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The process for adopting Robotic Process Automation in the South African Banking Sector

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

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ABSTRACT

The banking industry in South Africa has taken a major step towards digital transformation with the use of Robotic Process Automation (RPA). The goals of this change are to increase operational efficiencies, boost customer service, and preserve competitive advantage in a financial landscape that is changing quickly. This calculated action marks a turning point in the adoption of cutting-edge technologies by South African banks, enabling them to better manage the intricacies of regulatory compliance, cut expenses, and streamline operations. This study explores the use of RPA in South Africa's banking industry, concentrating on the drivers, challenges, and impact of RPA integration in this setting. As the South African banking sector leads the way in adopting digital innovations to improve customer service and operational savings, RPA stands out as a key tool for optimising workflows and cutting expenses. This research adopted a qualitative research method, including semi-structured interviews for data collection, using a purposive sampling technique for participants selection and data analysed using thematic analyses. A total of 10 participants who contribute towards the adoption and implementation of RPA within various banks within South Africa were interviewed. The findings show that organisational culture, legal frameworks, and technology readiness interact intricately to shape RPA initiatives. The study also emphasises how important governance structures and stakeholder participation are in overcoming adoption-related obstacles to RPA. This study broadens the understanding of RPA's role in the financial sector's digital transformation by providing insights into the experiences of South African banks. It also offers recommendations for future research in the subject and consequences for practitioners.

Keywords: Robotic Process Automation, Digital Transformation in Banking, Financial Services Innovation, Operational Efficiency in Banking, Technological Innovation in Banking

DECLARATIONS

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

Name: Mamelo Christina Mongwe Signature: Mamelo Mongwe

Signed at Midrand

On the 24th day of February 2024

DEDICATION

I dedicate this research paper to my parents and siblings, who have provided me with steadfast support and boundless love during this journey. The basis for this accomplishment is your faith in my potential and the sacrifices you have made for my education.

LIST OF ABBREVIATIONS

RPA	Robotic Process Automation
AI	Artificial Intelligence
BP	Business Process
IT	Information Technology
GDPR	General Data Protection Regulations

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1. Introduction

1.1 Background of the Study

The Banking Sector in South Africa is rapidly growing, from legacy banks such as ABSA to fintech start-ups that have just started penetrating the market (Kumar & Balaramachandran, 2018). Based on a report from Statista, there are 31 registered banks in South Africa as of September 2022, with the five big banks being Standard Bank Group, Absa Bank, First National Bank, Investec and Netback (Cowling, 2024). This confirms the need for banks to continuously improve their customer services, integrations, and experiences to remain competitive within the sector.

The banking sector in South Africa has significantly increased its customer base. Statista states that by 2022, almost 84% of people in South Africa have a bank account compared to 2010, of which it was around 54% (Cowling, 2024). Furthermore, online banking is expected to continue to grow in the coming years as the world moves towards digital solutions (Cowling, 2024). It is, therefore, important for organisations in this sector to strive to provide the utmost best customer experience to attract new clients and retain their existing customers (Wewerka , Dax, & Reichert, 2020, October). To stay ahead of the competition and draw in new business, banks must constantly innovate. Automation technologies help banks stand out in the market by facilitating the launch of cutting-edge services and goods. Zhu, Kraemer, and Xu (2006) contend that by facilitating more effective operations and generating new business models, the strategic application of information technology, including automation, can offer a competitive edge.

Due to the COVID-19 lockdown and experiences with having to move most of our routines to become digitised, such as shopping. Many people are now comfortable with interacting with digital platforms to complete most of their daily tasks, banking and get services from their preferred providers (Bagus, Hall, Jeenah, & Sari, 2020). Therefore, banks now saw a need to digitise most of their Business Processes (BP) (Romão, Costa, & Costa, 2019). The use cases that qualify for automation within the banking sector are customer service, account payables, compliances, underwriter support, credit card processing, cash collections and deposits, account origination process and account closure, amongst the rest (AutomationEdge, 2023).

Banks can conduct repetitive, high-volume processes more quickly and correctly thanks to automation, which also drastically lowers operating costs and processing times (Kamat, 2019). Lacity and Willcocks (2016) provide an example of how robotic process automation (RPA) can decrease the time and effort needed for manual processing, resulting in lower costs and more productivity. Automation technologies such as RPA, artificial intelligence (AI), and machine learning, allow banks to simplify workflows, cut expenses, and provide individualised customer experiences (Kumar, Khanna, Ghosh , & Kumar , 2023).

Banking sector organisations saw a need to adopt disruptive technologies such as RPA (Amin, 2022). RPA is used to automate repetitive processes that humans currently do. This is done to relieve employees from performing this task and allow them to focus more on critical and complex tasks and decision-making (Romão, Costa, & Costa, 2019). Research by Aguirre and Rodriguez (2017) and Lacity and Willcocks (2016) underscores the revolutionary influence of RPA on banking operations, stressing its function in propelling digital transformation, and augmenting competitive edge within the financial services sector. This RPA solution has its advantages and disadvantages when implemented within an organisation. Organisations in the banking sector started reporting benefits such as customer satisfaction, reduced operational costs, and increased productivity when employing RPA (Kamat, 2019).

Challenges that come along with employing RPA software within the banking sector are integrating with legacy systems, data privacy and security; it is hard to ensure and provide evidence of compliance of, which is a big concern within the banking sector (Kamat, 2019; Amr, 2022). Other challenges organisations come across is scalability, as the nature of their business has frequent and rapid changes and may need to make frequent changes to their RPA software. Furthermore, people are not easy to change; employees find it hard to adapt to change in the workplace (Kamat, 2019; Ramagiri, 2022).

This research aims to explore a process that can be used by organisations within the banking sector when adopting and implementing RPA within their environment. In exploring this process, the research will also gather data regarding the benefits and challenges that organisations within the banking sector are currently experiencing. Furthermore, the Technology Organization

Environment (TOE) framework is employed to determine the factors that influence the adoption of RPA, allowing for the development and application of more effective strategies. By considering a wide range of influences, the TOE framework facilitates a holistic analysis of technology adoption decisions, ensuring that all critical contexts affecting these decisions are examined.

1.2 Problem Statement

The banking sector has experienced rapid growth over the past few years and needs to implement technological advancement to ensure fast, secure, and reliable services to their customers (AutomationEdge, 2023; Al Balushi & Goel, 2019). Furthermore, to remain competitive, banks and financial institutions continue to employ RPA as part of their business processes, replacing time-consuming, repetitive tasks that were once performed by humans (AutomationEdge, 2023).

There are challenges experienced when employing Robots in an environment to replace redundant tasks previously conducted by employees. This challenge ranges per use case, environment, and organisation. Some banks have adopted hundreds of bots and need more process improvements, efficiency, and effectiveness (Kamat, 2019; Leshob, Bourgouin, & Renard, 2018). Other banks have implemented and deployed this robot with no long-term planning or knowledge and end up confused and unable to scale the RPA systems (Kamat, 2019; Aggarwal, 2017).

RPA has become a key tactic in the banking industry's drive for digital transformation and improved customer service while also increasing operational efficiency. Regulatory compliance in a changing financial landscape, organisational culture and workforce adaption, and technological compatibility with current systems are just a few of the complicated hurdles that come with integrating RPA (Lacity & Willcocks, 2016; Aguirre & Rodriguez, 2019). Moreover, a thorough examination of how banks can overcome these challenges to fully realise the promise of RPA is vital, as the strategic alignment of RPA projects with wider business objectives continues to be a significant concern (Suri, Sushil, & Singh, 2017). According to Kamat (2019) and Mlambo (2022), more research is needed that maps out a step-by-step process that the banking sector can follow when implementing and adopting RPA systems. This necessitates a comprehensive exploration of RPA adoption strategies to develop a structured approach for effectively implementing and scaling RPA systems in the banking industry.

1.3 Research Objectives

To add to the body of knowledge on digital innovation in financial services, this study aims to explore the adoption process of RPA in the banking industry. It does this by focusing on identifying the critical technological, organisational, and environmental factors that affect the successful implementation and scalability of RPA solutions. Furthermore, the research further looks into three secondary objectives as stated below:

- To understand how banking institutions are rolling out RPA systems.
- To explore the perceived benefits of adopting RPA systems within the banking sector
- To explore the challenges encountered by the banking sector in integrating RPA systems.

1.4 Justification/Rationale of the Study

The banking industry is at a turning point in its development as digital transformation changes the operational and consumer landscapes. A key technology in this shift is RPA, which presents previously unheard-of chances for increased productivity, lower costs, and better customer service. Adopting RPA, however, is a difficult process that involves managing organisational change, integrating technology, and coordinating automation with legal requirements.

The necessity to fully comprehend these intricate dynamics justifies a study on adopting RPA in the banking industry. This study sheds light on the adoption processes that banks follow as well as the operational, strategic, and regulatory factors that affect the successful integration of RPA. The study adds to the larger conversation on digital innovation in financial services by presenting empirical insights into these fields and useful takeaways for players in the banking industry.

A thorough understanding of the adoption process can help banks plan more efficiently, enabling them to take full advantage of RPA while overcoming related obstacles. This makes the research a timely and important investigation into the nexus of technology and finance, with substantial implications for improving operational efficiency, competitive advantage, and customer happiness within the banking industry.

1.5 Delimitations of the Study

This study exclusively looks at the South African banking sector and does not include banks from other nations. By focusing on this specific geographical location, the study provides detailed insights into how local legal frameworks, economic situations, and organisational cultures influence RPA implementation tactics and outcomes. However, it is vital to recognise that this focus limits the study's application to other regions with distinct banking contexts and issues. Furthermore, this research will not address and solve all the challenges the banking sector faces. The study's breadth is specifically aimed at investigating adoption dynamics within South Africa's unique banking ecosystem, adding valuable perspectives to the global discourse on RPA in banking while acknowledging the constraints of addressing every possible obstacle.

1.6 Report Outline

In the next chapter, the researcher dives deep into the literature review for this research, analysing and identifying areas for improvement within the field of RPA software in the banking sector of South Africa. This is followed by chapter 3, which explains the research methodology followed to carry out the data extraction, gathering and investigation. Thereafter, Chapter 4 presents the collected data and findings. Chapter 5 delves into the discussions of the findings, backed them up by literature, and Chapter 6 concludes this research and provides recommendations based on the findings. Furthermore, this chapter outlines the limitations and suggestions for further research.

2. Review of Literature

2.1 Introduction

This section conducts an in-depth literature review on adopting RPA, focusing on empirical and theoretical frameworks. It examines the benefits and challenges faced by organisations, particularly in the banking sector, aligning with objectives to explore perceived benefits and integration challenges of RPA. The empirical review identifies research gaps and explores five themes: RPA and business performance, organisational change, innovation, governance, and implementation. The theoretical framework is based on the Technology Organization Environment (TOE) model, which helps understand how organisations adopt technological innovations

(Tornatzky, Fleischer, & Chakrabarti, 1990). The last section concludes with insights gained from the literature.

2.2 Benefits of adopting RPA

The Banking sector is fragile due to the high volume of data analysed and processed daily in making financial decisions and executions (Mlambo, 2022). That said, RPA systems come in handy in this environment as they can quickly perform repetitive processes and process high volumes of data. This section will examine the benefits of employing RPA systems in the banking sector. Robots can provide enhanced process quality, security, governance, speed, and business continuity (Kamat, 2019). When properly configured, RPA systems can boost job completion capacity by 35% to 50% and generally perform faster, lowering data processing times by 30% to 50% (Aslani, 2020). Furthermore, they adopt a standardised rule that makes it error-free and adheres to the regulatory compliances (Kamat, 2019; Siderska, 2020).

RPA systems are highly efficient due to the repetitive nature of the tasks performed and having no resting time, that is, they run 24/7 (Kamat, 2019). This allows for more productivity as the human resources can use their decision-making and problem-solving skills on tasks that need them the most (Siderska, 2020). This also frees them up to work on demanding business processes. Employing the RPA system removes human error by reducing human interaction and manual error's (Economictimes, 2022). This is due to reduced transactional errors that may occur. For instance, an input of incorrect data can impact decision-making for further downstream processes, and it also decreases mistakes and missed steps (Syed, et al., 2020). Furthermore, the quality of the work is improved as Robots can reduce redundancy and improve accuracy by applying tasks within the processes that humans found to be tedious and time-consuming (Flechsig, Anslinger, & Lasch, 2022).

