The Role of the Business Analyst in Delivering Successful Digital Transformation Initiatives: An Advisory Services Perspective

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A research proposal 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 Management in the field of Digital Business

Johannesburg, 2023

DECLARATION

I, Refilwe Molekwa, declare that this dissertation is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. Further, it has not been submitted before for any degree or examination in this or any other university.

Name: Refilwe Molekwa Signature:

Signed at ____Johannesburg_____

On the _30th_day of _____June___2023___

DEDICATION

I would like to dedicate this thesis to my loving family whose unwavering support, encouragement, and understanding have been instrumental in my academic journey. To Tebogo Maano, my hubby, Motheo and Kaelo Maano, my sons, your smiles kept me going.

To my loving parents, Maggie and Ben Molekwa, your constant belief in my abilities and your sacrifices to provide me with the necessary resources and opportunities have been a source of inspiration throughout this research journey.

Lastly to my sister “Fefe”, thank you for being there when I needed you.

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my thesis supervisor, Prof Nixon Ochara, for your exceptional guidance, expertise, and unwavering support throughout the entire research journey. Your valuable insights, constructive feedback, and patient mentorship have been instrumental in shaping this thesis and my growth as a researcher. I am truly grateful for your dedication and commitment to my intellectual development.

I would also like to extend my heartfelt appreciation to my friends and colleagues who have been a constant source of encouragement, support, and inspiration throughout this research journey. The stimulating discussions and insightful perspectives have made this journey more fulfilling and enjoyable. I am grateful for the words of encouragement.

Furthermore, I would like to acknowledge the participants who generously shared their time, experiences, and insights for this study. Your willingness to contribute and engage in the research process has been vital in deepening our understanding of the subject matter. I am indebted to their valuable contributions, which have enriched the findings of this thesis.

Lastly, I would like to dedicate this work to all those who believe in the pursuit of knowledge, the power of inquiry, and the potential for positive change. May this thesis serve as a small contribution to the broader academic community and inspire future researchers in their quest for new discoveries and advancements.

ABSTRACT

Digital transformation is a vital strategic imperative for organizations in today's fast-evolving digital landscape. Business analysts (BAs) play a crucial role in facilitating successful digital transformation initiatives. However, their roles remain undefined, leading to unexplored impacts on these initiatives. This study, involving 12 participants, aims to scrutinize the roles and challenges of BAs in the context of digital transformation.

Drawing on extensive literature reviews and real-world case studies, the research assesses the specific contributions of BAs, challenges they encounter, stakeholder perceptions, and existing support mechanisms. It utilizes the Context, Content, Process, and Outcomes framework to comprehensively examine BAs' involvement in digital transformation projects.

Structured interviews were conducted with experienced BAs from Entelect Software South Africa, offering in-depth insights into their responsibilities, challenges, and strategies throughout digital transformation journeys. The findings underscore the BAs' role as essential intermediaries who bridge the business-technology divide, facilitating effective communication, collaboration, and coordination among stakeholders. However, challenges such as resistance and technical knowledge gaps may hinder their ability to propose effective solutions. The study reveals that unclear expectations and adaptation struggles can result from misunderstandings of the BA role. Despite the growing recognition of their significance in digital transformation, ambiguity about their responsibilities persists.

KEYWORDS

Business analysis; business analyst; digital business; digitalisation; advisory services.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
4IR	Fourth Industrial Revolution
AI	Artificial Intelligence
BA	Business Analyst
DT	Digital Transformation

CHAPTER 1: INTRODUCTION

1.1 Purpose of the study

This study seeks to understand the pivotal role of business analysts in driving successful digital transformation initiatives in organizations, with a specific focus on advisory services. By examining the challenges, contributions, and effectiveness of business analysts, this research aims to provide valuable insights for practitioners, researchers, and organizations interested in this field. The study ultimately aims to increase awareness of the multifaceted function of business analysts in ensuring successful digital transformation outcomes.

1.2 Background of the study

Digital transformation initiatives have become prevalent in modern organisations as businesses seek to adapt to the rapidly changing landscape of the digital era. These initiatives entail a comprehensive reimagining and revaluation of an organisation's strategies, processes, technologies, and culture to leverage the power of digital technologies and enable business growth, agility, and innovation (Ullah & Lai, 2011).

Organisations incorporate digital technologies through digital transformation, which involves a holistic and integrated approach to redefining an organisation's strategies, operations, and culture to leverage the power of digital technologies to drive business value and competitive advantage (Armstrong & Lee, 2021). Reimaging and revaluation have a substantial influence on how organisations operate and provide value to their clients (Fletcher & Griffiths, 2020). Central to the success of digital transformation initiatives is the critical role played by business analysts, who act as key facilitators, strategists, and change agents, driving effective digital transformation efforts (Edward, 2018; A. Iiba, 2015; Richards & Marrone, 2014). In this context, business analysis plays a critical role in bridging the gap between business needs and technological solutions, facilitating effective digital transformation efforts.

The business analysis focuses on identifying, analysing, and documenting business requirements and facilitating their implementation through effective communication and collaboration with stakeholders. According to Paul and Tan (2015), a business analyst should understand the strategic goals of an organisation and ensure that digital transformation initiatives align with these goals. Business analysts are also known to bridge the gap between an organisation's digital ecosystem and its people (Hrabal et al., 2020). Various studies have explored the role of business analysts, highlighting their importance from multiple perspectives.

- **Competencies and interpersonal skills:** Ouanhlee (2023) emphasises that business analysts require strong interpersonal competencies and knowledge of business and organisational matters.

- **Evolving contributions:** Hrabal et al. (2020) notes that the role of business analysts has evolved rapidly in multiple directions, including the development of environmentally sound technology practices.

- **Shifting focus:** Apine (2013) asserts that the role of business analysts has shifted from discovering and modelling business processes to determining the resources required for their execution.

- **Skill level and knowledge:** Wilder and Ozgur (2015) describes the role of business analysts by defining the appropriate skill level and breadth of knowledge required for success, bridging the gap between data scientists and day-to-day users.

- **Impact of big data:** Liu (2020) argues that the emergence of big data has made business analysis even more critical across various industrial sectors, necessitating corresponding education systems in schools and universities. This is also supported by Xu et al. (2022), who stated that big data analytics courses enhance the skills and employability of engineering students, equipping them to work as business analysts or data analysts.

- **Learning opportunities and risk management:** Vashist et al. (2014) emphasise the importance of boundaries as opportunities for learning in the role of business analysts, as the position was established in response to the gap between technical IT staff and users. By contrast, McCartney et al. (2020) state that business analysts provide data-driven insights into workforce management and support HR business partners in making informed decisions.

- **Prestige and Demand:** Brukhansky and Spilnyk (2022) highlight the high demand for professionals in business analytics because of its current status as one of the most prestigious and well-paid jobs in the competitive labour market.

1.2.1 Importance of business analysis

It is important to understand the functions of business analysis for several reasons. First, it helps organisations align their business goals with available technology, ensuring that solutions produce the expected results. By analysing and optimising business processes, business analysts can identify areas for improvement and propose effective solutions (Harris & Clark, 2023). Second, business analysis facilitates effective communication between stakeholders and technology teams. Acting as intermediaries, business analysts translate business requirements into technical specifications, ensuring that technological solutions meet the specific needs of the business. However, their role extends beyond translation. For example, Ouanhlee (2023) argues that business analysts play a crucial role in eliciting responses from individuals and understanding opportunities or problems through active questioning and observation. Third, business analysts mitigate the risks and challenges associated with implementing new systems or changing existing processes (Zerbato et al., 2022). Through thorough analysis and requirement gathering, business analysts identify potential issues and propose mitigation strategies that minimise the impact on the organisation and maximise the benefits.

1.2.2 Challenges faced by business analysts

Although business analysis has been conducted for several decades (Mukozho & Seymour, 2020), the typical systems analysis approach that business analysts apply, for example, to elicit requirements, does not suffice under the digital transformation umbrella. Mashhood and Senapathi (2021) explain that within the digital transformation domain, the focus of business analysts' services, activities, skills, and work practices is driven more toward assisting businesses in reinventing innovative ways to cater to customer expectations through the use and adoption of digital technologies. Currently, business analysts encounter several challenges in their roles, as highlighted below:

- **Ambiguity and changing requirements:** Business analysts often face ambiguous or evolving requirements, making it challenging to define clear solutions. Stakeholders may have different opinions, and can change requirements throughout the project lifecycle, requiring business analysts to adapt and manage their expectations (Harris & Clark, 2023).
- **Stakeholder management:** Business analysts must work with various stakeholders who may have conflicting priorities and expectations. Balancing these diverse perspectives and ensuring effective communication and collaboration can be challenging (Ngouo, 2022; Ouanhlee, 2023).
- **Technological complexity:** With the rapid advancement of technology, business analysts must keep up with evolving tools, platforms, and methodologies. Staying abreast of technological advancements and understanding their implications for business adds complexity to the role (Harris & Clark, 2023).
- **Resistance to change:** Implementing new processes or systems often results in resistance from employees who are comfortable with existing ways of working. Business analysts must navigate organisational dynamics and manage changes effectively (Castillo, 2022).

These challenges require adaptability, effective communication, and change-management skills for successful navigation.

