and offline customer interaction experiences is essential to meeting their expectations and ultimately gaining loyalty.

5.6.2.4 Re-Inventing the Business Model

Below are some strategic options that may be valuable to the case bank to help forge ahead with current DT initiatives and cater to the new digitally native customers (V. Srinivas, 2019).

Plan 1: Continue to create and integrate digital operations across branch locations and then begin to enhance the customer value proposition based on new processes to reflect the branch network and the new digital channels. It may help reduce costs and shift the focus of branch employees to more value-added tasks and the complicated services visiting customers will require.

Plan 2: Improve customer value proposition with digital content, insight and engagement at the branches before focusing on integrating digital operations into the business. Customer engagement can be better through the speed of service and the offering of personalised products and services to bank customers.

Plan 3: Develop new capabilities around the transformed customer value proposition and operation while still focusing on transforming current operations and ensuring the customer value proposition is included in the equation.

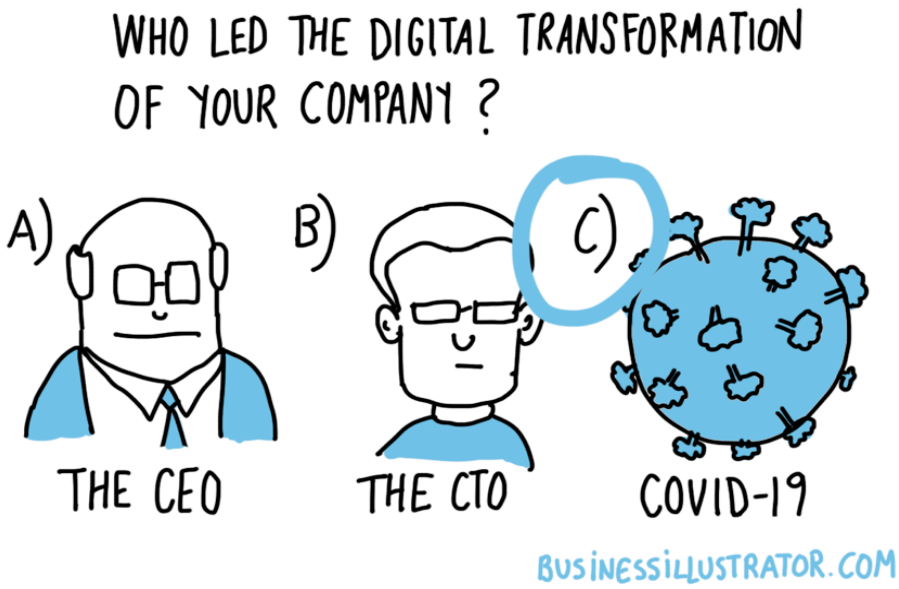

Fig. 5.2: The Role of the Pandemic in the Pressure to Digitally Transform (Business Illustrator.com)

The last couple of years have been difficult for most financial services sector companies, partly due to COVID-19 and the need to connect with customers digitally. Customers are now demanding more than ever, and more than business as usual is needed to retain the ever-demanding customers. Transforming organisations have undergone a high level of unprecedented challenges in responding to business and customer needs. As indicated previously, some very eager banks embarked on the transformation journey and rapidly moved from traditional banking methods to complete digital banking. However, most of them still need help to achieve digital maturity and fend off the competition; for most, the rapid move needed to be better planned, leading to low customer receptivity and more staff inertia to transformative change and a failed transformation process.

Although most African financial institutions recognise the importance of digital banking and embracing digital innovation across all organisation functions, with the pandemic providing the urgent justification for change, a significant number still need to be recovered on how to address the issue of transformation. The urgency for innovation was further illustrated below by President Emmanuel Macron, who argued that digital innovation is, therefore, *"the best way to provide the solution made by, and for African people" (Olupot 2018)."*

There is an urgency to transform across the organisation, but this puts consumers and employees under pressure to adjust to the new and changing organisation (A. Babbar, 2023). Furthermore, increasing disruption from emerging technologies adds pressure to evolve into a digitally mature organisation. Even though many financial institutions struggle, they are still making significant moves to provide a great digital experience for customers. Consequently, the digital banking landscape remains open and fast changing due to the new and urgent need to engage customers and other stakeholders via digital channels.

According to (Davenport, 2018), large enterprise banks and small start-ups financial service firms regularly seek new avenues to digitise and use enterprise data to drive value and competitiveness; this is evident in the adoption of new innovative technologies, including AI, ML, Analytic models and, to a great extent, the use of automation in the execution of processes (Davenport, 2018). For example, deploying a platform model with cognitive capabilities as part of the transformation process to various bank functions can create efficient economies of scale for banking services (Schuh et al. 2009). However, to achieve real success, they must review all business processes and how integration on a grand scale can add compelling value and overall organisational performance, setting the stage for banks to build predetermined approaches to measuring performance against set criteria **(**Kriebel & Debener, 2020).

5.6.2.5 Business and IT Integration

One of the signs of a stalling traditional model for transformation can be the significant contrast and variation in worldview between the business and the technology teams. The former sees impact as high based on performance, while the latter will measure it as much lower based on daily activities instead of performance (30). It is the case at the case bank; the interview data confirmed that IT teams initiate many innovations, but out of the need to make their jobs easier, they also initiate some requests on behalf of the business. But to achieve business value from technology deployments and a closer synergy with the business, the technology team may need to work closely to achieve close integration across all functional areas. Technology and business teams may need to plan together to devise new strategies to move to a new organisational state that will require letting go of the old isolated processes and structures with departmental silo units; and deploying modular pilot programmes that are more comprehensive, cutting across the organisation (31). This new strategy should include modular methods of data sharing as well as sharing of operational activities utilising technological innovations.

5.6.2.6 Test for Ideal Model and Technologies

Transforming financial organisations can try out various technologies and adaptive business models of innovation (N. Floss.,2017), such as the different levels of leadership from the executives, operational directors, managers, and operational teams working very closely and collaborating with the technology team to implement the various technology solutions. This bridge phase is where the old and the new processes are fused. The case bank may continue along a similar bimodal path to allow the business to drive the change process as more pilot projects demonstrate the new model's success, helping to gradually develop the capacity to link additional operational functions and business units to the transformation roadmap. This may help business leaders understand any bottlenecks in technology innovation and take corrective action as they evolve.

However, the downside of this approach may be the limited number of employees in the business units that will have the capability and competency to drive digital innovation (Blanka, 2022). Business team members could frequently be more technology savvy and invariably lean on the technology departments to guide them along innovation paths. Therefore, change

organisations can invest heavily in capacity building that will cut across a significant section of the business and technical units to achieve success with digital initiatives, and this may be achieved by setting up dedicated labs for educating employees across the business.

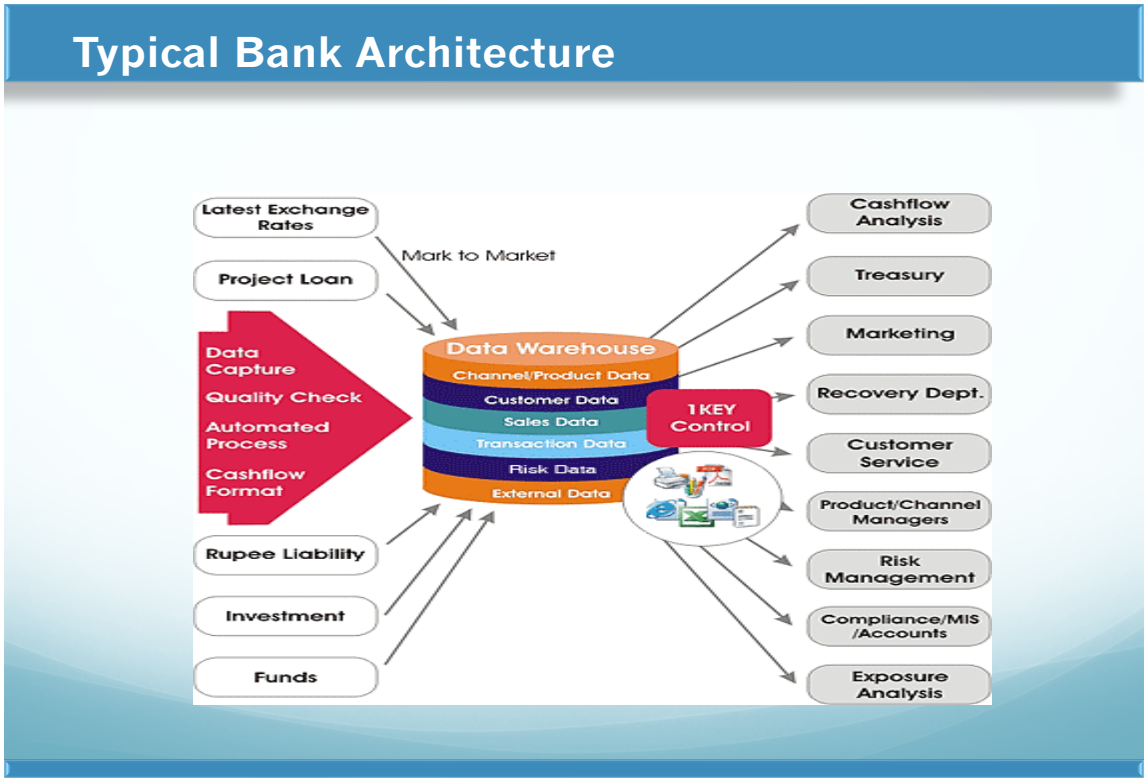

Fig. 5.3: The Urgent Need to Restructure the Enterprise

As GTCO seeks to transition to a platform business model, it can consider collapsing existing silo structures and move consistently towards a hub or centralised data consolidation model, allowing for rapid implementation of AI-driven applications in the new data-driven ecosystem created by the bank. Organisations that focus on building sophisticated data engineering capabilities and competencies and encourage using analytics-based prediction models across the business, with an increasing goal of automating operational tasks, will stand out and succeed (M. Hasan, 2020). Such organisations are now beginning to function as technology companies by developing comprehensive capabilities that enable rapid product and service experimentation for successful product releases.

5.6.2.7 The Notion of Ambidexterity

In achieving digital maturity, there is a need to reflect on the ideal business model, and this may include adopting an ambidextrous approach to business model selection. According to Tushman (2013), an organisation undergoing ambidexterity can simultaneously be in pursuit of exploitation and exploration to cope with the turbulence of disruption resulting from the transformation process if it is to achieve sustainable competitive advantage. An organisation's ability to pursue both strategic directions can allow any transforming organisation to compete in its maturing market where control, efficiency and incremental improvements are critical to

success. For traditional banks currently exploiting and having built success, such as GTCO, sustaining progress with the current business model will peak over time. Developing an adjoining business model to explore requires flexibility, rapid experimentation, and autonomy is critical so survival (Tushman, 2013), particularly when most organisations undergoing large-scale change struggle to combine the status quo operations with the latter exploration strategy.

Although ambidexterity may seem straightforward, the reality is far from easy; it is a complicated process for most organisations to achieve, particularly the large-scale organisations transforming like GTCO. The issue may be partly due to the significant challenges of combining exploitation, exploration and coping with organisational turbulence of transformation for sustainable competitive advantage (Jansen et al., 2006). To address exploiting current business opportunities can require organisations to adopt business strategies focusing on efficiency (March 1991). Exploration also requires focusing heavily on experimentation and risk-taking to foster disruptive innovations. As it currently appears, focusing on only one of the two strategies above can be detrimental to any transforming organisation (Turner et al., 2013).

Ambidexterity is not a new concept; there have been many studies on it (Duncan, 1976). However, despite all the studies, the real challenge is establishing a positive effect on an organisation's performance, particularly when considering environmental and technological uncertainties during digital transformation. Furthermore, exploitation and exploration consume scarce resources under tight budgets, creating friction that the case bank should balance (Wong, 2004). Organisations that take an ambidextrous position will require multiple organisational strategies, structures, and processes (O'Reilly, 1996). Furthermore, the case bank may have two parallel strategies by developing a new digital entity model separated from the current traditional bank (Heraclius et al., 2017), which may allow business integration between the two strategies whilst ensuring alignment, with a specific focus on each strategy direction (Fang et al., 2010). There is also the notion of contextual ambidexterity, which refers to adaptive changes for exploitation or exploration (de Clercq et al., 2014). The case bank may need to balance these activities by encouraging and empowering employees to experiment and use both.

In conclusion to the above recommendations and after extensive analysis and review of the challenges to transformation at GTCO, the researcher has summarised actionable points for immediate changes below. The researcher reviewed the various challenges identified from the response data and developed a framework with specific corrective actions with a list of actionable points in the diagrams below; these actionable steps can guide the case bank as it continues its digital transformation journey.