Robots are configured with predefined rules, regulations, and workflow, which ensures and improves process reliability and compliance (Siderska, 2020; Syed, et al., 2020). With RPA systems, it becomes effortless to log and document processes to monitor, improve and prove compliance when necessary (Vijai , Suriyalakshmi, & Elayaraja, 2020; Syed, et al., 2020). RPA systems provide economic benefits (Kamat, 2019). The cost of employing RPA systems can be relatively small, and the return on investment is much higher. This is due to the reduced human

interaction within the processes and that Robots have proven to process much faster, providing improved transactional and operational costs (Syed, et al., 2020). The increased operational efficiency of RPA systems improves and ensures customer and supplier satisfaction as requests or issues are addressed on time (Flechsig, Anslinger, & Lasch, 2022). RPA systems have enabled organisations to ensure 99.99% of critical systems are available (Syed, et al., 2020). Furthermore, this has also shown satisfaction from employees as now they have more time to look and address more challenging tasks within the organisation and produce high-quality services and products that are customer satisfactory (Flechsig, Anslinger, & Lasch, 2022; Al Balushi & Goel, 2019).

Generally, RPA systems provide better scalability, as it is possible and easier to employ and train multiple Robots at the same time, compared to employing new employees and taking them on a training workshop (Kamat, 2019; Vijai , Suriyalakshmi, & Elayaraja, 2020). Moreover, with RPA systems, it is easier to scale up or down based on the volume of data flow and processing within the systems (Amr, 2022). RPA systems can easily integrate with legacy systems, and therefore, there is no need to migrate legacy systems and data when employing them (Al Balushi & Goel, 2019; Vijai , Suriyalakshmi, & Elayaraja, 2020).

The banking sector is volatile and fragile from fraudulent attacks, and this has increased significantly due to Covid 19 as measures such as increased remote working, customers preferring digital platforms to do their banking rather than visiting the branch and the forensic analytics tools that proved to be ineffective in mitigating fraud and threats (Economictimes, 2022). RPA systems enhance fraudulent activity detection; for instance, in the banking sector, it provides the flexibility to configure rules that can detect fraudulent credit card transactions or be able to target a certain target market for brand awareness (Romão, Costa, & Costa, 2019). This is done by employing robot software with the integration to automated fraud detection technologies that are embedded with top-notch security that is dependable (Amr, 2022). They can analyse and process each transaction for anomalies and appropriately flag them as high-risk transactions (Economictimes, 2022). These robots can further make decisions to stop the execution of certain transactions according to the risks they impose (Amr, 2022).

2.3 Challenges of adopting RPA

With every system, challenges will always be experienced, ranging from cyber-attacks, viruses, and malicious execution of processes. RPA systems are no different from the rest. There are challenges experienced when employing Robots in an environment. These challenges range per use case, environment, and organisation. Several banks have employed hundreds of bots and have little to zero for process improvements, efficiency, and effectiveness (Kamat, 2019). Other banks have implemented and deployed these Robots with no long-term plans and end up confused and unable to scale the Robots (Kamat, 2019). Below are the challenges organisations have experienced when employing RPA systems.

Data privacy and protection is a huge factor within the banking sector, and strict regulations are followed to ensure the protection and security of customer data. RPA pose a huge risk regarding the privacy and protection of data for banks (Amr, 2022; Kamat, 2019). RPA systems can pose data breaches by accidentally exposing customer data and are at high risk of hacking threats and device spamming (Amr, 2022; Kamat, 2019). This challenge must be mitigated at all costs for banks to adhere to regulations. The banking sector has strict regulations due to the nature of the business they are conducting and, therefore, must continuously access and ensure that all their business processes are not breaching those regulations. With the adoption of the RPA System, everything is conducted in the background by software and organisations are unable to fully attest to or show proof of all the executions that the software bots have completed and that poses a threat to the auditors (Kamat, 2019).

Although RPA systems can contribute to operational efficiency and cost reduction in the long run, some institutions may find it very expensive to implement such a solution. Adopting RPA in an organisation can be a heavy investment (Kamat, 2019). This is due to the large investment required in integrating the robots into the legacy systems for processing (Kamat, 2019). It has been noted that banks in South Africa are still behind in the journey of digital transformation. Therefore, their legacy system runs on old infrastructures with little to no automation tests built into them. this will pose financial and reputation risks for the institutions if the systems crush (Amr, 2022).

Implementing the RPA system as a standalone technology will not yield many benefits to the organisations (Kamat, 2019). To fully automate a business process, RPA needs to be integrated with cognitive solutions such as AI and machine learning (Kamat, 2019). Furthermore, the adoption of RPA systems requires IT personnel who are familiar with the implementation and training process of robots; the lack of these IT personnel can impact the implementation of RPA in an institute (Kamat, 2019). After that, the training and upskilling of worker's who will maintain and work alongside the robots to complete their daily tasks (Amr, 2022). When all is set and done for business continuity, leadership needs to be aligned and ready to journey the team into the changes that will occur with adopting the RPA system in the organisation. This has been noted to be quite a challenge as managers are not well educated and informed about the implications of employing RPA systems due to the misconception that they are meant to replace employees and, therefore, lead to people being unemployed (Kamat, 2019; Gotthardt , et al., 2020). Therefore, employees are not receptive to such a change, and that can impact the success of the adoption of RPA systems in the organisation.

2.4 Empirical Review of Literature

RPA systems are becoming more popular in the banking sector as organisations are looking for innovative ways to reduce costs and increase the efficiency and effectiveness of the business, which in turn produces value creation for customers. Based on the benefits and challenges mentioned in the above sections, there are still research gaps in the study of RPA and their adoption within the banking sector, and this section will outline the research gaps that exist and provide motivation for the importance of the study conducted in this research and its contribution.

The table below illustrates the selected themes related to the study conducted in this research. In total, 28 research papers have been selected for this section, of which 18 papers were categorised in the table below based on five themes, which are RPA and Business Performance, RPA and Organisational Change, RPA and Innovation, RPA and Governance, and the Adoption and Implementation of RPA.

Table 1: Empirical Research Themes

Theme	No. of Articles	Reference	Research Gap
RPA and Business Performance	4	(Ratia, Myllärniemi , & Helander, 2018) (Kokina & Blanchette, 2019) (Sibalija, Jovanović, & Đurić, 2018) (KO, 2020)	The study and implications of employing RPA on different organisational levels and see how it impacts performance and value creation. To identify factors to consider while adopting and implementing RPA technology.
RPA and Organisational Change	2	(Fernandez & Aman, 2021) (Syed, et al., 2020)	Synthesis and extend techniques from a variety of disciplines.
RPA and Innovation	2	(Doguc, 2021) (Sobczak, 2022)	Implementing RPA, machine learning and Artificial intelligence combined to enhance business processes.
RPA and Governance	2	(Money, 2021) (Zhang , Issa, Rozario, & Søgaard, 2023)	There is no research on the organisation's governance framework when adopting RPA.
Adoption and Implementation of RPA	8	(Mlambo, 2022) (Al Balushi & Goel, 2019) (Leshob, Bourgouin, & Renard, 2018) (Balasundaram & Venkatagiri, 2020) (Gotthardt , et al., 2020) (Flechsig, Anslinger, & Lasch, 2022) (Siderska, 2020) (Kamat, 2019)	Investigate the direct and indirect impact of RPA on organisational performance. Strategic approach to the implementation of RPA in organisations Effective and long-term management of software robots The impact of leadership managing both human and bot' resources Research on the issues of upscaling of RPA and its technical and organisational disintegration frequency Challenges, Adoption model and the Impact of employing RPA systems in the banking sector

2.4.1 RPA and Business Performance

Ratia, Myllärniemi, and Helander (2018) did in-depth analysis and research on how RPA contributes to the performance of an organisation. They looked at it from the aspect of health care institutions and have noted that business performance improves when RPA is implemented within this organisation. RPA increases the efficiency of the institutions as there is a reduction in human labour in repeatable business processes, and the robots employed can run all day 24/7, meaning more work gets completed compared to when human resources are employed. Therefore, RPA solutions have proven efficient and effective when employed correctly. It is noted that when RPA is employed, the quality of the work produced improves as there were little to no mistakes recorded. They provided better scalability as employing more robot software takes far less time compared to employing a new human resource that must undergo training before starting with the work (Kokina & Blanchette, 2019). The other aspect that they noted was that when robot software was employed to do most of the back-office routines, the employees were able to give more attention to patients, which provided value creation for the customers (Ratia, Myllärniemi , & Helander, 2018). This aspect of RPA is relevant for the study as it will improve business performance in the banking sector, leading to better customer experience.

2.4.2 RPA and Organisational Change

Various studies have been conducted regarding RPA, organisational changes, and their impact on leadership and employees. It has been noted that the implementation of RPA creates fear in employee's as they think that they will lose their jobs as robots take over their work (Fernandez & Aman, 2021; Syed, et al., 2020). This is due to the lack of information and knowledge on what RPA is, its benefits and how it will impact the ways of working and the organisation. The other aspect that was noted is that there is resistance to the implementation of RPA from employees as they find it difficult to learn how to use new technologies (Fernandez & Aman, 2021). Therefore, this behavioural trait might negatively impact the adoption of RPA in organisations.

Fernandez and Aman (2021) further noted that not all employees felt the same in the long run; most employees started to embrace the change and noticed the positive impacts it has caused on their work life and the organisation. Some of the benefits that employees of a financial institution

that was used as the case study in this research noted that having robot software handling the repeated rule-based tasks that they have been performing has opened room for them to upskill, opportunities for promotions and advancement in their careers. This has also improved their work-life balance; hence, employees are happy and satisfied. Syed, et al. (2020) state that adopting RPA must be accepted from top-level management to the lower-level employees. The research has noted that it is not as simple as it seems to get the buy-in from the top-level management as they do not see the value of RPA at the same glance as those who perform the tasks. The research states that some people work based on "seeing is believing", and therefore, it is important to start the adoption process and let the top-level management, such as CFO, see how the organisation's efficiency has improved with the adoption of RPA.

This research does add value to this study as it is of utmost importance to ensure that with the implementation of RPA within the banking sector in South Africa, employees will be well equipped with knowledge of the changes that are about to occur and that they will benefit from the organisation shifting their business processes into this disruptive technology.

2.4.3 RPA and Innovation

RPA is a disruptive technology that organisations use to innovate the current business processes executed by repeatable tasks. Doğuç (2021) looked at RPA and its role when COVID-19 emerged and has seen a massive increase in the number of organisations that adopted RPA as an innovative measure to keep business processing running without human intervention. Organisations saw significant increases in performance, efficiency, and customer satisfaction. Doğuç (2021) discussed multiple solutions for adopting RPA systems for Covid-19 in developed and emerging markets. These solutions were observed in education, health care, insurance, retail, manufacturing, government, and the public sector.

Sobczak (2022) posits that RPA forms part of digital innovation due to its ability to transform business processes so that organisations can achieve resilience. Innovation is observed in the changes that occur when adopting RPA in an organisation, such as the structure, method of delivering products, customer satisfaction, and the industry's transformation. Therefore, RPA meets the criteria as an innovative technology due to the changes mentioned. Innovation is a crucial factor for this research as organisations will not only be employing RPA to reduce cost or its

effectiveness but as an innovative technology that can provide value creation for customers and a competitive advantage within the industry.

2.4.4 RPA and Governance

Due to the nature of RPA and their adoption to replace routine business processes. Organisations must determine and document policies that govern robot software. This will assist with ensuring that robot software operates in a secure and compliant manner (Money, 2021). Money (2021) has researched to determine the governance around RPA and its importance to organisations. Based on the large amount of data processed daily by financial institutions, governance is of utmost importance. Organisations must ensure that the robot software adheres to data analyses and privacy and protection policies. Robots must ensure that they do exactly what they have been instructed or programmed to execute by humans. Another challenge with RPA governance is access control, as stated by Zhang, Issa, Rozariom and Soegaard (2023). Since robots mimic the behaviour of humans to execute business processes, then it is of utmost importance that organisation assigns users with limited access rights (access rights that allow them to complete the required tasks) to the robots to be later able to distinguish the tasks that have been executed by the robots compared to humans.

The organisation must ensure that the robots do not execute the same task multiple times or access secure data that it was not instructed to access and does not communicate with systems it was not programmed to communicate with. Money (2021) has looked at this from a glance using the IT governance framework since RPA is implemented as a piece of software that can be deployed into a production environment. They found that the organisation needs to enable logging on these robots to analyse and ensure that no malicious activities are occurring and that they remain compliant with the use of confidential data that these robots process. They must ensure no data leakage and prove that the robots do exactly what they were instructed. RPA is a relatively new technology, and the governance of such technology needs to be critically explored; it is clear from the research that there is no research conducted yet to formulate governance frameworks that organisations can utilise and follow when adopting RPA.