1.2.3 The evolving discipline of business analysis

Business analysis is evolving to meet the demands of a constantly shifting market. Owing to an increasing demand of business analysts, their role is becoming more widely recognised as crucial within organisations. Additionally, business analysts have adapted to methodologies and frameworks such as Agile and DevOps, where both business and technical expertise are valuable. Their expertise and competence are validated by professional certifications such as the Certified Business Analysis Professional (CBAP) and the Agile Certified Practitioner (PMI-ACP).

By understanding the challenges, importance, and evolving nature of business analysis, organisations can leverage these insights to empower business analysts. In this way, they can benefit from the role's ability to align business goals with technological advancements, improve communication and collaboration, and mitigate risk. Research has shown that effective business analysis can lead to improved project outcomes, reduced costs, and increased business value (Bhuiyan, 2011; Jarzębowicz & Marciniak, 2017). Further research is needed to explore the influence and best practices of business analysis on digital transformation initiatives.

1.3 Context of the study

This study focuses on the role of business analysts in delivering successful digital transformation initiatives within Entelect Software, a leading South African technology company specialising in software engineering and consulting services. Entelect Software operates in the competitive landscape of the software development and IT consulting sector in South Africa.

The software development and IT consulting sector in South Africa is characterised by several notable companies, including Entelect Software. These businesses provide services such as custom software development, IT consulting, digital transformation solutions, and innovation consulting. They provide these services through utilising state-of-the-art tools and industry best practices as well as providing professionals to advise businesses about how to achieve their strategic objectives and advance digital transformation. Similar companies in South Africa operate in software development. IT consulting firms are highlighted below:

BBD Software: it is a well-known software development and consulting company in South Africa that provides services such as custom software development, application support, and IT consulting across various industries (BBD, 2023).

ThoughtWorks: it is a global software consultancy in South Africa that specialises in agile software development, digital transformation, and innovation consulting (Thoughtworks, 2023).

DVT: it is another South African-based technology consulting company that provides software development, testing, and support. Their expertise spans areas such as application development, data analytics, cloud solutions, and digital transformation (DVT, 2023).

Mint Group: it focuses on digital transformation and Microsoft-centric solutions, offering services in areas such as cloud computing, data analytics, application development, and customer experience management (Group, 2023).

Lastly EOH: it is one of the largest technology services providers in South Africa. The firms provides a broad range of services such as software development, infrastructure solutions, cloud services, and IT consulting, catering to sectors such as government, financial services, and manufacturing (EOH, 2023).

Within the context of this study, Entelect Software serves as a research site, offering a rich environment for investigating the role of business analysts in digital transformation initiatives. It operates with a team of highly skilled professionals, including software engineers, architects, designers, and business analysts. Their expertise encompasses a wide array of technologies, frameworks, and methodologies, enabling them to deliver tailored solutions that meet their clients' needs.

Entelect also deals with a diverse clientele across multiple sectors, providing a valuable opportunity to examine the experiences and perspectives of business analysts in various organisational settings.

The focus of this study on business analysts at Entelect Software helps explore their role in facilitating the delivery of successful digital transformation initiatives. By examining their involvement, effectiveness, and perceptions within this specific context, this study can provide practical recommendations and contribute to the understanding of business analysts' contributions to digital transformation efforts.

The findings can benefit both Entelect Software and other organisations seeking to optimise their digital transformation strategies and leverage the expertise of business analysts.

1.4 Research problem

Although the field of business analysis has been around since the 1990s, it has not been fully explored in research. Recent technological advancements have resulted in a complex business environment (Mukozho & Seymour, 2020), in which intense business analysis is needed to adapt and survive. Currently, business analysts face the dilemma of navigating the rapid pace of technological advancements and the increasing complexity of business environments. Their role spans across several departments and can involve various tasks, meaning different individuals within the same organisation may have different interpretations of what business analysts do. This can influence how business analysists perceive themselves and how others perceive them. A study conducted by Bradley et al. (2017) outlined how, for example, a business analyst's perspective on their role as a liaison is likely to be influenced by their work experience, education, and position within the organisational structure. Overlap with other roles leads to inefficiencies and misaligned expectations (Aoyama, 2016; Restrepo, 2015; Sheng et al., 2022) and, ultimately, project failure (Madampe et al., 2020). This lack of consistency can lead to confusion and misunderstanding about what the role entails in terms of responsibilities, required skills, and importance (Richards & Marrone, 2014).

The role of business analysts is not clearly defined, and there are often inconsistencies in the literature (Harris & Clark, 2023). As a result, there is no agreed-upon skillset or knowledge that individuals in the role should possess. Unlike other professions, such as accountants or engineers, it was only until 2003 that a universally recognised professional body for business analysts – International Institute of Business Analysis known as IIBA – was established. Professional bodies on knowledge such as BCS and PMI have also contributed to the explanation of the "business analysis" concept. A recent study indicates that the role of a business analyst has been reduced to focus only on solution requirements management, whereas the responsibilities of business analysts are much broader (Gobov et al., 2020). This indicates that many organisations do not fully appreciate the value of business analysis and the critical role it plays in driving successful digital transformation initiatives, resulting in a lack of investment in the development of the business analyst role and a lack of recognition of the skills and experience required to be effective in the role.

Another factor contributing to the unclear definition of a business analyst's role is the rapid changes in technology and the business world. As new technologies and business models emerge, business analysts must adapt and evolve. This means their responsibilities are constantly changing, making it difficult to keep up with the demands of their role (Mukozho & Seymour, 2020). It is important for organisations to better understand and invest in the development of the business analyst role to ensure the success of digital transformation initiatives. The problem under investigation is the lack of a clear, consistent definition and understanding of the role of business analysts, particularly in the context of digital transformation initiatives. Therefore, there is a need to explore and propose a definition that can be used as a guideline to derive the critical responsibilities and competencies required for success in digital transformation initiatives.

In summary the impact of the problem can be narrowed down to inefficient and misaligned business operations, reduced effectiveness in DT initiatives, a lack of recognition and investment in the business analyst's and difficulty in adapting to rapid changes. Considering these impacts, it becomes clear that investigating and addressing the problem of defining the role of business analysts in digital transformation initiatives is essential for improving organizational efficiency, ensuring the success of digital transformation efforts, and enhancing the professional development and recognition of business analysts.

1.5 Research questions

This study aims to understand the role of business analysts in the context of digital transformation initiatives. This will be addressed by the following subquestions:

1. What is the current understanding of the role of business analysts within the organisation regarding their contributions to digital transformation initiatives?
2. What is the involvement of business analysts in digital transformation initiatives within organisations?
3. How effective is the business analyst's role in supporting digital transformation initiatives from the perspective of those involved, and what are the strengths and weaknesses attributed to this role?
4. How do stakeholders within an organisation perceive the role and contribution of business analysts in digital transformation initiatives?
5. What actions have been taken or are being considered to enhance the organisational perception of business analysts and their involvement in digital transformation initiatives?

1.6 Significance of the study

Digital transformation is a complex process that entails effective information transmission and management and is a crucial aspect of modern enterprises. Although empirical studies have examined the role of business analysts in the creation of Information Systems (IS), there is limited insights into the significance of these professionals in the realm of digital transformation (Richards & Marrone, 2014). This study aims to clarify the role of business analysts in digital transformation initiatives to academics, practitioners, and policymakers.

Business analysts' importance in digital transformation programmes must be acknowledged for several reasons. First, policymakers should use this knowledge to urge organisations to prioritise the involvement of business analysts in digital transformation initiatives, increasing the chances of successful outcomes (Xia et al., 2023). In addition, policymakers can gain insightful information on how to promote the digital transformation of small service enterprises (Chen et al., 2021). Governments can create an environment that facilitates digital transformation in these organisations and stimulates economic growth, productivity, and creativity by adjusting current policies and programmes. Furthermore, this study emphasises the vital role of business process management in the success of digital transformation initiatives (Vashist et al., 2014; Mishra et al., 2019). Policymakers can recognise this role and implement measures to promote and support effective business process management practices within organisations undergoing digital transformation.

This study comprehensively explores the importance and contributions of business analysts to digital transformation initiatives, providing practitioners with a deeper understanding of their value. By examining their responsibilities and skills, the study can help practitioners recognise the significance of involving business analysts in digital transformation projects to ensure optimal outcomes. Moreover, this research provides practical recommendations, strategies, and guidelines to enhance practitioners' professional practice, addressing challenges such as technological complexities and change management issues (Mishra* et al., 2019; Vashist et al., 2014).

While stakeholders who are used to traditional processes may be resistant to employing business analysts and implementing strategies for change management, effective stakeholder engagement and highlighting the benefits can assist overcoming such barriers. To offer enough support to business analysts through digital transformation initiatives, practitioners must also carefully plan and manage resources. Acquiring the necessary skills and knowledge to effectively engage business analysts and leveraging their expertise can be challenging. These gaps can be closed through training programs, professional development opportunities, and knowledge-sharing platforms. Adapting to new technologies, practices, and ways of working is usually a requirement for digital transformation initiatives, necessitating proactive change management techniques.