Fig. 5.4: Intervention Framework Diagram with Actionable Change Areas

The above intervention summary covers the highlights discovered by the researcher as the primary pain points to achieving successful DT for GTCO as a digitally mature organisation. The analysis concluded that some impediments could be resolved to enable the bank to achieve digital maturity. Below is the detailed framework developed by the researcher based on the research findings; this includes three distinct categories: impediments to successful DT, solutions recommended to overcome the challenges, and the impact after applying the required solution. The responsible actors in this domain include executive management that can adequately drive the necessary changes within GTCO.

Fig. 5. 5 Framework Recommendations: Strategy

Fig. 5.6 Framework Recommendations: Leadership

Fig. 5.7: Framework Recommendations: Infrastructure

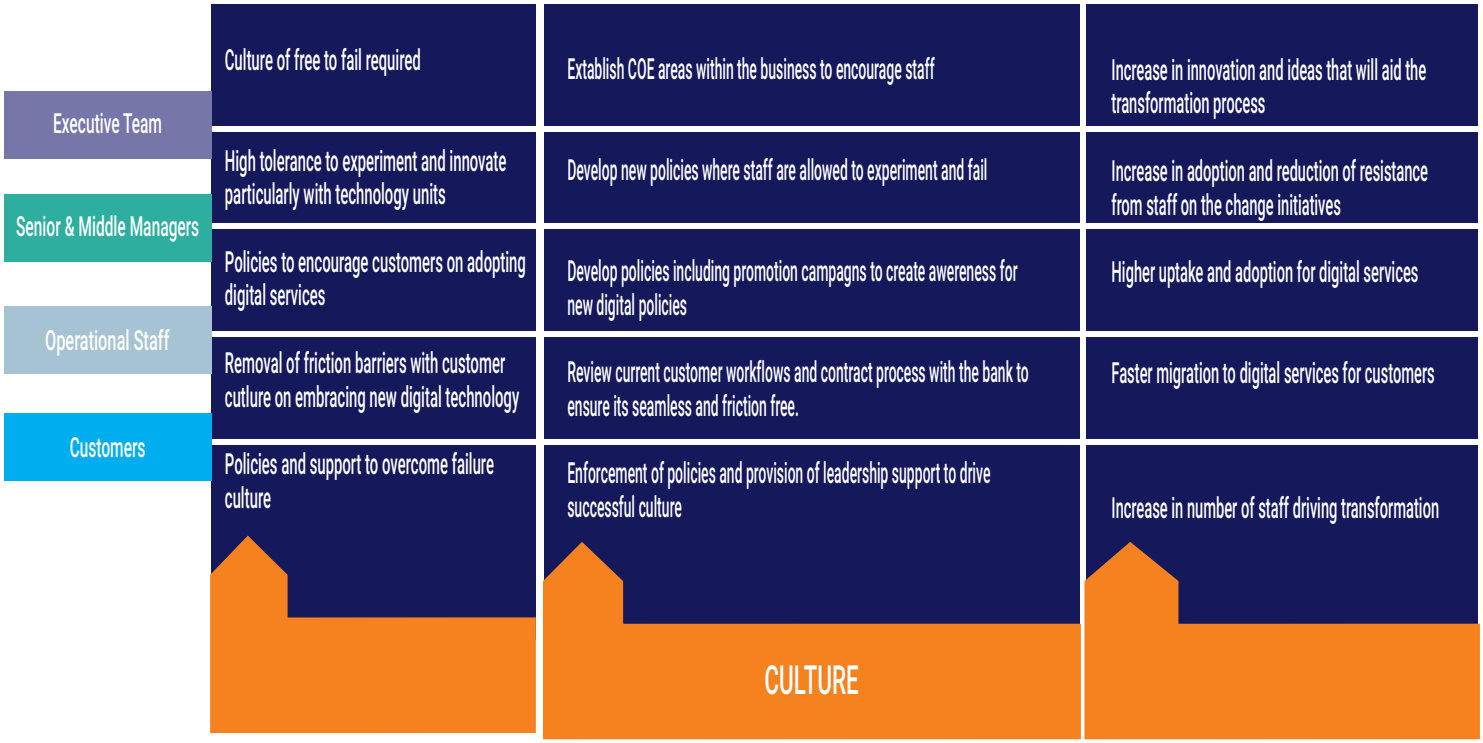

Fig. 5.8: Framework Recommendations: Culture

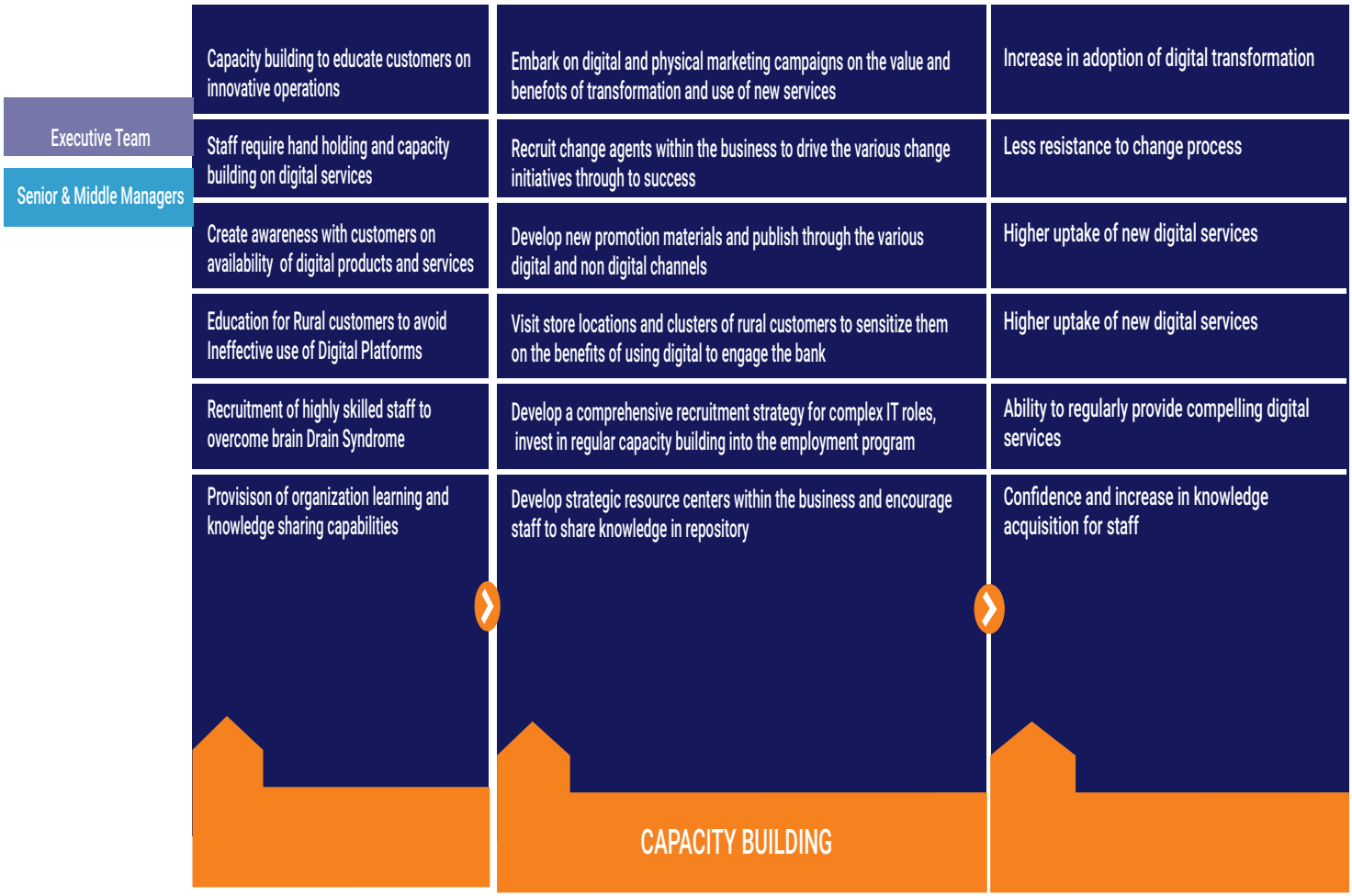

Fig. 5.9: Framework Recommendations: Capacity Building

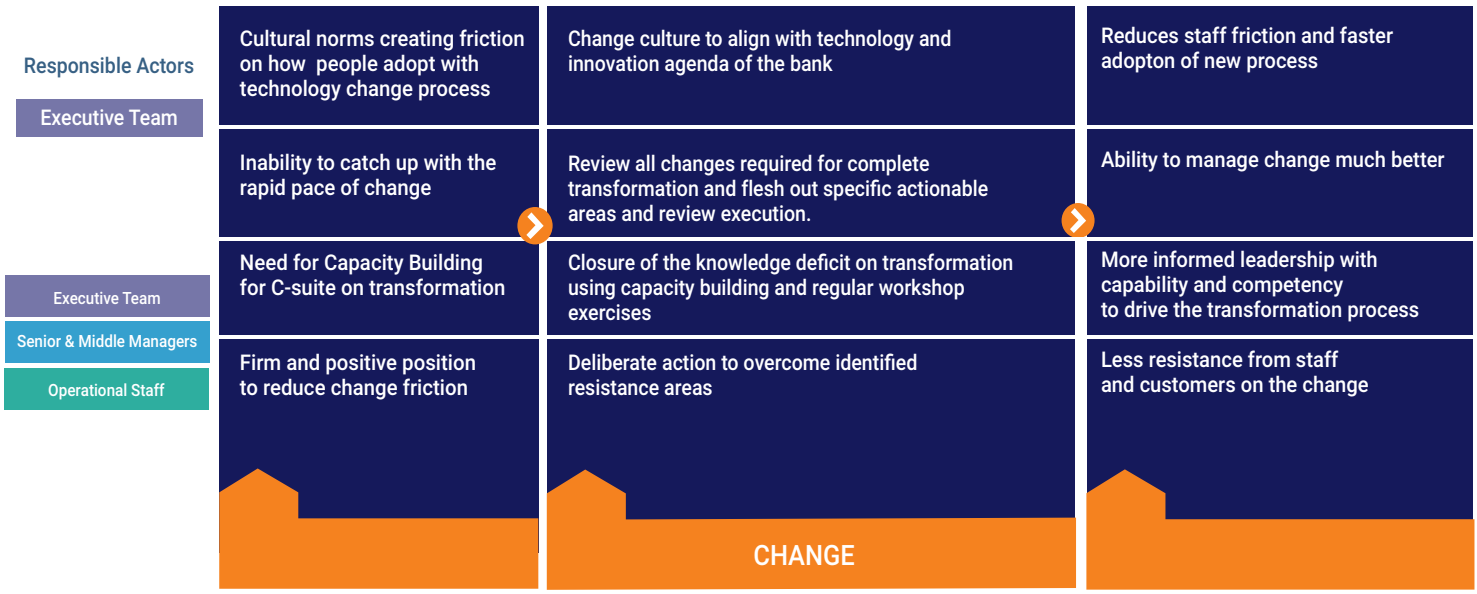

Fig. 5.10: Framework Recommendations on Change

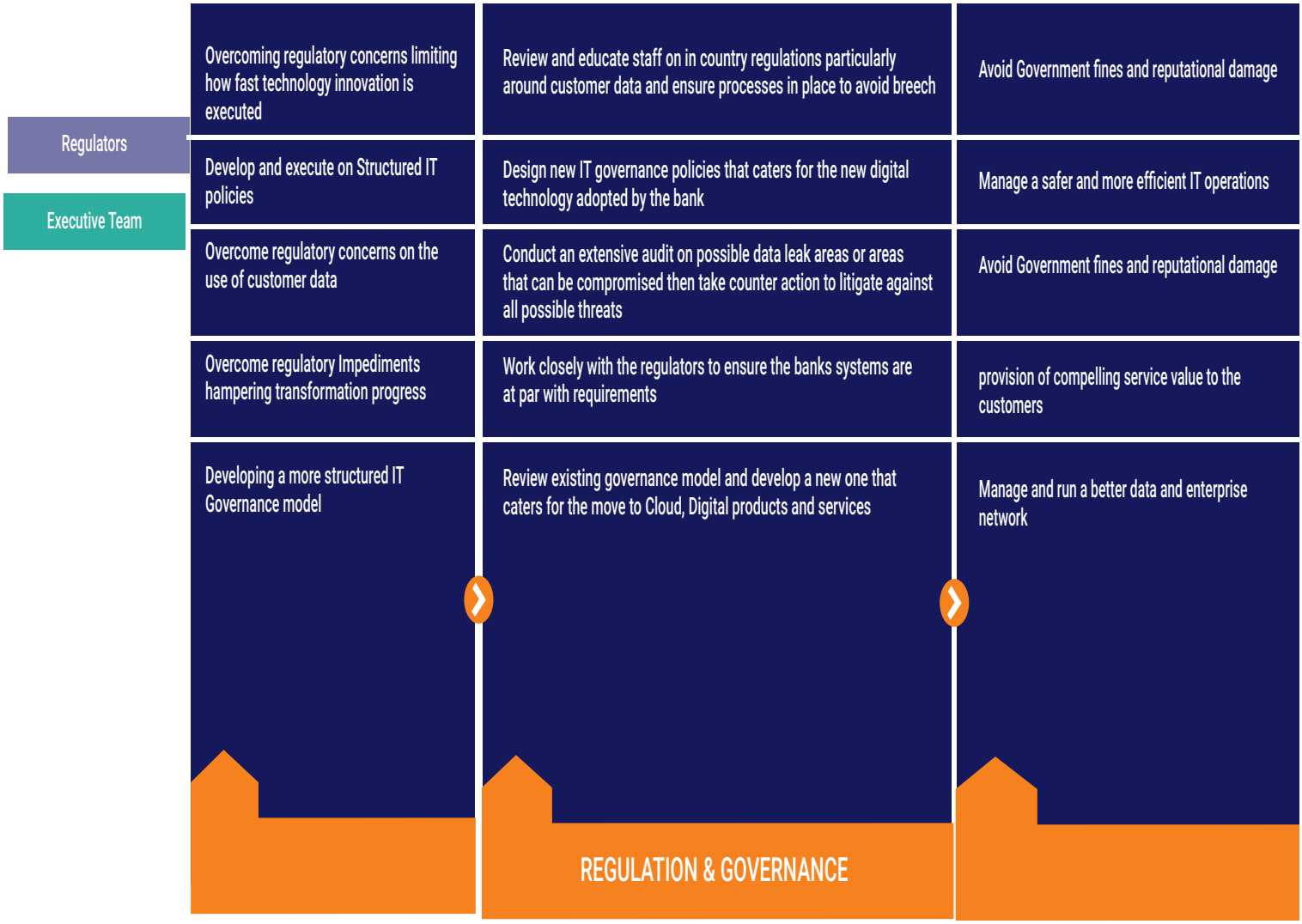

Fig. 5.11: Framework Recommendations: Regulation and Governance

Fig. 5.12: Framework Recommendations: Security

Fig. 5.12: Framework Recommendations: Business and Operations

5.7 Contributions to Theory and Implications for Practice

The literature review revealed several pain points restricting the case bank from achieving digital transformation and becoming a digitally mature organisation. The study also examined the various dilemmas faced by GTCO in the DT journey. This thesis adds to the body of research on overcoming the challenges of transitioning to a more digitally mature organisation, taking the competition and customers' cultural and attitudinal behaviours into cognisance. The study builds on existing theories and relevant models on technology innovation, change management, digitalisation and organisation transformation.

In summary, this study makes several contributions after careful analysis by the researcher. One such is how the case bank can best execute a strategy that allows it to keep up with serving the current market and providing the continuous incremental innovation it has always offered to attain its current leadership position. It also provides best practices to navigate and address the move to an entirely new target state without hurting its current business model. This study conceptualises several factors, particularly organisational change, technology innovation, and the impact of various innovative digital technologies. It also touches on ambidexterity in business and strategy (Werder & Heckmann 2019). Furthermore, the study highlights the case bank's ability and importance of balancing exploitation and exploration in its current turbulent context. The research section covers the need for regulation and IT governance as an established lens to manage and control transformation activities (DeLone, 2018).

By the goals of this research, practitioners in the banking world, particularly in the local African region where the case bank is situated, may draw on the researcher's result to gain clarity on

the complications impacting a successful digital transformation effort. One of these complications is the ability to manoeuvre the complex strategic decisions that address the current traditional business and the new digital trajectory of the bank to become a digitally mature organisation. Drawing on the highlighted concepts of organisational change in the transformation process, executive leadership can be a cornerstone to successful transformation. It can help identify and determine relevant areas of action that will more accurately clarify the effects of transitioning, taking the environmental turbulence into context.

The findings of this thesis also highlight how transformation impacts the following organisational components and other significant pillars of change, including people factor, process, structure and culture to transition to become digitally mature. The DT equation must include the technology infrastructure, which is critical in the four pillars of transformative change. The value of technology innovation as a crucial enabler in the transformation process must be addressed (Ashford et al., 2018). This study has highlighted the tangible value of technology in overcoming the pain points in organisational transformation. Significant value-add, including substantial changes to the case bank's brand and customer experience, especially how customers engage with the bank and its products and services.

It is important to note that innovative Technology, as part of the significant changes to an organisation, also provides the ability to build new capabilities (H. Ince et al. 2011). It impacts the review of the current business model employed by the case bank, focusing on how it serves the traditional customers and how best it serves the new digital natives rapidly embracing digital banking services. The ultimate gain from applying technology to the transformation process is to achieve the performance, growth and efficiency gains set out by the bank's shareholders as part of the reasons to transform. Some of these gains are demonstrable and sustainable economic value as well as efficiency in operations and increased revenue from current and new digital channels of operation

5.8 Discussion

5.8.1 Holistic Approach to Transformation

Rather than executing DT with solo efforts, traditionalists are taking a holistic approach to tackling transformation to achieve digital maturity, which involves having a sound strategy for the longer term. A financial organisation that has taken time to go through the DT journey and completely re-modelled itself will stand a much better chance to shake off FinTech's fiercely competing in its space. A digitally mature organisation will be better equipped to reposition itself to increase market share, its revenues and the bottom line –profit (32). This seems to be the approach the case bank has taken.

As the researcher discussed severally, the impetus for change in driving the DT process should come from the top management; the executive can communicate the new strategies to the organisation. This may include pressing for more digital sales of products and services using unconventional means and embracing the new platform business model adopted by the bank.

Interview data confirmed executives' mandate, including setting KPIs on change operations, particularly back-office efficiency using technology. What is sacrosanct is the leadership determination efforts in validating the metrics set as a benchmark for the DT program to ensure the changes are adding specific value across the organisation.

5.8.2 Changing Consumer Demographics

Consumer behaviour is rapidly changing in the face of DT; customers need to be more patient in delivering digital services; they want more convenience, faster response times and a service level that was unheard of many years ago (Berman 2012; Granados & Gupta 2013). From the literature review and the data received from the qualitative interviews and secondary data reviewed, it is clear that case bank consumers operate differently in this new digital era. The old way of reaching the bank customer is becoming obsolete and fast, with minimal to declining value recorded. The former is arguably more efficient and less stressful banking, while the latter can be demanding, particularly when customers have to visit physical bank branches regularly. Today, with technologies like data analytics and advanced technologies like generative AI, banks can better understand their customers' behaviours (33). If applied correctly, such innovative technologies play a significant role in establishing the success or failure of a bank's digital product or service (Berman 2012).

It is evident that digital technology and innovation is changing the dynamics of financial service organisation and their customer relationships and experiences; it is also changing the information asymmetries between the bank selling products and the customers consuming the products (Granados & Gupta 2013). Information ubiquity (Vey et al. 2017) is topical with the speed and pace of access to digital banking information using ubiquitous technologies, such as affordable mobile phones. Significant changes are bound to happen in the banking world, where the already established relationship with bank customers is fast changing and taking an entirely new dimension.

5. 8. 3 Employee Role in Transformation