2.4.5 Adoption and Implementation of RPA

Vijai (2020) argues that RPA is an emerging phenomenon within the banking sector as they journey into digital transformation. Due to the nature of the business that banks conduct, they have identified areas that can be improved, such as reducing operational costs and gradually becoming more digital to attract more customers and keep their customers satisfied and happy. These challenges have led banks to attempt to adopt RPA systems to mitigate these challenges. With the employment of RPA, several benefits for the banking sector have been identified, such as operational cost reduction, increased efficiency, accuracy, and better customer services. The adoption and implementation of RPA in the banking sector is crucial, and this phenomenon makes the foundation of the study in this research.

Vijai (2020) urges researchers to research further the impact and adoption strategies that banks can follow to employ RPA systems successfully. Mlambo (2022) further investigated the adoption of RPA, addressing the banking institutions' inability to prioritise business processes and when to apply RPA to improve productivity. The research looked closer at the factors that influence the adoption of RPA within the banking sector, and with the case study conducted, the following factors were observed. With the readiness assessment, the legacy system, and the integration of current systems with RPA, financial institutions are embarking on a journey of digitisation, and a solution that can effectively integrate with their legacy system is what would influence them. The last factor that influences the adoption of RPA is the implementation and application of RPA within the organisation. The researchers further urge and recommend that similar studies be conducted to contribute and compare different approaches to improve the process of adopting RPA systems in the banking sector (Mlambo, 2022).

2.5 Theoretical Framework

2.5.1 Technology Organization Environment

A successful introduction of a new technology in an organisation depends on how the intended users receive and accept the changes. It is, therefore, of utmost importance to assess the feasibility of implementing these disruptive changes by following an adoption framework that will assist with measuring the progress and acceptability of the technology, such as the Technology Organization Environment (TOE) framework. A popular conceptual model in the field of information systems

for analysing how technological innovation is adopted by businesses is the Technology-Organization-Environment (TOE) framework (Tornatzky, Fleischer, & Chakrabarti, 1990). This framework will assist the study in mapping out the factors influencing the acceptance of an RPA solution within the banking sector.

The TOE framework was introduced in 1990 as a model that can be used to understand how technology advances are embraced and deployed inside large organisations (Tornatzky, Fleischer, & Chakrabarti, 1990). According to this framework, a firm's technological, organisational, and environmental contexts are the three elements that have an impact on the acceptance and use of new technologies (Tornatzky, Fleischer, & Chakrabarti, 1990). Various factors can influence the adoption and utilisation of technology in organisations, and each situation offers some of them. The framework is depicted in Figure 1 below.

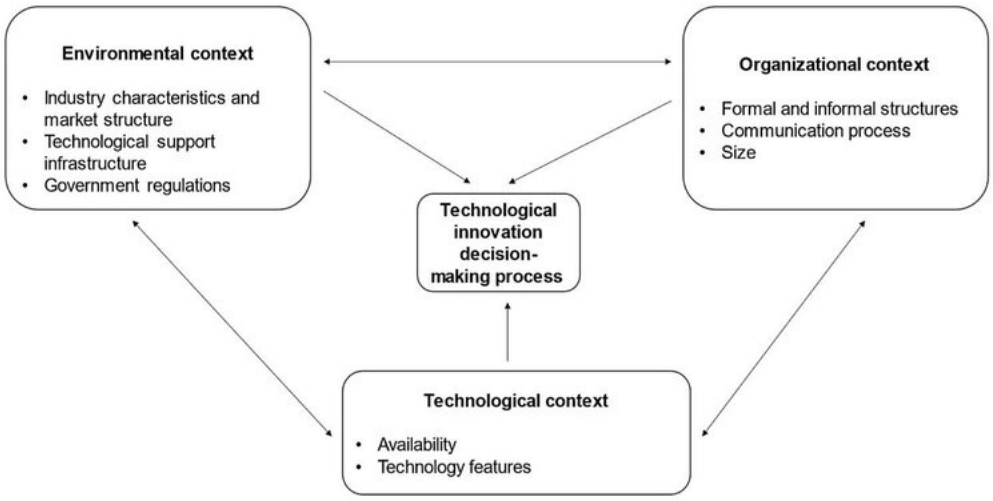

Figure 2- 1: Technology Organization Environment (Tornatzky, Fleischer, & Chakrabarti, 1990).

Technology Context

The term "technology context" describes the internal and external technologies pertinent to the organisation, including newly developed technologies and those already in use. It includes the attributes of the technology under consideration for adoption, including its relative benefit, interoperability with current systems, trialability, observability, and complexity (Rogers, 2003). The technological context evaluates how a technology's perceived costs and benefits and its technical characteristics affect an adoption decision.

Organisational Context

The organisational context refers to the features and assets of the organisation, such as its size, level of centralisation, complexity of its managerial structure, formalisation of procedures, and availability of resources (financial, technological, and human), are all included in this context. In addition, it covers the organisation's innovation culture, change readiness, and strategic direction. The significance of organisational elements, such as managerial support, leadership, and the existence of a champion or advocate for the technology, is emphasised by Damanpour (1991) and Tornatzky, Fleischer, and Chakrabarti (1990) in influencing the adoption and effective implementation of innovations.

Environmental Context

The environment context refers to the external environment of the organisation, which includes market dynamics, industry traits, legal frameworks, and the level of competition. This context examines how external support infrastructures and pressures like trade associations, competition, laws, and regulations affect an organisation's decision-making. To embrace cutting-edge technology, the organisation's technology adoption methods are significantly shaped by factors such as industry technological developments, customer demand, and competitive pressure (Zhu , Kraemer , & Xu, 2006).

2.5.2 Application of the TOE framework in the study

The TOE framework was first introduced, and since then, it has been extensively extended and used in empirical research in several information systems and technology management fields. The TOE framework has been used by researchers to examine the variables that influence cloud computing adoption by high-tech industry companies (Low, Chen, & Wu, 2011). Oliver and Romm (2002) used the TOE framework to present a critical perspective on organisations' justifications for implementing enterprise resource planning (ERP) systems. Furthermore, Zhu, Kraemer and Xu (2006) used the TOE framework to determine global organisations' adoption of advancements in Internet-based e-business. It is quite clear that the TOE framework has been used in various studies to determine the factors influencing the behaviour and acceptance of technology within organisations.

The framework has garnered recognition for its all-encompassing methodology in comprehending the complex dynamics of technology adoption. It offers an organised approach to evaluating the myriad variables that may impact this procedure. It has aided in the analysis and dissection of the challenges associated with implementing new technologies by academics and practitioners alike, allowing for a deeper comprehension of how many settings interact to influence technological change within organisations.

The TOE framework provides a complete lens for this research to examine the banking sector's deployment of RPA. This approach examines three essential contexts: technical, organisational, and environmental. Technologically, it evaluates the compatibility and benefits of RPA technologies in existing IT environments. Organizationally, it looks at the bank's readiness, culture, and support for implementing RPA, including staff adaptability and management buy-in. Factors influencing RPA adoption include regulatory compliance, market competition, and technology changes.

2.6 Conclusion

In this section, we have looked at the benefits and challenges organisations have observed when employing RPA systems to execute some of their mundane, repeatable, high-value data business processing to release human resources to more challenging tasks. The benefits that the organisation observed range from the reduction of costs, an increase in performance, sustainability, improvement in quality and employee satisfaction. This motivates organisations to continue embarking on a journey to adopt RPA systems. Challenges provide aspects of adopting RPA that still need to be addressed and solutions from a research perspective and the organisations as well. These challenges range from data protection and regulation, compliances, massive initial investments, change management, governance, integration to legacy systems and complicated IT infrastructure.

This is followed by the empirical review, which speaks to the research analysis, findings, and gaps conducted with RPA and how they form part of this research. This section has highlighted several gaps that still need further analysis, but the most important one for this research is to establish an adoption strategy that can be applied by financial institutions to swiftly adopt the RPA system

successfully and improve business processes, efficiency, and effectiveness. The last sections speak to the theoretical framework that forms the basis of this research. The Technology Organization Environment is used as the framework that assists with determining the acceptance of RPA systems by employees within the banking sector in South Africa. This model has three contexts: Technology Context, Organizational Context, and Environmental Context, which offer a thorough perspective for comprehending the various factors influencing the decisions made about the adoption and application of technology within organisations. Furthermore, we looked at how it has been applied in other research and how it assisted in the analyses and findings of the studies.

3. Research Methodology

3.1. Introduction

This research explores the strategy or process that can be adopted by financial institutions to employ RPA systems effectively and efficiently within the organisation to replace redundant processes that were once performed by human resources. To achieve this, the researchers review and evaluate the benefits and challenges that the financial institutions experience and the acceptance of RPA within the organisation.

The following sub-section elaborates on the research methodology used to carry out this study. The first section is the research approach, followed by the research design. Afterward, we look at the data collection and data analysis approach. Lastly, we look into the ethical considerations.

3.2 Research paradigm

A research paradigm is a collection of ideas and methods that direct the study of the nature of reality (ontology), the process of gaining knowledge (epistemology), and the methodology employed. It moulds how the researcher approaches the investigation, impacting the selection of research techniques and the interpretation of results (Guba & Lincoln, 1994). The constructivist is derived from the interpretivism paradigm (Adom, Yeboah, & Ankrah, 2016). It is an approach in which users build their understanding of the world through life experiences and reflections on those experiences (Adom, Yeboah, & Ankrah, 2016). It is built on the ideology that people learn from their life experiences. The interpretive paradigm highlights the importance of understanding

the subjective meanings and experiences that people attribute to their social environment, stating that reality is socially created. Recognising the importance of context and the co-construction of knowledge between researchers and participants promotes using qualitative approaches to investigate these phenomena in depth (Creswell & Poth, 2018). Based on the nature of this study and the qualitative research approach selected, the interpretivist paradigm is employed. The researcher is directed by an interpretivist paradigm to concentrate on comprehending the complex viewpoints of the several parties engaged in the RPA adoption process. It entails examining how various stakeholders view RPA's advantages, difficulties, and effects concerning their organisational and environmental contexts.

3.3 Research Approach

Every research must outline the research approach it will adopt to carry out the study and provide answers to the research questions and objectives. The three research approaches that can be applied are, quantitative, qualitative, and mixed methods study. This research approach can be applied in different contexts based on the research study conducted. The qualitative approach involves collecting non-numerical data to analyse user's behaviour, opinions, and experiences (Bhandari, 2020). This approach can be used to understand a problem, concept, or phenomenon extensively. The quantitative research approach is different from the qualitative approach due to the nature of the data collected. In the quantitative approach, numerical data is collected and analysed to detect patterns and averages, test relationships and gather results for a wider population (Creswell, 2014).

The mixed methods involve having a combination of both qualitative and quantitative research approaches to answer research questions. This approach provides a complete analysis over making use of a standalone approach, as it provides the opportunity to have the benefits of both approaches (George, 2021). For this study, the qualitative research approach is employed to test the research objectives and explore an RPA adoption process used by organisations within the banking sector when embarking on a journey to implement RPA software within their environment.

3.4 Research Design

This study makes use of the generic qualitative design. Generic qualitative design, also called basic qualitative research, aims to give a rich description of human experiences and perceptions in a

variety of contexts without being restricted to any one philosophical framework, such as grounded theory or phenomenology (Caelli, Ray, & Mill, 2003; Merriam, 2009). This flexible approach focuses on gathering and examining non-numerical data to understand people's thoughts, feelings, and behaviours. The objective is to comprehend how individuals interpret their events and the significance they give them. This method allows for a more open-ended investigation of the research topics. It is especially helpful in investigations when the objective is to explore phenomenon extensively without the limitations of a predetermined theoretical framework (Caelli, Ray, & Mill, 2003; Merriam, 2009).

3.5. Data Collection

Interviews are particularly useful for gathering data while conducting qualitative research on adopting RPA in the banking industry. With this method, the study examined banking personnel's attitudes, experiences, and difficulties when implementing RPA. The study gained nuanced insights into the tactics, motives, and outcomes of RPA adoption by conducting semi-structured interviews with a wide range of participants, including IT specialists, management, and business personnel involved in RPA implementation.

Conducting interviews enables the investigation of intricate subjects, including technological integration, organisational transformation, and the effects of automation on job responsibilities and work procedures (Creswell & Poth, 2018; Yin, 2018). They also make it possible to compile in-depth, comprehensive narratives that illustrate the complex ways that technology is changing banking organisations (Creswell & Poth, 2018; Yin, 2018). This approach is especially well-suited to elucidating the subjective interpretations and meanings that stakeholders ascribe to RPA, offering a thorough grasp of its implementation and integration into banking operations.

