Digital transformation strategies in the South African banking sector

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DECLARATION

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

Simphiwe Annita Sibeko

(Type your name in full here, and sign in the space above)

Signed at …Johannesburg……

On the ……19…….. day of ……June…… 2023…..

DEDICATION

My mother, Ntombizodwa Sibeko.

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For the patience and trust I will find my way with my research, I would like to thank Dr Euphemia Godspower-Akpomiemie. Thank you for the constructive feedback and guidance.

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ABSTRACT

The emergence of digital solutions has created unexpected players in the banking sector as the market slowly grows to defy boundaries. New entrants in the market are challenging the traditional players who have dominated the South African banking sector by introducing digital solutions and low-cost operating models. To compete in this rapidly changing and evolving market, traditional banks should prioritise digital transformation.

To drive innovation and long-term solutions, organisations should seek change and transformation. The concept of digitally transforming corporate, operational, and functional strategies of an organisation underpins the focus of this research article. The fundamental objective of this research is to enhance comprehension of the current advancements in the discipline of digital transformation strategies. This study aimed to contribute to not only the assessment of strategy maturity and effectiveness, but to provide context to the South African banking sector.

The objectives were achieved through qualitative comparative analysis of audited integrated annual reports and surveys on customer experience to calculate Net Promoter Scores in the industry. Analysis was conducted by applying a conceptual framework constructed by leveraging existing theories in literature, to identify and scrutinise the relationship between digital transformation strategy designs, learning and growth initiatives, and customer experience on the overall performance and market leadership. The framework provided structured analysis and standardised data to test strategy effectiveness between the four sample banks.

Overall, the study argues the need of standardised attributes pertaining to digital transformation strategy design and initiatives, which will drive accurate reporting on strategy maturity. Data reported is decentralised as there are not governing frameworks to align reporting. Aligning key attributes will provide decision makers with better insights and equip incumbents to respond less tactically to the evolving world of banking.

Keywords: *“Digital Transformation Strategy”, “Digitised Solutions”, “Customer Engagements”*

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

The concept of banking has undergone significant evolution since its establishment in the early 11th century (1100), attributed to the ancient empires of Babylon. Modern day banking services and products have moved with the changes in industrial revolutions which in turn change transaction needs and patterns of customers. Different schools of thought exist regarding the anticipated Fourth Industrial Revolution ("4IR"), and it is presently unknown whether the next industrial revolution will be a continuation of the third (Chou, 2018). What cannot be denied is that the next stage in industrialisation will have technology as the driver of change to all industries (Philbeck & Davis, 2018).

In recent years, technology has been central to the current and future strategies of organisations as an enabler of enhanced customer experience and improved operational efficiencies. The emergence of SMACIT (“Social, Mobile, Analytics, Cloud, and Internet of Things”) and other digital technologies presents a significant challenge to the economic sustainability and often the continued survival of well-established and lucrative organisations. Simultaneously, these improvements foster opportunities for established organisations to present compelling innovative value propositions that integrate their established capabilities with those of emerging technology (Jeanne, et al., 2016). 4IR encompasses a shift in value creation and distribution.

The use of technology to improve services by banks is not a new phenomenon. During the period of the 1980s and 1990s banks adopted telephone, automated teller machine (ATMs) and electronic cards to replace paper-based payment systems (Watson, 2016). In the early 2000s, internet and mobile banking services were introduced as means for customers to effect monetary and non-monetary transactions without the need to physically visit a bank branch.

Incorporating technology strategies to business operations and structures involves transforming them, this process is known as digital transformation. On the other hand, digital transformation strategies are the coordinated activities to implement transformations within an organisation (Verhoef, et al., 2021). Digital

transformation strategies underpin all other corporate, operational, and functional strategies of an organisation. To achieve the best outcomes, digital transformation strategies should relate to other organisational strategy formulation and implementation.

Banks are not excluded as a sector that should be incorporating and investing in technology as part of their strategy to drive digital solutions and ensure they maintain relevance in the market. The emergence of digital solutions has also created unexpected players in the banking sector as the market slowly grows to defy boundaries. New entrants in the market are challenging the traditional 'Big Four' players who have dominated the South African banking sector by introducing digital solutions and low-cost operating models. To compete in this rapidly changing and evolving market, traditional banks should prioritise digital transformation strategies

In their study titled "*Analysing the Relationship between Financial Technology and Commercial Banks' Financial Performance in South Africa*", Tshukudu et al. (2022) discovered that during the period from 2011 to 2020, South Africa was characterised as a nation facing challenges in terms of the necessary resources required to support the implementation of innovative digital banks, which are recognised as drivers of disruption within the banking sector. Numerous other nations that have implemented digital banking strategies have provided evidence that prioritising digitisation is the key to survival in the banking industry.

The objective of this study was to assess and analyse the digital transformation initiatives implemented by the four major banks in South Africa, using industry data. The four largest banks continue controlling over 85% of the total deposits. South Africa's financial industry exhibits a high level of sophistication, particularly in terms of its asset base, which is largely influenced by banking activities (Financial industry Conduct Authority, 2022). The objective of this study was to ascertain the primary indicators that have played a role in the effective execution of digital transformation plans, as well as to derive important insights for future framework considerations to maintain a competitive edge in an ever-evolving market.

1.2. Problem Statement

The development and adoption of new technologies have accelerated dramatically in recent decades, leading to heightened client expectations that banks may struggle to consistently fulfil. According to The Impact of Rapid Technological Change on Sustainable Development (2020) Big data, the Internet of Things, machine learning, artificial intelligence, robotics, 3D printing, biotechnology, nanotechnology, renewable energy technologies, satellite and drone technologies are just a few examples of the technologies that are undergoing rapid technological change.

Banks are presently under the impact of these influences, a significant portion of which are gaining momentum. Long-term phenomena like as climate change and demographic ageing are experiencing an acceleration, while in the short-term, markets have encountered destabilisation due to unforeseen occurrences like the covid-19 outbreak and the conflict in Ukraine. Park and Shin (2023) found that the recent crisis in Ukraine led to a range of reactions including economic sanctions that could obstruct the nation's digital transformation including limitations on manufacturing, aerospace technology, IT services, quantum computing, and other areas. Economic sanctions impact the import and export of goods and services and further indirectly impact any organisation that relies on skills and technology sourced from Russia.

The traditional banking business is currently under a direct challenge and disruption from both fintech and large digital corporations. Sub-Saharan Africa had twenty-one digital banks registered in 2021, up from only two in 2012. Seven of them were founded in South Africa (Statista, 2023). According to the Prudential Authority's Bank Supervision Department Annual Report, the domination of South Africa's banking market by assets was dominated by five largest banks holding 90.1% of the total banking-sector assets as of 31 March 2021. This is a reduction when compared to the 2012 report where 92.7% was controlled. In contrast, 'Other banks' increased from 3.1% to 4% between 2012 and 2021 (Prudential Authority, 2022).

South Africa's Fintech market is growing, with regulators like SARB and FSCA responding to developments. The market benefits from accelerators and venture capital firms. SARB and FSCA have established units to monitor and shape policy responses, while a "Fintech Program" assists in developing suitable policy responses (“South Africa: Financial Sector Assessment Program-Financial System Stability Assessment,” 2022).

The convergence of these transformative factors necessitates banks to adapt their business models in response to evolving social demands and effectively engage clients within rapidly changing digital landscapes. (The Economist Group, 2022). Covid-19 alone has been a contributor to the accelerated adoption of digital tools as branches became inaccessible or access was restricted. This opens the market to new entrants and non-traditional players that introduce digitally led innovations to banking. While most banks have made significant investments in their digital transformation strategies to improve their back-office processes and front-end customer experiences, the journey has not been free from challenges.

There are many considerations in incorporating more digital solutions, including platform reliability, security, and technology literacy of users (Financial Sector Conduct Authority, 2021). There is therefore a need to prioritize and carefully consider the processes of organising, designing, executing, and assessing digital transformation strategies (Philbeck & Davis, 2018) to ensure their success. With the world shifting towards technological solutions, online banking is expected to grow significantly in the coming years. The Digital Banking market industry is projected to grow from USD 98.6 Billion in 2023 to USD 199.38 Billion by 2032, exhibiting a compound annual growth rate (CAGR) of 9.20% during the forecast period (2023 - 2032) (Market Research Future, 2021).

In this market, the key players are no longer limited to traditional banks which by in large have dominated the South African banking market. Non-banks, Neo-banks and Challenger banks are penetrating the market. Digital banking does not rely on the traditional banking infrastructure like branches to onboard new customers. Figure 2 depicts a decrease in the number of commercial bank

branches at the end of 2021 which is coupled by an increase in individuals using the internet.

The World Bank reported that as of 2020, 70% of the population used the internet. Consumers in South Africa now have significant access to and adoption of technology, which has a significant effect on the way companies, including banking institutions, respond to their desires and demands (Naude & Jenkin, 2019). Up to two billion people globally used online banking services as of 2021, and that figure is expected to rise to 2.5 billion by 2024 (Statista, 2023).

To respond to the changes and retain market share, traditional banks require a targeted approach to the design of their digital transformation strategies. Overall, a standardised approach will enable strategy review and measure against competitors in the market.

1.3. Research Objectives

This research article, through qualitative methodologies, analysed and compared digital transformation strategies implemented by banks within the South African market for a ten-year period covering 2012 – 2021. The purpose was to identify key successes, risks, and impact of the change in other functions and processes within the organisation. Through the analysis of the big four banks as defined by their market share, the study constructed a conceptual framework developed by adapting formulated theoretical frameworks on designing and assessing the maturity of digital transformation strategies implemented by the various banks.

The objectives of this research article were achieved through:

- The review of digital transformation strategies implemented by the big four banks for the period under review and the identification of their digital transformation strategy design;
- The extrapolation of important principles for decision makers when considering the necessity of the investment into digital strategies or initiatives; and

- The construction of a framework that can be applied by banks to measure digital transformation strategy effectiveness against competitors.

1.4. Significance of the Research

The new trends in digitisation are being driven from the demand side, either by customer expectations or new entrants disrupting the sector (Watson, 2016). As such, for traditional banks, it is essential that the digital strategies they drive are planned and implemented. Overlayed with those challenges, there are various approaches and models focused on differing characteristics when measuring digital transformation strategy maturity (Teichert, 2019). The findings of this research contribute to the school of thought in this field and provide considerations when coordinating digital transformation strategies and potentially enable banks to move from reactive tactics to proactive future strategies.

1.5. Limitations and Assumptions of the Research

The review was confined to banks that are classified as the 'Big Four', which are registered in South Africa and under local management. The entities mentioned in Table 1 are Standard Bank Group Limited, often referred to as Standard Bank, Absa Group Limited, commonly referred to as Absa, Nedbank Group Limited, commonly referred to as Nedbank, and First National Bank Limited, commonly referred to as FNB or First National Bank. The study is limited to these banks as FinTechs, and Digital Banks are penetrating the banking industry to disrupt the traditional market. As reported annually in their respected annual reports, digital transformation is a key strategic focus as traditional banks acquire digital transformation capabilities.

Table 1 Southern Africa's Top Banks in 2021

Regional ranking	Africa ranking	Bank	Country	Date	Capital ($m)	Assets ($m)	Profit ($m)
1	1	Standard Bank Group Limited	South Africa	Dec, 2020	13,794	172,873	991
2	3	Absa Group Limited	South Africa	Dec, 2020	6,301	87,788	141
3	5	Nedbank Group	South Africa	Dec, 2020	5,530	78,648	268
4	6	First National Bank Limited	South Africa	Jun, 2020	4,958	81,869	831

Source: Minney (2021)

The review was of publicly available information reported, including audited annual integrated reports, bank press releases, and customer experience surveys and ratings. The review was limited to a period of ten years, beginning from the year 2012 to 2021.

1.6. Research Outline

This research article is divided into five chapters. The first chapter introduces the background of the study, including the problem statement and research objectives. Chapter two provides a literature review with a brief background on the South African banking industry, digital strategy transformation frameworks and key metrics used to assess and evaluate the success of an implemented strategy. Chapter three outlines the research methodology applied, with reference to theories previously used by other academics in digital transformation research. The chapter also provides a motivation for the chosen research strategy and techniques adopted. Chapter four presents findings from the data collected and analysed and is discussed within the theories of the literature review. Finally, chapter five presents a conclusion from the analysed findings and presents a recommendation in the form of a framework that can be applied by decision makers in banks.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This section of the paper presents a comprehensive examination of the prevailing conditions in the banking industry, with a broader scope beyond the specific institutions that are being reviewed. It provides general trends and conditions from an industry perspective which serve as a basis for the analysis that follows in the rest of the chapters. This chapter further outlines relevant literature that expands the various theories and conceptual frameworks relating to the approach of digital transformation strategies. The definitions of key terms and theories that were adopted in the rest of the paper are also be outlined in this section of the paper.

2.2. Overview of South African banking Industry

To function as a commercial or retail bank in South Africa, an entity must meet the criteria of being a public business and undergo registration in accordance with the Banks Act 94 of 1990 (South African Reserve Bank, 2017). The South African Reserve Bank (SARB) functions as the central bank of South Africa, responsible for the regulation and supervision of the nation's banking system. According to SARB, the scope of a bank's operations and undertakings encompasses actions such as actively seeking, promoting, and receiving deposits from the broader public. These deposits are leveraged to offer a diverse range of products and services.

The South African banking system is divided into three tiers, each of which serves a specific purpose. The tiers, or "types," of banks are horizontal and are part of the country's banking system. These include South African registered banks which are either locally or foreign controlled, mutual banks, cooperative banks, commercial banks, and merchant banks. Table 2 depicts the distinct types of banks that are registered in terms of the Banks Act 94 of 1990 or The Mutual Banks Act 124 of 1993.

Table 2 Registered banks in South Africa

Financial Service Providers	2014	2015	2016	2017	2018	2019	2020	2021
Banks	17	17	17	19	19	19	18	18
Mutual Banks	3	3	3	3	4	4	4	4
Co-operative Banks	2	2	2	3	4	4	5	5

Source: The South African Reserve Bank (2014 - 2021)

The banking sector in South Africa holds the distinction of being the largest on the African continent. The combined capital of the sector exceeded 34.4 billion US dollars in the year 2021. Furthermore, in the same year, the top five financial institutions in the country were among the ten largest African banks in terms of asset value. In 2020, the banking sector's total assets represented approximately 88 percent of South Africa's GDP (Statista, 2023). Standard Bank, Absa, Nedbank, and First National Bank make up more than 80% of the banking sector.

The South African banking sector is regarded as organised and leading at par with other developing and developed economies. The combined value of assets in the banking industry exceeds six trillion rands as reported by the SARB. This can be attributable to the governance framework in place overseeing the integrity of banking system (Syden & Sibanisezwe, 2019). The banking system provides efficient and reliable channels that are easily integrated to the wider global banking network. This is also evident with prominent foreign banks that establish regional operations in the country.

The segments served by banks include retail customers, which are classified utilising the Living Standards Measure (LSM). LSM is a marketing tool that divides the South African population into ten groups, ranked from highest living standard level to the lowest level (Ntloedibe & Ngqinani, 2020). Retail products and services can include day-to-day banking services and expand to high-net-worth services that provide personalised services including wealth management. The second segment is typically a class of diverse types of entities, including Small

Medium and Micro Enterprises (SMMEs) and larger corporations that require more complex products and foreign clearing.

According to Statista (2023), in the last decade, South Africa's banking sector has seen a significant increase in customer base. In 2021, 84 percent of adults in the country had a bank account, which is sharp growth from around 54 percent in 2010. Within the various segments, a mix of the below products and services will be provided (Cruijsen & Diepstraten, 2017):

- Current Accounts

Transactional accounts used for day-to-day banking. The accounts enable customers to send and receive funds at physical channels like Automated Teller Machines (ATMs) or branches, or on digital platforms. Banks charge fees for these accounts, which can be bundled or levied per transaction.

- Savings and Investment Accounts

Interest earning accounts used for saving or investment purposes. Interest earned on these accounts is linked to the period of investment and the portfolios the funds will be held. The longer the investment period, the higher the potential of interest earned.

- Credit Card Accounts

An account that offers customers an advance that they will repay with interest. The charges levied on these accounts includes fees and insurance for maintaining the facility.

- Loans and Overdrafts

Includes unsecured debt advanced at higher interest rates, or secured debt linked to the financing of an underlying asset.

Figure 2 depicts a summary of these products as balance sheet products which are published by The South African Reserve Bank (2021).