By examining the role of business analysts in implementing successful digital transformation initiatives, this study expands the theoretical understanding, which could result in the development of new conceptual frameworks. Additionally, it promotes methodological research in the fields of business analysis and digital transformation. This research informs future scholarly activities, contributing to a detailed understanding of the subject by addressing knowledge gaps and identifying areas that require additional research. It can also be used as a resource for scholars researching related subjects, giving them a framework for their research, and establishing a standard for scholarly examination in the area.

1.7 Delimitations of the study

The following delimitations can be identified based on the context of this study.

- This study focuses on the South African software development and the IT consultancy industry. It excludes the experiences and viewpoints of business analysts in other nations or areas. Instead, it concentrates on Entelect Software South Africa as the research site.
- The study examined the role of business analysts in Entelect Software only, thus excluding the experiences or perspectives of business analysts working for other companies engaged in software development and IT consulting in South Africa or elsewhere.
- While other popular IT consulting firms in South Africa such as BBD, ThoughtWorks, DVT, Mint Group, and EOH are highlighted, they are not considered research sites. This study's exclusive focus on Entelect Software South Africa restricts the applicability of the findings to other businesses in the industry.

- The research questions have been specifically designed to examine how business analysts who work for Entelect Software South Africa support organisations in the successful delivery of digital transformation initiatives. Other components of digital transformation and larger organisational issues that may affect the success of digital transformation were not covered in this study.
- The main subjects of this study comprise the experiences, viewpoints, and contributions of current and previous business analysts. The perspectives of other parties involved in digital transformation initiatives, such as project managers, executives, and end users, were not be thoroughly explored.
- Alternative theoretical perspectives or frameworks might exist, but are outside the scope of this study because this study is limited to the 4D framework (Context, Content, Process, and Outcome).

1.8 Definition of terms

This study used concepts broadly defined in the literature. The context in which these terms were used is described below:

- A business analyst in the tech world essentially refers to a go-between or intermediary between two parties in an organisation (Lubwama, 2020).
- Business analysis involves making changes in a company by identifying what's needed and suggesting solutions that benefit those involved (IIBA, 2015).
- Digital transformation refers to the change an organisation goes through as a response to either technological or exogenous change. Therefore, the total of these organisational change efforts in response to tech change is often transformational (Armstrong & Lee, 2021).

1.9 Assumptions

Data will be collected from participants with a business analysis background. Therefore, it is assumed that:

- The participants understand what is expected of a business analyst on a digital transformation initiative and what the defining factors of a successful digital transformation initiative are. Further, business analysts play a pivotal role in facilitating the delivery of digital transformation initiatives within organisations.
- There is a shared understanding of the digital transformation concept.
- The participants provided honest and factual responses regarding their experiences with digital transformation initiatives.

1.10 Chapter outline

The Role of the Business Analyst in Delivering Successful Digital Transformation Initiatives: An Advisory Services Perspective" is a comprehensive study divided into five chapters that delve into the crucial role of business analysts in facilitating the delivery of digital transformation initiatives.

The first chapter provides a compelling overview of the research problem, highlighting the motivations behind the investigation, and stating the goals and objectives of the study. Additionally, it discusses the important challenges that the study seeks to answer, providing a basis for the following chapters.

The second chapter, the literature review, examines the different perspectives on digital transformation in the literature. It then defines the definitions that will be used within the context of this study. Furthermore, it explores the types of digital transformation initiatives identified in the literature. The chapter also details the literature on business analysts and their functions in the implementation of digital transformation initiatives. It goes into detail regarding the different understandings and characteristics of business analysts, their responsibilities, and the skills needed for success in this position. Additionally, based on the literature, it critically examines the challenges business analysts frequently face when undertaking digital transformation projects and suggests how to overcome them. Finally, this section also examines the advisory services concept.

The third chapter provides a detailed account of the study's methodology, including the research design, data-gathering methods, and data analysis procedures employed. It also explains the sample selection process and discusses the limitations of the study, acknowledging any potential biases or constraints that may have impacted the research findings.

The fourth chapter presents the data analysis and provides a comprehensive interpretation of the findings. It critically analyses the data gathered and interprets the outcomes, providing valuable insights that contribute to a better understanding of the roles and contributions of business analysts in achieving effective digital transformation initiatives.

The fifth chapter, which is the conclusion, concisely summarises the key results of the study and discusses their implications for practice and future research. It provides practical recommendations for businesses to better support business analysts in their pivotal role in implementing digital transformation initiatives. The bibliography, meticulously compiled with the sources referenced in the research, follows the conclusion, and offers readers a valuable reference list for further research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The exploration and adoption of new technologies by organisations spans all industries. Pharmaceutical manufacturers such as Pfizer, logistics and supply chain companies such as DHL (Inna & Abrahm, 2019; Kern, 2021), 3D printing equipment manufacturers such as Stratasys, medical device producers such as Medtronic, and healthcare technology corporations such as Cerner have implemented several a number of initiatives to exploit the benefits of digital technologies. The potential of digitisation to help offer smarter and faster services to customers contributes to the transformation of key business operations (Matt et al., 2015; Nahrkhalaji et al., 2018).

Digital transformation (DT) initiatives are not a single process but rather a long-term process of continuous change (Westerman et al., 2014) involving more than just the adoption of technology (Tekic & Koroteev, 2019). Therefore, DT is a complex concept that requires a well-thought out and formulated approach to how the identified DT strategy or goal will be implemented across an organisation. Considering that DT initiatives incorporate digital technologies into all areas of an organisation's operations and business processes, there is a need for professionals who can understand business processes and technology to bridge the gap between the two and professionals who can ensure that technology is appropriately used to achieve the organisation's goal (Richards & Marrone, 2014). This is where business analysts come.

This chapter reviews the literature on business analysts and their role in the successful implementation of digital transformation initiatives. The literature review is organised into several key sections. First, the chapter provides an overview of the definition of digital transformation initiatives and their importance for businesses. Second, it reviews the literature on the role of business analysts in digital transformation, including their definitions, characteristics, duties, responsibilities, and competencies. Third, it explores the challenges business analysts face in the context of digital transformation and the strategies they employ to address them and an outlook on advisory services to support digital initiatives. Lastly, it examines case studies on successful digital initiatives.

2.2 Digital Transformation

2.2.1 Definition of digital transformation initiatives and their importance for businesses

The term DT has been widely used (and misused), making it vague. In addition, the concept of DT is complex, making it difficult to reach a shared understanding and creating inconsistencies in the literature (Gong & Ribiere, 2021; Morakanyane et al., 2017; Schallmo et al., 2017). Many studies define DT differently, depending on the author's focus or perspective (Morakanyane et al., 2017; Reis et al., 2018). There are other terms that are interconnected to DT, namely, digitisation and digitalisation (Gong & Ribiere, 2021). Some authors use digitalisation and DT interchangeably; however, within the context of this paper, these terms will be kept distinct.

This study aims to examine the different definitions of DT to establish a standard definition. Westerman et al. (2014) presents a definition of DT that emphasises its potential to radically improve the performance or reach of enterprises. This definition highlights the widespread adoption of digital advances such as analytics, mobility, social media, and smart embedded devices, as well as the improved utilisation of traditional technologies such as ERP. From this perspective, executives across industries leverage these technologies to transform customer relationships, internal processes, and value propositions that recognise DT as a hot topic and emphasise its transformative impact on businesses globally (Vashist et al., 2014) .

In contrast, Tang et al. (2019) provide a definition that centres on the shift in the role of technology within organisations. Tang et al.'s (2019) perspective suggests that technology now holds greater capabilities beyond being solely a support function for business processes. This definition implies that the changing role of technology is a key driver of digital transformation, playing a more strategic role in driving organisational change and innovation.

Fitzgerald et al. (2014) define digital transformation as the use of new digital technologies, such as social media, mobile, analytics, or embedded devices, to enable major business improvements. Their focus is on how these technologies can enhance customer experience, streamline operations, and create new business models, highlighting the specific technologies that facilitate digital transformation and desired outcomes within an organisation (Jorge et al., 2022; Shanti et al., 2022).

Similarly, Westerman and Bonnet (2015) propose a definition that emphasises various aspects of digital transformation initiatives. Their perspective revolves around leveraging greater customer engagement aligning with ideas from Bapat and Hollebeek (2023), introducing flexibility and agility to operational processes, and exploring strategic opportunities as stated by Kadenic and Tambo (2023). They also acknowledge the potential for the disruption and reinvention of entire value chains and industries, highlighting the multifaceted nature of DT (Westerman & Bonnet, 2015).

Another perspective is presented by Armstrong and Lee (2021), who describe digital transformation as the collective efforts of an organisation to respond to technological disruptions. Their definition emphasises that DT results in a marked change in the form and nature of the organisation, leading to improvements. This highlights the need for organisations to adapt and evolve in the face of technological advancements and disruptions.

Furthermore, Vial (2019) defined digital transformation as a process aimed at improving an entity through significant changes to its properties using information, computing, communication, and connectivity technologies. This definition highlights the transformative nature of DT and the role of various technologies in driving change and improvement within an organisation.

The robust discussion of DT definitions in the above section effectively conveys the multifaceted nature of DT, covering aspects such as the transformative potential of technology, use of specific digital technologies, customer-centricity, operational enhancements, strategic opportunities, organisational change, and improvement through technology-driven transformations (Liu et al., 2022). A comprehensive understanding of DT can be gained by examining these definitions from the literature. The researcher proposes the following definition for this study.