3.5.1. Sample and Sampling Design

A sampling technique is seen as an approach to selecting a suitable participant so that the focus of the study can be researched (Nikolopoulou, 2022). This research aims to understand the environment in which organisations in the banking sector find themselves when adopting RPA solutions. To understand the effectiveness and efficiency of such a transition and the initial influence that gets the organisation to see a need to adopt and implement RPA. The sample of this study focuses on people within the IT space and business units involved with adopting and

implementing RPA within organisations in the banking sector. The sampling size targeted for this study is 10 participants from the RPA department within the Banking Sector. Hennink and Kaiser (2022) state that the sampling size for qualitative research must be saturated such that a range of 9-17 interview participants or a focus group of 4-8 would be sufficient for the study's data collection.

This study makes use of the purposive sampling technique. A purposive sampling technique refers to the selection of participants who possess certain characteristics or experiences and are willing to take part in the study, ensuring that the researcher picks individuals whose case fits the study (Nikolopoulou, 2022). This allowed the researcher to choose a set of people who are working hand in hand with RPA solutions within the banking sector.

3.5.2. Population

The study population comprises banking professionals using RPA at several South African banks. These experts were chosen because of their firsthand experience with RPA systems, which provides significant insights into these technologies' practical application and effect in the banking sector. By focusing on this specific group, the study acquired extensive information on the benefits, obstacles, and overall experiences of RPA adoption from individuals who are the most informed and experienced in its implementation. This targeted strategy guaranteed that the data collected is relevant and complete, providing a more nuanced view of RPA's impact in improving operational efficiency and innovation in South African institutions.

3.5.3. Participants

In the banking sector, the targeted participants are the IT personnel ranging from Database specialists, software developers, quality testers, performance testers, scrum masters, system analysts, business analysts, product owners, information managers and the leadership within the space. Description of the target participants are as follows:

Table 2: Participants List

Role	Description
Database specialists	Responsible for maintaining, designing, and implementing the databases and data storage mechanism.

Software developer	The people are responsible for implementing and deploying the robots' systems.
Quality Testers	The people responsible for testing the robots once deployed to ensure that they are working as expected.
Performance Testers	They are responsible for testing the performance of the robots and advice if further improvements or optimisation is required.
Scrum master	Facilitate the project from inception to completion.
System analyst	Design and document the technical requirements of the robot's software.
Business analyst	Documents the business requirements of the robot's software.
Product owner	Is the owner of the robots' systems and states the expectations and requirements of the project.
Information managers	These individuals will interact with the robots' systems and integrate them into their processes.
Leadership	This refers to all the leaders involved in the project.

As stated above, participants are all the targeted Participants relevant to this study. This target population includes people who work closely with implementing and adopting RPA systems within the banking sector.

3.5.4. Research Instruments and Data Collection Procedures

For this study, semi-structured interviews were conducted using an interview guide. This interview guide consists of general information questions, the benefits and challenges observed when adopting RPA in the banking sector and questions about the process employed by banks when adopting RPA. Furthermore, for data collection, participants were approached and provided with context on the research's aim and what the data will be used for. The participants were notified that the interview would be recorded and transcribed. The questions were asked during the interview as per the interview guide, and further questions were asked based on their responses. The collected data was analysed using thematic analyses.

3.6. Data Analysis

For data analysis, the study employed thematic analyses to analyse data. A thematic analysis is applied to data collected from an interview or transcript to identify similar ideas, patterns, and themes (Caulfield, 2019). Data is first collected and thoroughly examined and reread to allow the researcher to become familiar with the material and make initial notes. After that, the data was analysed identifying characteristics pertinent to the study objectives and classifying the data into meaningful groupings.

The subsequent phase entailed locating themes by compiling all pertinent coded data extracts and recognising noteworthy patterns that surface. After that, these prospective themes were examined and improved to ensure they appropriately depict the data set and consider the connections between themes, sub-themes, and the overarching narrative the data conveys. Themes are then identified and given names, and each theme's specific feature of the data it captures is detailed. The last stage entailed writing the report, in which each topic is shown with a compelling example that connects the analytical narrative to a convincing conclusion that addresses the research objectives.

3.7 Quality Assurance and Dependability

3.7.1 Quality assurance

Strict quality assurance procedures are used in this study to guarantee the authenticity and dependability of its findings. This approach relies heavily on techniques like using a thorough and open methodology, reflexively evaluating the researcher's impact on the research process, and using triangulation to compare data from multiple sources, including interviews and literature analysis. Following the established standards for reliability put forth by Lincoln and Guba (1985), which include confirmability, credibility, transferability, and dependability, this study provides a thorough, accurate, and reliable assessment of RPA implementation in the banking industry. Using these painstaking quality control methods, the study adds insightful, well-examined information to the professional and scholarly conversation around RPA.

3.7.2 Credibility

Establishing credibility is essential for investigating the implementation of RPA in the banking industry and guaranteeing the dependability and authenticity of the research outcomes. This study

employs several strategies, involving extended interaction with participants through an interview to enhance comprehension of the subtleties of RPA adoption and literature review on different aspects of adopting RPA in the banking sector. The researcher also engages in reflexivity by recognising and considering their prejudices and how they affect the research process. These methodological rigour steps, which drew inspiration from Lincoln and Guba's (1985) guidelines, are crucial to establishing a solid foundation of credibility and guaranteeing that the insights produced regarding the adoption of RPA in the banking industry are genuine, thorough, and accurate reflect the experiences of the participants and the intricate reality of the organisational context.

3.7.3 Dependability

This study employs a transparent and well-documented research approach that outlines all research steps, from initial design and methodology to data collecting and analysis procedures, to guarantee dependability. Using the ideas put forward by Lincoln and Guba (1985), this method checks to see if the study could be repeated in a comparable setting and if the results match the information gathered. The study contributes to a trustworthy knowledge foundation for future research and practice by providing a dependable account of how banks use RPA through the comprehensive recording of the research process.

3.8 Ethical Considerations

This section dives deep into the ethical considerations adhered to and followed throughout this research study. This speaks to handling the data collection process and the data collected thereafter. The following section explains in detail the ethical considerations that the researcher is partaking in as part of this study.

3.8.1 Permission to Conduct Study

Permission to conduct the study is obtained from the Research Ethics Committee. The researcher ensured that all regulations and guidelines were adhered to throughout this study. This is done to gain participants' trust, the scientific community and the public.

3.8.2 Informed Consent

The informed consent is of utmost importance as it ensures that the participants understand the purpose of the study, the benefits and risks of partaking in the study and their contribution. This ensures that they are aware of their rights and that they are allowed to withdraw from the study at any time during the study. The participants were briefed about the purpose of the study and allowed to ask questions where clarity was required before signing the consent form.

3.8.3 Voluntary Participation

The participants were allowed to participate in the study voluntarily. The researcher ensured that the participants understood their rights and that they were allowed to withdraw from the study at any time before signing the consent form. Furthermore, the researcher ensured that the participants voluntarily signed the consent form before the study began.

3.8.4 Confidentiality and Anonymity

Personal information such as names, addresses, passport numbers, and identity numbers were not collected from the participants, and all data collected from the participants was stored in a secure password-protected location to which only the researcher's team had access. The confidentiality and anonymity of the participants are of critical importance, and the researcher ensured that the participant's collected data is confidential, and no personal data was collected from them.

4. Presentation of the Findings

4.1 Introduction

This chapter examines and interprets the data collected to determine key findings. The data was collected using an in-depth interview, and analyses were conducted using the Thematic Analyses methodology as stipulated in the methodology chapter above. The following objectives are used to draw insights from the data collected from participants:

- To understand how banking institutions are rolling out RPA systems.
- To explore the perceived benefits of adopting RPA systems within the banking sector
- To explore the challenges the banking sector encounters in integrating RPA systems.

4.2 Thematic Analyses Themes

The researcher's observations of the participants and a thematic analysis of the interview responses form the basis of the research findings. The codes listed in Table 1 were produced by a thematic analysis of the interview data.

Table 3: Thematic Analyses Themes

Codes	**Themes**	**Objective**
Operational Effectiveness Improvement	Operational Transformation	To understand how banking institutions are rolling out RPA systems
Enhanced Customer Services		
Standardisation of Processes		
Integration with Legacy Systems	Technological Integration	
Scalability and Flexibility		
Employee Role Transformation	Employee Experience	
Change Management and Training		
Cost Efficiency and Savings	Financial Efficiency	
Risk and Security Assessment	Risk and Compliance	
Operational Efficiency	Operational Excellence	To explore the perceived benefits of adopting RPA systems within the banking sector
Process Standardization		
Technological Integration		
Customer Service Enhancement	Customer Experience Improvement	
Quality of Service		
Compliance and Risk Management	Risk and Compliance Management	
Cost Savings	Cost and Resource Efficiency	

Scalability and Agility		
Strategic Resource Allocation		
Employee Job Satisfaction	Employee Empowerment	
Innovation Enabler		
Error Reduction	Quality and Reliability Enhancement	
Challenges in Cultural Adaptation	Cultural Adaptation Challenges	To explore the challenges encountered by the banking sector in integrating RPA systems
Concerns About Job Security		
Integration with Legacy Systems	Technical Integration Difficulties	
Ensuring RPA User-Friendliness	Usability and Accessibility	
Security and Compliance Concerns	Security and Compliance	

4.3 Background of Participants

The professionals that participated in this study are varied; they all have different perspectives and backgrounds regarding RPA in banking operations. They bring a range of experience levels in RPA, from novices with only two years of involvement to seasoned professionals with up to eight years in the area. Their ages range from late 20s to early 50s. The participants work for their companies in various capacities, such as engineers, solution architects, business analysts, and product owners. Their engagement with RPA covers a wide range of its management and execution, offering a deep, multifaceted understanding of the technology. They provide insightful information on several topics, such as how RPA affects customer service, its advantages and disadvantages, how simple it is to implement, and which financial operational procedures benefit from automation.

4.4 Objective 1: To understand how banking institutions are rolling out RPA systems

4.4.1 Operational Transformation

Banking operations are revolutionised by RPA, which automates repetitive procedures, greatly increases productivity, and lowers error rates. Banks can enhance customer service and employee happiness by refocusing resources on more intricate, value-added tasks. RPA's commitment to regulatory compliance requirements ensures a dependable and risk-managed banking environment. Moreover, RPA's scalability helps the banking industry meet its dynamic expectations by enabling quick adjustments in response to shifting market conditions.

One of the key components of RPA's value proposition is its pursuit of operational effectiveness. Participant 1 Illustrates the change in attention to higher-value tasks by stating,

> **Participant 1***: "RPA is the automation of repetitive and rule-based operations using software robots. This technology transfers routine duties to the automation platform, freeing up our team to concentrate on more strategic and value-added work".*

Participant 3 echoes this sentiment and adds, an observation highlighting how RPA helps banking organizations operate more effectively by automating processes and reallocating human resources to more strategic projects.

> **Participant 3**: *"We can improve operational efficiency, reduce processing times, and reduce the need for manual intervention by automating repetitive and time-consuming processes".*

Furthermore, the way that RPA has affected customer services is very noteworthy. Participant 1 expressed a view demonstrating the transition from routine work to improved client interaction.

> **Participant 1**: *"RPA frees up our team to concentrate on customised customer interactions, which increases customer happiness and loyalty"*

RPA reduces human error in jobs like data entry and transaction processing, it significantly improves accuracy in banking operations. Its quick execution of routine activities speeds up service delivery considerably and cuts down on the time it takes to process consumer inquiries and transactions. Customers and financial institutions may expect a more dependable and effective

banking experience thanks to this high accuracy and speed mix. Participant 10 noted that the banking operations' accuracy and speed of service have increased. By stating,

> **Participant 10:** *"I believe that by automating several banking tasks, RPA will lower operating expenses. Operational costs will drop as a result of this decrease in physical work. Moreover, RPA-driven processes' improved speed and accuracy can lower the expenses related to delays and mistakes"*

RPA ensures consistency and uniformity in the execution of routine operations; it is essential to standardising procedures within the banking industry. RPA removes variances that can result from human intervention by automating tasks like compliance checks, loan processing, and account opening. Standardisation guarantees regulatory compliance, raises overall service quality, and increases operational efficiency. Participant 1 emphasised the foundational elements required for a successful RPA integration.