Table 3 Balance sheet items of selected assets – Dec ‘22

	2021 Rbn	*2022 Rbn*	*% Growth*
Balance sheet items selected assets			
Total assets	6 457	6 819	5.6
Gross loans and advances	4 602	4 846	5.3
Homeloans	1 101	1 181	7.2
Commercial mortgages	363	378	4.2
Credit cards	134	140	4.5
Lease and instalment debtors	461	495	7.4
Overdrafts	221	240	8.5
Term loans	925	951	2.7
Redeemable preference shares	120	108	-10.2
Factoring accounts, trade and other bills and BA's	27	39	41.6
Loans granted/deposits placed under resale agreements	407	431	6.0
Bank intra-group balances	260	299	15.2
Other	582	584	0.3
Investment and trading positions	928	1 020	9.9
Derivative financial instruments	376	305	-19.0
Short term negotiable securities	294	359	21.8
Selected liabilities			
Deposits, current accounts and other creditors	5 112	5 473	7.1
Current	1 205	1 248	3.6
Savings	339	399	17.9
Call	1 026	1 090	6.2
Fixed and notice	1 363	1 487	9.1
Negotiable certificates of deposit	402	453	12.7
Repurchase agreements	161	187	16.0
Other	616	609	-1.3
Derivative financial instruments and other trading liabilities	469	423	-9.8
Equity			
Total equity	542	566	4.3
Off-balance sheet items			
Total off-balance sheet activities	1 465	1 570	7.2

Source: South African Reserve Bank (2022)

The products in Table 3 are mixed and modified by banks based on their market positioning and strategy, or the segments they serve. Issued debit and credit cards are issued by Mastercard or Visa. The use of cheques by banks and merchants was discontinued in the previous years over the concern of heightened risk for fraud.

There are various channels that are used by banks to process transactions on behalf of customers. Customer can transact using ATMs which are easily accessible in major metros and cities. There is Electronic Funds Transfer which can be used to transfer funds interbank, an advanced system which is not available in developed economies. Recurring payments can also be processed using a debit order system, to repay creditors or service provides. Some banks also offer international transfers using the Society for Worldwide Interbank Financial Telecommunications ("SWIFT"). This is a service used by corporations with international business operations and need to clear transactions with banks not domiciled in the country.

Although there are advances in products and services offered by banks, South Africa is still a cash intensive market. Deloitte South Africa (2019) reported that around 80% of South Africans have a bank account but still primarily use cash. Their findings included literacy rates, costs of internet connectivity and low trust in digital solutions as reasons for the low uptake and adoption. Their findings are aligned with Tshukudu et al. (2022) findings South Africa lacks the resources needed to sustain the adoption of novel digital banks. In response, SARB's 2025 vision is inclusive of addressing this issue through financial and digital inclusion (South African Reserve Bank, 2017).

2.3. Digitisation and the South African Banking Sector

Although the South African banking sector is perceived as lagging its global counterparts in terms of digitalization, the use of technology and data analytics is regarded as a crucial area of emphasis for the sector. This is evident in the South African Reserve Bank's vision for 2025. The South African Reserve Bank holds a view that the introduction of heightened competition within the value chain of

the payments system yields advantageous outcomes. The encouragement of collaboration between traditional payment service providers and financial technology solutions, commonly known as 'FinTechs', has emerged with the aim of tackling the issue of financial and digital inclusion. According to the South African Reserve Bank (2017).

There are currently five distinct types of digital banks or digital banking services that financial services providers can be engaged in (Mothibi & Rahulani, 2021). An overview of the digital banks is outlined in Table 2. Currently in the South African banking industry, there are at least two types of digital banking activities that are provided. The digitisation activities in South Africa can be clustered into Challenger Banks and Digitised Incumbents.

Since 2019, there has been disruption from challenger banks including telecommunications companies (Vodacom Group and MTN Group Limited), and digital banks without physical branches or presence (Discover Bank Limited, TymeBank and Bank Zero). In response, the traditional banks, including the Big Four banks have become digitised incumbents pursuing digital transformation strategies.

Table 4 Types of digital banks

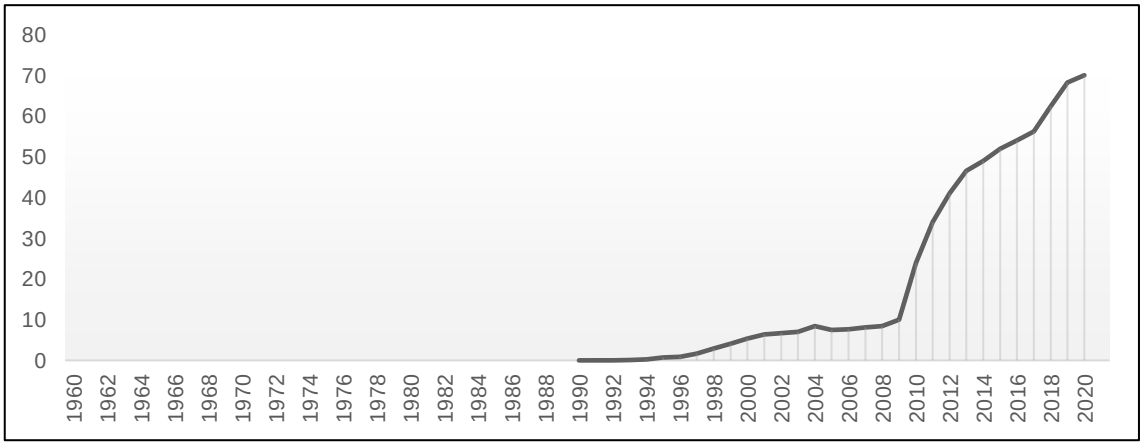
Digital Bank Type	Definition
Challenger/New Banks	FinTechs that disrupt traditional banking institutions and acquire full banking licenses.
Neobanks and Beta Banks	Do not possess a banking licence; however, it may engage in partnerships or joint ventures with financial institutions to provide services that are licenced by a bank.
Non-banks	Have no ties to existing financial licences. They instead provide financial services through other means.
Digitised Incumbents	Traditional banks engage in or pursuing complete or partial digital transformation of their traditional customer base.

Source: Mothibi & Rahulani (2021)

The rate of consumer digital transitioning is occurring concurrently with the digital transformation that the banking industry is undergoing and implementing. Consumers in South Africa now have significant access to and adoption of technology, which has a significant effect on the way companies, including banking institutions, respond to their desires and demands (Naude & Jenkin, 2019).

The key driver has been the information and communications technologies ("ICT") evolution. From a consumer perspective, the internet and mobile phone penetration has accelerated the growth. Figure 1 depicts the exponential growth of individuals using the internet in South Africa as a percentage of the population. The World Bank reported that as of 2020, 70% of the population used the internet.

Figure 1 Individuals using the Internet (% of population) - South Africa



Source: The World Bank (2020)

The growth in the percentage of the population using the internet has also been coupled with an increase in the number of consumers in South Africa who use digital channels. This correlates with Figure 2 depicting a decrease in the number of commercial bank branches at the end of 2021.

Figure 2 Commercial bank branches (per 100,000 adults) - South Africa

Source: The World Bank (2021)

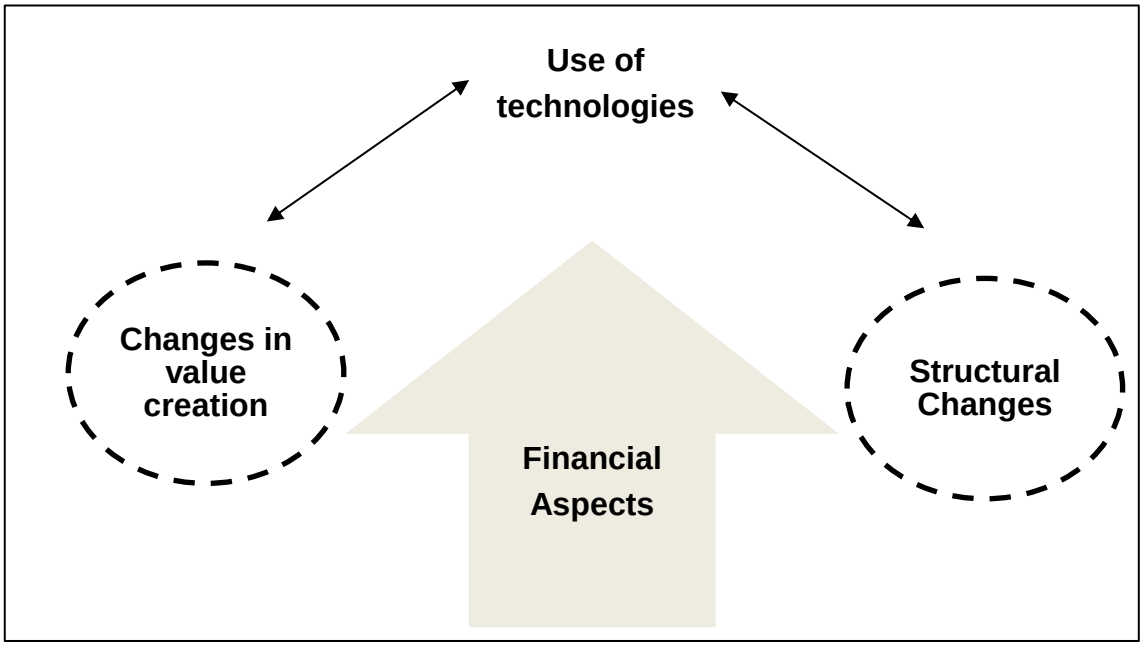
2.4. Theoretical Framework

2.4.1. Digital Transformation Strategy Framework

Digital transformation strategies are broadly defined as the integration of digital solutions and business operations (Liu et al., 2011, as cited in Ismail et al., 2017). The process is geared towards improving the performance of organisations and maintaining competitive edge in a continually changing market influenced by the development of innovative technologies. Strategies implemented should balance and align internal and external drivers to ensure relevance. The expected output when investment is made in these strategies is that organisations can enhance their overall performance.

Transformation encompasses various concepts of change management including process re-engineering, restructuring, renewing and regeneration (Liu et al., 2011, as cited in Ismail et al., 2017). Re-engineering and restructuring processes address issues of efficiency and contributes minimally to the long-term strategic capability and market positioning. To drive innovation and long-term solutions, organisations should seek change and transformation through renewing and regeneration of processes.

Figure 3 Digital transformation framework: balancing four transformational dimensions



Source: Matt, Hess, & Benlian (2015)

According to Matt, Hess, and Benlian (2015), an effective digital transformation strategy necessitates the consideration of four key components: technology, alterations in value generation, structural changes, and financial considerations as illustrated in Figure 3. The technological component relates to tools, systems, and solutions employed by an organisation's information and technology department. This also includes the broader culture in the organisation towards technology and their future targets. An organisation can either be a leader and deploy original solutions to the market or prefer traditional approaches where they mostly function as consumers.

Being market leaders in digital transformation provides a competitive advantage but is often a riskier approach to strategy as there is often limited information or existing capability. There is a lower rate of risk with employing tried and tested solutions. The scale that can be used to measure this is depicted in Figure 4:

Figure 4 Digital transformation deployment

	Traditional	Leading	World-class	Why it matters
 **Time to Market**	**1-2** years	**2-6** months	**8-12** weeks	To compete for consumer based on new tech functionality
 **Release Frequency**	**1-4** per year	**1-4** per month	**10-50** per day	To evaluate and refine the customer experience

Source: Fitzpatrick & Strovink (2021)

The overall purpose of modifying strategy is to create value for an organisation. Digitisation will often modify the sources of where an organisation derives said value. There is a potential to even expand on the sources of value an organisation derives. The expansion of served market segments will require structural changes to support modified processes. Structural changes will include acquisition of new skills and modification of processes. Depending on the extent of changes implemented the effects may be minimal or extensive. This endeavour will often come at a price, often in the absence of measurable return on investment.

According to the World Economic Forum (2018), corporate spending on new technologies will grow by 13% to $2.4 trillion per year. A successful digital transformation strategy will need to align use of technologies, changes in value creation, structural changes, and financial aspects.

2.4.2. Digital Transformation Strategy Design

Most organisations cannot avoid the need to implement digital strategies. The previous section outlined the frameworks applied and what organisations need to balance to implement these strategies. The successful implementation will

include consideration of how an organisation differentiates itself in the market. According to Jeanne, et al. (2016), in their paper ‘Designing Digital Organisations’, there are two approaches to digital disruption strategies. Organisations can invest in customer engagement or digitized solutions.

A customer engagement strategy enhances the go-to-market strategy of a business. Through online services and apps, as well as the support of customer service and sales employees, the digital transformation facilitates all consumer interactions. A customer engagement strategy prioritises developing loyalty, trust, and, in the best instances, fervour through the development of a superior, innovative customer service system that comprehends customers' requirements and responds to them promptly. This kind of design is thus market led by front-end customer experiences.

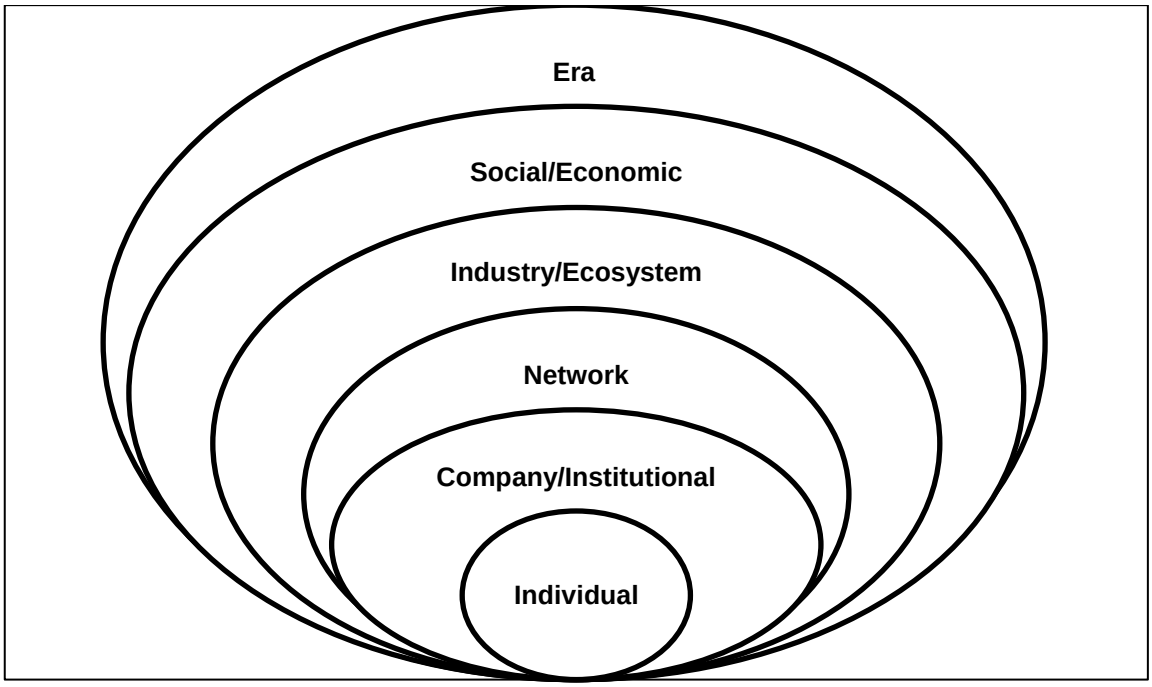
A digitised solutions strategy transforms a company's business model by reformulating the products and services offered for sale. The digitization of information flows increases the worth of products and services. A digitised solutions strategy focuses on adding value to consumers not only through a product or service, but also through the company's continuous involvement in the value-added use of that product (Jeanne, et al., 2016). Digitised solutions are operations led and primarily focus on transforming their back-office processes.

A company that pursues two distinct strategic approaches runs the risk of being unable to completely integrate them. The approach to corporate integration is governed by the digital strategy chosen. A business that chooses a customer engagement strategy will base its product development decisions on the degree to which they satisfy customer engagement priorities. In contrast, a company pursuing a digitised solutions strategy will select customer engagement initiatives that support its product offerings most effectively (Jeanne, et al., 2016).

2.4.3. Digital Transformation Perspectives

The strategy framework and design presented in section 2.4 and 2.5 are primarily inward looking, digital transformation strategies have external considerations. The digital transformation framework in Figure 4 primarily addressed individual and company level factors. Ismail, Khater, & Zaki (2017) developed a framework to expand the perspective of digital transformation as depicted in Figure 5. The concepts may appear as distinct, but are often interlinked. Any decisions made relating to digital transformation strategies should be considered in the context of the network, industry and era an organisation operates in.