Digital transformation (DT) is the use of new digital technologies, including analytics, social media, mobile devices, and smart devices, to significantly improve an organisation's performance, reach, and value proposition (Fitzgerald et al., 2014; Westerman et al., 2011). It involves leveraging technology to enhance customer relationships, streamline operations, and create new products and services, ultimately leading to a marked change in the form and nature of the organisation (Fitzgerald et al., 2014; Westerman & Bonnet, 2015; Westerman et al., 2011). DT is driven by a tangible shift in the role of technology within an organisation from a support function to a strategic enabler of business processes (Tang, 2021). It is a response to technological disruptions that trigger significant changes to an organisation's properties through the use of information, computing, communication, and connectivity technologies (Armstrong & Lee, 2021; Vial, 2019).

Based on this definition, it becomes evident that organisational change encompasses various levels. First, processes are involved, such as the introduction of new technology and its utilisation in streamline operations. This is the process level; here, organisational change involves the implementation of new procedures, systems, or technologies to improve efficiency and effectiveness. This can include the adoption of advanced tools, software, or automation techniques to optimise various operational aspects within an organisation. By incorporating new technology, organisations aim to enhance productivity, reduce costs, and streamline their workflows (Chernyavs'Ka & Kovtun, 2023; De-Pablos-Heredero, 2020).

Second, at the business domain level, change takes the form of the organisation's value creation and changing capabilities (Holopainen et al., 2023) . Changes in the core components that make up an organisation's value proposition define organisational transformation at this level. This encompasses changes in the products, services, or solutions offered by the organisation as well as modifications in the organisation’s market positioning, branding, and customer focus. It may involve redefining the target market, diversifying product offerings, or aligning the business with evolving customer needs and market trends (Cao et al., 2023).

Third, new products and services are produced at the organisational level because of the employment of cutting-edge work methodologies (Hsiao & Wu, 2020). Innovative work practices and approaches were adopted to change this effect. This can involve embracing agile approaches, re-engineering processes, or fostering a culture of continuous improvement (Chen et al., 2020; Hensmans, 2022). By embracing change and encouraging creativity, organisations can develop and introduce new products, services, or solutions that meet emerging demands and market opportunities.

Finally, change extends to the cultural level, leading to enhanced customer interactions, relationships, and collaboration (Parviainen et al., 2017). Through these changes, organisations can identify an appropriate approach for transformation. At this level, change involves transforming the organisation’s mindset, values, and behaviours. This shift in culture promotes customer centricity, improves collaboration, and focuses on building strong relationships with stakeholders (Colleoni et al., 2021). Organisations can effectively respond to market changes, seize opportunities, and drive transformative initiatives by fostering a culture that values customer satisfaction, open communication, and teamwork (Imran et al., 2021).

Through the collective impact of these changes across various levels – processes, business domains, organisational, and cultural – organisations gain insights and develop a holistic understanding of the appropriate approach for successful transformation.

2.2.2 Types of digital transformation initiatives that organisations can pursue

In his book "*The digital transformation playbook"*, Rogers (2016) identified five domains of strategy that DT is changing: customers, competition, data, innovation, and value. For a business to get ahead of these widespread forces, it would have to propose how to cohesively plan to integrate the digital and physical aspects of these domains. Determinants that an organisation can look at to decide on what type of DT initiative they should take on are strategic objectives, industry context, competitive pressure, and customer expectations. On the basis of research and industry experience (Berman, 2012), transformation routes can be summarised as follows: (1) focusing on customer value propositions, (2) transforming the operating model, and (3) combining approaches 1 and 2 simultaneously. Therefore, a DT initiative entails rethinking what customers value most and creating operating models that take advantage of what is newly possible for competitive differentiation by an organisation. Kane (2019) points out that DT is more than just the introduction of technology but rather a holistic approach.

The three main types of initiatives examined in this section are the implementation of new technology, process redesign, and customer experience redesign. The researcher examines the features and outcomes of each initiative using a range of study sources, giving examples to highlight their significance.

Technology Implementation: This involves incorporating new digital technologies into organisational operations. Businesses aim to enhance operational efficiency and customer engagement by adopting technologies such as cloud computing and artificial intelligence (Armstrong & Lee, 2021; Chan, 2020; Fitzgerald et al., 2014; Hanelt et al., 2021)

By leveraging these tools, organisations can streamline processes, automate tasks, and deliver personalised experiences to customers. For instance, Amazon, a retail giant, revolutionised the industry by implementing advanced technologies such as cloud computing and artificial intelligence. Their use of Amazon Web Services (AWS) for cloud computing allows them to scale their infrastructure, handle vast amounts of data, and provide reliable services to customers and third-party sellers (Mishra, 2022). Additionally, Amazon's utilisation of AI and machine learning algorithms for personalised product recommendations and efficient logistics management has significantly enhanced the customer experience and streamlined operations (Chawla & Goyal, 2021; Sam, 2020)

In South Africa, technology implementation is a significant initiative for organisations. Banking institutions such as Nedbank and Absa have adopted digital technologies, such as mobile banking apps and online platforms, to improve operational efficiency and enhance customer engagement (Manser Payne et al., 2021). By leveraging these technologies, banks enable customers to conveniently perform various banking transactions using their mobile devices. Similarly, Takealot has implemented cloud computing solutions to streamline operations and offer a seamless online shopping experience. These examples highlight how technology implementation in South Africa contributes to improved business outcomes.

Process Redesign: Another crucial initiative for organisational change is a process redesign. The focus is on transforming business processes to make them more efficient and effective. This can entail automating manual tasks, adopting agile methodologies, and utilising digital tools to optimise workflows (Armstrong & Lee, 2021; Berman, 2012; Guinan et al., 2019).

Toyota, renowned for its lean manufacturing practices, is an excellent example of a process redesign. By implementing the Toyota Production System (TPS), which includes concepts such as just-in-time production, continuous improvement, and value stream mapping, Toyota transformed its production processes. Consequently, they reduce inventory costs, minimise defects, and increase overall productivity. This approach has been widely adopted by other organisations in various industries (Hatoum et al., 2021; Sinkamba et al., 2023).

Within the South African healthcare sector, the National Health Laboratory Service (NHLS) has undergone a process redesign by implementing digital systems for laboratory testing and result management ("NHLS - Annual Performance Plan," 2021). This transformation has improved the speed and accuracy of diagnostic services and enhanced overall patient care. In the manufacturing industry, companies such as Sasol have adopted lean methodologies and digital tools to optimise their production processes, reduce waste, and enhance productivity (Liedtke, 2020). These real-life examples demonstrate how process redesign initiatives in South Africa yield tangible benefits.

Customer Experience Redesign: The third type of initiative that drives organisational change is customer experience redesign. This initiative centres on enhancing the customer journey, aiming to create personalised and seamless experiences. Organisations can achieve this by leveraging technologies, such as customer relationship management (CRM) systems, chatbots, and mobile apps (Berman, 2012; Nahrkhalaji et al., 2018; Rogers, 2016).

Starbucks provides a prime example of a successful customer experience redesign. By integrating technology such as mobile apps, Starbucks transformed the traditional coffee shop experience where customers can order and pay for their drinks in advance, providing a convenient and personalised experience. Starbucks Rewards, their loyalty program, offers personalised rewards, exclusive offers, and the ability to earn points for future purchases. These initiatives have resulted in a seamless and engaging customer journey, strengthening customer loyalty and driving continued growth (Liu & Liu, 2022; Singh et al., 2023).

In South Africa, organisations prioritise customer experience redesign to create personalised and seamless interactions. A retail giant, Woolworths, has implemented customer relationship management (CRM) systems to gather customer data and provide tailored promotions and recommendations, delivering a more personalised shopping experience. The telecommunications provider, Vodacom, has incorporated chatbots into its customer service channels, enabling customers to receive quick and efficient support. These examples illustrate how South African companies focus on enhancing customer satisfaction through an effective experience redesign.

Defining the types of DT initiatives that a company can implement proves that the end-to-end process is beyond the technology horizon. There are other influential factors, such as people, that drive and develop productivity. Close collaboration between IT and business is required for the successful implementation of technology within an organisation (Manfreda & Indihar Štemberger, 2019). Authors such as Kane (2019a) and Westerman et al. (2014) advocate for digital masters who can steer focus on the bigger picture of enterprise strategy when implementing DT initiatives. Therefore, there is a need to focus on professionals who can deliver business value as trusted advisors and adapt to the new reality quickly and professionals who are aware of customer frustrations, expectations and how technology can be used in innovative ways to solve organisational problems (Harris & Clark, 2023).

2.3 Business analysis

2.3.1 What is business analysis?

According to A. Iiba (2015), business analysis refers to the process of identifying and understanding business needs and developing effective solutions to meet those needs. It is a crucial activity that allows organisations to identify their goals and objectives, evaluate various options for achieving those goals, and implement the most appropriate solution in a systematic and effective manner.