> **Participant 1:** *"I am actively involved in our organisations process standardization and documentation. We have started a thorough process of documenting workflows to establish a single, central repository for standard operating procedures. This not only guarantees uniformity and openness but also makes audits go more smoothly and is a useful tool for orienting new hires".*

Another Participant (Participant 7) reiterated this sentiment, highlighting the necessity for clear and consistent processes, mentioning,

> **Participant 7:** *"I think that standardizing procedures and creating comprehensive documentation are essential to using RPA successfully. Processes that are well documented make it easier to determine which ones should be automated and offer a clear path for creating RPA solutions."*

The participants' direct quotes indicate that RPA is accelerating an "Operational Transformation" in the banking industry. It is causing process standardisation and improving operational efficiency and customer service. These participants' combined thoughts provide a complex picture of how RPA is advancing the banking industry toward a more automated, efficient, and customer-focused future.

4.4.2 Technological Integration

A significant change in banking operations is represented by technological integration, especially by integrating RPA technologies with legacy banking systems. The intricate interaction between incorporating new technology and preserving the integrity of current infrastructures defines this integration. Participant 1 describes the staged integration strategy, stressing the need to bridge gaps between more outdated systems and newer RPA technologies, as well as the significance of compatibility. Participant Stated

> **Participation 1**: *"The bank is integrating RPA using a staged approach with its older systems. Our current systems are being thoroughly evaluated, integration points are being found, and processes that should be automated are being prioritized. To guarantee compatibility, cooperation with our IT team is essential. We are investigating middleware options to close the gap between RPA and legacy systems. Achieving seamless integration without interfering with ongoing activities is the aim."*

This demonstrates how thoughtful and intentional RPA integration should be to ensure it enhances current workflows rather than interferes with them. Participant 4 remarks on how difficult this assignment is, saying,

> **Participation 4**: *"The main difficulty lies in integrating RPA with legacy systems, which can be a laborious and intricate process. In addition, determining whether processes are suitable for automation necessitates a thorough examination to guarantee that they adhere to standards and are rule-based".*

The necessity of conducting a thorough analysis, a task that calls for technical and operational expertise, to ascertain if a process is suitable for automation. Participant 7 offers a solution architect's perspective on scalability as a crucial element of integration, stating,

> **Participation 7**: *"RPA is very scalable, so banks can readily modify their operations to accommodate changing workloads without having to make major infrastructure adjustments"*

This scalability is crucial for the banking sector, which must rapidly adapt to market demands and regulatory changes. RPA systems' scalability makes it possible to reallocate resources, shifting human capital from routine jobs to places where creativity and strategic thinking are most welcome. RPA's scalability offers a foundation for process optimisation, cost savings, and aligning

with strategic objectives. Participant 6 discusses the scalability of RPA as a competitive advantage, stating.

> **Participant 6:** *"The scalability of RPA allows us to swiftly adapt to shifting market demands without incurring additional human expenditures"*

Banks are in a position to react quickly to changes in the market because of their capacity to grow without making large investments in human resources. Participant 3 highlights RPA's flexibility even more by highlighting the system's capacity to modify in response to changing business requirements,

> **Participant 3:** *"RPA has produced a versatile system that is simple to modify to meet changing business requirements"*

This flexibility is crucial for banks to remain agile and competitive in a dynamic industry.

The foundation of digital transformation methods is RPA, which unifies diverse systems and automates repetitive operations to drive efficiency and creativity. Its strategic importance comes from its ability to free up resources for innovation and core company operations, which helps organisations become more competitive and develop faster in the digital age. The strategic significance of RPA in digital transformation is emphasised by Participant 2,

> **Participant 2**: *"RPA supports our objectives of encouraging innovation, cutting expenses associated with operations, and optimizing processes"*

Navigating technological obstacles, handling cultural transformations, and ensuring the new systems increase productivity without jeopardising current operations are all part of integrating RPA technology within banking operations. The integration is not only a technical task but also a strategic one that calls for careful planning and in-depth knowledge of the new RPA technologies and the legacy systems they will interface with. The panellists' statements reveal a cautious but hopeful approach to RPA integration, systems which respect existing systems while promising to improve banking operations.

4.4.3 Employee Experience

The implementation of RPA in the banking industry has resulted in a notable shift in the duties and tasks of employees. Workers in financial institutions are observing a change in the workplace as RPA replaces repetitive and routine duties. Participant 1 says,

> **Participant 1:** *"Our organization's implementation of RPA will reshape job roles and responsibilities. Employees will be able to take on more strategic and creative duties as regular and repetitive jobs become automated"*

This illustrates a pattern in which RPA not only modifies the tasks performed by employees but also enhances their jobs by freeing them up to concentrate on more challenging and fulfilling activities. Participant 8 highlights the opportunity for career advancement, pointing out.

> **Participant 8:** *"Adoption of RPA, in my opinion, will alter how agile team's function. It can be necessary for team members to acquire new RPA-related skills, such knowing how to incorporate automated procedures into an agile framework"*

According to this claim, RPA allows workers to learn new skills and interact with technology in ways that will advance their professional development. Furthermore, RPA has an impact on changes in organisational culture. Participant 4 mentions,

> **Participant 4***: "The organization's culture is being profoundly impacted by the implementation of RPA as more strategic and analytical work is taking precedence over manual repetitive chores"*

Furthermore, task automation is driving a cultural change prioritising analytics and strategic thinking above manual labour. Participant 1 emphasizes how crucial it is to handle this transition skilfully.

> **Participant 1:** *"Managing the change in employee culture has been a major problem. There is now opposition to change and worry about job loss. To overcome these obstacles and guarantee a seamless transition for our staff, effective change management and clear communication are crucial."*

This quotation recognises the possibility of resistance to new technologies and emphasises the need for effective communication and change management techniques to promote adaptability. Participant 4 elaborates on the necessity of specialised training initiatives, stating,

> **Participant 4:** *"To optimize usability and enable the team to properly utilize RPA capabilities, it is imperative to provide appropriate training programs and continuous support"*

This realization emphasises the importance of implementing new systems and ensuring staff members receive the necessary training and assistance during the changeover.

Retraining the workforce to succeed in a new setting where manual jobs are automated is another aspect of using RPA. Participant 2 illustrates this point,

> **Participant 2:** *"Workers have a shorter learning curve since they may quickly get used to the user-friendly interfaces. Nonetheless, in order to optimize usability and enable the team to properly utilize RPA capabilities, it is imperative to provide appropriate training programs and continuous support."*

Here, the emphasis is on how user-friendly RPA systems facilitate adoption and help lessen the learning curve of utilising new technology. In a similar spirit, Participant 7 talks about the proactive measures implemented to improve personnel capacities,

> **Participant 7:** *"We're using cutting-edge technologies to methodically record and capture workflows. In addition to providing the framework for RPA integration, this documentation encourages a continual improvement mindset, which helps us to streamline and optimize procedures for optimal effectiveness."*

This highlights the company's dedication to developing a culture of ongoing learning and development and introducing new technologies.

This result shows that RPA is a catalyst for human resource development and a technology tool. In addition to changing job responsibilities, banking institutions are creating a more strategic and value-added work environment for their workers. Thus, the integration of RPA emphasises creating a competent, flexible, and future-ready banking workforce, which is not only a technological advancement but also a human-centric undertaking.

4.4.4 Financial Efficiency

Based on banking experts' first-hand experiences and observations, this subject encapsulates the effect of RPA on operating expenses and the resulting savings. RPA's impact on banking is mostly due to its ability to increase cost efficiency. Participant 1 states that to clarify this,

> **Participant 1:** *"Automation will result in significant labour cost savings by eliminating the need for manual labour in repetitive operations"*

This demonstrates how RPA directly reduces costs by automating repetitive processes and lowering human labour needs. To accentuate this point even more, Participant 2 says,

> **Participant 2***: "With the deployment of RPA... we hope to see a decrease in operating expenses. Not only will labour expenses decrease with the automation of regular activities, but operational risks and related costs resulting from human error will also decrease"*

This claim demonstrates how RPA lowers direct labour costs while simultaneously lowering costs related to human mistakes, which improves total operational cost-effectiveness. Participant 3 talks about the wider financial ramifications, stating,

> **Participant 3:** *"I anticipate that our organization's deployment of RPA will have a significant effect on operating expenses... Furthermore, RPA's increased accuracy and efficiency can help reduce costs associated with errors, thus further lowering operating expenses"*

This viewpoint emphasises how important RPA's accuracy and efficiency are in cutting down on expenses related to mistakes and inefficiencies.

Implementing RPA is a calculated step toward streamlining processes and drastically cutting expenses. This subject includes more than just cost-cutting; it also includes a more comprehensive approach to improving operational performance and lowering errors, all of which contribute to a more profitable and efficient banking business. This shows that there is an agreement regarding the financial advantages of RPA and emphasises its importance in boosting savings and cost-effectiveness in the banking sector.

4.4.5 Risk and Compliance

This theme explores the steps required to evaluate and reduce the risks of putting RPA into practice, ensuring that these systems comply with legal requirements and protect private financial information. Banks are aware of the hazards that come with RPA, especially about data security and regulatory compliance. Participant 1 from a large bank draws attention to this issue by saying,

> **Participant 1:** *"My method for evaluating the risks and security implications of deploying RPA at the bank is to start a thorough security assessment. This entails assessing possible weaknesses, carrying out penetration tests, and making certain that RPA procedures follow stringent access constraints"*

This thorough approach to security demonstrates the level of examination that RPA systems go through prior to integration. Participant 2 highlights the need to coordinate RPA with current security standards and stresses the need for proactive risk management,

> **Participant 2:** *"To safeguard sensitive data, we'll use robust authentication procedures, comprehensive threat modelling, and encryption techniques. Our security approach will include ongoing system activity monitoring and regular security training for RPA users".*

This quotation emphasises the need for a multi-layered security approach that includes staff training and technology security measures to guarantee the safe operation of RPA systems.

This highlights how crucial it is to continue enforcing strict security protocols and adhering to compliance guidelines while deploying RPA in the banking industry. The responses from the banking experts demonstrate a thorough and watchful strategy to reducing the dangers of RPA. This ensures that even though RPA automates and streamlines banking processes, it does not jeopardise the security and legal compliance essential to the banking sector.

4.5 Objective 2: To explore the perceived benefits of adopting RPA systems within the banking sector.

4.5.1 Operational Excellence

When seen through the lens of Customer Service Enhancement via RPA, operational excellence in banking is defined by a notable increase in the effectiveness of service delivery, which raises customer happiness and loyalty. Thanks to RPA, banks can process customer requests and

transactions faster and with fewer errors, which directly affects consumer satisfaction. This rise in operational efficacy is attained without sacrificing the human component of customer contacts, which is crucial in intricate support scenarios.

Participant 1 highlights how RPA may enhance customer support, emphasising how routine jobs are replaced with more individualised client encounters, leading to better service and increased customer loyalty.

> **Participant 1**: *"PA frees up our team to concentrate on customized customer interactions which increases customer happiness and loyalty by automating repetitive work."*

According to Participant 3, the technical effectiveness of RPA is the main concern. Demonstrating how RPA can automate jobs more accurately and quickly, directly impacting customer service by lowering errors and expediting procedures.

> **Participant 3**: *"RPA efficiently automates repetitive processes, increasing accuracy and productivity."*

Furthermore, participant 4 provides information about RPA's function in data management. This demonstrates how RPA may help banks manage and process customer data more efficiently to provide more specialised services to their clients.

> **Participant 3**: *"RPA makes improved data management possible, resulting in customized banking experiences".*

RPA automation improves back-office and customer service task uniformity and predictability. It allows for significantly lower operational risks brought on by human error, raising the service provision standard. Additionally, RPA is essential in reducing worker workloads so that staff members can concentrate on more complex and worthwhile jobs that improve service capabilities. Furthermore, RPA-driven procedures help to cut operating costs by minimising the quantity of physical labour and enhancing process speed and accuracy, all of which reduce costs associated with errors and delays.

Participant 2 reaffirms this by talking about the flexibility and economy that RPA provides. Highlighting the cost-effectiveness and operational efficiency of RPA, which improves customer satisfaction.

> **Participant 2**: *"RPA increases agility, lowers costs and optimizes processes—all of which change the way we deliver services."*

In addition to cutting expenses and streamlining procedures, technology allows for more effective and individualised consumer encounters. Thus, using RPA in banking is a critical step in raising customer happiness and operational effectiveness.

4.5.2 Customer Experience Improvement

RPA has a significant impact on customer service in the banking industry. RPA increases customer satisfaction by allowing human resources to concentrate on more intricate and individualised customer interactions by automating repetitive and rule-based tasks. The following statement from Participant 1 sums up RPA's influence on customer service:

> **Participant 1**: *"RPA frees up our team to concentrate on customised customer interactions which increases customer happiness and loyalty by automating repetitive work. It also expedites reaction times offering a more effective service".*

This demonstrates how RPA improves service delivery effectiveness and quality by allowing banking employees to concentrate on more customised client encounters.