Figure 5 Digital Transformation Viewpoints



Source: Ismail, Khater, & Zaki (2017)

Network considerations in digital transformation speak to interconnectivity between different channels outside an organisation. It is of no use to deploy a solution if it may cause frictions for customers, suppliers, and other participants in the same network. There has been emergence of multiple players in the mobile network providers enabling customers to effect transactions through Unstructured Supplementary Service Data (“USSD”) codes that are linked to mobile phone SIM cards.

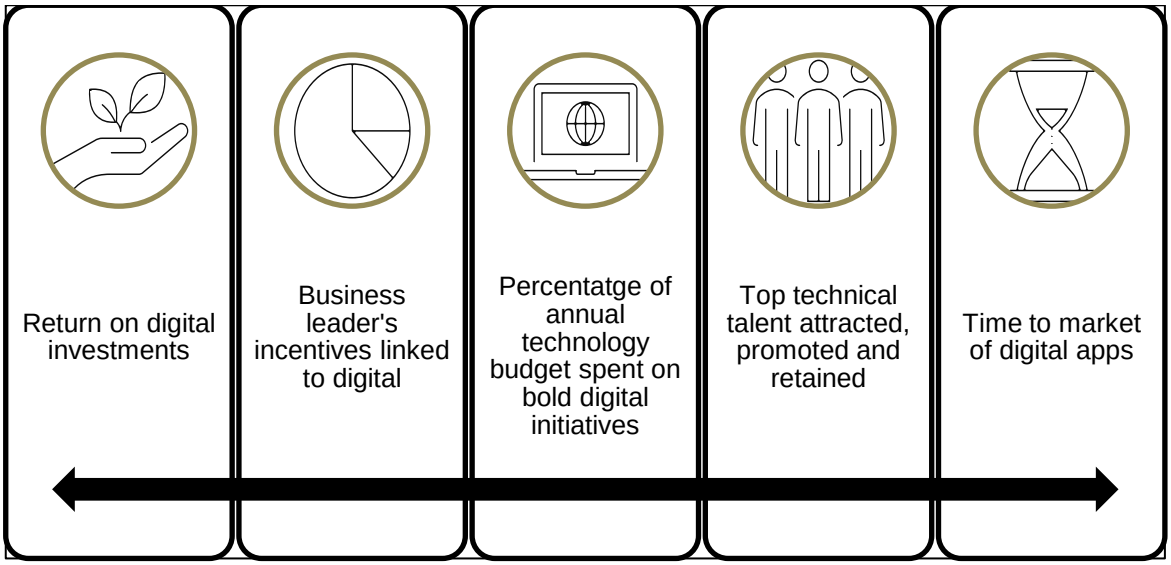
The issue with this digital solution is that the different financial services providers are not interlinked, and it is often impossible to transact with users in other platforms. This was a challenge identified and solved by Mojaloop (2022) through their development of open-source software to provide connected payments platforms for all digital financial providers and customers. This also interlinks with the industry an organisation operates in. There is a difference between creating a competitive edge and developing technology solutions that will operate in a silo and create limited value. Although with the correct solution, an organisation can take advantage of an industry without boundaries.

2.4.4. Digital Strategy Success Measure

As with any strategy implementation, it is essential to review and measure the outcomes and return on investments made. The return on investment with digital transformation strategies might sometimes be difficult to quantify, and often not immediately realised, it is important to establish key performance indicators that can be continuously monitored. This was a challenge Teichert (2019) identified in his article, "*Digital Transformation Maturity: A Systematic Review of Literature"*. Teichert (2019) reported that measurements employed in various digital maturity assessment models can vary, and only a few models include transformational characteristics alongside digital ones.

The scale and complexity of the projects insist on critical measurement to ensure the expense and efforts are producing desired outcomes (Fitzpatrick & Strovink, 2021). An approach that can be used is a balanced scorecard, which evaluates the organisation's performance, customer experience, talent make-up and continuous innovation (Dias, 2021). As depicted in Figure 6, there are five key performance indicators against which progress can be assessed by an organisation.

Figure 6 Digital Transformation Performance Indicators



Source: Fitzpatrick & Strovink (2021)

- Return on Investments

Return on investment (ROI) is a metric employed to assess the profitability of a particular venture. The return on investment (ROI) is commonly expressed as a ratio that is derived by dividing the net profit or loss of an investment by its entire cost. Expressed as a percentage, it will account for how much of the profit made is attributable to the overall investment (Birken & Curry, 2021). The results should be considered in the context of all strategic objectives.

Decision makers in organisations can also measure their overall investment against those of other organisations operating in the same industry (Dias, 2021). This provides an additional measure for benchmarking purposes to assess whether they lead in that market or fall behind (Fitzpatrick & Strovink, 2021). In evaluating the results, it enables an organisation to discover the best approach to transformation, and where they may consider increasing spending or scaling back. It is also an opportunity to separate and stagger initiatives based on the phases and maturity journey of each project.

- Percentage of annual technology budget spent on bold digital initiatives

To maximise return on investment, the annual spend on technology should incorporate bold or disruptive initiatives. It is possible to significantly invest on technology yet drive no innovative solutions. As outlined in Figure 6, this will fall into traditional digital strategies spend to respond to competitors than drive market leadership. As strategies are future focused and based on industry foresight, digital initiative spending should anticipate market scenarios.

Bold initiatives should not seek to create complex solutions but prioritize simplicity for all in the value chain. According to Fitzpatrick & Strovink (2021), the banking industry spends more than ninety percent of their digital budgets on architectural aspects of technologhy and maintaing infrastructures with only ten percent or less of the budget allocated to business improvement investments. Fitzpatrick & Strovink (2021) recommend spending twenty five percent or more on on bold digital initiatives.

- Time to launch

Effective prior planning and direction are essential for implementing digital transformation. How motivated and devoted decision makers are to the common cause of digitisation will determine how quickly this change will materialise (Zaouia & Souissi, 2020). Keeping initiatives simplified contributes to the speed at which an idea can be translated to a solution ready to be launched to a market.

Considering the disruptive nature of technology and how it is constantly evolving, initiatives that remain ideas for a prolonged time might miss their time in the market or the ability to yield competitive advantage. To support appropriate timeliness, organisations ought to invest in their research and development including collecting useful data and insights. Fitzpatrick & Strovink (2021) recommend that this process should take less than six months to ensure usability of ideas and solutions. Digital strategies should be governed by agile frameworks that enbale responsiveness.

- Business leaders' incentives linked to value-creating digital transformation

Different functional areas in an organisation should be tasked with aligning with digital strategies that are being driven. This entails attaching tangible initiatives to business leaders to drive. The process like any other reinforces a top-down approach and preventing risks of a strategic disconnect. Strategies can be assigned at board level to chief digital or technology officers, but their role will be supported by functional inputs that enable digital capabilities.

Leadership for digital transformation includes aspects of organisational culture (J. Konopik et al., 2022). To instil the proper mindset for the transformational process in the organisation, leadership and culture are crucial for digital transformation. This includes the capacity to encourage experimentation with and learning from novel ideas and technologies (Chang et al., 2012, as cited in J. Konopik et al., 2022).

- Attracting, promoting, and retaining technical talent

The continual transformation of the organisation is demonstrated by its efforts to expand its workforce with personnel possessing expertise in data architecture and analytics, as well as design and user experience. The skills needs will undergo continuous evolution contingent upon the level of maturity exhibited by the strategy.

Companies are asking their employees to behave in new ways as they adopt innovative technologies and redesign structures, roles, and processes. Many leaders are aware that some of the new responsibilities require the use of different skills. The necessary skill levels are often still unclear. It is necessary that organisations prioritise the recruitment of candidates possessing technology and analytics skills. This strategic approach serves to foster evidence-based decision making and facilitate seamless adaptation to technological advancements among staff members (Jeanne, et al., 2016).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter provides an elaboration on the research design and methodology approach. It presents a comprehensive overview of the research theory and strategy employed in the gathering and analysis of the sample data.

3.2. Research Strategy and Approach

The approach to the study was based on qualitative comparative analysis utilising secondary data. Secondary analysis of data comprises utilising existing data to discover answers to different inquiries than those posed in the initial research study (Hindsetal.,1997 as cited in Long-Sutehall, et al., 2011). Qualitative methodologies contribute to describing and interpreting of nuanced issues, improving, and revising understanding as opposed to merely confirming the validity of earlier conclusions of theories.

The comparative method of analysis is utilised to understand the factors that impact business activities and how organisations respond to “cultural, social, political, institutional, environmental, economic, industrial, and market variety” (Pettigrew & Collinson, 2009). As this is a comparative analysis of digital transformation strategies, it is an applicable approach to reviewing and comparing institutional and industrial data.

Table 5 depicts the different approaches to comparative analysis that are applicable in reviewing and assessing digital transformation strategies. Each approach and technique have been evaluated for advantages and limitations by Kuntsman & Arenkov (2019). The methods outlined have been used in practice to evaluate digital transformation strategies in different organisations. The approaches are still widely qualitative in nature, which offer limitations to objectively assess key performance indicators. As digital transformation strategies are interpreted differently, there is no single best method for

evaluations. Quantifying success in foresight strategies or in emerging industries is not always forthright (Kuntsman & Arenkov, 2019).

For the purposes of this study, the balanced scorecard approach was utilised taking into consideration each bank's activities for the period under review. The different components of the balanced scorecard were analysed according to content and thematic categories. Vaismoradi and Snelgrove (2019) argue that content evaluation is a methodology performed to examine the substance of many data forms, encompassing visual and audio information. The process allows for the classification of events or incidents, thus aiding in their interpretation and analysis. The approach encompasses a wide variety of approaches with diverse concepts, assumptions, and analytic principles.

Under the qualitative descriptive design, qualitative content analysis and thematic analysis are categorised as qualitative descriptive design. It is a collection of techniques used to analyse textual data and clarify themes. The systematic process of categorization, examination of meaning, and description of reality through the construction of themes is their defining characteristic.

Table 5 Various methodologies used in comparative analysis to evaluate the efficacy of digital transformation initiatives.

No	Groups of techniques, techniques	Pros	Cons
1	Based on cost accounting or minimization (TCO etc.)	Full accounting of all cost types and their ratio to cost sources	They do not provide an opportunity to fully assess the benefits and advantages of integrating digital technologies into business.
2	Investment analysis techniques	Detailed and most reliable construction of the cash flow scheme, which characterizes the project profitability.	There is no consideration of the peculiarities of digital technologies, and there is no possibility to estimate the costs and benefits of the project.
3	Integral techniques		
3.1	"Balanced" (example: balanced scorecard)	Assessment of all company's activities, considering past and future trends.	Complex and resource intensive in the process of application and construction.
3.2	«Risky» (example: real options valuation, ROV)	The most accurate and complete assessment of all risks and company preparedness to work under uncertainty.	Complex implementation and the need for a cumbersome statistical and mathematical apparatus.
4	Original methods of consulting companies (TVO etc.)	Detailed assessment of all areas of firm's activities that are subject to significant impact of digital technologies.	Closed techniques
5	Other techniques	Rapid assessment (often simplified) of selected areas of company's activity.	Used only in certain situations and specific sectors of the economy.

Source: Kuntsman & Arenkov (2019)

3.3. Research Sample

The research was constrained in its focus to banks classified as the 'Big Four', which are registered in South Africa and under local governance. The banks that are encompassed within this grouping are Standard Bank, Absa, Nedbank, and First National Bank. The scope of this study is restricted to ten years, commencing in 2012 and concluding in 2021. The decision to focus the study exclusively on these institutions is justified by their significant market control, which exceeds eighty percent.

3.4. Data Collection

The review was of publicly available information reported, including annual results, industry ratings and surveys conducted, and company press releases. The audited integrated annual reports were the primary source of data, as only 20% of the report pertains to the company's financial position, while the remaining 80% is textual in nature and provides insight into the company's strategies, leadership, sustainability, and corporate governance. (Sai et. al., 2019).

The data was sourced from bank websites and third-party organisations that conduct annual surveys on customer experience to calculate the Net Promoter Scores in the industry. Data collected was applied to the balanced scorecard pillars depicted in Figure 7, further adapted from the key performance indicators outlined in Chapter two. The conceptual framework applied, which encompasses both the traditional balance scorecard and key performance indicators is depicted in Section 3.6 of this Chapter.

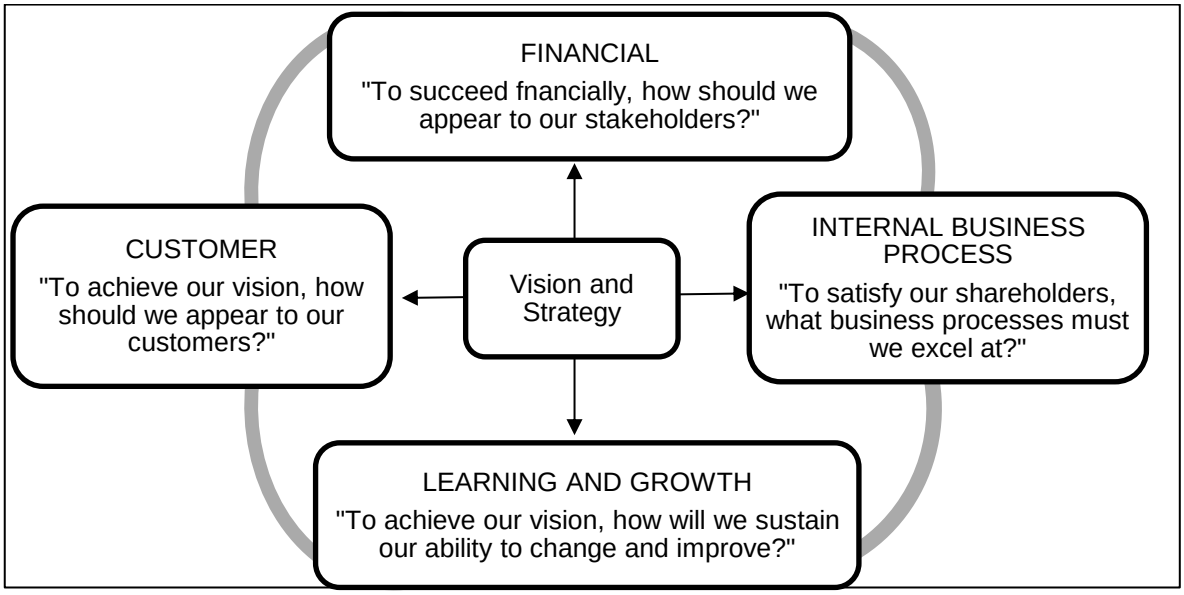
a. Balanced Scorecard

David Norton and Robert Kaplan published an article in the Harvard Business Review where they introduced the first concept of a balanced scorecard. A balanced scorecard measures a company’s performance and how they use assets at their disposal to create value (Kaplan & Norton, 1992). Effectively

measuring performance indicators offers an opportunity to understand what drives performance and how you can improve it.

Figure 7 depicts the main pillars of a balanced scorecard. The financial element is the key driver, though this needs to be supplemented with other elements which include customer, internal process, and learning and growth (Kaplan, 2010).

Figure 7 Translating Vision and Strategy: Four Perspectives



Source: Kaplan (2010)

- Vision and Strategy

Information relating to vision and strategy was sourced from published and audited integrated annual reports of the banks under review. Annual reports provide an overview of an organization's performance in the past, development strategies, and prospective projections (Sai et. al., 2019). Section 2.4.2 outlines Jeanne, et al. (2016) theory of how organisations approach the design of digital transformation strategies.In their paper ‘Designing Digital Organisations’, there are two approaches to digital disruption strategies. Organisations can invest in customer engagement or digitized solutions. The Vision and Strategy pillar will

be assessed according to Jeanne, et al. (2016) theory and assessed accroding to the definitions in Table 8.

- Financial

Decision makers in organisations can also measure their overall investment against those of other organisations operating in the same industry (Dias, 2021). This provides an additional measure for benchmarking purposes to assess whether they lead in that market or fall behind (Fitzpatrick & Strovink, 2021). In evaluating the results, it enables an organisation to discover the best approach to transformation, and where they may consider increasing spending or scaling back. Financial information was sourced from published and audited integrated annual reports of the banks under review. Information extrapolated included the current position as of December 2021. Data collected is in relation to headline earnings, collected deposits and total number of customers.