Moreover, it involves analysing business processes, gathering requirements, creating specifications for new or improved systems, identifying areas of improvement in existing systems or processes, facilitating communication between stakeholders and project teams, and ensuring their buy-in and support. The profession of incumbents performing these listed business analysis activities using different techniques and methodologies is called a business analyst (Boutin et al., 2022; Ouanhlee, 2023).

2.3.2 The role of a business analysts within the context of DT

Business process management has been identified as an enabler of enterprise digital transformation (Stjepić et al., 2020). Within the realm of business process management is the role of the business analyst, which is critical to the success of digital transformation initiatives. The literature supports that business analysts play a key role in identifying opportunities for digital transformation, assessing the current state of processes and systems, designing new processes and systems that leverage digital technologies, and facilitating the implementation of these designs (Babar et al., 2014; Gobov et al., 2020; Mosconi et al., 2022). This is where the business analyst's expertise comes into play: they are well positioned to understand both the technology and business process aspects of digital transformation.

Despite the crucial nature of business analysts’ role, authors such as Mashhood and Senapathi (2021); Mukozho and Seymour (2020) believe that they are often overlooked in existing research on digital transformation. Furthermore, digital transformation is a continuous process rather than a single event (Guinan et al., 2019). Therefore, the ongoing involvement of business analysts is fundamental to ensuring that digital transformation initiatives remain aligned with changing business needs and priorities.

In addition, while technology may be the driver of digital transformation initiatives, business analysts are key players in defining the scope and objectives of those initiatives (Kane, 2019). To address this research gap, future research should focus on the role of business analysts in digital transformation initiatives and their impact on different industries and business models. It is also important to develop tailored approaches that prioritise business analysts’ needs and perspectives when designing and implementing digital transformation initiatives.

2.3.3 Challenges faced by business analysts in delivering successful digital transformation initiatives.

Achieving successful digital transformation is not always easy, and business analysts often face several challenges that can hinder their ability to achieve the desired outcomes. Some of the challenges faced by business analysts that are outlined in the literature are discussed using the Golden Triangle or PPT (people, process and technology) framework below (Leavitt, 1964):

People: One of the major challenges organisations face during digital transformation is a lack of understanding of the importance of business leadership (Venkatesh et al., 2019). This lack of understanding can lead to resistance to change, which may slow or even halt the transformation process. Moreover, it can result in a misalignment in the digital transformation approach, leading to a weakly defined digital strategy, inefficiencies, and suboptimal outcomes (Jayalath & Premarathne, 2021). Without clearly defined goals, business analysts may struggle to identify areas for improvement and recommend effective solutions. Additionally, the lack of human resources with the necessary skills and expertise can make it challenging to effectively implement digital transformation initiatives (Chen et al., 2021). Furthermore, digital transformation often requires significant investment and resources, creating budgetary challenges that must be balanced with the need for a successful transformation initiative. Therefore, tight collaboration with stakeholders is essential to establish clear and realistic objectives that can be achieved using the available resources.

Process: The design and implementation of effective business process automation, which involves digitalisation and automation of company activities, is a critical aspect of digital transformation. However, careful planning and execution are required to ensure that automation does not negatively impact day-to-day operations or customer experience. This process can be time-consuming and resource-intensive and requires buy-in from all stakeholders (Lazić & Jović, 2019; Tomičić Furjan et al., 2020). To address these challenges, organisations should consider thoroughly analysing and documenting the current state of processes and identifying areas for improvement and potential automation opportunities. Additionally, involving all relevant stakeholders from different departments and levels of the organisation can help foster collaboration and ensure a smooth transition during the implementation of business process automation.

Technology: The rapid pace of technological change poses a significant challenge for business analysts, as it can be difficult to keep up with the latest trends and developments (Machado et al., 2021). This knowledge gap can hinder their ability to deliver successful digital transformation initiatives. Furthermore, legacy systems with limited digital capabilities within an organisation can also pose a significant technical barrier (Venkatesh et al., 2019; Zeerak et al., 2023). To overcome these challenges, organisations should prioritise ongoing learning and development initiatives for their employees to enhance their digital skills and knowledge (Zakharov et al., 2021). This may involve investing in training programs, workshops, or partnering with external experts to bridge knowledge gaps (Ostmeier & Strobel, 2022). Additionally, organisations should consider modernising or replacing legacy systems to enable better integration and compatibility with new digital technologies (Doherty & Stephens, 2021).

By addressing these challenges in the people, process, and technology dimensions, organisations can better navigate the complexities of digital transformation and increase the likelihood of successful outcomes.

2.4 Advisory services

Advisory services encompass a range of consultancy services that aim to enhance the efficiency, effectiveness, and overall performance of organisations or individuals seeking expert guidance in a specific field (Bode et al., 2022). This study focuses on the domain of information technology (IT) advisory services, which plays a crucial role in helping clients navigate the complexities of technology to align it with their business or process strategies. Gartner, a renowned research and advisory firm, defines IT advisory services as providing strategic, architectural, operational, and implementation planning to support clients' IT initiatives (Gartner, 2020).

Strategic planning advisory services are a fundamental component of IT advisory services. They assist clients in assessing their IT needs and formulating comprehensive system implementation plans. An organisation aiming to enhance its data analytics capabilities may seek strategic planning advisory services to evaluate its current infrastructure, identify gaps, and design a roadmap for implementing advanced analytics tools and techniques. Coca-Cola Enterprises, one of the largest beverage companies globally, sought IT advisory services from Gartner to enhance its digital capabilities and align its IT strategies with business objectives. Gartner's strategic planning advisory services helped Coca-Cola

Enterprises assess its IT needs and develop a system implementation plan. This involved evaluating its existing infrastructure, identifying opportunities for digital transformation, and recommending technological solutions to drive operational efficiency and customer engagement. With Gartner's guidance, Coca-Cola Enterprises successfully implemented advanced data analytics tools, enabling it to gain valuable insights into consumer preferences, optimise supply chain operations, and enhance its overall performance (Griswold, 2023)

Architectural planning advisory services are critical. These services focus on aligning strategic plans with emerging technologies to create a logical system design and support infrastructure that meets specific customer requirements (Chinoperekweyi, 2023). For instance, a company undergoing digital transformation might engage in architecture planning advisory services to ensure that its technology investments align with its long-term goals and enable seamless integration across different systems and platforms (Klerkx et al., 2017). One can see a real-life example from General Electric, a multinational conglomerate partnered with Accenture for IT advisory services to support its digital transformation journey. Accenture's architecture planning advisory services played a crucial role in helping GE align its strategic plans with emerging technologies. By leveraging Accenture's expertise, GE developed a comprehensive architecture design that integrated IoT (Internet of Things) devices and cloud computing solutions across their manufacturing facilities. This allowed GE to collect real-time data, optimise production processes, and improve equipment maintenance, resulting in increased operational efficiency and cost savings (Markman, 2020).

Operational assessment services play a vital role in evaluating operating efficiency and capacity within a client's IT environment (Chen et al., 2020). This involves analysing existing processes, systems, and resources to identify areas for optimisation and improvement (Chinoperekweyi, 2023). For instance, an organisation struggling with slow and inefficient IT operations may seek operational assessment services to identify bottlenecks, streamline workflows, and enhance overall productivity.

Implementation planning advisory services focus on advising clients on the rollout and testing of new solution deployment. These services guide organisations through the practical aspects of implementing technological changes, such as managing transitions, training employees, and ensuring smooth integration with existing systems (Ostmeier & Strobel, 2022). For example, when introducing a new customer relationship management (CRM) system, a company might engage implementation planning advisory services to develop a phased deployment strategy, conduct user training, and oversee the successful adoption of the new system (Wensing & Grol, 2019). Both operational assessments and implementation planning can be seen in Amazon, a global e-commerce giant. Amazon engaged Deloitte for operational assessment and implementation planning advisory services. Deloitte conducted a thorough assessment of Amazon's IT environment and analysed existing processes and systems to identify areas for improvement. Based on the assessment findings, Deloitte provided recommendations for streamlined warehouse operations, enhanced logistics management, and improved order-fulfilment processes. Additionally, Deloitte supported Amazon in the implementation of new technologies, such as robotics and automation, to optimise its fulfilment centres and achieve higher operational efficiency. This partnership enabled Amazon to handle increasing customer demand effectively and maintain its position as a leader in the e-commerce industry (Oka & Sachi Ghai, 2017)

These case studies demonstrate how organisations such as Coca-Cola Enterprises, General Electric, and Amazon have benefited from IT advisory services provided by renowned firms such as Gartner, Accenture, and Deloitte, respectively. By leveraging the expertise of IT advisors, these organisations were able to align their IT strategies with business objectives, optimise their operations, and drive digital transformation to enhance their performance and competitive advantage.

2.4.1 *The importance of advisory services in supporting digital transformation initiatives*

Organisations are increasingly recognising the importance of digital transformation initiatives in staying competitive in today's fast-paced digital economy. However, the implementation of new technologies and processes can be daunting without appropriate guidance and support (Santarsiero, 2023). This is where advisory services come into play, as they offer expert advice to businesses on the best strategies for successful digital transformation (Sayyadi & Provitera, 2023). In South Africa, we have already observed this influence through the rapid adoption of cloud services, big data analytics, and IoT within the financial, mining, and manufacturing sectors (Manda & Backhouse, 2018). For the effective implementation of such initiatives across industries, such as financial services, partnering with experienced advisory service providers becomes crucial in navigating through the complexities associated with these changes (Santarsiero, 2023).