The banking industry's deployment of RPA significantly affects service delivery. Automating repetitive jobs, RPA improves overall productivity by reducing processing times and error rates. This simplifies operations. Customer transactions become quicker and more accurate due to this automation, which raises customer satisfaction. RPA also makes services available around-the-clock, which increases consumer convenience. RPA also helps to create a more trained and engaged staff, which raises the standard of service provided by the banking industry. Participant 2 highlights RPA's wider effects on service delivery, stating.

> **Participant 2**: *"RPA increases agility, lowers costs, and optimizes processes—all of which change the way we deliver services. Due to the ability to respond more quickly and accurately, there is a significant impact on the customer experience."*

This viewpoint highlights how RPA improves accuracy and agility, which significantly enhances the customer experience.

The usage of RPA greatly impacts the operational components of banking that directly affect clients. Participant 4 states,

> **Participant 4**: *"By streamlining operations, the banking industry's use of RPA has had a substantial influence on customer services. Wait times and mistake rates have decreased as a result of banks being able to handle high-volume tasks like loan processing, account openings, and consumer inquiries more accurately and efficiently. This makes services faster and more dependable, which improves the client experience overall."*

This demonstrates how RPA improves service speed and reliability, directly benefiting customers.

One of RPA's main benefits is its capacity to provide continuous service, which greatly raises client happiness. Participant 6 talks about how RPA is changing customer service,

> **Participant 6***: "I think RPA has changed banking customer service by making services available around-the-clock, which is revolutionary. Faster transaction processing now benefits customers, increasing their loyalty and level of satisfaction"*

Participant 7 highlights RPA's importance in enabling more tailored banking services, stating.

> **Participant 7**: *"Through RPA, we can expedite and improve the accuracy of client request processing by automating repetitive and laborious processes. By cutting down on errors and wait times, this not only increases the effectiveness of services like loan processing and account management, but it also improves the client experience. Additionally, by quickly evaluating consumer data, RPA may offer more individualized services"*

This claim emphasises how RPA makes individualised services possible by processing and analysing client data effectively.

Balancing RPA and human interaction in the banking industry is essential for providing the best possible service. This synergy, which combines the efficiency and dependability of automation with the compassion and flexibility of human connection, guarantees a superior, customer-centric service model. Participant 10 emphasises the significance of striking a balance between RPA and human engagement,

Participant 10: *"RPA has a big influence on customer support. It expedites the processing of consumer requests and questions by streamlining operations. Better client loyalty and satisfaction are a direct result of this efficiency. But when using RPA, it's crucial to maintain a human element, particularly when managing intricate customer support situations"*

This realisation emphasises how important it is to combine RPA with human contact to maintain a high standard of customer care. This indicates a thorough understanding of RPA's benefits to customer service within the banking industry. In addition to improving responsiveness and efficiency, RPA enables more individualised interactions and 24/7 service availability, eventually raising customer satisfaction. These observations from banking experts demonstrate how RPA is revolutionising customer care in the banking sector.

4.5.3 Risk and Compliance Management

By automating and performing compliance-related operations, RPA lowers the possibility of human mistakes and ensures conformity to regulatory requirements, thereby streamlining risk and compliance management. Additionally, it provides thorough audit trails, which improves transparency and helps firms comply with regulations and successfully manage risk. A banking industry participant emphasises the all-encompassing approach to risk management and compliance that comes with using RPA. Participant 1 states,

Participant 1: *"My method for evaluating the risks and security implications of deploying RPA at the bank is to start a thorough security assessment. This entails assessing possible weaknesses, carrying out penetration tests, and making certain that RPA procedures follow stringent access constraints".*

This method suggests a multifaceted approach to ensuring the RPA system complies with industry best practices and legal requirements. It also entails tight coordination with cybersecurity teams and technological assessments.

A cautious, phased approach is taken when integrating RPA into the banking industry's current systems to ensure compliance and reduce risks. Participant 10 states,

> **Participant 10**: *"Standardization and documentation, in my opinion, are two important variables that affect RPA's adoption and efficacy. Processes should be clearly documented to guarantee that RPA is used where it can be most beneficial and that the bank's operational objectives are met by its adoption. Conversely, standardization guarantees consistent and dependable automation and facilitates the scalability of RPA solutions across many departments"*

This strategic integration demonstrates the banks' dedication to integrating RPA into their present frameworks without compromising the security and integrity of their systems.

4.5.4 Cost and Resource Efficiency

One of the main advantages that participants emphasised was the decrease in personnel expenses. Routine, manual processes are automated by RPA, which lowers the requirement for a large workforce. Participant 10 pointed out,

> **Participant 10**: *"I believe that by automating several banking tasks, RPA will lower operating expenses. Operational costs will drop as a result of this decrease in physical work."*

Several participants remarked that the accuracy of RPA systems considerably lowers the incidence of human errors. Error correction and rework costs are reduced because of this decrease in errors. Participant 6 highlighted

> **Participant 6**: *"RPA should have a favourable effect on operating expenses by delivering services more quickly and accurately, which will increase customer satisfaction and retention".*

Furthermore, participants noted that smart reallocation of human resources is made possible by RPA. Employees can concentrate on more strategic and value-added work as regular chores become automated. Participant 9 said,

> **Participant 9**: *"Employee workloads are lightened by the automation of repetitive operations, freeing them up to concentrate on higher value work".*

The scalability of RPA was another important factor mentioned. It makes operations more cost-effective by enabling banks to handle increasing workloads without a corresponding increase in human resources. Participant 2 emphasised,

> **Participant 2**: *"RPA increases agility, lowers costs, and optimizes processes."*

Another reason mentioned for cost savings was the simplicity of managing RPA systems. Comparatively speaking, sophisticated manual procedures demand more training than automated ones. Participant 1 states,

> **Participant 1**: *"Workers have a shorter learning curve since they may quickly get used to the user-friendly interfaces of RPA systems".*

RPA assists in complying with regulatory standards by guaranteeing consistent process execution, lowering any compliance-related expenses. Participant 2 echoed this by saying,

> **Participant 2**: *"I think RPA can significantly improve a few of our bank's operating procedures. Specifically, RPA automation may greatly shorten processing times, improve accuracy, and guarantee regulatory compliance in the following areas: client onboarding, KYC (Know Your client) procedures, and compliance reporting".*

In summary, implementing RPA technologies in the banking industry greatly improves resource and cost efficiency. All indications of this are reducing labour costs, minimising errors, reallocating strategic resources, scaling, requiring less training, adhering to compliance, and improving overall operational efficiency. Together, these elements support significant cost reductions and more efficient resource utilisation in banking processes.

4.5.5 Employee Empowerment

Employee jobs are changing from primarily repetitive to more analytical and strategic. This change is said to have occurred due to RPA taking over repetitive jobs so that workers can focus on more rewarding work. Automating time-consuming processes increases productivity and raises employee job satisfaction. Participant 1 pointed out,

> **Participant 1**: *"This technology transfers routine duties to the automation platform, freeing up our team to concentrate on more strategic and value-added work".*

Employee upskilling, which increases job satisfaction, is required by RPA. The necessity of *"upskilling programs*" to allow staff members to apply their abilities in more value-added areas was mentioned by Participant 3.

When RPA is implemented, staff at banking institutions are more likely to be involved in creative tasks, which promotes an inventive culture. Participant 1 emphasised that,

> **Participant 1**: *"cultural shift inside our organization towards innovation and efficiency"*

It has been observed that RPA enhances work-life balance by relieving employees of tedious duties and freeing them up to concentrate on important work. This characteristic is deduced from the responses of the participants as a whole.

To sum up, implementing RPA notably impacts employee empowerment within the banking industry, as demonstrated by elevated work satisfaction levels. This is accomplished by changing employees' positions, providing chances for professional growth, encouraging an innovative culture, and enhancing work-life balance.

4.5.6 Quality and Reliability Enhancement

In the banking industry, RPA is essential since it drastically lowers errors and raises service standards. Data input, transaction processing, and document verification are just a few of the time-consuming, repetitive processes that it automates. Processes are accelerated by automation, which also improves accuracy by reducing human error. Participant 1 states,

> **Participant 1**: *"RPA frees up our team to concentrate on customized customer interactions which increases customer happiness and loyalty".*

Participant 2 notes,

> **Participant 2**: *"RPA increases agility, lowers costs, and optimizes processes—all of which change the way we deliver services".*

These observations highlight how RPA is revolutionizing customer service, making it more effective, tailored, and customer-focused. When RPA is integrated into financial services, the whole customer experience is significantly enhanced since it not only streamlines processes but also enhances the timeliness and accuracy of customer interactions.

4.6 Objective 3: To explore the challenges the banking sector encounters in integrating RPA systems.

4.6.1 Cultural Adaptation Challenges

The difficulties and barriers banking organisations face when incorporating RPA into their current operational and cultural frameworks are called cultural adaptation problems. These subjects capture employee resistance to automation technology, worries about job security, the need for reskilling, and the changing nature of job positions. In addition to a major organisational cultural shift, technology integration is required for the transformation. This calls for acceptance, flexibility, and a smooth transition for all parties involved.

The participants' observations underline the need for comprehensive change management techniques that address both the technical implementation and the human side of such changes, as they indicate both concrete and intangible hurdles to successful RPA adoption. They highlight a shared concern about how RPA might change current workplace interactions and employees' anxiety about job security. Participant 9 states,

> **Participant 9**: *"Managing the human element presents the biggest implementation challenge for RPA. It entails addressing worries about job security and the fear of machines taking your work".*

This is made more difficult by the requirement for organisations to undergo a substantial culture shift to guarantee that employees are properly trained and ready to shift to more automated procedures. The conversation highlights the need to strike a delicate balance between utilising RPA's advantages in terms of accuracy and efficiency and keeping a motivated workforce that can adjust to new operating paradigms, as highlighted by Participant 9,

> **Participant 9***: "It is imperative to guarantee efficient communication and offer training to improve skills. Another difficulty is incorporating RPA into current workflows in a way that improves and supplements them rather than interfering with them."*

Furthermore, while workers adjust to these changes, leadership must provide open communication and support, as the theme makes clear. It implies that an organisation's capacity to successfully oversee the cultural adaptation process, ensuring workers feel appreciated and part of the change, is a prerequisite for the success of RPA deployment. Addressing concerns, offering the required

training, and rethinking positions to fit the new technology environment will lessen resistance and promote an innovative and resilient culture.

4.6.2 Technical Integration Difficulties

This theme explores the banking industry's major challenges in incorporating RPA with its current, frequently antiquated IT infrastructure. Study participants discussed the difficulties of integrating RPA technology with legacy systems, highlighting the technical difficulties, the necessity of strategic planning, and the significance of cooperation between RPA solution providers and IT departments. Participant 2 emphasised this, stating,

> **Participant 2**: *"Handling the difficulties of integrating RPA with current legacy systems has proven to be a significant problem. Careful planning and coordination are needed to guarantee flawless compatibility and little interruptions to ongoing activities"*

Furthermore, participants emphasised the complexity of data mapping and the need for careful alignment between RPA platforms and the quirks of legacy systems. They also mentioned that ensuring seamless operation without interfering with ongoing operations often requires a thoughtful approach to integration and that RPA software compatibility with the various formats and protocols of older systems calls for creative solutions to close these gaps. Participant 7 highlights this,

> **Participant 7**: *"As a Solution Architect, overcoming the inherent constraints of these older systems will be the biggest hurdle when integrating RPA with legacy systems. They frequently lack the required APIs for smooth integration, necessitating the development of time-consuming and intricate custom solutions. Another major problem is making sure the RPA bots can accurately interpret and process data from various systems without causing any disturbances."*

This theme exploration demonstrates a sophisticated comprehension of the organisational and technological challenges of implementing RPA in the banking industry, especially when combining new technology with legacy systems.

4.6.3 Usability and Accessibility

In the banking industry, this theme focuses on resolving the accessibility and usability issues that arise when RPA systems are implemented. Study participants emphasised how crucial it is to create

RPA systems that are user-friendly and intuitive for staff members to guarantee successful adoption and maximise advantages. Participant 3 states,

> **Participant 3**: *"As an Engineer, I recognize how crucial it is to design user-friendly interfaces in addition to functional ones. Finding a balance between complexity and simplicity is difficult. Even though the system must manage complex automation procedures, it is essential to create user interfaces that make it possible for users—even those without strong technical backgrounds—to effectively engage with and control the RPA system."*

They stressed that consumers must have thorough training and continuous assistance to use these devices effectively. Furthermore, it was observed that integrating RPA with current banking systems and procedures posed a substantial usability problem that must be carefully planned and carried out to guarantee little interruption and smooth operation. This all-encompassing viewpoint emphasises the diverse strategy required to improve RPA's user-friendliness in the banking sector, striking a balance between technological innovation and user-centred design and support.