Many traditional banks are already adopting some of the initiatives mentioned by the researcher in this study. However, they often need to pay more attention to the severe challenges they will go through, including the value of gaining employee participation using agile methods to drive the execution of all transformation initiatives across all departments in their organisations. The researcher discussed this fact earlier in the study, and they are functions that cannot be left to consultants; the organisation's leadership and employees must drive them. Technology intensity is a topical issue in today's digital era, meaning how far employees will push to ensure technology is deployed to drive digital innovation and achieve business outcomes across the organisation. Research indicates that organisations that invest significantly in technology, like GTCO, making tools available to the vast amount of data held and technology savvy staff generally gained from technology innovation intensity tend to achieve superior performance. On the contrary, organisations that could not develop technology and data-driven competencies with their team could not compete and ultimately failed to achieve extraordinary performance (34).

Further studies have shown that investing significant sums in technology does not necessarily equate to better performance. In some transformation deployments, despite investments in tech-savvy employees, considerable technology investments can result in lower performance results if there is no coordination, collaboration, and proper management between the organisation's various divisions. Success in DT is usually propelled by the three fundamental cornerstones, namely architectural, leadership and organisational methods to transformation (M. Mohring et al., 2023). These are the best methods to distinguish between success and failure instead of overreliance on competency. However, transformation also profoundly changes the people dynamics by giving employees more options in achieving tasks while radically altering how they relate to one another in the new digital financial market.

As with any phenomenon, some will perceive the changes DT brings as significant, while others will see it as radical, risky or even dangerous. An illustration that explains this concept is the exposure of sensitive customer transaction datasets transmitted through new platforms sitting in a remote Cloud location for a typical bank. Some believe that moving to the Cloud is more risky and less secure. In contrast, others will naturally embrace the changes required for better efficient working methods, and some argue that it is an important survival strategy for modern organisations (35). The case bank has started an aggressive approach to transform and integrate its silo structure. Some departments and units have started the journey to DT by building a central data science department with specialist teams running operations. They apply the agile methodology in application development and process improvement, including automation; some have started the journey to Cloud-based platforms connecting multitudes of in-house applications and some third-party applications using sophisticated API mechanisms.

However, complete transformation and achieving digital maturity requires more than the above; it may include organisations moving to create a central relevant enterprise hub. Such should allow data traffic to be gathered in a confluence to allow cognitive capability models to be applied to generate valuable insights that can create more network effects for the company’s digital assets. The case bank is yet to achieve this level of maturity delivered by the fintech. Once completed, the organisation may need to develop additional capabilities to create and manage integrated applications, possibly through defined structures where modular applications and AI capabilities can be further applied and used to generate significant value.

Finally, the value of data democratisation in banking holds much promise (37). The case bank can seek to develop a strategy that makes them masters in democratising data across the enterprise. This effort will not be easy considering the infrastructure impediments in the region; the process will require the collapse of existing isolated structures and systems; it will also need the consolidation of all enterprise datasets that can integrate with systems across all departments and units, all with a singular purpose of extensively sharing datasets including business information to achieve breakthrough performance and measurable business outcomes. This is the ideal target state of any bank undergoing digital transformation.

5.8.4 Alignment with Fintechs

Fintechs are creating significant value in the financial services sector; It is, therefore, important for traditional banks transforming to form partnerships and work more closely with the Fintechs and not see them as hostile "enemies", particularly ones they share standard value systems and digital ecosystem with; this can spur entrepreneurship as part of transformation (Kohler, 2016). Incumbent banks and other traditional banks going through the DT process should consider Fintechs as a source of market enablers that require collaborative partnerships for success rather than seeing them as threats to their market value. The case bank has joined forces with several Fintechs, including Flutterwave and Paystack, to provide premium payment services. These strategic partners seem to be paying off with terrific dividends to both the bank and the Fintechs.

Transforming banks may also collaborate with the Fintechs to implement new nimble structures within the large existing structures at the typical incumbent organisation; they can seek to partner to develop goal-driven and agile development of small complete pieces of deliverables and conduct regular field-level explorations of go-to-market models instead of relying on exiting mundane and complex processes. In addition, traditional banks should realise that corporate entrepreneurship underscores the need for organisational success (Zahra 2015). Furthermore, financial institutions that embrace knowledge acquisition and sharing through partnerships with FinTech companies can create an enabling atmosphere for testing various innovative ideas, which positions them for success.

It is a known fact that digital start-up companies have proved to be the champions of DT; this may be attributed to the fact that they are built from the ground up as digital companies with digital structures and models employed from day one (Barroso et al., 2022). Their agility, flexibility, process automation and overall business strategy make them a force to reckon with. However, traditional banks, like GTCO, have been around for decades, with much more experience, resource capabilities, brand reputation and broader customer base. Success may require a healthy partnership between the traditional banks and the new digital start-ups to grow the financial service industry beyond its current fragmented state in the region. Both organisations will benefit from the partnership by leveraging each other's strengths and weaknesses.

Some financial institutions going through the DT process argue that transformation is partly a cultural issue and not necessarily about partnerships. But the researcher thinks that partnerships are critical for transforming firms looking to offer compelling digital services, and so are other variables discussed in this study, including culture. There may be a need to firmly communicate a new cultural direction throughout the organisation to avoid failed projects that will eventually pay off. However, adopting a cultural strategy of broadly communicating culture may risk management losing the overall vision of transformation and getting completely lost (38). This can create an implosion that may confuse employees going through the already complex change process

CHAPTER SIX

CONCLUSION

6.0 Introduction

One of the tangible promises of transformation and achieving digital maturity is staying ahead of the competition, and to achieve this, there should be a significant improvement in speed to market, radically reducing operational costs and enhancing overall service offered to position the organisation for growth. On a strategic level, it is crucial for transforming organisations to review extensively how their capabilities align with their desired transformation outcomes. Leadership at these organisations should also begin to drive the transformation operations primarily from the customers' viewpoints rather than the best innovation available. To achieve this, it can redefine and create a more dynamic and responsive business model that seeks to create and capture value based on current realities. It should also thoroughly examine individual initiatives on their transformation agenda to determine if and what to eliminate, automate or keep with the status quo. Transforming organisations can seek to apply the right level of technology to drive critical business changes to achieve both top and bottom-line growth across the organisation.