To address the complexities of digital transformation, businesses may enlist IT consultants to aid, ranging from initial evaluations and recommendations for their digital strategies to hands-on technical guidance during implementation (Bongarzoni, 2021). This is necessary because many companies lack the in-house expertise and resources required for successful digital transformation projects. Advisory services can also offer training and capacity-building opportunities to ensure that employees possess the skills needed to effectively leverage new technological capabilities (Price, 2022). Additionally, these advisory services can deliver ongoing support and monitoring that enables organisations to remain on track with their digital initiatives while making any required adjustments along the way.

Thus, a business analyst consultant is the primary change agent. They are viewed as problem solvers who not only identify issues but also reframe them in a way that does not force clients to conform to predetermined models or approaches. In this regard, business analysis is an essential function in many advisory organisations as it gives firms a competitive advantage.

2.5 Analytical framework

This section begins by discussing the theoretical framework underlying this study and presents an overview of the conceptual framework, providing a thorough explanation of the interrelationships between the constructs. In doing so, it facilitates an understanding of the research methodology employed in this investigation.

2.5.1 Theoretical framework

The research study will be guided by the theoretical framework for "IT and Change Management" initially presented by Whipp and Pettigrew (1992) and later adjusted by Ward and Elvin (1999). This framework provides a comprehensive perspective on the relationship between IT and the management of organisational change. It incorporates key components, such as context, content, change processes, and outcomes. Analysing these dimensions using this framework allows for a holistic exploration of the intricate dynamics and challenges associated with integrating IT into organisational change processes.

In addition to the original framework, Paul and Tan (2015) made further modifications to investigate the involvement of business analysis in information systems (IS) development. Their modifications provide more insights into the role of business analysts, enhancing the understanding of how BA contributes to IT-driven change initiatives. This expanded perspective enables a deeper exploration of the role of business analysts in the successful implementation of IT and organisational change.

With the help of business analysts, an advisory service can utilise Ward's four-dimensional framework to comprehend the successful implementation of digital transformation initiatives. These dimensions provide a structured approach to understanding the factors that influence the success of digital transformation initiatives, including the role of business analysts in shaping the context, defining the content, managing the process, and achieving desired outcomes. The incorporation of this framework into this study can provide valuable insights into how business analysts contribute to the successful completion of digital transformation projects. The framework has been used by Paul (2018) to come up with a service definition aimed at facilitating the efficient execution of Business Analysis tasks. In addition to this, Mashhood and Senapathi (2021) adopted the context, content, process, and outcomes framework to systematically assess a range of sources, including peer-reviewed articles and a curated selection of grey literature, in order to examine the competencies, methodologies, and support services utilized by business analysts in the context of digital transformation.

The framework begins by considering the context, which encompasses external factors, such as market conditions, competition, regulatory requirements, and technological advancements (Paul & Tan, 2015). Elements such as organisational structure, culture, leadership, and resources come into play. This dimension helps researchers and practitioners assess the external forces driving the need for change and evaluate how IT can play a role in addressing these challenges (Armstrong & Lee, 2021; Mashhood & Senapathi, 2021).

The content dimension focuses on the technological capabilities and systems within an organisation. It examines existing IT infrastructure, including hardware, software, networks, databases, and information management processes. By assessing IT infrastructure, researchers can identify potential opportunities and constraints for change management efforts and evaluate the organisation's IT readiness and capacity for change.

The process dimension emphasises the methods, approaches, and strategies used to manage organisational change (Paul & Tan, 2015). This includes planning, communication, stakeholder engagement, training, and evaluations. This framework highlights how IT can be integrated into these change processes to enhance communication, collaboration, and knowledge sharing, thus supporting effective change implementation (Mashhood & Senapathi, 2021).

Finally, the framework considers the outcomes of IT-driven change initiatives (Paul & Tan, 2015). This dimension focuses on the results and the impact of the implemented changes, encompassing both short- and long-term outcomes, which may include improved efficiency, effectiveness, innovation, customer satisfaction, and overall organisational performance. Assessing outcomes helps determine the success of IT and change management efforts, providing insights for future improvements and refinements (Rogers, 2016).

While this four-dimensional framework forms the core of this research, it is essential to acknowledge other existing frameworks that provide valuable insights. For instance, the ADKAR Model (Kazmi & Naarananoja, 2013; Paramitha et al., 2020), developed by Prosci, concentrates on individual change management and addresses the psychological and emotional aspects of change at the individual level. Similarly, the McKinsey 7-S framework developed by Peters and Waterman Jr (2011) provides a holistic perspective on organisational change by considering elements such as strategy, structure, systems, skills, style, staff, and shared values. Although not explicitly focused on IT, it provides insights that can be integrated into the IT and change management contexts to achieve a more comprehensive understanding. Kotter's 8-Step Change Model (Tang et al., 2019) offers a systematic approach to managing organisational change, emphasising crucial steps such as creating urgency, building coalitions, and communicating the vision. While lacking a specific IT dimension, it can be integrated into IT-focused frameworks to provide a more comprehensive and structured approach to change management.

Finally, Information Technology Infrastructure Library (ITIL) offers the best practices for managing IT-related changes within an organisation (Soomro & Bashir, 2012). While not a change management framework, it provides guidelines and processes for effectively managing changes within the IT infrastructure; however, it requires integration with broader change management frameworks to address the organisational context comprehensively.

In comparing the different frameworks, the chosen framework emerged as the most suitable because of its specialised focus on the interplay between IT and organisational change. Unlike other frameworks, it provides a comprehensive perspective by addressing multiple dimensions, including environmental and organisational contexts, Information Technology (IT) infrastructure, processes, and outcomes. This comprehensive approach strengthens the foundation of this research and enables a thorough examination of the intricate dynamics involved in integrating IT into organisational change processes.

In addition, the practical application and actionable insights offered by the framework enhance its value for research. This framework not only provides a theoretical basis but also offers practical implications that can be directly applied to real-world organisational settings. Its emphasis on the integration of IT within change processes and the consideration of potential outcomes facilitates a more hands-on approach to managing IT-driven change initiatives effectively.

The adaptability and flexibility of the chosen framework further strengthen its suitability. It can be applied across diverse industries, organisational contexts, and change scenarios, ensuring its relevance in various research settings.

Lastly, the literature and support available for the framework contribute to the robustness of this research. The extensive literature on this framework provides a wealth of knowledge, empirical evidence, and scholarly discussion that can enrich and support the analysis. Leveraging the literature enhances the credibility and reliability of research findings.

2.5.2 Conceptual Framework

This section presents an overview of the conceptual framework and elucidates the interconnectedness of the various constructs. This study's framework is predicated on the premise that business analysis has strategic significance in the realm of digital transformation initiatives.

To underpin this research, a thorough examination of the current literature on business analysis within the context of digital transformation is needed. This literature review encompasses studies on the essential competencies required for business analysts to effectively contribute to digital transformation initiatives as well as investigations into how business analysts’ performance can impact the overall success of such endeavours (Davies et al., 2022; Sonteya & Seymour, 2012). Additionally, studies exploring advisory services should be considered to gain insights into how collaborative efforts between business analysts and other stakeholders can enhance the efficiency and effectiveness of digital transformation initiatives.

Business analysts from advisory firms are contracted to assist organisations in identifying opportunities for improvement and growth through data analysis, trend identification, and development of business solutions. However, functioning as an IT consultant involves challenges and expectations. Therefore, it is crucial to acknowledge the influence of organisational variables on the success of digital transformation efforts because these factors may affect business analysts' ability to contribute effectively. Organisational culture, structural issues, and the role of leadership in driving and supporting change initiatives are among the variables that may be considered (Alma Çallı et al., 2022; Schiuma et al., 2022)

The conceptual framework seamlessly extends the dimensions of the theoretical framework, particularly focusing on the theoretical dimensions of context, content, process, and outcomes. In this adaptation, the primary concentration is on the role of business analysts within these dimensions and their contributions to digital transformation initiatives. This extension, in essence, connects the broader concept of "context" from the theoretical framework to delve deeper into the influence of organizational variables on the overall success of digital transformation efforts.

Central to the development of the conceptual framework is the incorporation of key theoretical insights, derived from the existing body of knowledge in the field. In particular, this framework underscores the vital significance of comprehending the essential competencies of business analysts and the consequential impact of their performance. These fundamental elements are explicitly informed by the foundational theoretical insights that underscore the critical role of business analysis in the context of digital transformation.

The figure below depicts the conceptual framework linking the research questions with the elements and dimensions to be considered in the study.