Learning and Growth

Data regarding the annual expenditure on research and development, as well as the proportion of the yearly technology budget allocated to innovative digital projects, was gathered where feasible. As depicted in Figure 6, there are five key performance indicators against which progress can be assessed by an organisation. Thematically, a key indicator for investment includes spend on the development of talent and skills, products or solutions, and information technology. This information was sourced from published and audited integrated annual reports

- Customer

According to Kaplan (2010), four main categories typically comprise customer concerns: time, quality, performance and service, and cost. Lead time quantifies the amount of time needed by the business to satisfy the demands of its clients. To support appropriate timeliness, organisations ought to invest in their research and development including collecting useful data and insights. Fitzpatrick & Strovink (2021) recommend that this process should take less than six months to ensure usability of ideas and solutions.

The customer pillar encompasses the surveys on digital banking experience that have been collected and reported by InSites Consulting in their annual SITEisfaction report. The SITEisfaction report is a yearly assessment of customer satisfaction regarding digital banking services in the context of South Africa. The information is collected through a survey and combines ratings on internet and mobile banking. The methodology applied by InSites Consulting is expanded upon in Section 3.5 of this Chapter.

- Internal Business Process

As this study leveraged secondary data, there was no specific review of internal business processes, but rather, a review of key indicators. This included observed structural changes and challenges as potentially impacting the successful implementation of digital transformation strategies.

b. Search Strategy

The search strategy followed a deductive coding approach to identify texts that match keywords. The results of matches were used to perform a thematic analysis to build a theory from the data (Linneberg & Korsgaard, 2019). The primary tool used for the preliminary search was ATLAS.ti. ATLAS.ti is software that facilitates qualitative data analysis for qualitative, quantitative, and hybrid approaches to research. The search process consisted of three phases. The first phase sourced audited integrated annual reports published in open-source websites for the various banks.

The second phase of the search was creating codes or keywords outlined in paragraph 0 on ATLAS.ti. The codes created were to identify information on digital transformation strategies linked to the vision or strategy implemented, development of talent and skills, products or solutions, and information technology.

The Vision and Strategy pillar codes included “Digital”, “Digital Transformation” and “Digital Transformation Strategy”. The Learning and Growth pillar which assessed talent and skills, products or solutions, and information technology

codes included “Analytics”, “Data”, “Big Data”, “Information Technology”, “Digital”, “Chief Information Officer” and “Digital Transformation Strategy” and “Chief Technology Officer”.

The third phase and final phase was the run on forty uploaded audited integrated annual reports of the banks under review. For purposes of the analysis, the code matches were clustered categorically applying the screening process in Table 7 and definitions in Table 8.

Table 6 Search process documentation

Data source	Search process documentation
Audited Integrated Annual Reports	Date Published: January 2012 - December 2021

c. Search terms used

The search terms used included: “Analytics”, “Data”, “Big Data”, “Information Technology”, “Digital”, “Chief Information Officer”, “Digital Transformation”, “Digital Transformation Strategy”, “Chief Technology Officer”

Table 7 Inclusion criteria used

Screening phase	Inclusion criteria
Primary Screening - Initial Inclusion	Information published between January 2012 – December 2021 Match in the English language Exact text matches as per section c.
Secondary Screening – Strategy Analysis Contextualization	Implemented strategy. Applicable to year under review. Removal of duplications including summaries and full text reporting on the same information. First code match in scenarios where a paragraph has multiple code search matches.
Final Screening	Categorisation of information reported to definitions in

Table 8 Search term thematic definition

Strategy Design Application	Applied Thematic Definition
Digitized Solutions Strategy	A strategy will be categorised as digitised solutions if the primary objective was to transform the business model by reformulating the products and services offered for sale.
Customer Engagement Strategy	A strategy will be categorised as customer engaged if the primary objective was to enhance the go-to-market strategy of a business through online services and apps, as well as the support of customer service and sales.

3.5. SITEisfaction Methodology

Secondary data collected by InSites Consulting was used for the customer pillar in the balanced scorecard. *The South Africa Digital Banking SITEisfaction*® survey by InSites Consulting evaluates the expectations, behaviours, and experiences of digital banking consumers in South Africa. The survey has been conducted annually for ten years. It compares the internet banking, application banking, and consumer experiences to those of competitors as well as to the performance of previous years.

Data was collected via a device-agnostic digital survey. Participants were required to use internet banking and mobile banking to qualify for the survey. 1 500 participants were sampled in total. The sample was distributed to reflect the South African mobile and internet banking population universe as depicted in Table 9. A device-agnostic digital survey was used to capture data, meaning it could be completed on any device. All bank comparisons in this report involved users with a primary IB account or primary bank account at a given institution.

Table 9 SITEisfaction sample distribution

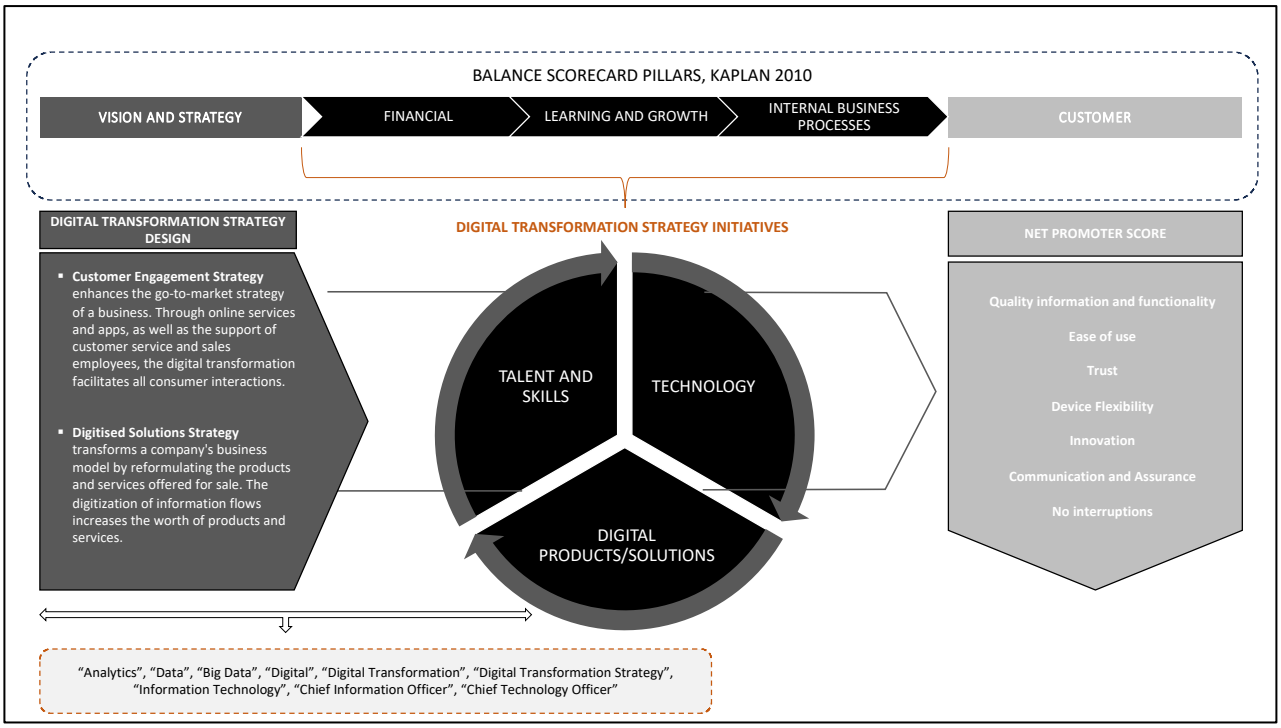
Universe	Internet Banking		Mobile Banking	
Age Group	15–24	13%	15–24	18%
	25–34	31%	25–34	37%
	35–49	36%	35–49	33%
	50+	20%	50+	12%
Gender	Male	56%	Male	52%
	Female	44%	Female	48%
Population Group	Black	48%	Black	63%
	Coloured	6%	Coloured	9%
	Indian / Asian	7%	Indian / Asian	4%
	White	39%	White	24%

Source: SITEisfaction (2021)

3.6. Digital Transformation Conceptual Framework

Combining factors from the literature review in chapter 2 and balanced scorecard summarised in section 3.4 of this chapter, the framework depicted in Figure 8 was applied to organise and synthesise data. The framework connected themes from the deductive coding and standardised data for comparative analysis. The vision and strategy were categorised by design, aligned to definitions in Table 7. Financial, learning and growth and internal business processes were categorised by the type of strategic initiatives which will fall under development of talent and skills, products or solutions, and information technology. Lastly, the customer pillar was assessed utilising surveys on digital banking experience that have been collected and reported by InSites Consulting in their annual SITEisfaction report.

Figure 8 Digital Transformation Conceptual Framework



Source: Author's (2022)

3.7. Credibility and Verifiability

Data collected was from audited annual reports and InSites Consulting. The audited annual reports information is deemed as credible as independent parties review the information and provide an opinion on what is reported by an organisation. InSites Consulting is a credible source banks use to calculate their net promoter score (“NPS”) with banked customers.

3.8. Ethical Issues

The data used in the research is information from institutions’ public reports, therefore, there are no perceived ethical issues with use and analysis of information. However, the ethical process and standard of the University of Witwatersrand was adhered to and implemented. An ethics waver was also obtained from the Ethics Committee of the University of Witwatersrand.

3.9. Methodology and Approach Limitations

The generation of findings and results from qualitative data does not occur spontaneously through the examination of documents. Instead, it requires a deliberate and focused endeavour to identify the most crucial components and construct a cohesive and persuasive narrative that addresses the research inquiries and provides accurate interpretations aligned with the data (Miles et al., 2013).

The approach is a complex and resource intensive approach to extrapolate and align various forms of information to draw insights. However, in this study, there is reliance on accurate reporting by the various banks under review. Information is provided at executive consumption only highlighting what an organisation openly reports on. Annual reports tend to provide a balanced view of performance, and not proactively report on cases of failure unless there is direct link to financial performance. This study does not provide a detailed functional

level review and analysis on digital transformation initiatives. It assessed data at industry performance level.

CHAPTER FOUR: ANALYSIS

4.1. Introduction

This chapter provides an overview of the study's findings, offering a comprehensive and in-depth analysis of each of the banks reviewed in the study. After each deductive code analysis, a presentation of the themes is comprehensively outlined following the Figure 8 Digital Transformation Conceptual Framework. The last section of the chapter discuses findings in the context of the objectives set out in Chapter one.

4.2. Code and Thematic Analysis Overview

There are 3,830 matches for the nine ran codes. Figure 9 represents the results of the document analysis keyword queries. The table in the figure illustrates the distribution across the numerous codes and years. This provides the initial overview of communicated and reported digital transformation-related themes. The terms "Data", "Digital", "Chief Information Officer", and "Information Technology" yielded matches for each year under consideration. This demonstrates that these are given consideration as part of the strategy communicated to stakeholders.

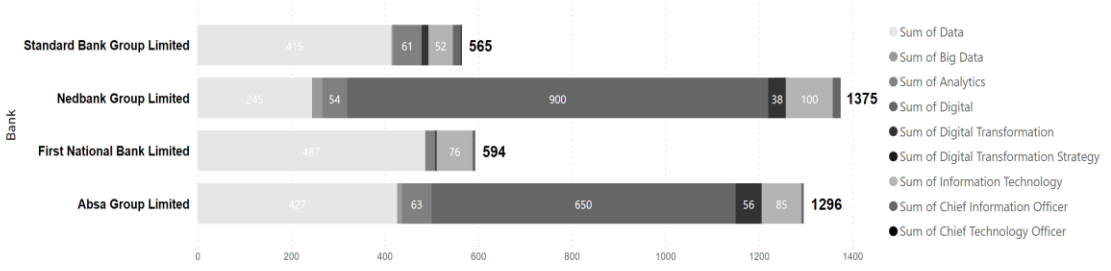
The terms "Big Data", "Digital Transformation", "Digital Transformation Strategy", and "Chief Technology Officer" has fewer matches. These concepts are associated with the maturation of a strategy rollout and the convergence of key performance indicators in a successful transformation strategy rollout. The graph in Figure 9 illustrates the distribution of matches to the study's institutions. Nedbank has the most matches, while Standard Bank has the fewest. Half of the distribution for the four examined institutions was in the hundreds, while the other half was greater than double the number of matches.

It is noteworthy to observe that a considerable number of matches are attributed to "Data" across all institutions. Any successful digital transformation strategy relies on collected data to provide insights on which markets and segments to

prioritise. At 487, First National Bank Limited has the highest match for “Data” and is 98.78% higher than Nedbank Group Limited, which has the lowest at 245. Across all Banks, “Data” ranged from 245 to 487 and “Big Data” ranged from 0 to 21. Nedbank and Absa have significant contests against "Digital", which contributed to the overall aggregate. Approximately 68% of Nedbank's 1321 code matches are associated to the term "Digital", whilst 53% of the total matches are attributed to "Digital" for Absa (650 out of 1233).

Figure 9 Code and Thematic Analysis Overview

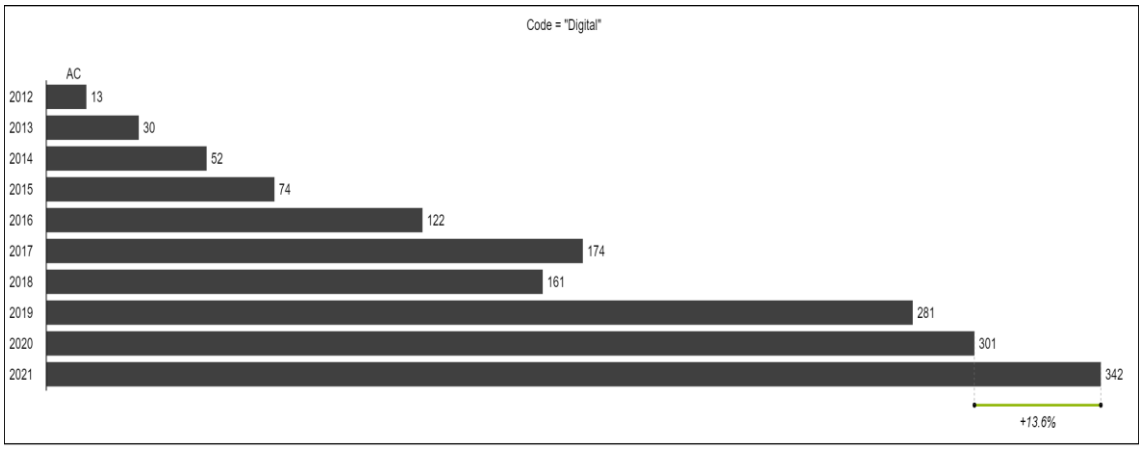
Year	Sum of Data	Sum of Big Data	Sum of Analytics	Sum of Digital	Sum of Digital Transformation	Sum of Digital Transformation Strategy	Sum of Information Technology	Sum of Chief Information Officer	Sum of Chief Technology Officer
2012	112	0	1	13	0	0	26	4	0
2013	98	0	6	30	0	0	40	3	2
2014	118	1	13	52	0	0	37	7	0
2015	152	8	22	74	5	0	36	7	0
2016	158	5	22	122	6	0	28	4	0
2017	153	3	31	174	7	0	34	5	0
2018	137	2	28	161	8	0	24	3	0
2019	211	8	26	281	17	0	27	5	0
2020	213	5	26	301	47	1	26	4	0
2021	222	2	24	342	22	0	35	3	0
Total	1574	34	199	1550	112	1	313	45	2



a. Vision and Strategy – Digital Transformation Strategy Design

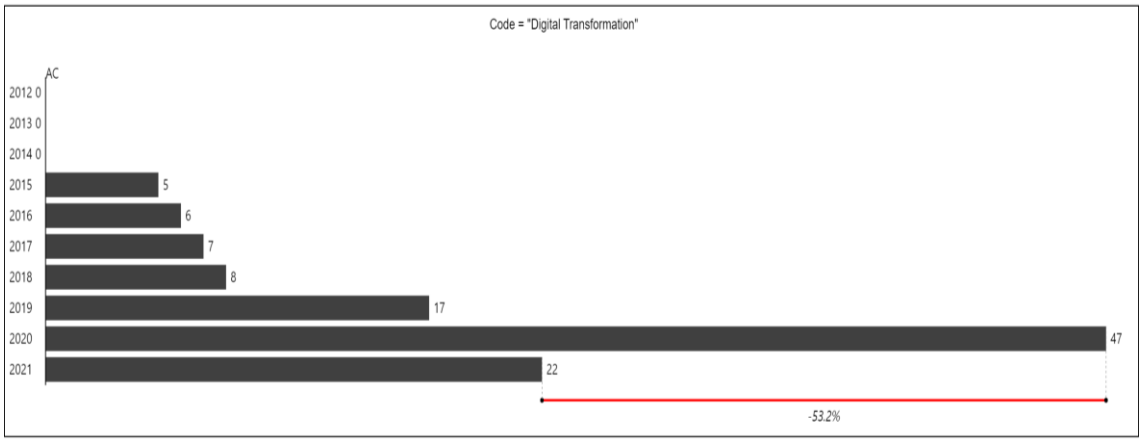
As depicted in Figure 10, the match on “Digital” dates to 2012. The term "Digital" returned 1,550 matches in total. There is consistent growth from year to year, with a minor decrease between 2017 and 2018. Nedbank has the highest total at nine hundred, followed by Absa Group Limited at 650. The year 2021 makes up 11.55% of the overall total.