The qualitative data analysis revealed several facts, in this case, a research study, including the realisation that the organisation currently operates a traditional digital innovation model. This process occurs when technology projects reside primarily within the IT department of any organisation (Forgoros et el., 2020). The case bank's technology department is responsible for most innovations, and most technology investments are usually made in the IT departments, with relatively lower investments across the business. Currently, the impact of technology innovation at the case bank can be felt across various country subsidiaries but in wildly inconsistent ways, with most technology initiatives centred at the bank’s corporate headquarters in Nigeria.

These innovations are often in various silos with little or no cross-functional or cross-boundary distribution of technological impact evenly across all African operational locations. The result of this type of model is evident: various bursts of technology and business growth in small parts and often executed inconsistently. For complete digital maturity, there is a need for a holistic assessment of how the entire organisation can benefit from digital transformation. Financial service organisations that have successfully undergone the transformation journey have had to centralise functions, interconnect departments and units and normalise data from various organisational parts (P. Verhoef et at, 2021).

Product departments can deploy integrated solutions in areas ranging from customer service to supply chain management to customer service. These organisations tend to integrate data structures into a company-wide repository successfully. They also build business process platforms to provide collaborative applications and analytic models that multiple business teams can use to enable innovation in wide-ranging areas. Research indicates that the very high

impact of DT is just beginning to be felt by the financial service sector (39). The maturing Internet, the platform business model, advanced data analytics and AI are profoundly changing how organisations compete. These new engagement methods will undoubtedly impact customer values and how they interact with financial institutions.

6.1 Adopting a Strategic Mindset

The pandemic has shown the need for every enterprise to think differently and adopt a digital mindset in supporting business operations. Effectively going through the transformation process requires changing current structural arrangements across the organisation, and this has to do with significantly moving towards a cross-functional and matrix organisation. Traditional banks can explore the options of shifting from reactive business models to more proactive ones in responding to market challenges determining whether they can compete and win, particularly against the new digital native organisations.

Change is the only constant in a fast-developing, digitally interconnected world. What will differentiate leading banks with resiliency like GTCO from the others as they evolve can be their ability to persevere and benefit from the effects of constant disruptive changes in the financial service industry. Also, organisations having the ability to align technology infrastructure with risk, business processes, structure and resiliency in strategy can make them stand apart from their competitors. Therefore, enterprise architecture may differentiate between technical and operational resilience. A well-thought-out architecture strategy can strategically provide organisational clarity to power through the various DT initiatives, allowing the leadership to map out clear directions for all target states for the business.

Transforming organisations should be aware of the changing requirements; in recent years, bank customers have become increasingly aware of newer, innovative and convenient ways of engaging with their customers. As this research indicates, these new digital models have opened the financial sector to new Fintechs operating in the same space as the banks. With the technology's capability to compete, success will be more effortless. Furthermore, the ability to overcome the myriad challenges GTCO faces will set the tone for how well it performs post-transformation.

6.2 The FinTech Effects

The disruption from the FinTech companies is a cause of worry for most traditional banks. What makes it more of a concern is that barriers to entry are low. Also, the deregulation of the banking industry has encouraged start-ups to take up new market shares (T. Philippon, 2016). These start-ups and big technology firms can now offer more unique products and services using innovation as the driver for such offerings. Furthermore, unbundling financial services to the same bank customers is now done more efficiently and is cheaper than the traditional banks, thus providing the average customer with more choices than what was obtained in the past.

The efficiency gained by the Fintechs from offering digital-only services by some digital banks in Africa is evident; a good example is the neo bank, Kuda. It started operations in 2016 and

now serves over 2 million active customers across Nigeria whilst running from the UK; it does not have a single branch location in its operating regions. Naturally, its fixed costs are significantly lower than the traditional banks with over 300 branches and high operational costs. These Neo-banks leverage data mining whilst applying cognitive models to data experimentation to offer loans and credit services to customers of traditional banks that do not qualify for loans. The technology leverage allows them to earn from a niche market that traditional banks cannot service while keeping costs low (36).

A combination of the above scenarios is how the new entrants use digital technologies to battle against the large incumbents. Therefore, to compete, transforming banks can ensure they deliver on their transformation ambition by leveraging the various success factors discussed for change in this study, including the investment in technology, particularly the use of data. Traditional banks have often been custodians of vast customer data, including daily transactional data. They are sitting on massive data assets, particularly in assessing creditworthiness, customer profiling, and personalisation for upselling new products and services. However, the big technology companies dabbling into financial services can now also offer banking services based on customer data they generate on their platforms; this makes the leverage position held by the traditional banks highly challenged.

6.3 Reviewing Transformation Hurdles

The interview data gathered and analysed throughout this study revealed that the case bank faces a significant dilemma with its transformation journey, which involves several mitigating factors. As indicated previously by the researcher, this includes the need to address banking for the current traditional customers who make up a large part of the bank's revenue; most are not keen to move to digitalisation fully but will instead continue visiting the physical branches to transact business, this has worked well for several years, and they find it difficult advancing to a different way of banking (40). The case bank should address these challenges and the growing need to provide the digital natives with new services offered on more modern digital banking platforms.

The current business model of the bank was built based on traditional customers visiting its over 200 branches. This model is partly why the bank has been very successful. So, shifting to a new digital economy or business model may negatively disrupt the organisation. It may lose the market share built over decades; they are trying to thread with great caution to maintain its enviable market position. However, all traditional banks realise that transformation has significant benefits to address and maximise the benefits. However, they must change the status quo by taking steps towards the DT journey (Matt et al., 2015). Nevertheless, this process involves significant reformation, transformation and enhancement of capabilities and competencies across all areas of its pan-African operations. It could involve the bank taking on an entirely new position and identity (Wessel et al., 2020); these risk factors challenge any transformation drive.

To further address the challenges of competition, including the FinTech companies gaining power in the market, transforming incumbent organisations will need to figure out the right

strategic balance to address the needs of emerging digital requirements by deploying new innovative technologies and business initiatives (41). It requires developing new digital strategies that can address the business dilemmas, one that fits to address all functional transformation needs. Furthermore, these strategies should address the peculiar needs of working with a rapidly growing customer base, including a new generation Z category requiring novel yet demanding digital banking services. Providing adequate services to this segment may be a challenge for the banks as they must develop capabilities and strategies to explore and exploit both simultaneously; this is termed an ambidextrous organisation.

Finally, as the researcher concludes this study, it is essential to reflect on the research question as it forms the foundation and basis and trajectory of research for the thesis: "How can Africa's leading bank GTCO best navigate the challenges in their transformation journey to attain digital maturity?". In answering the question, it is essential to take the definition of digital maturity into cognisance as it further clarifies what transformation is about. According to BCG, "Digital Maturity is the measure of an organisation's ability to create value through digital" (42).

Therefore, digital maturity is more than deploying the best technology innovation, which the case bank has significantly invested in over the years. It is more about the bank taking a bird's eye-view strategy by leveraging technology to create compelling value in transforming all areas of the organisation into an entity that can compete and be successful in today's crowded financial marketplace. Regional incumbent banks have invested significantly in attaining digital maturity, while others are still struggling to make strategic changes. This latter can be due to several factors, with the risk of failure and the high cost of DT being champion among the reasons.

From the qualitative data gathered, the case bank's strategies for deploying digital technologies in alignment with the business may be limited. However, they have invested significantly in innovative technologies to automate and digitise. They may need to invest more in the right tools and talent to fully realise their DT dreams (B. Frankiewicz et al., HBR, 2020). This may include specific high-skill roles linking data science and artificial intelligence, which are vital requirements for achieving true digital maturity across the organisation. Consequently, the bank is increasingly vulnerable to disruption from start-ups, new financial entrants, and other competing banks that are much more adept at using digital technologies to achieve business competitive advantage.

Digital maturity is essential for organisations seeking to achieve great things through innovation, whether bringing new products or services to market or delivering an enhanced customer experience. It is necessary to understand that digital maturity takes time and effort for any organisation, so digital transformation is often called a journey rather than a sprint (G. Westerman et al., 2012). GTCO is making great strides at achieving this remarkable maturity feat; however, they still need to be quite there and on the journey. To attain maturity will require the leadership team to make some difficult and significant decisions by tightly aligning and integrating essential pillars of the organisation (G. Kane et al., 2017). They must continually and consistently keep working on executing specific change programs for several years; this

will involve spending time to get the transformation details right as they move through the change process (G. Kane et al., 2017).

It will involve introducing novel technologies and strategically thinking about how new value can be created and captured across the organisation. Part of the required transformative strategy will include cultivating strategic relationships with partners along the financial value chain to achieve greater leverage over the growing competition.

10- Revisit the research questions in the Conclusion Chapter and explain how they have been answered, highlighting what is new and novel here; whose work has been built on or challenged.

The framework developed by the researcher builds on existing theories on DT to include Digital Orchestra and Digital Piano by specifically reviewing the following components as part of the qualitative analysis process. It leverages the above models by investigating regional challenges GTCO faces as it transforms. This includes several challenges, including dealing with low literacy rates with customers adopting digital banking and coping with epileptic power outages as the bank further expands its digital footprints, particularly in rural areas. The researcher's framework also looks at the challenges of dealing with the 'brain drain' skill deficit challenges mainly faced by transforming banks in the African continent and the significant infrastructural deficiencies impeding the deployment of new innovative services, how data democratisation can be achieved considering the limited and often congested Wide Area Networks as well as the migration to private Cloud infrastructure. These are regional challenges the digital transformation, BMI and Change models do not cover, partly because these challenges are peculiar to developing countries.

6.4 Limitations of the Study

Although this thesis covers a broad research spectrum, it has limitations. The meticulous process of collecting, analysing and interpreting the data can have some elements of bias that can impede the research outcome. However, it can also influence the subjective understanding of the researcher. There is also the possibility, albeit relative, that reviewing extensive literature in articles and journals meant the researcher should have included essential information that could be useful for this study (Yin 2009). However, the researcher did follow very structured research methods to review and analyse the data collected from the banks; this proved to be very effective, though some may argue that the first-level and second-level coding should be more elaborate. Furthermore, given the data collected and insights generated, the researcher is confident that the correct process was followed, and the data extracts are invaluable to this thesis's intervention.

6.5 Concluding Arguments

This thesis opens doors for future researchers to look at varying approaches that can benefit the DT process. It is important to note that looking at DT in banking through a few prisms, including the organisational or technology aspect, has limitations; it omits other valuable insights that can be gleaned from the DT journey, particularly in the African region. This study

has discussed that traditional banks seek to reposition themselves to win in this new digital era considering the ever-more competitive financial landscape.

However, some executives still believe the inherent high barrier to entry into banking may limit or restrict the FinTech companies from completely taking over their market dominance built over decades; this may be partly true, but it will involve considerable effort on the part of the incumbents to remain dominant as the market dynamics is rapidly changing. This may be because of the significant resources they have built in all aspects of banking. It can be argued that incumbent banks are not in imminent danger of total extinction. Owing to the personalised physical services they provide and the traditional, loyal customers still need to be in the digital space, their branches and associated services may be required for many more years, particularly in Africa's peculiar environment, where literacy rates are still low (World Bank Report., 2022). However, comfort in traditional banking methods can be a good recipe for disaster waiting to happen; this is why visionary banks like GTCO are moving into the uncomfortable zone before the battle gets significantly heated with the Fintechs.

In summary, DT is a relatively new phenomenon in most African regions, particularly in the financial service sector. However, the concept is gaining popularity, and executives are beginning to grasp the opportunities it presents to their respective organisations (World Bank Report. 2022). It is fair to state that DT can be classed as ongoing change that occurs at various levels of an organisation, including change in how value is created and captured; also, it includes a strategy on how organisational structures and processes, as well as the entire operations of an organisation, evolve (Parviainen et al., 2017). After studying the case organisation and reviewing several digital transformation articles, journals and frameworks, the researcher believes that DT is undoubtedly a significant organisational change based on various degrees of change that should reflect across all areas of an organisation, including change impacting internal and external stakeholders. Globally, it is clear that the banking sector is undergoing various forms of change, including technology disruptors competing with the incumbents and taking over market share (F. Akinshola 2017). So therefore, the need to move in the digital trajectory is urgent for GTCO and other traditional banks in the region.

6.6 Opportunities for Future Research

From the literature on technological disruption and to gain the various perspectives on DT, the researcher can infer that research on DT is arguably vast and needs to be thoroughly studied, particularly in the African financial service sector. The researcher examined technology and non-technology-related changes from structural and operational integration perspectives on how to propel the business forward; this included transformation initiatives within the organisational context and a broader understanding of the speed of DT adoption. The researcher also looked at the various leadership requirements and highlighted the importance of senior and middle management involvement in the DT process. In addition, the researcher reviewed the competencies and skill deficit aspects of transformation and how they can lead to a threat that separates the digital natives from the traditional and more experienced staff.