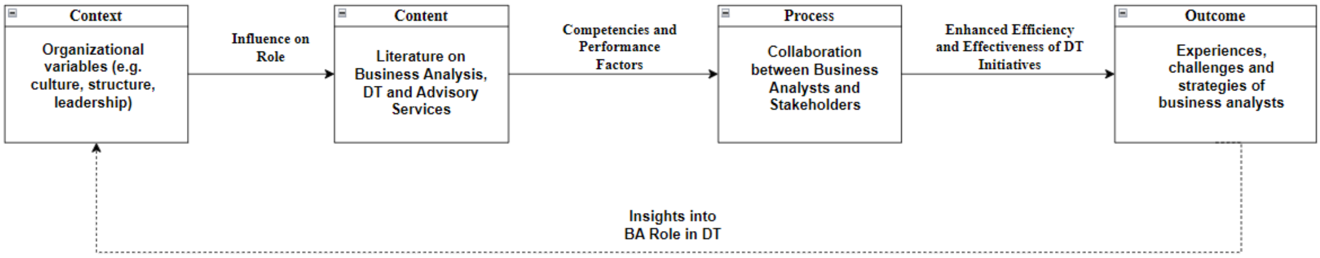


Figure 2.1: Conceptual framework overview

While the theoretical framework primarily focuses on the dimensions of context, content, process, and outcomes, the conceptual framework introduces a new layer of complexity by considering elements not explicitly outlined in the theoretical framework. These novel dimensions include the critical aspects of organizational culture, structural issues, and the role of leadership. These dimensions are recognized as pivotal factors influencing the efficacy of business analysts in the successful execution of digital transformation initiatives.

CHAPTER 3: RESEARCH METHODOLOGY

This section outlines how the research question will be answered. This will be achieved by defining the techniques or procedures that will be adopted to obtain valid and reliable answers to the research questions.

3.1 Research approach

This study used a qualitative approach to primarily obtain an in-depth understanding of the subjective experiences and perspectives of the participants regarding the topic under study. A qualitative research approach helps comprehend the human condition in various circumstances and the perception of a situation (Bengtsson, 2016). Given the limited understanding of how the business analyst profession affected the delivery of digital transformation projects within the IT consulting industry, the chosen methodology aimed to highlight where and how the business analyst role participated in facilitating successful digital transformation initiatives.

Qualitative research also allows for unanticipated themes to emerge by affording participants the flexibility to respond and a depth of understanding from those whose experience we seek to understand and analyse (Galloway & Haniff, 2015). Additionally, the enquirer’s personal perceptions were deemed important and critical in understanding the phenomena under study (Patton, 2014). Stakeholders’ perceptions of the business analyst within the service system played a vital role in this study.

While researchers such as Morgan (2013) recommend using a mixed approach to achieve more comprehensive results, the researcher found a qualitative approach suitable for this study because it emphasises interpretation, contextual analysis, environmental immersion, and a deep understanding of concepts (Richard, 2013). According to Patton (2014), many quantitative methodologies failed to ground their findings due to a lack of "fieldwork" that provided insights through informative investigations. The insights were crucial to the study because they would foster informed discussions within the business analysis community and encourage the development of support systems for the profession.

3.2 Research design

This qualitative research on business analysts used Entelect Software – a South African software engineering and consulting company that specialises in delivering innovative software solutions and technology-consulting services – as a case study. The company was founded in 2001 and has since grown to become a leading software engineering firm in South Africa.

According to Creswell and Creswell (2017), this type of enquiry (case study) is suitable for an inductive style; it highlights the importance of rendering the complexity of a situation. The case study included many variables, making it suitable. Furthermore, this approach allows for the final report to be written in a flexible structure because of emerging questions and procedures (Creswell & Clark, 2004). It is important to gain insight into the different perspectives concerning the impact of business analysts in the delivery of digital transformation projects.

The selection of a single case study design for this research is necessary to explore the role of business analysts in delivering digital transformation projects within Entelect Software's South African office. A single-case study design allows for an in-depth examination of a specific context, providing a comprehensive understanding of the complexities and intricacies involved (Creswell & Poth, 2016; Yin, 2009). By focusing on a single case, the researcher can delve deeply into the unique characteristics, processes, and perspectives of Entelect Software, thereby gaining rich insights into the impact of business analysts on digital transformation initiatives.

Moreover, the incorporation of embedded units in the single-case study design enhanced the analytical power of this research. The researcher can analyse data within subunits separately, enabling a within-case analysis that explores the nuances and variations across different teams, projects, or departments within the Entelect Software. This approach provides a more granular understanding of the factors that influence the success of digital transformation initiatives. Additionally, the researcher conducted a between-case analysis to compare the perspectives and practices of different subunits, further enriching their analysis.

Finally, cross-case analysis allows for the identification of patterns, commonalities, and differences across all subunits, leading to broader insights (Creswell & Poth, 2016).

This design choice aligns with the recommendations of Bahtilla et al. (2022) regarding qualitative case study methodology. Their emphasis on studying design and implementation for novice researchers supports the idea that a single case study with embedded units is a suitable approach for capturing the complexity (Koirala, 2023) and rendering a comprehensive analysis of the role of business analysts in delivering digital transformation projects within Entelect Software.

3.3 Data collection methods

Primary data were gathered through one-on-one interviews. According to Gill et al. (2008), interviews can be classified into three fundamental types: structured, semistructured, and unstructured. This study employs semistructured interviews, which were conducted either in person or using video-conferencing tools such as Microsoft Teams or Zoom. For in-person interviews, all necessary COVID-19 protocols were followed.

Semistructured interviews comprise several key questions that help define the areas to be explored but also allow the interviewer or interviewee to diverge to pursue an idea or response in more detail (Gill et al., 2008). This flexibility is particularly valuable compared to structured interviews, as it enables the discovery or elaboration of information that is important to participants but may not have previously been thought of as pertinent by the research team (Gill et al., 2008). Additionally, this approach is useful when participants cannot be directly observed (Creswell & Creswell, 2017) and allows them to provide historical information (Creswell & Creswell, 2017).

Data collection methods for qualitative research include in-depth, open-ended interviews, direct observations, and the analysis of written documents (Patton, 2005). In this study, the primary method of data collection involved one-on-one interviews. As Creswell and Creswell (2017) point out, one advantage of interviews is that they allow researchers to maintain control over the line of questioning. However, conducting interviews can be time-consuming; therefore, only a limited number of participants will be included in the data collection process, ensuring a focused and in-depth analysis of the gathered data.

3.4 Population and sample

3.4.1 Population

The population selected for this study consists of business analysts. These included those who are Junior (1-3 years' experience), Intermediate (4-8 years' experience) and Seniors (8+ years' experience). It also included individuals who have transitioned into more senior roles and who now hold more senior positions such as Development Managers in Entelect Software. Such individuals now bring their expertise and experience to teams responsible for executing and delivering digital transformation initiatives. Their direct engagement in these initiatives, coupled with their experience, positions them to provide invaluable insights, shape, and define the experiences under investigation, and contribute to a deeper understanding of the research problem (Polkinghorne, 2005).

3.4.2 Sample and sampling method

The focus of qualitative research diverges from that of statistical research, as it places emphasis on the in-depth exploration and interpretation of the phenomenon under investigation (Polkinghorne, 2005). In qualitative research, a set of principles guides the selection of data sources. This method offers the advantage of purposeful sampling, wherein participants are chosen based on their knowledge and expertise pertaining to the phenomenon being studied (Creswell & Clark, 2004).

Purposeful sampling was employed as the sampling method. It involves the deliberate selection of information-rich cases, which can provide valuable insights into the central aspects of the enquiry (Patton, 2005). Contrary to random or chance selection, purposeful sampling is driven by specific criteria and objectives (Polkinghorne, 2005).

Qualitative researchers often work with small numbers of participants in their studies to obtain diverse perspectives on the experience being examined. By comparing and contrasting these perspectives, researchers can identify essential aspects that are shared across sources while also recognising variations in the perception of the experience (Polkinghorne, 2005).

The concept of triangulation in qualitative research does not seek to verify a single account but rather to approach the experience from different angles and viewpoints. Through triangulation, researchers can gain a more comprehensive understanding of the phenomenon by uncovering its core meaning through an examination of multiple accounts (Polkinghorne, 2005). Qualitative studies require a minimum sample size of at least 12 to reach data saturation (Braun & Clarke, 2006; Guest et al., 2006). Therefore, a sample size of 13 was deemed sufficient. Thirteen participants were identified, as per the table below; however, only 12 participants provided responses.

Table 3.1: Sample size by role

Role	Number of participants
Business Analyst (Junior, Intermediate, Senior)	10
Development Managers	3
Total	**13**

3.5 The research instrument

One-on-one interviews were conducted using preset (open-ended) questions to gather data for this study. The interviews were divided into three parts to ensure a comprehensive understanding of the research topic.

Part I: Introduction and Study Overview: This section provided participants with a brief introduction to the study and its objectives.

Part II: Participant Profile: it focused on collecting relevant information about the participants. The questions covered aspects such as their name, gender, age, educational qualifications, and years of experience in their respective fields.

Part III: Exploring the Business Analyst's Role in Delivering Digital Transformation Initiatives: Participants were encouraged to share their insights and perspectives regarding the role of business analysts in delivering digital transformation initiatives. This discussion encompasses their experiences across various industries and projects in which they have been involved.

The interviewer posed 16 questions to facilitate conversation and gather in-depth responses.

A template analysis method was employed to ensure the systematic analysis of the data, allowing for the identification and development of themes that organise and analyse the collected data. It also helps to facilitate the exploration of interrelationships and hierarchies within data (King, 2004).