Figure 10 Code: Digital



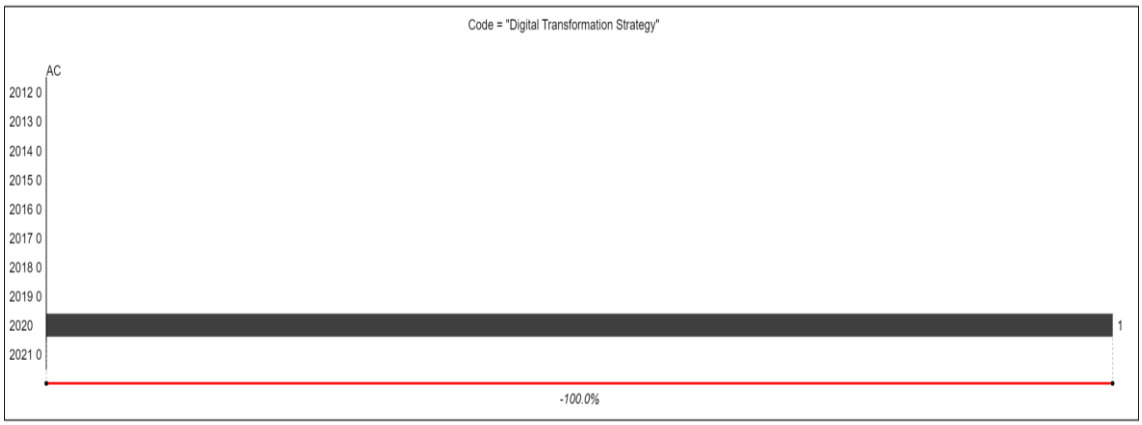
2015 marks the beginning of the combination of digital and transformation yielding results. The combined term "Digital Transformation" returned 112 matches in total as depicted in Figure 11. The increase is significant between 2019 and 2020, with a decline noted between 2020 and 2021of 53.2%. Absa has the highest total at 56, followed by Nedbank, Standard Bank, and FNB. 2020 makes up 28.57% of the sum.

Figure 11 Code: Digital Transformation



In 2020, the search for "Digital Transformation Strategy" returned only one result as shown in Figure 12. FNB makes up 100.00% of the results.

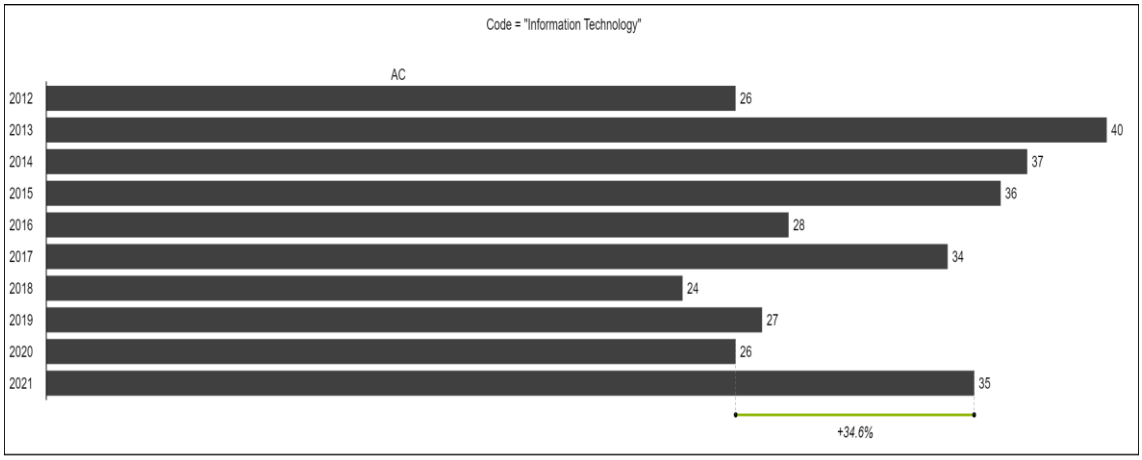
Figure 12 Code: Digital Transformation Strategy



b. Learning and Growth - Digital Transformation Strategy Initiatives

The code for “Information Technology” returned matches for all years under review as depicted by Figure 13, a total of 313. This is the third largest match overall. The average values observed did not drastically change year on year. Information technology is foundational in operations and will pre-set strategic initiatives to digitise an organisation.

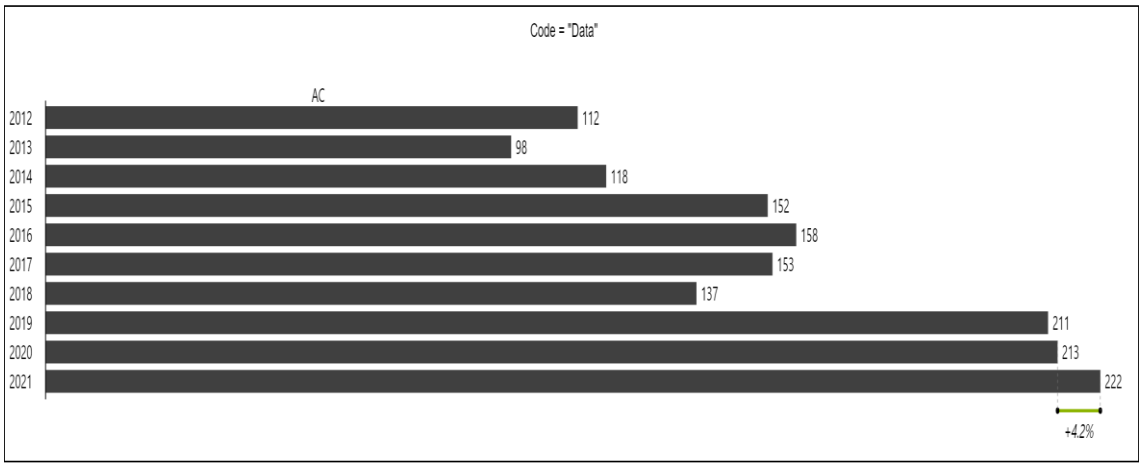
Figure 13 Code: Information Technology



At 40, 2013 has the highest sum of Information Technology and is 66.67% higher than 2018, which has the lowest sum at 24. 2013 accounted for 12.78% of the

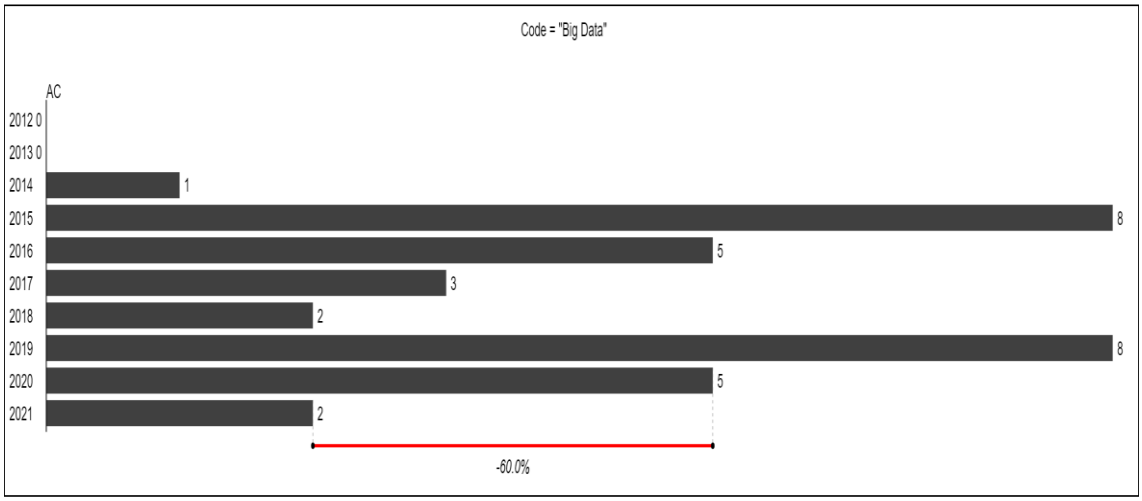
total results across all 10 Years. Nedbank has the highest total sum of Information Technology at one hundred, followed by Absa, FNB, and Standard Bank. To drive the right decisions, data, and insights play a vital role. The “Data” code returned the highest number of matches as depicted by Figure 14, a total of 1,574.

Figure 14 Code: Data



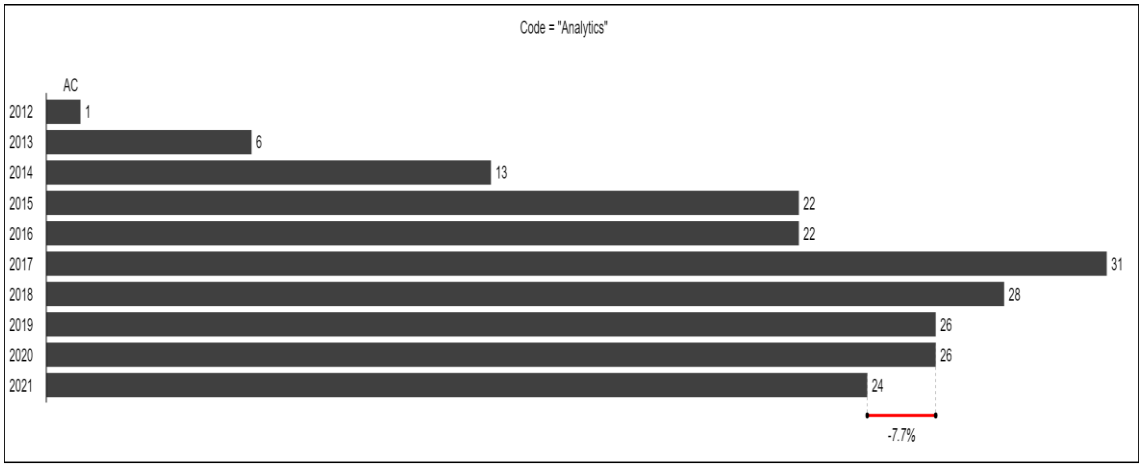
At 222, 2021 has the highest sum of Data and was 126.53% higher than 2013, which had the lowest Sum of Data at 98. The sum of Data and of Big Data as depicted in Figure 15 are positively correlated with each other. The relationship between Data and Big Data diverged the most in 2021, when Data is 220 higher than Big Data.

Figure 15 Code: Big Data



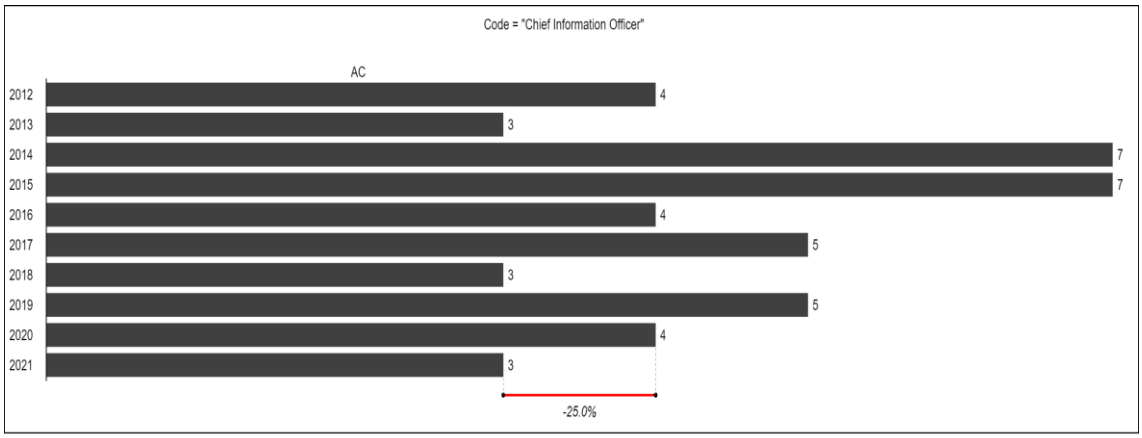
FNB has the highest total matches for Data at 487, followed by Absa, Standard Bank, and Nedbank. The code for “Analytics” returned matches for all years under review as depicted by Figure 16, a total of 199. At 31, 2017 has the highest matches for Analytics and was 3,000.00% higher than 2012, which had the lowest sum at 1. 2017 accounted for 15.58% of the total results. Across the 10 years under review, the results ranged from 1 to 31. Absa has the highest total sum of Analytics at 63, followed by Standard Bank, Nedbank, and FNB.

Figure 16 Code: Analytics



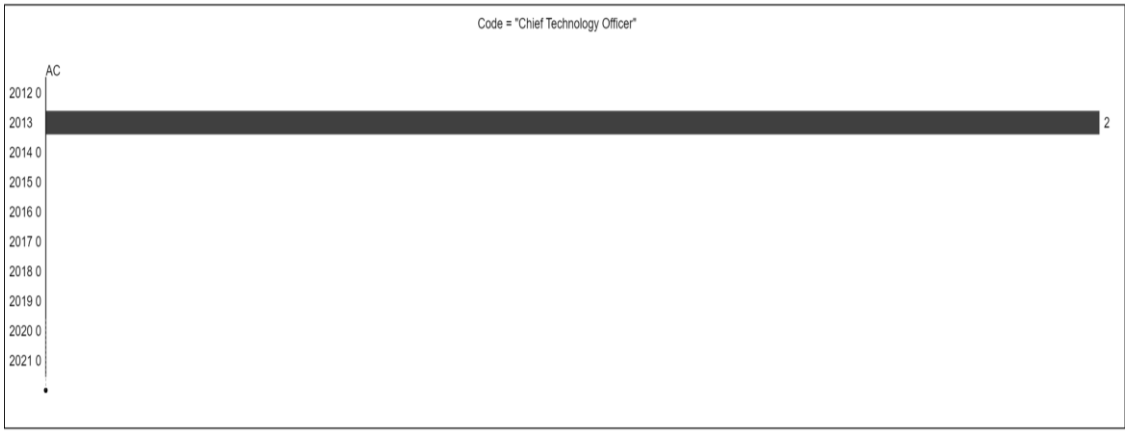
The code for “Chief Information Officer” returned matches for all years under review as depicted by Figure 16, a total of 45. 2014 and 2015 tied for highest sum at 7, followed by 2017 and 2019.

Figure 17 Code: Chief Information Officer



Across all the 10 years under review the results ranged from 3 to 7. Standard Bank and Nedbank tied for highest total sum at 17. On the other hand, only 2 matches were returned for code “Chief Technology Officer” as depicted in Figure 18. 2013 accounted for 100.00% of the sum of results. Standard Bank accounts for 100.00% of the results.