Finally, the researcher emphasised the need for traditional banks, including GTCO, to form strategic unions or collaborate with fast-growing Fintechs in their financial ecosystem; this can foster a more progressive transformation effort and allow alignment with the new modern way of delivering transformative services to their customers. The researcher recommends that transforming organisations have a broad perspective for the DT programme, consider resources accordingly and then allocate resources and teams in a structured manner. Alternatively, established incumbents may embark on a pilot programme in a few branches or subsidiaries for the transformation to evaluate results before moving to the much larger and more complex operations across their various regions. This option allows organisations to make changes and fine-tune the steps in the DT initiative process. Radical transformation changes are simply tools and a vehicle for achieving more extraordinary things, including cost savings, efficiency and serving customers better (43). The emphasis should be more on applying the various transformational initiatives in the business, mainly how deploying new technology infrastructure and transitioning to a data-driven model create compelling value for the organisation (Van Alstyne et al. 2021). Therefore, despite the great potential of DT, the reality is that only some can accurately predict the future in terms of value realisation amongst other benefits of transformation; no one also knows for sure the actual impact it will have on the leadership and entire employees of GTCO.

What is sure is the fact that technology is here to stay and will not be going obsolete any time soon. However, the case bank's approach in embracing and executing its DT agenda will either make the organisation more successful or mar it to the point of non-existence in just a few years. Therefore, the onus is on management to ensure it succeeds in its audacious transformation journey. Executives have realised that organisations that lead in scale, with sophistication, organised customer data and digital expertise, are the ones that will ultimately win in the DT journey (44). In this category are also data-driven banks that fully understand how their customers want to engage and transact with them in the digital age. Most of the executives that responded believed that the case bank is already almost a digital bank based on concurrent technology investments made in the recent past. However, investing primarily in technology innovations may lead to a partial enterprise-wide transformation. Furthermore, investing in digital technologies differs significantly from company-wide digital transformation, where the entity strives to achieve digital maturity requiring a tight alignment in people, processes, structure and organisational culture(45). Organisations that can quickly recognise and take corrective actions in their change journeys will be the ones that will reap the dividends of Digital Transformation.

Finally, DT is a vast spectrum with similarly vast challenges; this study focused on specific pain points African banks face as they transform. It will only be possible for a single researcher to thoroughly study all challenges traditional banks face in the African region; this task requires significant resources. This, therefore, leaves room for future researchers to investigate other aspects of DT in the region. Areas that include a more detailed deep dive into the vast cultural challenges, or dealing specifically with the ‘brain -drain’ issue of highly skilled staff leaving for better prospects overseas or the subject of regulation with Central banks' difficulty in

adequately regulating the banks as they seek to innovate and provide compelling digital value unmatched by their competitors.

6.7 Feedback Reviews on Conceptual Framework

Following sharing the framework with several bank executives, below are their responses:

Response from Bank Executive:
"Great work done in digital transformation; the research and subsequent findings are on point! The framework is practical and very relevant to any traditional bank transformation. We have battled with the pain points for some time, and the framework gives logical answers on resolving the challenges; we will be onboarding many recommendations."

Response from Bank COO:
"I particularly like the section shared on branch network challenges; most traditional banks in the region need help to balance non-efficient and expensive branch networks with going fully digital without making sacrifices, including losing customers that have grown with us from inception. The solutions proffered are timely for most large banks with a vast branch network. Well done."

Response from Bank CIO:
"Extensive work has been done in the transformation space, and the feedback from the findings is real. Culture and change are some forces we contend with as we transform. Also, Inertia from staff and customers is another big issue. The research clearly articulates the dangers of not transforming, which we all now realise. However, most importantly, the framework guides banks on tackling our region's peculiar transformation challenges".

Response from Bank CIO:
"I have read extensive articles on the reason to transform, this is not new to me, but the greatest challenge we have faced as an organisation is the 'How' to execute our transformation agenda; this has always been the million-dollar question, and your research clearly articulates the 'How questions' with some great solutions; we will certainly consider implementing some of the recommendations made."

Response from Bank Director:
"As an executive in a large financial organisation, we often do not admit our challenges for fear of the competition getting wind of it. Power and outdated infrastructure are among the most significant business costs in Africa. We do not entirely own the infrastructure value chain or spectrum as a bank. We are a bank, not a power company or an infrastructure company. So even with the best of intentions, when we invest significantly in power solutions and infrastructure, including state-of-the-art Wide Area Networks.

These investments and technologies can only be so reliable as the service provider we connect to and the power company we also connect for services. When we are let down by epileptic power, which is clearly outside our control, it can potentially have a ripple effect on our services. I like how the research highlights these pertinent facts; as we plan our transformation journey, knowledge on mitigation allows our team to make provisions to avoid the disappointment that will impact services; excellent work."

Response from Bank CISO:

"The piece on regulation is striking; a good number of tier-one banks are oblivious to the implications of security and customer data sharing as they invest significant sums in new technology innovations by building out new platforms and moving customer data across the enterprise ring; this research homes in on this fact particularly the NITDA rules and regulations. The research findings will undoubtedly be valuable to practitioners in and out of the financial services sector. It will certainly be useful as a guideline when planning to integrate departmental silos and sharing customer data within the organisation to create more value across the board; impressive!"

BIBLIOGRAPHY

A Big Data Financial Information Management Architecture for Global Banking. 2014 International Conference on Future Internet of Things and Cloud (FiCloud). Munar, A. 2014.

A Conceptual Framework for Designing Data Governance for Cloud Computing. Al-Ruithe et al. (2016)

A literature analysis of research on AI in management information system (MIS) (2018). Nascimento et al.

A literature review on AI, International Journal of Information and Management Sciences. S Oke, 2018.

A model for data governance - Organising accountabilities for data quality management. Wende K, ACIS 2007.

Morphology of the organisation of data governance. Otto B,2011.

A need for research focus shift: Banking industry in the time of digital disruption. Tornjanski, Vesna et al, 2015.

A Sense of Urgency. John P. Kotter, 2008.

A systematic literature review of data governance and Cloud data governance. Al-Ruithe et al. 2018.

African Data Privacy Laws - Page 75. Alex B. Makulilo, 2016.

Agile Change Management. Melanie Franklin, 2021.

Analysis of the transformation of the Russian banking system. International Scientific Conference Digital. Golubev, A, 2019.

Analytics and big data: the Davenport collection. Davenport T, Harris J, Morison et al. 2015.

Applications of Case Study Research. Robert K. Yin, 2012.

AI with big data. Proceedings - 2018 1st IEEE International Conference on

AI for Industries, AI4I 2018. Ostrowski, David.

Assessing Banks to Develop an Open Digital Marketing Approach for the Future of the Bank. Electronic Business Journal. Al-rfouh, Akbar 2019.

Assessing the Potential for “Cultural Disruption” through Sharing Economy: A Case Study of a Time Bank in Helsinki. Träskman, Tomas, Hyde-Clarke, Nathalie. 2016.

Automation or interaction: What's best for big data? Kenwright, David Et al. 1999.

Balancing Innovation and Risks in Digital Financial Inclusion-Experiences of Ant Financial Services Group. Handbook of Blockchain, Digital Finance, and Inclusion. 2017. Sun T.

Article
Banking transformation leaders across the globe uncover six recommendations for overhauling organisational change.

[Online]. Available from: https://www.ey.com/en_uk/banking-capital-markets-transformation-growth/if-transformation-needs-to-be-bold-do-banks-have-the-right-tools-for-success (Accessed on 3rd Feb 2023).

Bank of the Future: The ABCs of Digital Disruption in Finance. Citi GPS. 1991.

Banking in the Cloud: Part 1 – banks' use of Cloud Services. Hon, W. Kuan, Millard, Christopher 2018.

Banking Regulation in Africa. Folashade Adeyemo, 2021.

Banking Transformation. Banking Transformation, Vanini, Paolo. Broumandi, Shadie. 2013.

Banking without banks: Exploring the disruptive effects of converging technology. Journal of Securities Operations & Custody. 2014.

Big data analytics and firm performance: Effects of dynamic capabilities. Wamba, Samuel Fosso Et al 2017.

Big data analytics and firm performance: Findings from a mixed-method approach. Mikalef, Patrick Et Al.. 2019.

Big Data and Central Banks. Bholat, David. Big Data & Society.

Big Data and Strategic Intelligence. Intelligence and National Security. Lim, Kevjn (2016).

Big Data Challenges for e-Government Services in Nepal. Journal of the Institute of Engineering Pomykalski P. 2019.

Big Data Challenges for e-Government Services in Nepal. Journal of the Institute of Engineering. Pomykalski P, 2019.

Big Data Challenges for e-Government Services in Nepal. Munar et al., 2018.

Big Data, Cloud and Computing Challenges. Sun, N. 2014.

Building Digital-Ready Culture in Traditional Organizations. Mit Sloan Management Review. Pradhan P. Shakya S. 2018.

Business Model Innovation Strategy: Transformational. Raphael Amit, Christoph Zott, 2020.

Business Model Innovation: From Systematic Literature Review. Daniela Andreini, Cristina Bettinelli, 2017.

Business Model Innovation: The Organizational Dimension. Nicolai J. Foss et al, 2016.

Business Model Innovation: What Can the Ambidexterity Literature Teach Us? Academy of Management Perspectives (27:4), pp. 313-323. Markides, C. C. 2013.

Business Models, Business Strategy and Innovation," Long Range Planning (43:2–3), pp. 172-194. Teece, D. J. 2010.

Business Strategy: A Guide to Effective Decision-Making. The Economist, Jeremy Kourdi, 2015.

Case Study Research and Applications: Design and Methods. Robert K. Yin, 2017.

Case Study Research for Business. Jillian Dawes Farquhar, 2012.

Case Study Research: The Quick Guide Series: 2nd Edition. Dan Remenyi, 2013.

Creating Business and Corporate Strategy. AdylAliekperov, 2021.

Creating Value through Business Model Innovation, MIT Soan Management Review (53:3), pp. 41-49. Amit, R., and Zott, C. 2012.

Customer entrepreneurship on digital platforms: Challenges and solutions for platform business models. Creativity and Innovation Management. Pang S, 2017.

Data governance frameworks and change management. (Egelstaff, Richard Et Al). 2013.

Data governance strategy: A key issue in building an enterprise data warehouse. Data governance strategy: A key issue in building enterprise data warehouse. (Rifaie, Mohammad et al 2009).

Data Science and Big Data Technologies Role in the Digital Economy. Tem Journal-Technology Education Management Informatics. Novikov, S. V. 2020.

Deep and modular neural networks. Springer Handbook of Computational Intelligence. Chen, Ke. 2015.

Defining Data Science and Data Scientist. M. Dana Dedge ET AL. 2016.

Developing A Digital Banking Framework in the Iranian Banks: Prerequisites and Facilitators Digital Banking Manifesto: The End of Banks? Lipton, Alex. 2016.

Article
Digital and Cloud transformation for banking. PwC Pulse Executive Views on Business 2022. [Online]. Available from: https://www.pwc.com/us/en/industries/financial-services/banking-capital-markets/digital-banking-transformation.html.
(Accessed on 21st Dec 2022).

Digital Transformation Challenges. Emily Henriette et al. Télécom Ecole de Management. 2016.

Digital Transformation Strategies. Christia Matt et al., 2018.

Digital Disruption A mix of players, and FinTech firms pose threats and opportunities. Pathak N, 2017.

Digital Disruption and Creative Destruction. Global Finance. (G Wright, 2017).

Digital Disruption in Banking. Annual Review of Financial Economics, Vol 11. Votintseva, L. 2019.

Digital disruption of the banking industry: Threat or opportunity? Krstić, Nataša et al 2016.

Digital Disruption. Independent Banker. Jordan et al., 2015.

Digital innovation and the fourth industrial revolution: epochal social changes? Ai & Society. Caruso, L. 2018.

Digital Technologies in Transformation of Classical Retail Bank into Digital Bank. Sajic, M. 2017.

DIGITAL TRANSFORMATION OF GLOBAL BANKING: CHALLENGES AND PROSPECTS. Shkodina, I.

Digital transformation of Russian banking institutions: assessments and prospects. Westerman, G. 2019.

DIGITAL TRANSFORMATION OF THE BANKING SECTOR. International Scientific Conference on Global Challenges and Prospects of the Modern Economic Development (GCPMED). Shcherbina, T. A. 2018.

Disrupting Class: How Disruptive Innovation Will Change the Way the World learns. Clayton Christensen, Curtis W. Johnson, Michael B. Horn, 2008.

Disruption and Disintermediation in Financial Products and Services. FinTech and the Remaking of Financial Institutions. J Hill. 2018.

Dual-Track's Strategy for Incumbent's Transformation: The Case of Danske Bank Adopting a Platform Business Model. Staykova, Kalina S, 2019.

Effect of Strategy Implementation on Performance of Commercial Banks in Kenya. Njagi, Linet et al,2014.