4.6.4 Security and Compliance

This topic of RPA implementation in the banking industry draws attention to the major difficulties in guaranteeing that RPA systems are safe and adhere to legal requirements. From the insights provided by the participants, to reduce the risks associated with RPA integration, comprehensive security evaluations, frequent monitoring, and adherence to industry best practices are essential. Participant 8 states,

> **Participant 8**: *"Integrating security evaluations and risk assessments into our agile processes is necessary to guarantee the security of RPA implementations. Security sprints with regular schedules could be used to evaluate and reduce RPA-related risks."*

Furthermore, participants emphasise the significance of creating a strong security framework that complies with regulatory regulations and industry standards and the necessity of ongoing attention and improvement to protect against changing cybersecurity threats. Participant 1 states,

> **Participant 1**: *"My method for evaluating the risks and security implications of deploying RPA at the bank is to start a thorough security assessment. This entails assessing possible weaknesses, carrying out penetration tests, and making certain that RPA procedures follow stringent access*

constraints. Working together with our cybersecurity team, we want to develop a strong security framework that complies with legal standards as well as industry best practices."

This theme emphasises the importance of striking a balance between utilising RPA's advantages and upholding strict security and compliance standards to safeguard sensitive information and preserve public confidence in banking operations.

5. Discussion of the Findings

5.1. Introduction

In this chapter, we are discussing the findings drawn out from the data collected and analysed in this study. This is discussed about the literature and objectives in question for this study. The objectives that are explored in this section are as follows:

- To understand how banking institutions are rolling out RPA systems.
- To explore the perceived benefits of adopting RPA systems within the banking sector
- To explore the challenges the banking sector encounters in integrating RPA systems.

5.2. Objective 1: To understand how banking institutions are rolling out RPA systems.

An important change in operational strategy and execution is highlighted by using RPA in banking institutions, highlighting the trend towards efficiency and digital transformation. Redefining roles, procedures, and integration tactics is part of this operational change that aims to integrate RPA into the banking ecosystem successfully. This entails reassessing current procedures to see which ones stand to gain the most from automation. Initially, banks analyse a lot of repetitive, high-volume processes that need much manual labour but are rule-based and ready for automation (Aguirre & Rodriguez, 2017; Lacity & Willcocks, 2016).

Reengineering current processes to maximise their automation is a prerequisite for integrating RPA. This reengineering exercise may result in a comprehensive redesign of banking activities, improving their efficiency and bringing them into line with the objectives of the digital transformation (Aguirre & Rodriguez, 2017). Process optimisation streamlines operations and cuts

down on turnaround times, improving the entire customer experience while preparing operations for RPA.

Banks now have the task of making sure that automated operations adhere to current governance structures and regulatory norms when they implement RPA. A strong governance architecture with explicit policies, risk management techniques, and ongoing monitoring systems is necessary to ensure compliance (Lacity, Willcocks, & Craig, 2015). Robust governance guarantees secure, dependable, and industry-compliant RPA implementations. The findings suggest that ensuring automated processes adhere to current financial rules and norms is contingent upon governance and regulations. This entails creating precise RPA deployment standards that cover privacy, data security, and operational risk management. Banks must negotiate a challenging regulatory environment to take advantage of RPA's benefits while meeting strict compliance standards. This highlights the significance of strong governance frameworks for efficiently managing RPA projects.

Furthermore, data security and privacy are crucial while implementing RPA because of the delicate nature of banking processes. To comply with regulatory standards like the GDPR and other rules governing the financial sector, banks must ensure that RPA bots handle consumer data and financial information securely. Lacity, Solomon, and Yan (2018) discuss how crucial it is to put strong security measures in place, such as data encryption and access controls, to guard against illegal access and guarantee data integrity in automated operations.

Ensuring RPA is compatible with current banking systems, which sometimes include legacy and contemporary apps, is a major challenge when implementing it. Careful evaluation of these systems is necessary to integrate RPA solutions to guarantee smooth communication. Aguirre & Rodriguez (2017) underline the importance of choosing RPA solutions that work well with current banking software and don't require many changes. Effective process automation across several platforms and databases depends on this compatibility. The findings suggest that strategic planning is required when integrating RPA with legacy systems in the banking industry to guarantee smooth data flow and connectivity between the two platforms. Banks can automate procedures without replacing their core systems by utilising middleware solutions or custom interfaces to bridge the

gap. Effective integration makes improved accuracy and efficiency in banking operations possible, which also protects existing IT infrastructure investments.

Another essential component of technology integration is scalability. RPA solutions that can expand with their needs and adjust to shifting business environments are what banks need to select. To support the dynamic nature of banking operations, Willcocks, Lacity, and Craig (2015) emphasise the necessity for RPA platforms that enable flexibility in deployment options, whether on-premises or in the cloud. Banks can increase their automation efforts as they find new areas to improve efficiency by utilising scalable RPA technologies. Findings support this theory by suggesting that scalability using RPA enables the efficient automation of procedures, meeting varying needs without requiring proportionate increases in staff or resources. Adjusting to growth or seasonal peaks helps banks handle massive volumes of transactions and data processing effectively. The bank's capacity to innovate and enhance client service while staying cost-effective is supported by this operational flexibility.

The main advantage of RPA for workers is its capacity to automate laborious, repetitive jobs. As a result, workers can concentrate on more strategic, value-added tasks, which increases engagement and job satisfaction. Lacity and Willcocks (2016) emphasise that staff members can focus on customer-focused and analytical work, leading to more rewarding and significant jobs. The findings suggest that employees can benefit from adopting RPA by focusing on more strategic and rewarding jobs instead of tedious, manual duties, which will increase their job satisfaction. Additionally, it offers chances for developing skills in cutting-edge technology, setting up workers for professional advancement in the changing digital banking scene.

According to Aguirre and Rodriguez (2017), training programs are essential for giving staff members the skills they need to succeed in a workplace that has undergone a digital transformation. The adoption of RPA offers chances for upskilling and professional advancement. The need for expertise in data analysis, digital literacy, and strategic decision-making is growing as regular operations become more automated. Furthermore, by relieving human workers of time-consuming and repetitive chores, RPA enables banks to reallocate their resources to more valuable endeavours strategically. Better customer service, innovation, and the creation of new financial goods and

services can result from this strategic reallocation. Lacity and Willcocks (2016), posit that this redistribution can strengthen the bank's competitive advantage and boost revenue growth, further improving its financial performance. RPA has the potential to provide a less stressful work atmosphere by decreasing the number of manual chores. Less pressure and mistake rates benefit the workforce, which improves the work environment. Suri, Sushil, and Singh (2017) state that RPA can enhance workers' overall job experience, increasing their happiness and retention rates.

The considerable decrease in operating expenses is among the most apparent advantages of using RPA in the banking industry. Repetitive processes that have historically required significant human labour, like data input, compliance reporting, and customer questions, can now be automated thanks to RPA. Lacity, Willcocks, and Craig (2015) claim that RPA can reduce costs for some processes by as much as 65%. The bots' capacity to operate continuously without interruption or mistake results in increased productivity at a reduced cost, which accounts for their cost efficiency.

RPA lowers operational expenses and the chance of errors that come with manual operations. Financial ramifications result from this greater accuracy, particularly in the form of lower error correction costs and possible fines for noncompliance with regulations. According to Aguirre and Rodriguez (2017), RPA can improve regulatory compliance by ensuring procedures are carried out precisely and consistently, lowering the financial risks connected with non-compliance. The findings suggest that RPA reduces the need for manual labour and streamlines operations, which lowers operating expenses by a large amount and lowers the cost of workforce management and human errors. This automation helps the financial institution's bottom line by increasing efficiency and reallocating resources to more strategic projects. Another important component of RPA's financial efficiency in banking is the return on investment. RPA technology can have a considerable upfront cost, but it can also result in significant long-term savings and productivity increases. According to Suri, Sushil, and Singh (2017), banks have seen a return on investment (ROI) within the first year of implementing RPA, mostly due to decreased operating expenses, increased accuracy, and the capacity to reallocate staff members to higher-value tasks.

5.3 Objective 2: To explore the perceived benefits of adopting RPA systems within the banking sector.

There are many advantages of using RPA in the banking industry, including increased operational effectiveness, lower expenses, and better customer service. Below is a summary of the benefits based on data collected from the study. Banking automation is predicted to save up to 25,000 hours of work annually by decreasing human errors (AutomationEdge, 2023; Wangoo, 2023). RPA increases productivity by automating activities quickly and precisely, eliminating the ambiguities of manual processes (AutomationEdge, 2023; Wangoo, 2023).

The findings suggest that by employing RPA, which automates repetitive tasks, businesses can reduce labour costs and the chance of error. RPA also improves resource efficiency by freeing employees to work on higher-value tasks, boosting productivity and operational efficiency. Furthermore, because RPA is scalable, businesses can quickly adapt to changing demands without investing in new infrastructure or resources. This is backed up by literature stating that by automating repetitive operations and reducing the need for human interaction, RPA implementation dramatically lowers operating expenses and saves anywhere from twenty to twenty-five per cent of operating expenditures (AutomationEdge, 2023; Wangoo, 2023). This reduction is attained by working more productively, using less energy, and completing activities in less time (Wangoo, 2023).

Banks can effectively scale their operations with RPA, handling large amounts of work during peak hours without needing extra human personnel. Banks may concentrate more on strategic expansion and innovation because of its scalability (AutomationEdge, 2023; Wangoo, 2023). Additionally, the capacity to continuously monitor and enforce compliance rules against the tiredness or oversight that can arise from human processes assists in anticipating and proactively identifying and mitigating risks, guaranteeing that banks function effectively within the bounds of the law.

Wangoo (2023) states that RPA makes it easier to prepare for audits and comply with rules by automating record-keeping and reporting operations. Banks are subject to strict regulatory requirements (Wangoo, 2023). Siderska (2020) mentions that robots are controlled by a

predetermined set of guidelines, rules, and procedures, which guarantees and enhances process compliance and dependability. Findings suggest that by automating and standardising procedures to guarantee constant adherence to regulatory requirements, the banking industry can greatly improve risk and compliance management using RPA. By lowering the possibility of human error, ensuring a thorough audit trail for every transaction, and facilitating accurate and timely reporting, RPA helps banks better adhere to strict regulatory regimes.

Furthermore, by reducing human error, RPA systems improve the precision and dependability of banking procedures. They are available around the clock and unaffected by data outages. They can efficiently handle massive volumes of data and processes by utilising technologies like AI and machine learning (AutomationEdge, 2023; Wangoo, 2023). The findings suggest that RPA adoption in the banking industry improves quality and reliability while significantly lowering errors and inconsistencies. Automation raises the standard of banking services by ensuring that procedures are carried out consistently. Additionally, RPA's capacity to work continuously without getting tired improves service reliability by guaranteeing that internal procedures and customer transactions are handled effectively and without interruption, boosting customer satisfaction and trust in the bank's offerings.

The findings suggest that by automating repetitive operations, RPA in customer service improves customer service interactions by enabling faster response times and round-the-clock assistance. Routine questions may be answered quickly, and customer satisfaction increases without the need for human assistance. Furthermore, utilising the synergy between robotic accuracy and human empathy frees customer care agents to concentrate on more intricate problems, enhancing the overall quality of service. Customer service processes like loan processing and query handling can be automated to guarantee faster and more accurate solutions for customers (AutomationEdge, 2023). RPA bots can provide support around the clock, enhancing the general customer experience (AutomationEdge, 2023).

RPA technology has been widely adopted in the banking industry, especially during the COVID-19 epidemic. This has brought attention to the technology's significance in operational resilience and digital transformation, allowing banks to continue operating efficiently even in the face of

disruptions (Bulatovych, 2023). Furthermore, RPA enables banks to leverage current data and systems to enhance service delivery and reporting by integrating and automating operations across old systems without requiring major modifications to the current infrastructure (Bulatovych, 2023). Findings suggest that RPA allows banks to embrace digital transformation and make the most of their current IT infrastructure by modernising and extending the life of legacy systems at a reasonable cost.

By streamlining processes and accelerating the industry's digital transition, RPA implementation in banking gives businesses a competitive edge through increased productivity, lower expenses, and better customer support. The case studies and practical implementations of RPA in the banking industry highlight the technology's capacity to transform a range of banking functions, including fraud detection, compliance reporting, and customer onboarding.