Figure 18 Code: Chief Technology Officer

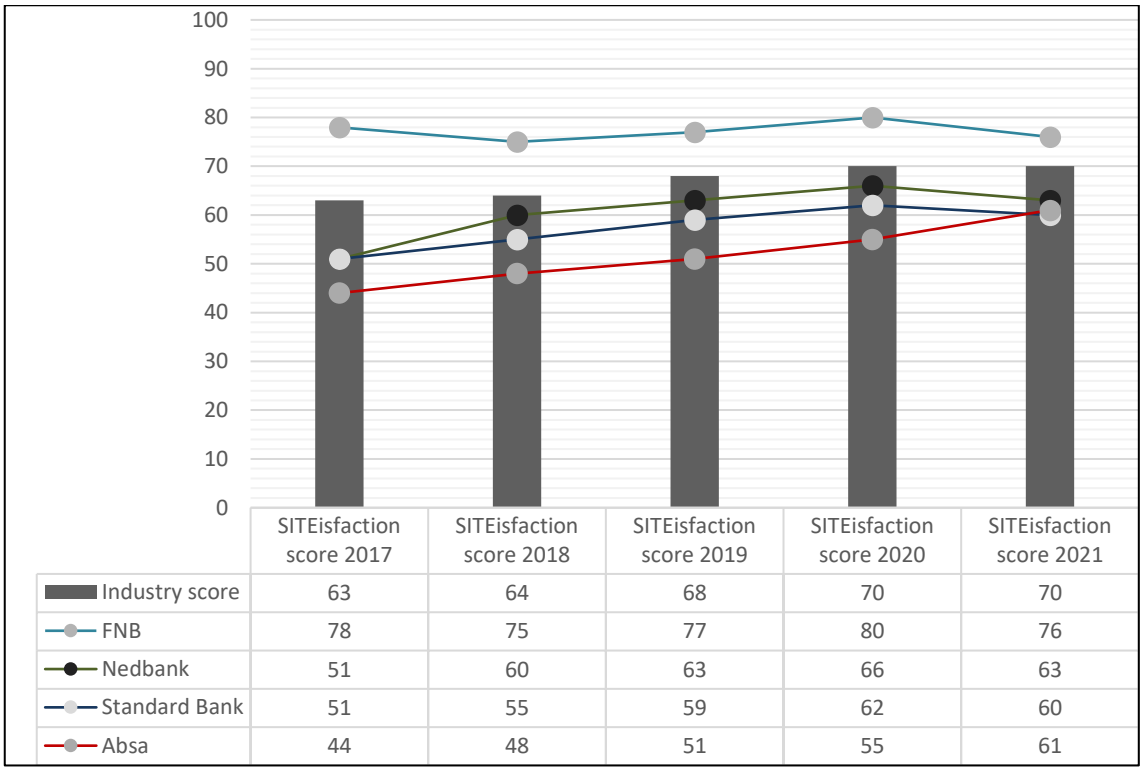


c. Customer Experience - Net Promoter Score (“NPS”)

The overview of the customer satisfaction score over the past five years is depicted in Figure 19. FNB has performed consistently above the overall industry average since 2017. The highest customer satisfaction score is in 2020, whilst their lowest is in 2018. The Nedbank score also reached its peak in 2020, with decline in 2021. Standard Bank had an increasing performance year on year, with a slight decline by two points in 2021.

Absa consistently performed below other banks, though it has shown the greatest year on year increase. It is the only bank under review that did not experience a decline in customer satisfaction in 2021.

Figure 19 2021 SITEisfaction Score Overview



	SITEisfaction score 2017	SITEisfaction score 2018	SITEisfaction score 2019	SITEisfaction score 2020	SITEisfaction score 2021
Industry score	63	64	68	70	70
FNB	78	75	77	80	76
Nedbank	51	60	63	66	63
Standard Bank	51	55	59	62	60
Absa	44	48	51	55	61

4.3. Absa Group Limited Digital Transformation Strategy Analysis

a. Vision and Strategy – Digital Transformation Strategy Design

In contextualising the code matches for Absa, only 60 out of 1296 from the integrated annual reports and 3 out of 322 from their website pertained to their digital transformation strategy. Even though Absa positioned their strategy as digitally driven in their reporting, less than 5% could be attributed to specific, measurable digital transformation strategies. Post applying Table 7's inclusion criteria, Tables 8 and 9 provide an overview of the initial and subsequent matches considered for analysis and contextualising.

The 63 analysed matches indicated a strategy that was designed to digitise solutions, that is, 55.56% of the initiatives were geared towards transforming operations. 44.44% of the strategy design was focused on innovation geared towards their go-to-market strategy. An overview of the results is depicted in Figure 20. It is interesting to note that as a singular concept, customer

engagement through digital products and solutions were higher than technology and skills/talent linked initiatives.

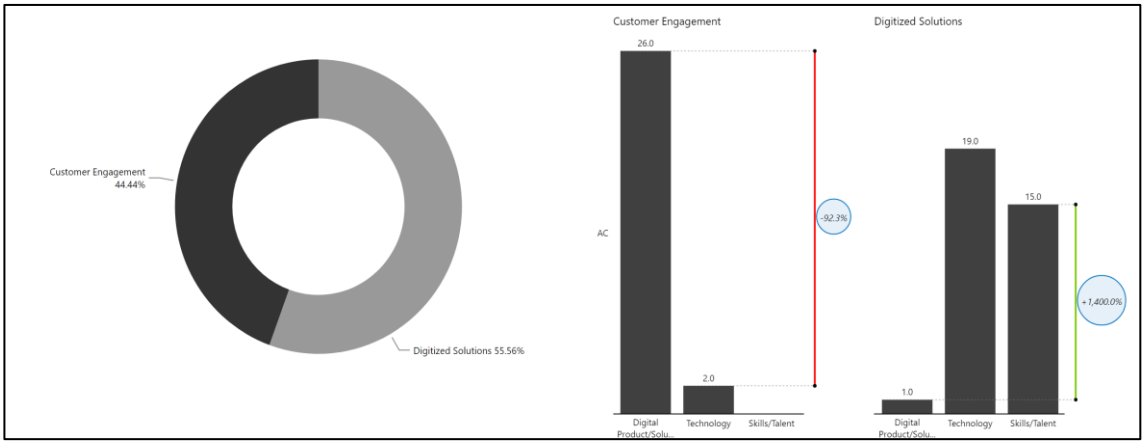
Table 10 Absa Group Limited Integrated Annual Report Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
“Analytics”, “Data”, “Big Data”, “Digital”, “Digital Transformation”, “Digital Transformation Strategy”, “Information Technology”, “Chief Information Officer”, “Chief Technology Officer”	1296	60

Table 11 Absa Group Limited Web Domain Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
site: https://www.absa.africa/ "digital" site: https://www.absa.africa/ "digital transformation" site: https://www.absa.africa/ "digital transformation strategy" site: https://www.absa.africa/ "data" site: https://www.absa.africa/ "big data" site: https://www.absa.africa/ "analytics" site: https://www.absa.africa/ "information technology" site: https://www.absa.africa/ "chief technology officer" site: https://www.absa.africa/ "chief information officer"	322	3

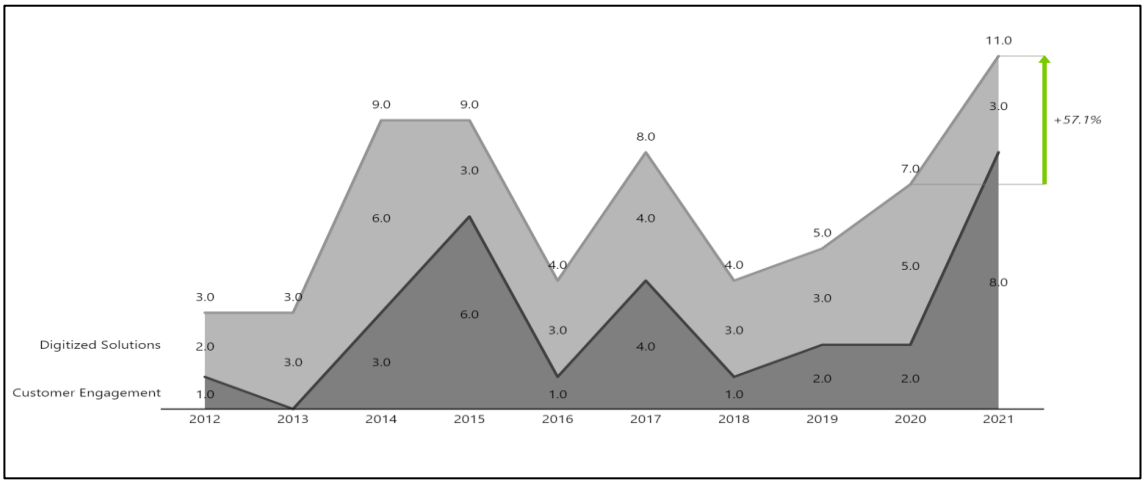
Figure 20 Absa Group Limited Strategy Design and Initiatives Overview



b. Learning and Growth – Digital Transformation Strategy Initiatives

As depicted in Figure 21, the strategy design of Absa altered and changed year on year during the period under review. The bank did not apply a single approach and alternated between initiatives. In review of Absa's integrated reports, it was observed that 2012 strategy was centred on their operations, and the Information Technology Steering Committee was established to ensure that architectures and systems received board attention and were prioritised as part of their strategy.

Figure 21 Absa Group Limited Strategy Design and Initiatives YoY



The consumer engagement strategy centred on promoting the mobile application and online banking functionality. In 2013, there was a 68% increase in the amount of revenue spent on professional fees for strategic initiatives. Most of the fees were for project delivery and investment in mobile digital applications and systems.

Between 2014 and 2019, the design of the strategy continued to emphasise digital solutions. The bank mentions the need for a Chief Information Officer, the assignment of additional responsibilities to the Information Technology Steering Committee, and an increase in technology expenditures. They implemented a paperless registration system that incorporated branch, ATM, and mobile banking processes. Over R12.4 billion was invested in infrastructure and applications between 2015 and 2017. The digital strategy's objectives had two distinct execution streams: "Run the Bank" and "Transform the Bank." In addition, data and analytics were used to cross-sell financial services such as insurance and create personalised consumer experiences. Between 2017 and 2018, Absa began investing in skills and aptitude through the Digital Academy apprenticeship programme.

In 2020, Covid-19 provided Absa with the impetus to contemplate and accelerate changes to their business strategy and refine their strategic focus. They reported that 70% of approved initiatives are associated with digital transformation. Absa established positions for a director of Digital Solutions, Innovation, and Technology, a chief digital officer, and a director of customer experience. Significant emphasis was placed on customer engagement initiatives in 2021, with enhancements made to digital banking applications through the incorporation of artificial intelligence, the provision of a digital fraud warranty, and the release of a free app that does not require mobile data or Wi-Fi to operate.

c. Internal Business Processes

The period from 2017 to 2019 marked a notable transformation for Absa in internal business operations, influenced by the company's split from Barclays. This separation encompassed the transfer of services, including technology solutions, which were previously offered by Barclays, as well as a rebranding

effort. The relocation of the Absa Regional Operations central banking system, from the United Kingdom to South Africa, had a significant impact on 10 subsidiaries and represented the most extensive data and technology migration for customer- and employee-facing channels in Africa to date.

The rebranding initiative undertaken by the company was of a magnitude never seen, since it involved the transformation of all technological and digital platforms, corporate and retail establishments, commercial assets, and marketing materials. Absa additionally disclosed a strategic implementation initiative that involved Paul O'Flaherty taking on the responsibility for digital operations within Engineering Services.

In 2020, a strategic shift was observed in their approach, wherein they aimed to introduce customer-centric digital solutions. This involved the establishment of a comprehensive framework encompassing financial services, lifestyle enhancements, and value chain provisions. The primary objective of this framework was to ensure a smooth and integrated customer experience across all available channels and touchpoints, while maintaining competitive pricing.

d. Financial Performance 2021

Through improved product offerings and enhanced digital platforms, Absa's customer base expanded. In South Africa, Absa's largest market, the number of consumers rose from 9.6 million to 9.7 million, with a 10 percent increase in digitally active customers as stability improved and functionality was enhanced. Absa reported 2.7 million digitally active consumers in total. They reported receiving R1.74 trillion in deposits and R18 billion in revenue.

e. Customer – Net Promoter Score (“NPS”)

Absa’s NPS was 61 at the end of 2021. The bank has consistently performed below other banks yet showed an increase year on year. There is correlation in the 7-point jump in 2021 as depicted by Figure 19 2021 SITEisfaction Score Overview Figure 20 and the observed strategy shift in 2020 to implement customer-first digital solutions. The 150 respondents to the SITEisfaction survey

scored Absa highly on functionality, flexibility, trust, and ease of use of their digital products and solutions.

Table 12 Absa Group Limited Net Promoter Score (“NPS”)

Key Drivers	Score/Rating
Base Sampled	n=150
Quality information and functionality	81%
Ease of use	83%
Trust	77%
Device flexibility	73%
Innovation	67%
Communication and assurance	69%
No interruptions	53%

4.4. First National Bank Limited Digital Strategy Transformation Analysis

a. Vision and Strategy – Digital Transformation Strategy Design

When FNB's code matches were analysed, only 22 out of 594 from their integrated annual reports and 6 out of 2496 from their website were relevant to their digital transformation strategy. With significant positioning in the public domain, less than one percent of outcomes could be attributed to specific, measurable digital transformation strategies. After applying Table 7's inclusion criteria, Tables 13 and 14 provide an overview of the initial and subsequent matches considered for further review.

Table 13 First National Bank Limited Integrated Annual Report Code Match Analysis

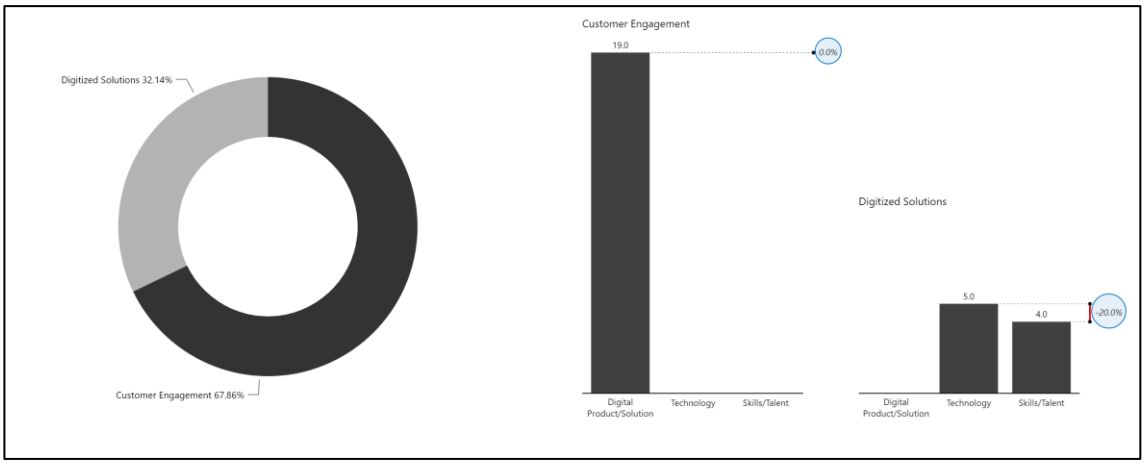
Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
“Analytics,” “Data”, “Big Data”, “Digital”, “Digital Transformation”, “Digital Transformation Strategy”, “Information Technology”, “Chief Information Officer”, “Chief Technology Officer”	594	22

Table 14 First National Bank Limited Integrated Web Domain Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
site: https://www.fnb.co.za/ "digital" site: https://www.fnb.co.za/ "digital transformation" site: https://www.fnb.co.za/ "digital transformation strategy" site: https://www.fnb.co.za/ "data" site: https://www.fnb.co.za/ "big data" site: https://www.fnb.co.za/ "analytics" site: https://www.fnb.co.za/ "information technology" site: https://www.fnb.co.za/ "chief technology officer" site: https://www.fnb.co.za/ "chief information officer"	2496	6

The 28 analysed matches indicated a strategy that was designed for customer engagement, that is, 67.86% of the initiatives were geared towards their go-to-market strategy. An overview of the results is depicted in Figure 22. All their customer engagement strategies were positioned through digital products and solutions.

Figure 22 First National Bank Limited Strategy Design and Initiatives Overview

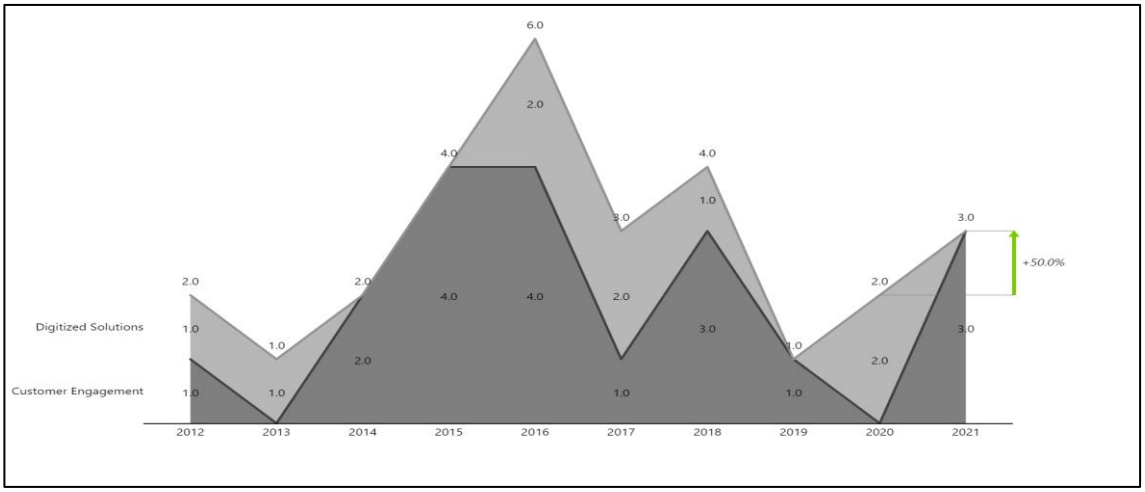


b. Learning and Growth – Digital Transformation Strategy Initiatives

Figure 23 depicts that, apart from 2013 and 2020, FNB's strategy design was centred on consumer engagement driven by digital products and solutions as part of their initiatives. In South Africa, FNB holds the distinction of being the pioneering retail and commercial bank to develop a mobile banking application within the country. Further reported in their annual integrated report, FNB established an Information Technology Governance Framework in 2012, which was directed by the Chief Information Officer.