Essence of digital transformation—Manifestations at large financial institutions from North America. Pramanik, HimadriSikhar et al 2019.

Extending digital infrastructures: A typology of growth tactics. Koutsikouri, Dina. Et al., 2018.
Financial Services and Fintech Introduction. Nicoletti, Bernardo. 2017.

Financial technology and the future of banking. Broby, Daniel, 2021.

FinTech – Challenges and Opportunities How digitisation is transforming the financial sector. Drummer, Daniel et al. 2016.

Fintech – The digital (r)evolution in the financial sector. Dapp, Thomas, 2014.

Fintech and Regtech: Impact on regulators and banks. Journal of Economics and Business, Anagnostopoulos, Ioannis, 2018.

Fintech: Ecosystem, business models, investment decisions, and challenges. Lee, In et al., 2018.

Fintech: The Digital Transformation in the Financial Sector. Dapp, Thomas F. 2017.

From Data to Disruption: Innovation Through Digital Intelligence. Bus, Harvard, 2019.

From Data to Disruption: Innovation Through Digital Intelligence. Bus, Harvard et al. 2016.

Future Generation Computer Systems-the International Journal of Escience. Pramanik, H. S.
Gawer, A. 2014. "Bridging Differing Perspectives on Technological Platforms: Toward an Integrative Framework," Research Policy (43:7), pp. 1239-1249.

Global banking regulation and supervision: What are the issues, and what are the practices? Barth, James R. et al. 2010.

Global Banking: Transformation, Innovation & Competition. Innovative Economic Symposium (IES) on Strategic Partnership in International Trade. Korobov, Y. 2017.

Good Strategy/Bad Strategy: The difference and why it matters. Richard Rumelt, 2011.

Governance of big data collaborations: How to balance regulatory compliance and disruptive innovation. Van den Broek, Tijs. 2018.

Growth of a platform business model as an entrepreneurial ecosystem and its effects on regional development. Yun, Jin Hyo Joseph. 2017.

Harvard-Business-Review-Inflection-Point-Data-Driven-Enterprise. 2017.

How banks and FinTech start-ups are partnering for faster innovation. Mohan. 2016.

How Big Data Helps Banks Personalize Customer Service. IBM, 2014.

How Do Banks Interact with FinTech's? Forms of Strategic Alliance and Their Economic Impact. Hornuf, Lars et al. 2018.

How do co-operative banks perceive the impact of digital transformation? Fernandez-Torres, Y.

How Useful Is the Theory of Disruptive Innovation? King, Andrew A et al., 2015.

iCARE: A framework for big data-based banking customer analytics. Ibm Journal of Research and Development. Vives, X. 2019.

Impact of Big Data Analytics on Banking Sector: Learning for Indian Banks. Improving business and information strategy alignment: learning from the banking industry. Broadbent, M. 1993.

Information and Communication Technologies for Development. Julian M. Bass et al, 2020.
Innovating Platform Business Models: Insights from Major Tech-Companies. Moser, Daniel J, 2016.

International Journal of E-Business Research. Pourebrahimi, N. 2018.

Interviews in Qualitative Research. Nigel King, Christine Horrocks, 2010.

Intrinsically motivated learning in natural and artificial systems. Baldassarre, Gianluca. 2013.

Is execution where good strategies go to die? Bonchek, Mark. 2017.

Iterative Insight: Creating a Big Data Strategy That Works for Your Organization. Wilson FLMI, AIRC, ACS, John R. 2015.

Journal of Global Information Technology Management. Malar, D. A. 2019.

Key Management and Governance Challenges when Executing Data Science / Analytics Projects. Saltz, Jeffrey. Et Al. 2018.

Knowledge-driven decision analytics for commercial banking. Journal of Management Analytics. Law, K. S. 2020.

Leading and Implementing Business Change Management. David J. Jones et al, 2013.

Leading Change, John P. Kotter, 2012.

Leading Digital: Turning Technology into Business Transformation. George Westerman et al, 2014.

Making customer relationship decisions: Analytics v rules of thumb. Journal of Business Research. Persson, A. 2014.

Making Sense of Change Management. Esther Cameron, Mike Green, 2009.

Management challenges in creating value from business analytics. Vidgen, Richard. 2017.

Management Theories for Educational Change. Keith Morrison, 1998.

Meeting the Challenge of Disruptive Change. Christensen, Clayton M. et al., 2015.

Mobile banking and the use determinants of digital channels for financial transactions—Journal of Management and Technology. dos Santos, A. C. 2020.

Multi-Sided Platforms as New Organizational Forms: A Dynamic Perspective on Strategy, Scope and Business Models, Academy of Management Perspectives. Krestschmer, T. et al, 2020.

Neural networks: An overview of early research, current frameworks and new challenges. Prieto, Alberto. 2016.

New knowledge and management models for sustainable growth of business: the case of the Italian banking sector. Lerro, A. 2014.

Next generation data infrastructures: Towards an extendable model of the asset management data infrastructure as complex adaptive system. Brous, Paul. 2019.

Nigerian Banking Reforms in Strategic Financial Management Perspective: Least Square Specifics. Agundu, P. U. C. 2014.

On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services. Journal of Management Information Systems. Gomber, P. 2018.

On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services. Gomber, Peter. 2018.

One size does not fit all -A contingency approach to data governance. Weber, Kristin. 2009.

Open banking and APIs for transformation in banking. Premchand, Anshu. 2018.

Open data policy and open data services. Chatfield, Akemi Takeoka. 2018.

Open Strategy: Mastering Disruption from Outside the C-Suite. Christian Stadler et al, 2021.

Opinion: Getting Positioned For Digital Disruption. Goldberg, Michael. 2018.

Report
Optimizing banking operating models. From strategy to implementation. September 2012. [Online]. Available from: https://assets.kpmg.com/content/dam/kpmg/pdf/2014/07/Optimizing-Banking-Operation-Models.pdf
(Accessed on 1st May, 2023).

Origin of Alliance Portfolios: Entrepreneurs, Network Strategies, and Firm Performance. Source: The Academy of Management Journal. Ozcan P, Santos, 2015.

Platform Business Models – A Case Study of the Technology Industry. Stoian, Carmen Alexandra. 2021.

Platform business models. Markova, Vera D. 2018.

Article
Platform Operating Model for the AI Bank of the Future. May 18th, 2021.
[Online]. Available from: https://www.mckinsey.com/industries/financial-services/our-insights/platform-operating-model-for-the-ai-bank-of-the-future
(Accessed on 3rd Mar 2022).

Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You. WW Norton & Company. Gregory, R. W. et al. 2021.

Platformisation. Internet Policy Review, Pike K, 2021.

Platformisation. Internet Policy Review. Pike K, 2019.

Platformisation. Poell, Thomas. Internet Policy Review. 2019.

Platforms and Infrastructures in the Digital Age," Information Systems Research (29:2), pp. 381-400.Constantinides, P., Henfridsson, O., and Parker, G. G. 2018.

Privacy, Regulations, and Cybersecurity, Page 150. Chris Moschovitis, 2021.

Producing a Systematic Review. Buchanan, David A. 2019.

PSD2: The digital transformation accelerator for banks. Cortet, Mounaim. Et al., 2016.
Qualitative Research. David Silverman, 2020.

Reducing Risk in KYC (Know Your Customer) for Large Indian banks using Big Data Analytics. Soni, Anuraj. International Journal of Computer Applications. 2014.

Report
Reshaping retail banks: Enhancing banking for the next digital. Mckinsey. 18 Oct 2022.
[Online]. Available from: https://www.mckinsey.com/industries/financial-services/our-insights/reshaping-retail-banks-enhancing-banking-for-the-next-digital-age
(Accessed on 3rd Mar 2022).

Retail Banking: In Tech We Trust. The Economist. Pogue D. 2016.

Revenue and valuation of companies with digital platform business models. Management Sciences. Pogue D. 2016.

Revenue and valuation of companies with digital platform business models. Management Sciences. Pogue D, 2016.

Rewiring The Enterprise for Digital Innovation: The Case of DBS Bank. Kien, Sia Siew, 2015.

The Impact of Applying the Blue Ocean Strategy on the Competitive Advantage of Commercial Banks in Saudi Arabia. Al Nsour, Iyad A. 2016.

The impact of big data on the South African banking industry. Mungai, Kinyanjui. 2018.

The Impact of Public Policy on the Banking System in Nigeria. Martin Brownbridge, Institute of Development Studies (Brighton, England), 1996.

The Innovator's Dilemma. Clayton Christensen, 2013.

The Innovator's Solution: Creating and Sustaining Successful Growth. Clayton, Michael, 2013.

The intelligent control model and application for commercial bank systems emerge under risk status based on big data. Ozturk E et al, 2016.

The internal information transformation of IBM. Vayghan, J A, 2007.

The Law of Banking in Nigeria. Enyia, Jacob Otu, 2019.

The long-term effect of digital innovation on bank performance: An empirical study of SWIFT adoption in financial services. Scott, S. V. 2017.

The market that never was: Turf wars and failed alliances in mobile payments. Strategic Management Journal. Ozcan P, Eisenhardt K 2009.

The market that never was: Turf wars and failed alliances in mobile payments. Strategic Management Journal. Pradhan P, Shakya S, 2018.

The Missing "Turn to Practice" in the Digital Transformation of Industry. Computer Supported Cooperative Work-the Journal of Collaborative Computing and Work Practices. Lewkowicz, M.

The need to lead in data and analytics. Martin, Jean-François. 2018.

The platform business model and business ecosystem: quality management and revenue structures. Kim, Junic, 2016.

The Platform Political Economy of FinTech: Reintermediation, Consolidation and Capitalisation. Langley, Paul, 2021.

The Rise of AI. Niewiadomski, Robert, 2019.

The rise of the platforms: Business model innovation perspectives. Gatautis, Rimantas, 2017.

The Role of AI and Data Network Effects for Creating User Value, Academy of Management Review (46:3), pp. 534-551. 2020.

The Role of Big Data, Data Science and Data Analytics in Financial Engineering. International Conference on Big Data Engineering. Chakravaram, V. 2019.

The Theory and Practice of Change Management. John Hayes, 2022.

The transition from traditional banking to mobile internet finance: an organisational innovation perspective - a comparative study of Citibank and ICBC. Chen, Zhuming et al., 2017.

The unstoppable rise of African fintech is rapidly changing the way Africans transact. Collett, Dominique et al, 2016.

The use of business intelligence and predictive analytics in detecting and managing occupational fraud in Nigerian banks. Journal of Operational Risk. Nwafor, C. N. 2019.

Three types of chief digital officers and the reasons organisations adopt the role. Tumbas, Sanja, 2017.

Thriving in an Increasingly Digital Ecosystem. MIT Sloan Management Review. Weill, Peter, 2015.

Towards a data governance framework for third-generation platforms. Yebenes, Juan et al, 2019.

TRANSFORMATION MECHANISM OF NETWORK MARKETS IN DIGITAL ERA. Rozanova, N. M, 2019.

Report
Transform your bank's operations model. Published by Booz & Company, 2013.
[Online]. Available from: https://www.strategyand.pwc.com/gx/en/insights/2002-2013/transform-banks-operations-model/strategyand-transform-your-banks-operations-model.pdf
(Accessed on 5th May, 2022).

Driving Business Value from Digital Transformation
[Online]. Available from: https://research.wpcarey.asu.edu/services-leadership/2017/02/03/driving-business-value-from-digital-transformation/
(Accessed on 14th April 2022).

CATERPILLARS, BUTTERFLIES, AND UNICORNS. Does digital leadership in banking really matter?
[Online]. Available from: https://www.accenture.com/_acnmedia/pdf-102/accenture-banking-does-digital-leadership-matter.pdf
(Accessed on 19th Sep 2022).

Digital disruption is shaking up the content landscape - but these media moguls are ahead of the curve.
[Online]. Available from: https://www.businessinsider.com/digital-disruption-is-shaking-up-the-content-landscape-2017-10?r=US&IR=T
(Accessed on 9th Nov 2019).

[Online]. Available from: https://online.hbs.edu/blog/post/what-are-network-effects
(Accessed on 10th April 2021). 12 NOV 2020. Tim Stobierski

A four-step blueprint for digital reinvention. Strategy and Leadership 44(4):18-25
DOI: 10.1108/SL-06-2016-0042
Authors: Saul J. Berman, Peter J. Korsten.

[Online]. Available from: https://www.researchgate.net/publication/306341845_A_four-step_blueprint_for_digital_reinvention
(Accessed on 13th October 2022).

Analysis: Markets must face up to tightening financial conditions by Yoruk Bahceli.
[Online]. Available from: https://www.reuters.com/business/finance/global-markets-financial-conditions-analysis-pix-2022-05-09/
(Accessed on 5th November 2022).

Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organisational change. Syed Talib Hussain et al.
[Online]. Available from: https://www.sciencedirect.com/science/article/pii/S2444569X16300087
(Accessed on 10th December 2022).