5.4 Objective 3: To explore the challenges the banking sector encounters in integrating RPA systems.

While there are many benefits to using RPA in the banking industry, there are also unique hurdles. One significant obstacle is a reluctance to automation adoption; although RPA technology is mature, nearly half of the respondents in a study by the Association of Chartered Certified Accountants (ACCA) and Chartered Accountants Australia and New Zealand (CAANZ) identified this opposition as a barrier to deploying RPA (AutomationEdge, 2023). The findings suggest that employee resistance to change is a barrier when implementing RPA in the banking industry due to cultural adaptability, as automation might cause concerns about job displacement and modify established roles and procedures. This opposition is frequently caused by a misconception about the advantages of RPA and a fear that it will dehumanise customer support.

Another big issue is organisational misalignment, which occurs when roles and responsibilities are shifted by automation, affecting how IT and business processes are aligned. Without a strategy for organisational alignment and process uniformity, efforts could run into problems from the outset (AutomationEdge, 2023). The findings suggest that when there is a mismatch between the strategic goals of automation and the operational preparedness or organisational culture, misalignment in adopting RPA in the banking sector occurs. To match automation aims with more comprehensive

business strategies and guarantee that staff members, both technical and non-technical, are actively involved in the transformation process, banks must cultivate a culture of cooperation and ongoing learning.

Regulations and legal requirements also contribute to the complexity since RPA must understand the complicated legal environment that governs banking operations (AutomationEdge, 2023). Aside from the sensitive nature of banking data, other obstacles include security and confidentiality issues and the requirement for regulatory compliance, which is critical in a highly regulated sector such as banking (ProjectPractical, 2024). As Lacity, Solomon, and Yan (2018) note, With the possibility of data breaches and cyberattacks, protecting the security and privacy of RPA systems is crucial. Findings suggest that when implementing RPA in the banking industry, care must be taken to guarantee that automated procedures adhere to stringent data security guidelines to protect client data from security breaches or unwanted access. Banks must manoeuvre through a challenging regulatory environment, maintaining RPA systems to meet changing legal requirements and standards without sacrificing operational effectiveness. Furthermore, strong governance frameworks must be established to control the risks related to RPA and ensure that automated activities comply with internal policies and external regulatory standards.

IT architecture problems also occur since banks require a stable infrastructure to implement RPA. The shift may also cause organisational transformation difficulties, which could encounter resistance from employees and interrupt current operations (ProjectPractical, 2024). Findings suggest that the difficulty of integrating new automation technologies with legacy systems, many of which are out-of-date and lack the required APIs for smooth integration, is the driving force behind the banking industry's adoption of RPA. This discrepancy may make automating procedures that depend on these outdated systems more difficult, necessitating expensive and time-consuming specialised fixes or workarounds. Significant technical challenges also exist in ensuring that RPA systems can interact with various banking platforms and apps without interfering with the current IT architecture. These difficulties highlight how crucial strong governance frameworks, stakeholder participation, and strategic planning are to the banking industry's successful RPA adoption.

6. Conclusion and Recommendations

6.1 Conclusion

With an emphasis on rollout tactics, perceived benefits, and encountered challenges, this study set out on an exploratory trip to explore the dynamics underlying the adoption of RPA within the banking sector. An extensive examination of qualitative data and a comparison with extant literature have shed light on the complex aspects of RPA deployment within banking establishments. The study's goals have been met, and it is clear that banks are gradually implementing RPA to increase productivity, optimise processes, and boost customer satisfaction while navigating the challenges of organisational transformation and technology integration challenges.

The results highlight how important stakeholder participation and strategy alignment are to implement RPA systems effectively. Banks that can successfully explain the goals and advantages of RPA while promoting a cooperative and encouraging atmosphere will be in a better position to overcome opposition and realise the full potential of the technology. The study's findings about the advantages of using RPA, such as reduced operational costs, increased accuracy, and strengthened regulatory compliance, align with existing research and support the technology's appeal to the banking industry. However, the deployment of RPA is fraught with difficulties, especially when handling the human impact of automation and integrating it with legacy systems. This emphasises the necessity of implementing technology with delicacy. These results imply that although RPA has many benefits, it requires careful design, thorough governance structures, and continuous managerial support to be successful.

The study's exploration of RPA adoption in the banking industry adds to the larger conversation about digital transformation in the financial services industry and offers insightful information to practitioners and academics alike. The results emphasise the significance of strategic, operational, and human elements in achieving the advantages of automation and provide banking organisations with recommendations on best practices for RPA deployment.

6.2 Recommendations

The banking industry may greatly increase operational efficiencies, cut costs, and improve customer service by implementing RPA. Based on this research and successful case studies in the industry, the following recommendations are made to assist banks in adopting RPA. Creating a strong governance structure is essential advice for banks implementing RPA. Clear policies, processes, and standards should be included in this framework to direct the choice, creation, implementation, and oversight of RPA projects. It guarantees that RPA initiatives follow best data security and privacy practices, comply with legal requirements, and are in line with the bank's strategic objectives. A coherent approach to RPA adoption is ensured by a clearly defined governance structure that defines roles and responsibilities across IT, operations, compliance, and business units, facilitating cross-functional collaboration.

It also offers a risk management technique that addresses the concerns related to RPA regarding operations, reputation, and cybersecurity. Banks may improve the scalability, dependability, and efficacy of their RPA initiatives by implementing a strong governance framework. This will guarantee that automation maximises benefits while minimising potential risks. With the help of this methodical methodology, RPA skills can increase sustainably, empowering banks to manage the challenges of digital transformation more skilfully.

Furthermore, stakeholder involvement is crucial when implementing RPA in the banking sector to ensure that the needs and viewpoints of all relevant stakeholders are considered and to create a collaborative atmosphere favourable to effective implementation. Early and ongoing stakeholder engagement throughout the RPA adoption process can greatly reduce resistance, improve buy-in, and guarantee that the deployment aligns with the bank's strategic objectives and regulatory requirements. Stakeholders include all levels of employees, management, customers, and regulatory bodies.

Regular communication updates, workshops, training sessions, and feedback methods to gather information and address problems are examples of effective engagement strategies. By clearly outlining responsibilities, benefits, and duties, this method makes installation go more smoothly and uses a variety of information to optimise RPA solutions for increased productivity,

compliance, and customer service. Ultimately, comprehensive stakeholder engagement fortifies the adoption process, resulting in more significant and long-lasting RPA projects in the banking industry. By implementing these suggestions, banks will be better equipped to handle the challenges of RPA adoption and use the technology to gain a competitive edge and major operational improvements.

6.3 Suggestion for further research

Research on the implementation of RPA in the banking industry is highly promising. Here are some suggestions for further research that will improve our comprehension of RPA and its application in this crucial sector of the economy. Future studies should focus on longitudinal studies that examine how RPA is being adopted in the banking industry. These studies can show how RPA's effects change over time. With the help of these studies, researchers could follow the development of RPA deployments from the point of adoption to the point of complete integration and maturity, recording changes in customer satisfaction, staff roles, operational efficiency, and competitive advantage.

By monitoring changes in these areas over longer periods of time, longitudinal studies can reveal the long-term advantages and difficulties of RPA, such as its impact on work culture, adaptability to regulatory changes, and the sustainability of efficiency gains. Furthermore, these studies could also investigate how banks adjust their RPA strategies in response to changes in the market and in technology. This all-encompassing strategy would provide stakeholders with important insights and steer future implementations by offering a sophisticated knowledge of RPA's role in the banking industry's digital transformation.

Finally, studies comparing the adoption of RPA across various locations and bank sizes offer a wealth of opportunities for additional research in the banking industry. Such research could clarify how RPA adoption tactics and results are influenced by contextual elements such as technology infrastructure, market maturity, regulatory settings, and cultural attitudes towards innovation. Researchers can evaluate the scalability and adaptation of RPA technologies to various operational needs and restrictions by contrasting the use of RPA in major international banks with smaller regional institutions. By comparing banks of various sizes and geographical locations, this

comparative method would also highlight differences in the possibilities and problems they encounter, providing insights into best practices and lessons learned. Regardless of their size or location, banks may use the results to inform customised RPA implementation strategies to maximise automation's benefits for improving customer service, operational efficiency, and competitive positioning.

6.4 Limitations of the study

The study on the deployment of RPA in the South African banking sector has significant limitations. Its geographical concentration on South Africa, while offering depth, may limit the findings' applicability to banks in other locations with distinct legal, economic, and cultural contexts. Second, while the qualitative approach is detailed and insightful, it may fail to capture quantitative indicators of RPA's influence on operational efficiency and cost savings throughout the banking industry. Furthermore, relying on interviews and document analysis may create biases depending on participant opinions and the availability of published documents, potentially ignoring internal data and metrics that banks consider confidential or sensitive. These limitations highlight the importance of a cautious interpretation of the findings, encouraging future research that includes a broader range of banks, employs mixed methods for a more comprehensive analysis, and uses a broader range of data sources to validate and extend the study's conclusions.

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APPENDIX (A) Research Instrument

1. Interview Guide

Number	Question
1	What is your gender?
2	What is your Age?
3	How many years of experience do you have using RPA?
4	What is your understanding about RPA?
5	Do you think the adoption of RPA has an impact on customer services?
5.a	Why and why not?
6	What are the key benefits that you have observed when adopting RPA in the organisation?
7	What are the key challenges you have observed when adopting RPA in the organisation?
8	Do you think RPA systems are easy to use?
9	Which tasks or processes within your organisation do you think will benefit from automation through RPA?
10	How do you think the adoption of RPA will impact the efficiency and productivity banking operations?
10.a	Which specific indicators or metrics would you use to measure the improvements?
11	How do you think the adoption of RPA will impact the operational costs in the organisation?
12	Do you currently have any documentation and standardization of processes within your organization?
12.a	Do you think this can influence the implementation and effectiveness of RPA?
13	Do you think that RPA adoption will impact the job roles and responsibilities of employees within the organisation?
14	What will you use to access the possible security implication and risks associated with the implementation of RPA in the organisation?
15	How are you integrating or planning to integrate RPA with legacy systems in the organisation?
15.a	What challenges do you anticipate, or have you experienced with the integration?
16	how is the introduction of RPA affecting the organisations culture and change management within the organisation?

APPENDIX (B) Interview Consent Form

Research Tittle: The process for adopting Robotic Process Automation in the South African Banking Sector

Name of Researcher: Mamelo Christina Mongwe

I, …….., agree to participate in this research project.

I agree to the following:

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study.	YES	NO
I agree that direct quotations from my questionnaire may be used by the researcher in their research report.	YES	NO
I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report).	YES	NO
I agree that other researchers may use the information I provide in my questionnaire (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO

…… (signature)

…… (name of participant)

…… (date)

…… (signature)

…… (name of researcher/person seeking consent)

APPENDIX (C) Participants Information Sheet

Dear Sir / Madam

My name is Mamelo Mongwe. I am a Masters student in Business Administration at the University of the Witwatersrand, Johannesburg. My supervisor is Ms. Ayanda Magida. I am conducting a research study about the adoption of Robotic Process Automation in the banking sector of South Africa. The study title is **The process for adopting Robotic Process Automation in the South African Banking Sector**.

I am inviting you to take part in a single interview. If you decide to take part, your participation in this research study will last about an hour. The interview will take place on MS Teams at the time agreed upon.

With your permission, I would like to audio record the interview. This data will be stored on google drive for 8 months and/or deleted after 8 months. Only the researcher will have access to the data.

During the research activity, I will need to ask for some personal information about you, including gender, age and work experience.

The interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are no more than what happens in everyday life / some of the questions asked may make you feel sad or upset. If this happens, I will stop the interview and continue another time.

This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

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

Yours sincerely,
Mamelo Mongwe

Researcher:
Mamelo Mongwe, 1724803@students.wits.ac.za, +27 780359575

Supervisor:
Dr Ayanda Magida, ayanda.magida@wits.ac.za , +27 11 717 3953

APPENDIX (D) Ethics Clearance Certificate

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

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

Ethics Clearance Certificate

Ethics protocol number: WBS/BA1724803/456
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below)

Project title	The process for adopting robotic process automation in the South African banking sector
Investigator / Researcher	Mrs Mamelo Mongwe
Nature of Project	MBA (Research Article)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed confidentialty.
Issue Date of Certificate	2023/10/13
Expiry date	Date of submission of the project / research report
Chairperson	Dr Pius Oba ☎ +27 11 717 3976 +27 82 733 6587 ✉ pius.oba@wits.ac.za

Declaration by Researcher

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

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

Signature _____ Date: _____