They instituted Digital Banking Support Self-help in the same year, giving their consumers access to bankers 24 hours a day, seven days a week. Between 2014 and 2015, FNB reported establishing an internal innovation programme with the goal of acquiring new customers and migrating existing customers to low-cost electronic channels. During the period, more than three thousand new innovations were reported.

Figure 23 First National Bank Limited Strategy Design and Initiatives YoY



As consumers migrated to digital channels, FNB reported an increase in branch closures and a decline in the total number of operational locations. In 2016, they introduced digital wallets, such as eWallet and FNB Virtual Card on Google Pay, to the market. Their initiatives were heavily influenced by data and analytics. This laid the groundwork for an integrated internet and mobile banking platform that facilitated the cross-selling of services in 2017 and 2018. The most recent iteration of the mobile application facilitated a comprehensive consumer application process.

In 2018, FNB announced the establishment and appointment of a Chief Digital Officer to position and oversee digital transformation with board oversight. Through 2020, they reported that 75% of the appointed board members had information technology or digital expertise. The focus of 2021 was on generating additional innovations that would provide customers with an ecosystem of fully integrated financial services.

c. Internal Business Processes

No structural changes of significance were observed during the period under review. FNB's strong strategic focus on innovative financial services products and delivery channels, with a particular emphasis on electronic and digital platforms

from one year to another was observed. There were investments made to facilitate disruptive data and digital platforms.

d. Financial Performance 2021

In South Africa, FNB's largest market, there were 8.82 million customers. Digitally active customers grew to 6.09 million from 5.90 million (digital includes mobile banking (USSD), online banking and the app). They reported receiving R1.64 trillion in deposits and R26.9 billion in revenue.

e. Customer – Net Promoter Score ("NPS")

FNB's Net Promoter Score was 76 at the end of 2021. FNB has performed consistently above the overall industry average since 2017.

Table 15 First National Bank Limited Net Promoter Score ("NPS")

Key Drivers	Score/Rating
Sampled Base	n=390
Quality information and functionality	91%
Ease of use	90%
Trust	84%
Device flexibility	84%
Innovation	84%
Communication and assurance	83%
No interruptions	67%

There is correlation in the consistent NPS with their customer-first digital solutions observed during the period under review. The 390 respondents to the SITEisfaction survey scored FNB highly on all key drivers with the exception on interruptions as outlined in Table 13.

4.5. Nedbank Group Limited Digital Strategy Transformation Analysis

a. Vision and Strategy – Digital Transformation Strategy Design

When Nedbank's code matches were contextualised, only 46 out of 1375 from their integrated annual reports and 1 out of 1912 from their website were relevant to their digital transformation strategy. With significant positioning in the public domain, less than one percent of outcomes could be attributed to specific, measurable digital transformation strategies. After applying Table 7's inclusion criteria, Tables 16 and 17 provide an overview of the initial and subsequent matches considered for further analysis.

Table 16 Nedbank Group Limited Integrated Annual Report Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
“Analytics”, “Data”, “Big Data”, “Digital”, “Digital Transformation”, “Digital Transformation Strategy”, “Information Technology”, “Chief Information Officer”, “Chief Technology Officer”	1375	46

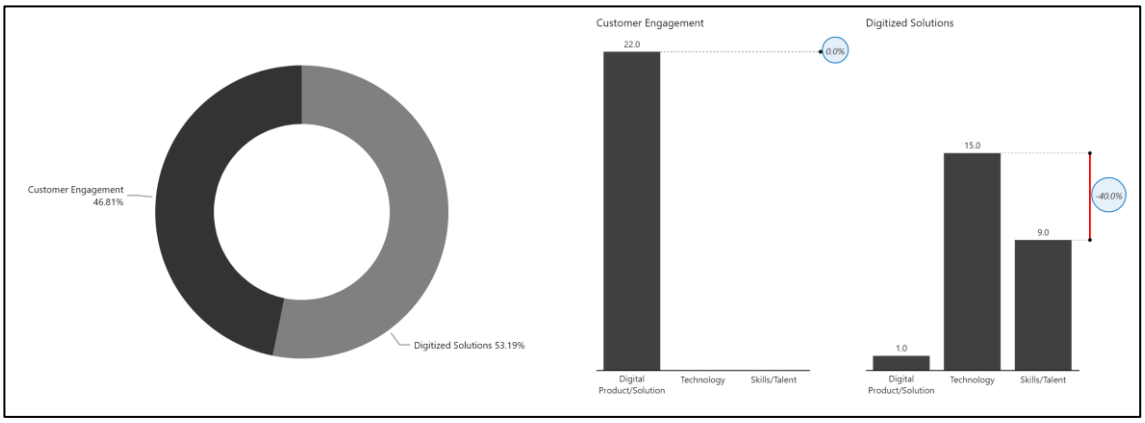
Table 17 Nedbank Group Limited Integrated Web Domain Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
site: https://www.nedbank.co.za/ "digital" site: https://www.nedbank.co.za/ "digital transformation" site: https://www.nedbank.co.za/ "digital transformation strategy" site: https://www.nedbank.co.za/ "data" site: https://www.nedbank.co.za/ "big data" site: https://www.nedbank.co.za/ "analytics" site: https://www.nedbank.co.za/ "information technology" site: https://www.nedbank.co.za/ "chief technology officer" site: https://www.nedbank.co.za/ "chief information officer"	1912	1

The 47 analysed matches indicated a strategy that was designed for digitized solutions, that is, 53.19% of the initiatives were geared towards transforming operations.

An overview of the results is depicted in Figure 24. All their customer engagement strategies were positioned through digital products and solutions. It is interesting to note that as a singular concept, customer engagement through digital products and solutions were higher than technology and skills/talent linked initiatives.

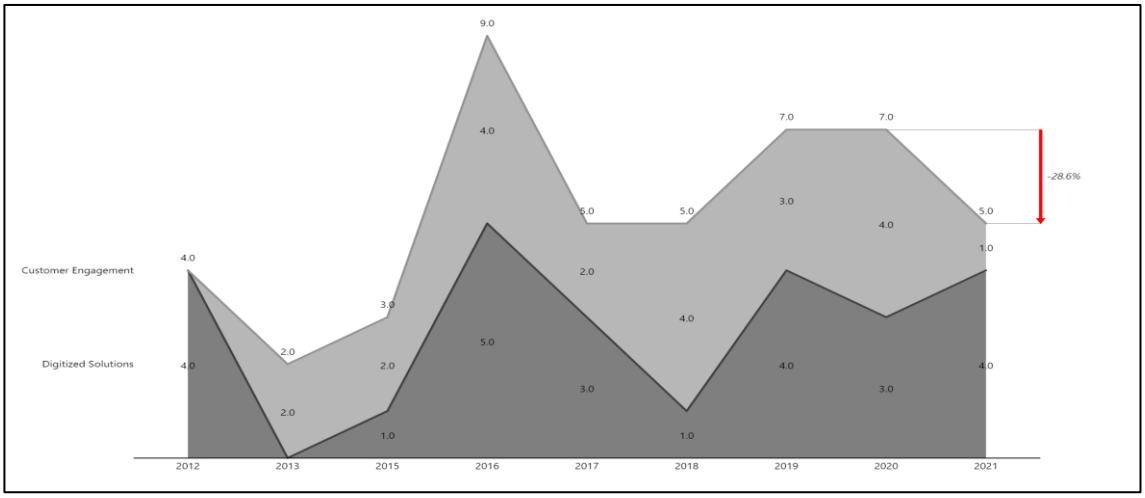
Figure 24 Nedbank Group Limited Strategy Design and Initiatives Overview



b. Learning and Growth – Digital Transformation Strategy Initiatives

Figure 25 depicts that Nedbank's implemented digital strategy altered year on year for the period under review.

Figure 25 Nedbank Group Limited Strategy Design and Initiatives YoY



Prioritisation moved between transforming operations and products, or solutions taken to market. Most initiatives were undertaken in 2016, and unlike in the case for Absa and FNB, a decline in 2021.

In review of the integrated annual reports for Nedbank, the strategic focus in 2012 was on digitised solutions. Nedbank established a Group Information Technology Committee and appointed a Chief Information Officer. The primary strategic objective was the process of streamlining and consolidating systems, aiming to decrease the total count from two hundred and twenty to sixty within a gradual timeframe. As at present, forty systems have been successfully consolidated, resulting in a reduction to a total of one hundred and eighty systems. The design shifted in 2013 to focus on customer engagement with the implementation of the first to the market online home loan application process. The focus on enhancing customer experience in their strategy continued to 2017, with the introduction of analytics to tailor customer experience, first of a kind interactive ATMs, and further enhancements to Masterpass enabling transactions over SnapScan QR codes.

To position digitisation as a strategic emphasis, the role of a Chief Digital Officer was established ensuring board and executive priority. The importance of executive education in providing Nedbank leadership with the necessary skills to

support the group's strategy has been recognised. The implementation of The Executive Business Transformation Programme was centred on multiple components, encompassing innovation and proficiency in digital technologies. Nedbank's strategic intent, known as 'Digital First, First in Digital,' has underscored its commitment to digitalization.

This commitment was exemplified by the introduction of the Nedbank Money app in November 2017. In 2018, Nedbank remained committed to implementing customer engagement initiatives by focusing on improving digital platforms through the utilisation of robotics. These efforts aimed to facilitate customer-driven onboarding processes. In 2019, R760m was invested in employee training, including upskilling employees for digital transformation. Cost-efficiency programmes and adoption of digital solutions enabled the reduction of headcount by 1 874 and closure of 21 branches. During the Covid-19 lockdown, the Karri app was launched, targeting schools as users for their administrative capability. There was a 28.6% reduction in digital transformation strategies in 2021, with the significant focus being on operations and spend to enhance both technology and skills.

c. Internal Business Processes

In the year 2019, there was a notable internal business incident that was reported. Nedbank disclosed a data security incident that transpired at the facilities of a third-party service provider. A portion of the affected data held by a third party consisted of personal details, such as names, identification numbers, telephone numbers, physical addresses, and/or email addresses, belonging to certain clients of Nedbank. An estimated 1.7 million users were impacted, with 1.1 million of them being currently active subscribers. Nedbank announced its disconnection from the vendor. The potential consequences of the structural changes on digitisation projects would have been considerable.

d. Financial Performance 2021

In South Africa, Nedbank’s largest market, there were 7,4 million customers. Nedbank’s digitally active users increased to 2,3 million. This equated to a total

of 31% digitally active main-banked customers. They reported receiving R971.975 billion in deposits and R11.7 billion in revenue.

e. Customer – Net Promoter Score ("NPS")

Nedbank's NPS was 63 at the end of 2021. There is correlation in the three-point drop between 2020 and 2021, and the decrease in digital initiatives as outlined in Figure 25. The 141 respondents to the SITEisfaction survey scored Nedbank highly on all key drivers with the exception on communication and assurance, and interruptions as outlined in Table 16.

Table 18 Nedbank Group Limited Net Promoter Score ("NPS")

Key Drivers	Score/Rating
Sampled Base	n=141
Quality information and functionality	92%
Ease of use	92%
Trust	85%
Device flexibility	87%
Innovation	84%
Communication and assurance	79%
No interruptions	67%

4.6. Standard Bank Group Limited Digital Strategy Transformation Analysis

a. Vision and Strategy – Digital Transformation Strategy Design

When Standard Bank's code matches were analysed, only 30 out of 565 from their integrated annual reports and 0 out of 227 from their website were relevant to their digital transformation strategy. With significant positioning in the public domain, less than four percent of outcomes could be attributed to specific,

measurable digital transformation strategies. After applying Table 7's inclusion criteria, Tables 19 and 20 provide an overview of the initial and subsequent matches considered for further analysis.

Table 19 Standard Bank Group Limited Integrated Annual Report Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
“Analytics”, “Data”, “Big Data”, “Digital”, “Digital Transformation”, “Digital Transformation Strategy”, “Information Technology”, “Chief Information Officer”, “Chief Technology Officer”	565	30

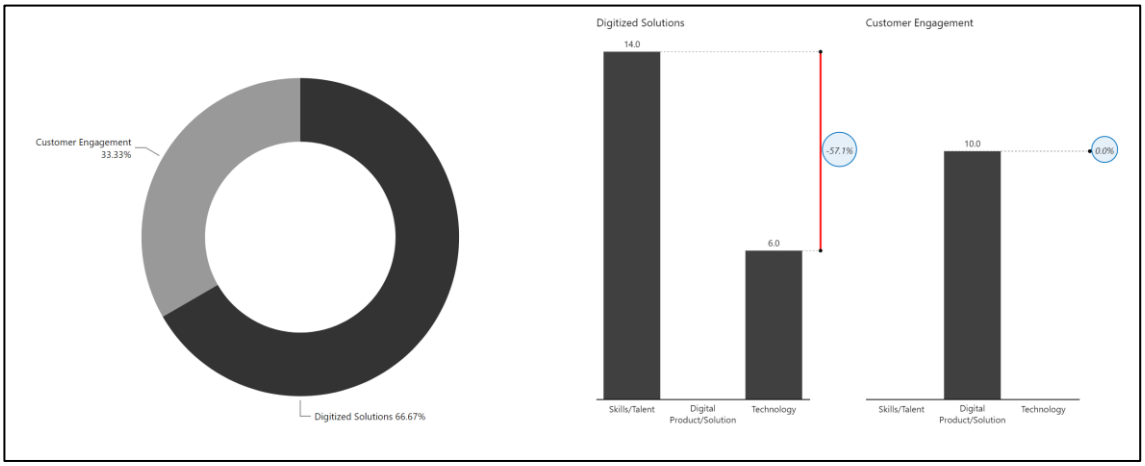
Table 20 Standard Bank Group Limited Integrated Web Domain Code Match Analysis

Search Keywords	First Hits	Relevant Hits Included for Strategy Analysis
site: https://www.standardbank.com_sbg/ "digital" site: https://www.standardbank.com_sbg/"digital transformation" site: https://www.standardbank.com_sbg/"digital transformation strategy" site: https://www.standardbank.com_sbg/ "data" site: https://www.standardbank.com_sbg/ "big data" site: https://www.standardbank.com_sbg/ "analytics" site: https://www.standardbank.com_sbg/ "information technology" site: https://www.standardbank.com_sbg/ "chief technology officer" site: https://www.standardbank.com_sbg/ "chief information officer"	227	0

The 30 analysed matches indicated a strategy that was designed for digitized solutions, that is, 66,67% of the initiatives were geared towards transforming operations. An overview of the results is depicted in Figure 26. All their customer engagement strategies were positioned through digital products and solutions.

Standard Bank's significantly invested in skills and talent initiatives in their strategy design.