Journal of Innovation & Knowledge. Volume 3, Issue 3, September–December 2018, Pages 123-127
[Online]. Available from: https://www.sciencedirect.com/science/article/pii/S2444569X16300087
(Accessed on 10th December 2022).

Retail e-commerce sales worldwide from 2014 to 2026(in billion U.S. dollars)
[Online]. Available from: https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/
(Accessed on 19th February 2023).

Digital, Technology, and Data
[Online]. Available from: https://www.bcg.com/capabilities/digital-technology-data/overview
(Accessed on 18th Jul 2021).

Driving Business Value from Digital Transformation. By Centre for Services Leadership | February 3, 2017.
Lewin's Change Management Model. Understanding the Three Stages of Change.
[Online]. Available from: https://www.mindtools.com/ajm9l1e/lewins-change-management-model

(Accessed on 4th Aug 2020).
Options for Formulating a Digital Transformation Strategy. MIS Quarterly Executive. Jun 2016, Vol. 15 Issue 2, p123-139. 17p. Thomas, Matt, Christian; Benlian, Alexander; Wiesböck, Florian.

Orchestrating Digital Business Transformation. Working in Concert to Achieve Digital Excellence. By Michael R. Wade et al. June 2017.
[Online]. Available from: https://www.imd.org/research-knowledge/reports/digital-orchestra/

(Accessed on 6th Apr 2020).
The next normal arrives Trends that will define 2021 – and Beyond.
[Online]. Available from: https://www.mckinsey.com/featured-insights/leadership/the-next-normal-arrives-trends-that-will-define-2021-and-beyond.

(Accessed on 11th June 2022).
Roadmap for digital transformation: A literature review. Fadwa Zaoui, Nissrine Souissi. 2019.

Social media banking models: A case study of a practical implementation in the banking sector. Parusheva, Silvia. 2017.

Source: The Academy of Management Journal, Ozcan P, 2019.

Strategic choices for banks in the digital age. Broeders, Henk et al. 2015.

Strategic foresight for organisational agility at Nedbank Area Collaboration. Oosthuizen, Marius. 2018.

Strategic implications of fintech on South African retail banks. Coetzee, Johan. 2018.

Strategy as Practice: An Activity Based Approach. Paula Jarzabkowski, 2005.

Synergizing Digitization and Disruption for Service Economy: A Perspective on Digital Marketing.Kumar, Alok. 2018.

Technology and disruption: How the new customer relationship influences the corporate strategy. Krämer, Andreas et al, 2018.

The Banks of the Future: An Experience Design Perspective. Girling, Rob, 2014.

The big (data) bang: Policy, prospects, and challenges, Mcneely C, Hahm J. Review of Policy Research, (2014).

The Data and Analytics Playbook. Fryman, Lowell. 2017.

The Democratization of Data. Crosby, Lawrence A. 2001.

The DGI data governance framework. Thomas, Gwen. The Data Governance Institute, Orlando, FL (USA). 2016.

The Shape of Digital Transformation: A Systematic Literature Review. Emily Henriette. 2015.

The Digital Disruption in Banking, Demons, demands, and dividends. Accenture, 2014.

The digital disruption of banking and payment services. Arnold, David. 2016.

The Digital Platform: A Research Agenda, Journal of Information Technology (33:2), pp. 124-135.Business Source Premier. Parker, G. G. et al.

The Digital Transformation and Disruption in Business Models of the Banks under the Impact of FinTech and BigTech. Proceedings of the International Conference on Business Excellence. Maracine, V.

THE ECUADORIAN BANKING INDUSTRY FACING THE NEW FINTECH BUSINESS MODELS. Oleas, M. E. E.

The Effect of Branchless Banking Strategy on the Financial Performance of Commercial Banks in Kenya. Dzombo, Gift Kimonge. 2017.

Article
The End of Digital Transformation in Banking. Jan 2022.
[Online]. Available from: https://www.forbes.com/sites/ronshevlin/2022/01/10/the-end-of-digital-transformation-in-banking/
(Accessed on 9th Dec 2022).

The effect of critical success factors on IT governance performance. Nfuka, Edephonce N. et al., 2011.

The Effects of Internet Banking on Financial Performance: Evidence from the East Asian Countries. Lin, Shu-ling et al. 2018.

The evolution of platform business models: Exploring competitive battles in platforms. Zhao, Yang et al., 2020.

The Fintech Revolution: An Opportunity for the West African Financial Sector. Koffi, Hua Wilfried Serge. 2016.

The Future of AI. Pathak, Nishith, 2017.

The Future of Fintech and Banking: Digitally Disrupted or Reimagined. 2015.

Article
The Future of Banking: Time to Rethink Business Models. Nov 2021. Accenture. M. Abbott. [Online]. Available from: https://www.accenture.com/us-en/insights/banking/future-banking-business-models
(Accessed on 4th Nov 2022).

The IBM Data Governance Council Maturity Model: Building a roadmap for effective data governance. IBM Institute for Business Value and IBM Strategy and Change. 2007.

The Change Curve. Accelerating Change and Improving Its Likelihood of Success
[Online]. Available from: https://www.mindtools.com/au03rgg/the-change-curve
(Accessed on 19th March 2021).

The Network Effects manual: 16 Different Network Effects -2022.
[Online]. Available from: https://www.nfx.com/post/network-effects-manual
(Accessed on 14th January 2023).

Article
The Kurt Lewin Change Management Model. By Mark Connelly
[Online]. Available from: https://www.change-management-coach.com/kurt_lewin.html

(Accessed on 5th Oct 2019).
Digital Vortex How Digital Disruption Is Redefining Industries
[Online]. Available from: https://www.cisco.com/c/dam/en/us/solutions/collateral/industry-solutions/digital-vortex-report.pdf
(Accessed on 17th Nov 2019).

The Transformation Orchestra: A New Framework for Digital Execution
[Online]. Available from: https://www.thedigitaltransformationpeople.com/channels/strategy-and-innovation/
(Accessed on 15th January 2023).

Understanding digital transformation: A review and a research agenda. Gregory Vial, 2015.

When the Bank Comes to You: Branch Network and Customer Omni-Channel Banking Behaviour. Abhishek, Vibhanshu et al, 2017.

Why Banks Must Become Smart Aggregators in the Financial Services Digital Ecosystem. Dintrans, Philippe et al, 2017.

Why Companies Don't Respond to Digital Disruption. MIT Sloan Management Review. Kane, Gerald C, 2018.

Why Companies Need a New Playbook to Succeed in the Digital Age. Weill, Peter et al, 2018.

Why FinTech Banks Will Rule the World. Gelis, Philippe, 2016.
[Online]. Available from:
https://www.cleverism.com/understanding-kubler-ross-change-curve/

(Accessed on 25th Aug 2020).
CEOs See Growth in 2021, Marked by 3 Shifts
[Online]. Available from: https://www.gartner.com/smarterwithgartner/ceos-see-growth-in-2021-marked-by-3-shifts

(Accessed on 12th Jan 2022).
IBM Institute for Business Value Digital re-invention Preparing for a very different tomorrow.
[Online]. Available from: https://www.ibm.com/downloads/cas/20NX8NYB
(Accessed on 19th Jul 2020).

Report
What are Network Effects? By Nicholas L. Johnson.
[Online]. Available from: https://www.applicoinc.com/blog/network-effects/
(Accessed on 3rd Mar 2022).

https://www.mckinsey.com/industries/financial-services/our-insights/african-banking-the-productivity-opportunity

REFERENCES

(1) https://www.mckinsey.com/Transformation/Why do most transformations fail

(2) https://www.wired.com/insights/2013/02/is-big-data-the-new-black-gold/

(3-12) https://www.gtcoplc.com/who-we-are/our-history

(13) Nigeria Data Protection Regulation 2019: Implementation Framework. NITDA. November 2020.
[Online]. Available from: HTTPS://NITDA.GOV.NG/WP-CONTENT/UPLOADS/2021/01/NDPR-IMPLEMENTATION-FRAMEWORK.PDF
(Accessed on 12th May 2022).

(14) African fintech Flutterwave triples valuation to over $3B after $250M Series D by Tege Kene-Okafor. February 2022.
[Online]. Available from: https://techcrunch.com/flutterwave-triples-valuation-to-over-3b
(Accessed on 9th July 2022).

(15) How cognitive banking is improving customer experiences. By Globant. May 2022.
[Online]. Available from: https://stayrelevant.globant.com/en/technology/finance/how-cognitive-banking-improving-customer-experiences.
(Accessed on 15th Jan 2023).

(16) 'What can we do?': Millions in African countries need power. BY MOGOMOTSI MAGOME. March 2023.
[Online]. Available from: https://apnews.com/article/electricity-africa-just-energy-transition
(Accessed on 25th April 2023).

(17) Banks' digital transformation: where do we stand? By European Central Bank. February 2023.
[Online]. Available from: https://www.bankingsupervision.europa.eu/governance and risk appetite frameworks.
(Accessed on 21st Mar 2023).

(18) Technology as a Competitive Weapon
by Alan L. Frohman. January 1982
[Online]. Available from: https://hbr.org/1982/01/technology-as-a-competitive-weapon.
(Accessed on 19th Oct 2021).

(19) Report: Bankers Fleeing Nigeria's Stagnating Economy as Brain Drain Worsens. By Emmanuel Addeh. May 2022.
[Online]. Available from: https://www.thisdaylive.com/report-bankers-fleeing-nigerias-stagnating-economy-as-brain-drain-worsens
(Accessed on 25th Aug 2022).

(20) US regulators seek to impose $1bn fine on banking giants over misuse of messaging apps. By Private Banker International. August, 2022.
[Online]. Available from: https://www.privatebankerinternational.com/news/regulators-1bn-messaging-apps-2/.
(Accessed on 18th Jan 2023).

(21) Economic Reforms and Monetary Policy. Central Bank of Nigeria
[Online]. Available from: https://www.cbn.gov.ng/monetaryPolicy/Reforms.asp
(Accessed on 12th Mar 2023).

(22) More African Central Banks Are Exploring Digital Currencies. By Habtamu Et Al. June 2022.
[Online]. Available from: https://www.imf.org/en/Blogs/Articles/2022/06/23/blog-africa-cbdc
(Accessed on 12th Sept 2022).

(23) African countries embracing biometrics, digital IDs
New digital technologies have enabled countries to leapfrog outdated tools and progress to modern innovations. By: Finbarr Toesland. February 2021.
[Online]. Available from: https://www.un.org/africarenewal/magazine/february-2021/african-countries-embracing-biometrics-digital-ids
(Accessed on 24th Sept 2022).

(24) Digital identification in Africa: Frameworks and initiatives. Diplomacy. Edu
[Online]. Available from: https://www.diplomacy.edu/resource/report-stronger-digital-voices-from-africa/digital-identification-africa
(Accessed on 25th Feb 2023).

(25) Lever six: Organization and governance
By Dash Bibhudatta, Jonathan Silver, and Edward Woodcock. September 2014 | Article
[Online]. Available from: https://www.mckinsey.com/capabilities/operations/our-insights/lever-six-organization-and-governance.
(Accessed on 3rd May 2022).

(26) The Advantages of Cloud Computing in Banking Are Undeniable. By Jim Marous. May 2021
[Online]. Available from: https://thefinancialbrand.com/news/digital-banking/advantages-of-cloud-computing-in-banking-cant-be-ignored-114779/
(Accessed on 3rd May 2022).

(27) Ambidexterity: Your Strategy Needs a Strategy/ Boston Consulting Group.
[Online]. Available from: https://www.bcg.com/publications/collections/your-strategy-needs-strategy/ambidexterity
(Accessed on 3rd May 2022).

(28) Data valuation: Understanding the value of your data assets. Deloitte Article, 2020.

[Online]. Available from:
https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Finance/Valuation-Data-Digital.pdf
(Accessed on 15th May 2022).

(29) Do we really still need bank branches? UK Times. Dereck French. Feb 2023.
[Online]. Available from: https://www.thetimes.co.uk/article/do-we-really-still-need-bank-branches-v86g5585x
(Accessed on 26th Mar 2023).

(30) 16 Ways Companies Can Bridge The Disconnect Between IT & Sales. Forbes. Nov 2020.
[Online]. Available from: https://www.forbes.com/ed9d682287d
(Accessed on 19th April 2021).

(31) How Leaders Can Align Their Tech Team With Their Business Strategy. Forbes. July 2021.
[Online]. Available from: https://www.forbes.com/sites/forbestechcouncil/2021/07/13/how-leaders-can-align-their-tech-team-with-their-business-strategy/?sh=1e0de2ef502c
(Accessed on 26th Mar 2023).

(32) Digital Banking Maturity 2022. Deloitte, September 2022.
[Online]. Available from: https://www2.deloitte.com/content/dam/Deloitte/br/Documents/financial-services/Deloitte-DBM%202022-global-report.pdf
(Accessed on 26th Mar 2023).