Figure 26 Standard Bank Group Limited Strategy Design and Initiatives Overview



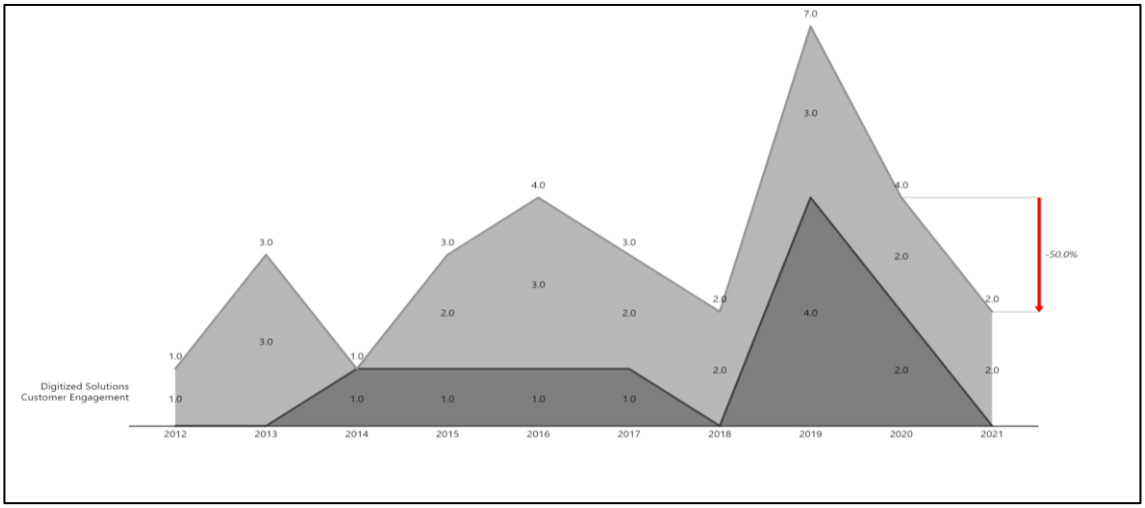
b. Learning and Growth – Digital Transformation Strategy Initiatives

Figure 27 depicts a consistent focus on digitised solutions year on year for the period under review, with exceptions in 2019 when customer engagement had more initiatives. Like with the results for Nedbank, a decline occurred in 2021.

As reported and analysed from their annual integrated reports, between 2012 and 2013, initiatives for Standard Bank were geared towards information technology architectures, frameworks, and their governance. The bank had appointed a Chief Information Officer to oversee the R2,3 billion investment. The restructuring of the core banking system was driven by customer data collected. In the year 2014, a technology dubbed SnapScan was introduced, enabling individuals to make payments for their goods by scanning a distinct vendor code with their smartphone at the point of sale.

This payment method allowed customers to charge the transaction amount to either their credit or cheque card. This was the first customer engagement strategy observed.

Figure 27 Standard Bank Group Limited Strategy Design and Initiatives YoY



From 2015 through to 2018, Standard Bank continued with prioritising initiatives geared towards the information technology programme. The strategy leveraged data analysis supported by an investment in a graduate data science programme, executive training and transforming redundant roles. Customer engagement solutions introduced to the market targeted high-net worth clientele, affording them multi-currency accounts through a digital wallet. More customer engaged solutions were introduced in 2019.

The mobile banking application underwent a redesign with the integration of iiDENTIFii, a technology that facilitated the secure and reliable process of remotely opening an account within a period of less than 60 seconds. This was made possible through the utilisation of biometric digital identity verification methods. Additionally, the implementation of MyMo, an entirely digital transaction account that facilitates smart device-based account creation, and MobyCash, which enables digital cash management, was conducted. In the same year, a committee dedicated to digital transformation was formed, with the group chief executive at its helm, responsible for leading the organization's digital strategy.

Standard Bank’s initiatives were driven by data and analytics, that in 2020, they leveraged artificial intelligence and machine learning to customize solutions and products. The focus in 2021 was on skills and talent, with each client segment

enabled by Client Solutions, Engineering, and Innovation capabilities. In 2021, they invested R59.8 million in bursaries for under- and post-graduate studies in digital skills for 1 868 employees.

c. Internal Business Processes

Standard Bank reported a systems failure in 2014 where a technical malfunction triggered a shutdown of the mainframe. This triggered a response that altered their business processes.

d. Financial Performance 2021

In South Africa, Standard Bank's largest market, there were 10.2 million customers. The total digitally active users were 3,3million. This equated to a total of 32% digitally active main-banked customers. They reported receiving R1.8 trillion in deposits and R25 billion in revenue.

e. Customer – Net Promoter Score ("NPS")

Standard Bank's NPS was 60 at the end of 2021, the lowest of the banks. There is correlation in the two-point drop between 2020 and 2021, and the decrease in digital initiatives as outlined in Figure 27. The 180 respondents to the SITEisfaction survey scored Standard Bank highly on all key drivers with the exception on innovation, communication and assurance, and interruptions as outlined in Table 21.

Table 21 Standard Bank Group Limited Net Promoter Score (“NPS”)

Key Drivers	Score/Rating
Sampled Base	n=180
Quality information and functionality	90%
Ease of use	90%
Trust	80%
Device flexibility	83%
Innovation	76%
Communication and assurance	75%
No interruptions	57%

4.7. Discussion Based on Research Objectives

The preceding presented analysis are deduced and explained below to the extent that they address each of the research objectives set out in Chapter one. The forthcoming discussion will present a comprehensive summary of significant findings, the analysis of the associations, trends, and connections observed within the data, and the potential implications of these findings on established theories as outlined in Chapter two.

4.7.1. Digital transformation strategies implemented South African banks

Key Findings

The problem statement in Chapter one emphasised that banks face challenges due to the rapid evolution of technology and the rising demands of customers. The challenges are compounded by enduring phenomena such as climate change and demographic ageing, as well as immediate disruptions in the market such as the COVID-19 pandemic and the conflict in Ukraine. The circumstances have prompted banks to adapt their business models to align with societal expectations and the demands of digital environments. The first research objective provides an overview of the key findings of the study in contextualising how the sampled banks have designed and implemented digital transformation strategies in response to these challenges.

a. Vision and Strategy

From the four sampled banks in this study, a review of the digital transformation strategy was possible within the research strategy and methodology applied. From the data observed, between 2012 and 2021, there has been a consideration of digitally transforming back-office and front-end strategies. The design and communication of the strategies was not approached consistently, providing some challenges for independent industry level assessments.

It was observed that each bank positioned and communicated strategies without underlying measurable data. The emphasis of reporting in the public arena was

primarily on market positioning rather than on delivering concrete results, as is often seen in the context of disclosing financial information. Overall analysis of the data indicated that:

- Absa's digital transformation strategy was identified in only 60 out of 1296 integrated annual reports and 3 out of 322 website code matches, indicating that less than 5% of their strategy could be attributed to specific, measurable digital transformation strategies.

- Standard Bank's digital transformation strategy was analysed, finding that only 30 out of 565 integrated annual reports and 0 out of 227 website codes were relevant, indicating less than 4% of outcomes could be attributed to specific strategies.

- With FNB, this figure was even lower at less than 1%. 22 out of 594 from their integrated annual reports and 6 out of 2496 from their website code matches were relevant to their digital transformation strategy.

- Nedbank’s figure was the same as FNB at less than 1%. Nedbank's digital transformation strategy data was identified as relevant in only 46 out of 1375 integrated annual reports and 1 out of 1912 website code matches.

Regarding the aspect of strategy design, the findings suggest that Absa, Nedbank, and Standard Bank made substantial investments in digitised solutions, placing less emphasis on customer engagement strategies. Between 53% and 67% of their strategy design was focused on digitised solutions. On the contrary, more than 68% of FNB’s investments was focused on implementing customer engagement strategies.

b. Financial

The findings of the study revealed that FNB exhibited the highest level of digital adoption among its customers. The percentage of their customers who were digitally active was over 66%, compared to 32% or less for the other subjects. The reported revenue exhibited a positive correlation, with FNB reporting the

highest revenue and Standard Bank closely following. It was interesting to note that Standard Bank had the second highest number of digitally active customers.

c. Learning and Growth

A relationship was observed between customer engagement strategy design and digital product and solution initiatives across all the subjects examined. In contrast, the adoption of digitised solutions was primarily influenced by skills or talent, and the advancements in information technology initiatives. While the various initiatives were aligned in terms of strategies pursued, FNB placed a significant emphasis on the implementation of customer engagement strategies through digital product and solution initiatives. The other three peers adopted fragmented strategies that encompassed a range of different strategic designs.

d. Customer

Predictably, FNB continually achieved higher scores than the other three subjects in their Net Promoter Score (NPS). In examining the key drivers of the NPS, none of the subjects were rated positively by customers for communicating effectively or providing uninterrupted services.

4.7.2. Necessity of the investment into digital strategies or initiatives.

Interpretation of Key Findings

The second objective of the study provides an overview of the interpretation of key findings in relation to important principles for decision makers when considering the necessity of the investment into digital strategies or initiatives. A targeted strategy design and initiative was correlated with the ultimate positioning of a bank. This finding was aligned to what Jeanne, et al. (2016) theorised, that a company that pursues two distinct strategic approaches runs the risk of being unable to completely integrate them. The successful implementation and governance of digital transformation strategies is dependent on corporate integration governed by the digital strategy design chosen.

The bank that invested more than 65% of their strategy initiative towards digitised solutions had the largest market share when measuring earnings, total customers and total deposits collected. The results also indicated the largest population of active digital users on their platform. It was also observed that changes, whether in the increase or decrease of initiatives or amendments to the strategy design resulted in similar changes to the net promoter score.

For the two banks that had a decrease at the end of 2021 in total number of initiatives, similarly, a decrease in NPS was observed. For the bank that changed the design of their transformation strategy from customer engagement to digitised solutions, a lower NPS was resultant in 2021. Decision makers should be clear on their objectives as they adjust and change strategy to ensure alignment with overall long-term and tactical objectives. It is impossible to singularly implement either or of the designs, as ultimately one approach will pull other initiatives depending on how a strategy is led.

4.7.3. A framework by banks to measure digital transformation strategy effectiveness against competitors.

Implications of Key Findings

In review and study of various literature on the subject as outlined in Chapter two, and adaption of existing research and comparative analysis methodologies, a conceptual framework was proposed. The framework in Figure 8 Digital Transformation Conceptual Framework was constructed to identify and analyse the relationship between variables. The framework provided structured analysis to assess strategy effectiveness between the four samples. The framework connected themes from deductive coding and standardised data for comparative analysis.

The framework was developed using the pillars of Kaplan (2010) Balance Scorecard which included:

a. Vision and Strategy

The vision and strategy were further categorised by design as per Jeanne, et al. (2016) theory, as either digitised solutions or customer engagement. To be categorised as digitised solutions, the strategies that were implemented were required to be operationally driven and primarily centred on the transformation of back-office processes. Additionally, the customer engagement strategies encompassed go-to-market approaches that placed a high priority on end-users.

The data pertaining to vision and strategy was obtained from the published and audited integrated annual reports of the banks under review. As previously elaborated upon in the key findings, the strategies employed by the four subjects could be classified using the definitions. The framework provides measurable and standardised insights into information that is frequently dispersed in reporting.

b. Financial

The concept of return on investment (ROI) emerged as a prominent and recurring theme within the theories explored in the literature review. This is not surprising, as organisations that aim to generate profits prioritise strategies that contribute to financial gain and overall growth. Data collected was in relation to headline earnings, collected deposits and total number of customers. Financial position information provided positive patterns and relationships between strategy design, customer response and adoption.

c. Learning and Growth

Data was collected on the annual expenditure for research and development, as well as the proportion of the yearly technology budget allocated to ambitious digital initiatives, where feasible. The primary indicators were derived from the theoretical framework proposed by Matt et al. (2015), which encompasses four transformative dimensions in the context of digital transformation. According to the proposal put forth by Matt et al. (2015), a comprehensive digital transformation should encompass four key components: technological advancements, changes in value generation, structural modifications, and financial considerations.

The technological component related to tools, systems, and solutions employed by the subject of the study. Whilst structural changes included the acquisition of new skills and modification of processes. The key indicators for learning and growth were expressed as the spend on development of talent and skills, products or solutions, and information technology initiatives.

The additional categorization offered valuable perspectives on the primary factors influencing strategic design and the optimal allocation of resources. The main driver of customer engagement was products and solutions. The lack of integration between talent and skills, or information technology initiatives, and end-user strategies resulted in a focus primarily on back-office operations. Customers did not assign high ratings in the NPS to subjects that lacked talent and skills, or information technology initiatives, as they were deemed ineffective in communication and unable to provide uninterrupted services.

d. Internal Business Process

Although a pillar in the balanced scorecard, there was no specific review of internal business processes, but rather, a review of key indicators as this study leveraged secondary data. This is a recommended area for future studies.

e. Customer

The customer pillar included the digital banking experience surveys collected and reported by InSites Consulting through their annual SITEisfaction report. The inclusion of the external customer component was aligned to Khater, & Zaki (2017) theory that digital transformation strategies have external considerations. Network considerations in digital transformation speak to interconnectivity between different channels outside an organisation. It is of no use to deploy a solution if it may cause frictions for customers, suppliers, and other participants in the same network. The inclusion of the customer component to the analysis provided insights to the sensitivity of customers to any strategy adjustments.

The proposed framework has been developed by integrating existing theories with the objective to establish a standardised approach for measuring and

comparing digital transformation strategies, an undertaking that is frequently complex and challenging (Kuntsman & Arenkov, 2019).

Kaplan's (2010) Balanced Scorecard framework was applied to enhance the understanding of principles pertaining to digital transformation. Individually, the pillars do not offer insights into the factors influencing strategy design or the methods for integrating various elements. The NPS is widely used within the industry as a standard for evaluating performance. However, it is important to note that relying solely on the NPS may overlook the significance of factors such as talent, skills, products or solutions, information technology, and a comprehensive understanding of the overall design of implemented strategies.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The main objective of this study was to provide a better understanding of the contemporary development in the field of digital transformation strategies. To the school of thought, the study aimed to contribute to not only the assessment of strategy maturity and effectiveness, but also provide context in the South African banking sector. Overall, this study points to the need of standardised attributes pertaining to digital transformation strategy design and initiatives, which will drive accurate reporting on strategy maturity. The data that is being reported lacks centralization, and there is a lack of governance structures to ensure alignment in reporting. Aligning key attributes will provide decision makers with better insights and equip incumbents to respond less tactically to the evolving world of banking.

The objectives of the research were achieved through the analysis of publicly available data for the sampled `Big Four' banks. The analysis upheld that technology is rapidly changing and continues to increase customer expectations that banks are not always able to meet. The analysis additionally affirmed the importance of establishing industry standards for the evaluation and assessment of the maturity of digital transformation strategies. Like other operational procedures within an organisation, the evaluations, and assessments, whether conducted internally or in comparison to industry counterparts, offer valuable perspectives to those who are responsible for making critical decisions.

5.2. Policy Recommendations

It is recommended that investment should be made to align digital transformation frameworks universally. It is no coincidence that all banks in the sector prescribe to the same net promoter scores for customer experience. Maintaining and following similar frameworks across the industry will provide greater opportunities. At entity level, banks should:

a. Define a focused strategy design, led by operations or the markets they operate within.

b. Integrate and track the effectiveness of implemented initiatives, it is not enough to only innovate solutions that are not integrated with the overall strategy.

5.3. Recommendations for Further Studies

The research has demonstrated that considerable progress has been made during the period under review as it pertains to digital transformation strategies. However, there are still several significant research inquiries and need for technical knowledge that have yet to be addressed. In Chapter three, a framework for strategy evaluation was proposed, which can be implemented and expanded upon to answer additional research questions. This chapter briefly discusses and identifies three research gaps.

c. Impact of Fraud and Cybercrime Risks on Digital Transformation Strategies

Potential risks associated with the process of digitally reforming an organisation were not considered in the scope of this research study. The execution of digital transformation strategies at a bank might be hindered by many risks, such as fraud and cybersecurity. The potential risks include malevolent acts or unauthorised intrusion by attackers with the intention of corrupting and compromising valuable digital resources, thereby causing damage to sensitive information.

The Ombud for Banking Services South Africa (2023) reported that Digital Banking complaints were one of the two most significant case categories initiated in 2022. Most of cases within these categories related to various forms of fraudulent activities. The prevalence of digital banking instances had an increase of 3%, resulting in a total of 17%. This is further supported by the South African Banking Risk Information Centre's 2021 Crime Statistics Report where it noted the number of reported fraud occurrences on banking applications had

a 13% increase, rising from 10,667 instances in 2020 to 12,095 cases in 2021.

Further studies should continue to improve the existing conceptual framework outlined in Chapter three to evaluate the implications of fraud and cybersecurity on the successful execution of digital transformation strategies.

d. Review Inclusive of Internal Business Operations

As this study leveraged secondary data, there was no specific review of internal business processes, but rather, a review of key indicators. This included observed structural changes and challenges as potentially impacting the successful implementation of digital transformation strategies. Research should be expanded to include internal business processes, including gathering insights from key policy makers engaged in the design and implementation of digitised solutions.

e. Inclusion of New and Challenger Banks with Growing Market Share

The scope of the review was limited to banks deemed the ‘Big Four’, which are South African registered and locally controlled. It cannot be ignored that new entrants and non-traditional players that introduce digitally led innovations to banking are slowly growing their market share. Further research on the digitised incumbents should be reviewed in comparison to strategies implemented by new and challenger banks.

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