(33) Breaking barriers: Exploring how banks scale generative AI for growth. Accenture Report 26 May 2023.
[Online]. Available from: https://bankingblog.accenture.com/how-banks-scale-generative-ai-for-growth.
(Accessed on 15th June 2023).

(34) Equipping Employees To Succeed In Digital Transformation. Martin Birch Aug 2022.
[Online]. Available from: https://www.forbes.com/sites/forbesbusinesscouncil/2022/08/09/equipping-employees-to-succeed-in-digital-transformation/?sh=6b0d52bd7dc1
(Accessed on 24th Oct 2022).

(35) Five risks of moving your database to the cloud. Marc Linster. Jan 2022.
[Online]. Available from: https://www.technologyreview.com/2022/01/25/1043950/five-risks-of-moving-your-database-to-the-cloud/
(Accessed on 16th Feb 2022).

(36) Kuda Bank Revolutionises Banking for Millennials. Digital Banker Africa.
[Online]. Available from: https://digitalbankerafrica.com/kuda-bank-revolutionises-banking-for-millennials/
(Accessed on 18th Mar 2023).

(37) The Power of Data Democratization in Banking
[Online]. Available from:https://thefinancialbrand.com/news/data-analytics-banking/the-power-of-data-democratization-in-banking-158306/
(Accessed on 16th Feb 2022).

(38) How culture and strategic partnerships help fuel transformation. CIO Magazine. Mar, 2023.
[Online]. Available from: https://www.cio.com/article/464999/how-culture-and-strategic-partnerships-help-fuel-digital-transformation.html
(Accessed on 24th May 2023).

(39) How digitalization impacts financial services companies and their audits. Zeynep Deldag. Jan 2020.
[Online]. Available from:https://www.ey.com/en_gl/assurance/how-digital-transformation-impacts-financial-services-companies-and-their-audits
(Accessed on 22nd Jan 2023).

(40) Recognizing the value of bank branches in a digital world. Val Srinivas, Richa Wadhwani. Feb 2019.
[Online]. Available from: https://www2.deloitte.com/uk/en/insights/industry/financial-services/bank-branch-transformation-digital-banking.html
(Accessed on 18th Mar 2023).

(41) How can banks deal with the new fintech competition? By Konstaintn Rabin. April 2022.
[Online]. Available from: https://www.finextra.com/blogposting/22164/how-can-banks-deal-with-the-new-fintech-competition
(Accessed on 12th Dec 2022).

(42) Digital Maturity. Boston Consulting Group Article.
[Online]. Available from: https://www.bcg.com/capabilities/digital-technology-data/digital-maturity
(Accessed on 12th Dec 2022).

(43) If Transformation Needs to be bold do banks have the right tools for-success. Enerst & Young Article. Jan 2023.
[Online]. Available from: https://www.ey.com/en_uk/banking-capital-markets-transformation-growth/if-transformation-needs-to-be-bold-do-banks-have-the-right-tools-for-success.
(Accessed on 18th April 2023).

(44) The value of Big Data: How analytics differentiates winners. By Rasmus Wegener and Velu Sinha. Sept 2013.
[Online]. Available from: https://www.bain.com/insights/the-value-of-big-data/
(Accessed on 12th Jan 2023).

(45) Digital transformation in organisations and people functions. Hayfa Mohdzaini. CIPD Article. Jun, 2021
[Online]. Available from: https://www.cipd.org/uk/views-and-insights/thought-leadership/the-world-of-work/organisations-people/
(Accessed on 10th Nov 2022.

APPENDIX 1.1

DBA Research Interview Questionnaire. Emmanuel Magnus Eweka May 2022

Thesis: Digital Transformation in the Financial Services Sector: Navigating the Challenges for a Successful Digital Transformation: A Case of GTCO.

Qualitative Research Questions for:

Executive Directors, C-Suite Executives, Divisional heads, Senior Management Team. Technical Heads and Engineers

All individual answers can be printed on the form below.

1. How does the bank's digital transformation program impact overall strategy?
2. Can you describe how digital transformation has translated into an effective strategy?
3. How is Digital Transformation applied to the business and operating model of the bank?
4. What digital transformation initiatives are currently deployed or planned?
5. On a scale of 1 – 10, where is the bank progressing with Digital Transformation? Please explain.
6. How is Digital Transformation executed across the various departments across the enterprise for better productivity, efficiency and performance?
7. What are the current limitations of implementing Digital Transformation?

8. What is management's view on the value of Digital Transformation?
9. What are your primary responsibilities in implementing the various Digital Transformation initiatives?
10. What role does management play in the day-to-day operations post digital transformation?
11. What policies are in place to promote the digital transformation initiatives at the bank?
12. What are the effects of digital transformation so far on employees, culture, products/services and customers as a whole?
13. What is the resistance to Digital Transformation change as a result of new technological innovations?
14. What policies and processes are in place to drive Digital Transformation change?
15. Does the bank operate a platform-based business model? How does this relate to products and services offered?
16. Explain the various technology roles as part of the various digital transformation initiatives and what they do as the bank transitions. If so, how?
17. What are the main challenges of Digital Transformation, and how is the bank overcoming those challenges to ensure a smooth transformation process.
18. If the bank was to restart the digital transformation journey all over again; what will the bank do differently with hindsight to overcome the impediments to successfully transforming?
19. Finally, all banks have a sizable number of customers who still prefer to

visit the branches and physically discuss their needs with a staff; what strategies are in place to keep these customers yet significantly deepen the bank's digital footprint? Please share some Examples.

20. Will the above be a challenge to truly transform digitally, considering the overheads of keeping many brick-and-mortar stores?

Example Response format:

Date:

Respondent A:

Department:

Questions 1 – 20 can be entered here for each respondent:

Respondent B:

Department:

Questions 1 – 20 can be entered here for each respondent: Respondent A:

Department:
Questions 1 – 20 can be entered here for each respondent:

Very happy to have as many as 50 respondents cutting across directors, divisional heads, senior managers, heads of Depts and team technical team members

APPENDIX 1.2

GTCO (formally Guarantee Trust Bank PLC) has maintained an unbroken streak of year-on-year growth and a consistent lead in driving the digitalisation of African financial services. In 2007, they became the first sub-Saharan bank and the first Nigerian joint stock company listed on London Stock Exchange and Deutsche Börse; it has been on the former LSE for 14 years. The IPO raised US$750,000,000 at the time of listing over a decade ago. The same year, they successfully placed Nigeria's first private Eurobond issue on the international capital markets. They are the first African bank to dual list on an International Exchange and the first Nigerian company to raise international capital using listed Global Depositary Receipts (4). As a Proudly African and Truly International Institution, they are fully invested in powering the continent's progress and are at the forefront of promoting enterprise and empowering small businesses.

Over the years, Guaranty Trust Bank Limited has received numerous notable awards for product and service innovation, corporate social responsibility and world-class governance standards. In 2019, GTCO was recognised as the Best Bank in Africa and Best Bank in Nigeria by Euromoney Magazine and the Best Banking Group and Best Retail Bank Nigeria by World Finance Magazine. In the same year, Guaranty Trust Bank Limited also dominated the Central Bank of Nigeria's Electronic Payment Incentive Scheme (EPIS) Efficiency Awards for the third year in a row, taking home 8 of the 12 honours for banks at the forefront of driving the digitalisation of financial services. (5)

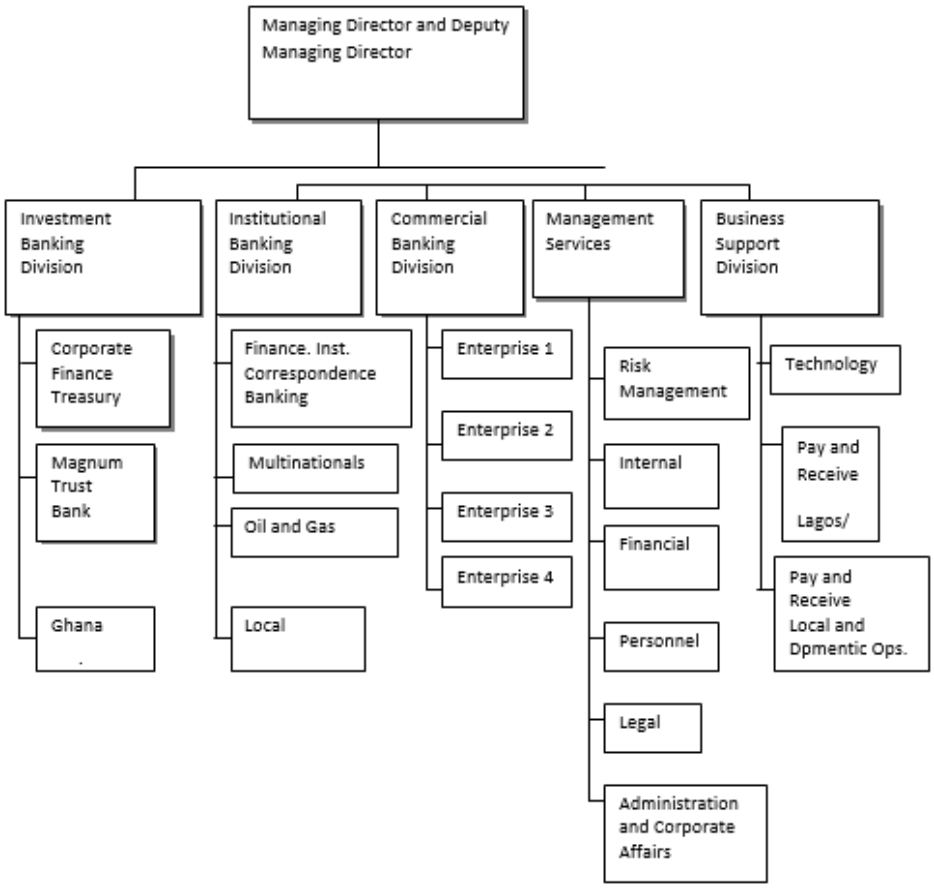

Fig 1.1.2 Organogram for GTCO

The bank's structure can be seen in Fig 1.1.2 above; Segun Agbaje heads its group operations; he is the Group's Chief Executive Officer. Agbaje is also a Director of PepsiCo and a member of the Mastercard Advisory Board, Middle East and Africa. He was appointed Group CEO of Guaranty Trust Holding Company in August 2021 after stepping down as Managing Director of Guaranty Trust Bank. (6)

The Bank's History:

Founded three decades ago by a group of young, vibrant and dynamic professionals determined to transform traditional banking, GTCO has been on a mission to make financial services accessible to all Africans in ways that truly serve people's needs and help businesses thrive. Since commencing operations in February 1991, they have maintained year-on-year growth and a consistent lead in driving the digitisation of financial services in Nigeria thanks to its strong service culture, efficient management, world-class corporate governance standards and bias for innovation. At the end of 2020, alongside leading the industry in innovation and service delivery, they were Nigeria's most profitable banking group with best-in-class Return on Equity and other key financial metrics. (7)

In April 2021, the reorganisation of Guaranty Trust Bank Plc to a financial holding company, Guaranty Trust Group Holding Company Plc (GTCO Plc), was completed as part of the company's strategy to position for future growth and deliver benefits beyond banking to the people, communities and businesses who depend on the value we create to thrive. In September 1996, they became a publicly quoted company and won the Nigerian Stock Exchange President's Merit award that same year and subsequently in 2000, 2003, 2005, 2006, 2007, 2008 and 2009 (8). A major rebranding exercise followed in June 2005, which saw the bank emerge with improved service offerings, an aggressive expansion strategy and its vibrant orange identity.

They entered the history books in 2007 as the first Nigerian financial Institution to undertake a US$350 million regulation S Eurobond issue and the US$750 million Global Depositary Receipts (GDR) Offer. The listing of the GDRs on the London Stock Exchange in July of that year made the bank the first Nigerian Company and African bank to be listed on the primary market of the London Stock Exchange. In May 2011, the bank successfully launched a US$500 million bond to the international community, the first non-sovereign benchmark bond offering from sub-Saharan Africa (outside South Africa). (9) GTCO has received several awards over the years for superior financial performance, customer service delivery, share performance, management efficiency, etc. Some of these accomplishments in 2022 are Euromoney Market Leaders - SME Banking; Corporate Banking; CSR; Digital Banking, ESG EUROMONEY AWARDS 2022. The bank was recognised as Africa's Best Bank and the Best Bank in Nigeria at the 2021 Euromoney Awards for Excellence.

It also retained its position as Africa's Most Admired Financial Services Brand in the 2021 Brand Africa 100: Africa's Best Brands ranking. (10) The GTCO vision is to become a Platform for Enriching Lives by building strong, value-adding relationships with customers, stakeholders and the communities in which it operates (11). In line with this vision, they are constantly pioneering ground-breaking ideas that offer customers more value beyond banking. They are also revolutionising access to consumer loans with our first-of-its-kind digital lending products. It also retained its position as Africa's Most Admired Financial Services Brand in the 2021 Brand Africa 100: Africa's Best Brands ranking (12).