3.6 Procedure for data collection

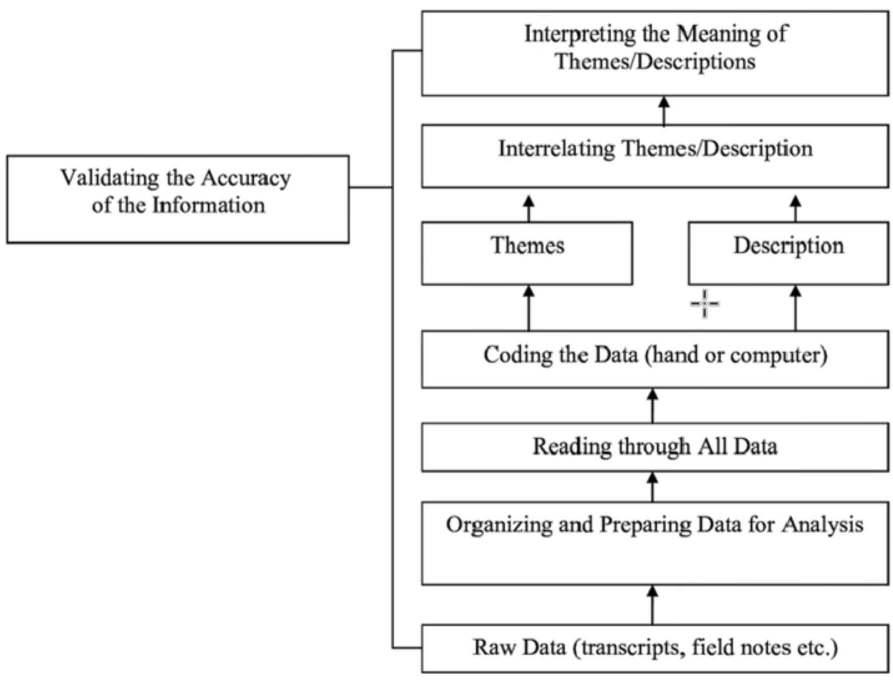
The study was conducted at Entelect Software South Africa after obtaining permission from the operations manager. Once permission was granted, potential participants were contacted via email and invited to participate in this study.

To ensure ample preparation time, the researcher sent interview questions and consent forms in advance to the participants. Participants had to choose between in-person interviews or video conferencing based on their preference and availability (Creswell & Creswell, 2017). Included was the consent letter to record the sessions for transcription purposes and data collection, and the participants were asked to provide consent before the interviews commenced.

3.7 Data analysis and interpretation

The data required to study a phenomenon should be derived from a thorough investigation involving participants (Polkinghorne, 2005). This investigation yielded qualitative data composed of interconnected words forming sentences rather than isolated words. The complex relationships among these spoken and written words make their transformation into a numerical format challenging for analysis.

Participants' views were analysed using deductive thematic analysis, which involves assessing the extent to which qualitative data in a specific study align with existing conceptualisations, explanations, results, or theories (Patton, 2014). This analytical approach aims to produce trustworthy findings that are firmly grounded in tested theories (Braun & Clarke, 2006). The analysis was guided by the methodological guidelines provided by Braun and Clarke (2006) and Creswell and Creswell (2017). Figure 3.1 below outlines a systematic procedure that the qualitative researcher employed to derive meaning and insights from their data. It provides a structured view of key stages, including data collection, data reduction, data display, and drawing conclusions or verifying them.



Source: (Creswell & Zhang, 2009)

Figure 3.1: Basic Qualitative Analysis Approach

3.8 Data analysis process in Atlas.ti

This section outlines the specific steps taken to analyze the data using the ATLAS.ti software. All interviews were conducted in English, recorded, transcribed, and then imported into ATLAS.ti as text documents. Field notes from the data collection process were also incorporated into ATLAS.ti and converted to *memos*[1].

With the data in ATLAS.ti, we conducted a systematic analysis, including coding and thematic analysis. The software allowed for the identification of patterns, themes, and categories in the text data. Coding and memos were used to organize and interpret the data.

One of the advantages of using ATLAS.ti was its data retrieval capabilities, which made it easy to access coded segments for review. We generated reports with coded segments and memos to capture our findings.

Throughout the analysis, we maintained rigor by engaging in discussions and validations of interpretations. This involved techniques such as peer debriefing and member checking. Overall, ATLAS.ti facilitated a well-structured and efficient data analysis process, ensuring meaningful insights from the qualitative data.

3.9 Transferability and dependability

For the study's insights to be meaningful, the researcher must ensure trustworthiness and quality (Tracy, 2010). According to Guba (1981), the criteria

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[1] Brief notes capturing the analyst’s initial thoughts about the data.

that can be used are credibility, transferability, and dependability and are outlined in this section.

3.9.1 Credibility

Credibility asks the question "How congruent are the findings with reality?" (Shenton, 2004). This relates to the level at which readers can trust and act on the recommendations made in the report (Tracy, 2010). The outcome of this study may be biased because it relies on views from different individuals. As indicated in the previous section, the researcher used a wide range of informants. Individual experiences and viewpoints were verified against others, and therefore triangulated via data sources (Shenton, 2004).

The researcher ensured credibility by interviewing participants who are experts in the field (5+ years). To ensure honesty in participants, each participant was informed about voluntary participation (Shenton, 2004).

To ensure transferability the researcher provided detailed profiles of the 12 participants that were interviewed. In this way the reader can evaluate the relevance and applicability of your findings to similar populations or settings.

Furthermore, the researcher will make the research design and instrument available to readers who wish to replicate this study.

3.9.2 Dependability

Dependability is concerned with the techniques to show that if the work was repeated, in the same context, with the same methods, and with the same participants, similar results would be obtained (Shenton, 2004).

To enable the readers of the research report to develop a thorough understanding of the methods and their effectiveness, the report includes sections devoted to describing what is planned and executed, details of how the data are collected, and how the data are to be analysed.

In this study several methods were employed to ensure dependability. To maintain dependability, we ensured that the surveys were administered under controlled conditions. All participants were given identical instructions, and the surveys were conducted with consistent procedures. This minimized the risk of external factors influencing participants' responses and increased the likelihood that if the study were replicated, similar results would be obtained.

Furthermore, the interviews were recorded, and the researcher was able to listen and transcribe verbatim the responses from the participants. This reduced the chances of any information being misunderstood or lost.

3.10 Ethical considerations

Protecting human subjects by applying appropriate ethical principles is important for any research study (Arifin, 2018). This study involved direct interaction with participants, as directed by the research approach. Below are the ethical considerations according to the Wits Business School.

1. Written consent for participation and recording of the session was obtained from participants.
2. Participants will be informed that they could withdraw from the study at any point without incurring any penalties.
3. Participants were informed that the recorded interviews are solely for academic purposes and remained the property of the university.
4. Participants were informed that confidentiality was not guaranteed.
5. The purpose of the study was reiterated to the participants before the interviews took place.
6. Data was not collected before ethical clearance was received.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This study explores the pivotal role of business analysts (BAs) in facilitating the delivery of digital transformation (DT) initiatives within organisations. The research questions guiding this study encompass the current understanding of the BAs' role, their involvement in DT initiatives, their effectiveness in supporting such initiatives, stakeholder perceptions of their contribution, and their actions to enhance organisational perception.

The research questions guiding this study are as follows:

1. What is the current understanding of the role of business analysts within the organisation regarding their contributions to digital transformation initiatives?

2. What is the involvement of business analysts in digital transformation initiatives within organisations?

3. How effective is the business analyst's role in supporting digital transformation initiatives from the perspective of those involved, and what are the strengths and weaknesses attributed to this role?

4. How do stakeholders within an organisation perceive the role and contribution of business analysts in digital transformation initiatives?

5. What actions have been taken or are being considered to enhance the organisational perception of business analysts and their involvement in digital transformation initiatives?

These research questions served as the foundation for the data collection and analysis processes undertaken in this study. Through a comprehensive exploration of these questions, this study aims to contribute to the literature on the role and significance of business analysts in driving successful digital transformation initiatives.

In this section, the data analysis processes used in this study are outlined. The analysis focuses on the role and contribution of business analysts to digital transformation initiatives within their organisations. Data were collected through one-on-one interviews with 12 participants, and the chapter presents the findings derived from the analysis.

The analysis followed a deductive thematic approach in which pre-existing themes and codes were identified based on relevant theories and frameworks. Atlas.ti software was employed to organise and manage the data. The software allows for systematic coding and categorisation based on predetermined codes derived from the research questions and theoretical frameworks.

The coding process involved applying predetermined codes to the interview data and systematically identifying and labelling relevant sections. The researchers then conducted a thorough examination of the coded data and identified patterns, connections, and relationships between the codes. Iterative discussions were held to ensure consensus and rigor in data interpretation.

Throughout the analysis, measures were taken to maintain the authenticity of participants' voices. Verbatim quotations from the interviews were included to provide direct evidence and to support the interpretation of the findings. The utilisation of Atlas.ti software played a crucial role in facilitating the analysis by providing functionalities for data organisation, coding, retrieval, and visualisation.

4.2 Participant demographic information

The data were collected from 12 participants (Table 4.3). Valuable insights are provided into the role of BAs in delivering successful DT initiatives. The participants' demographic information is summarised as follows:

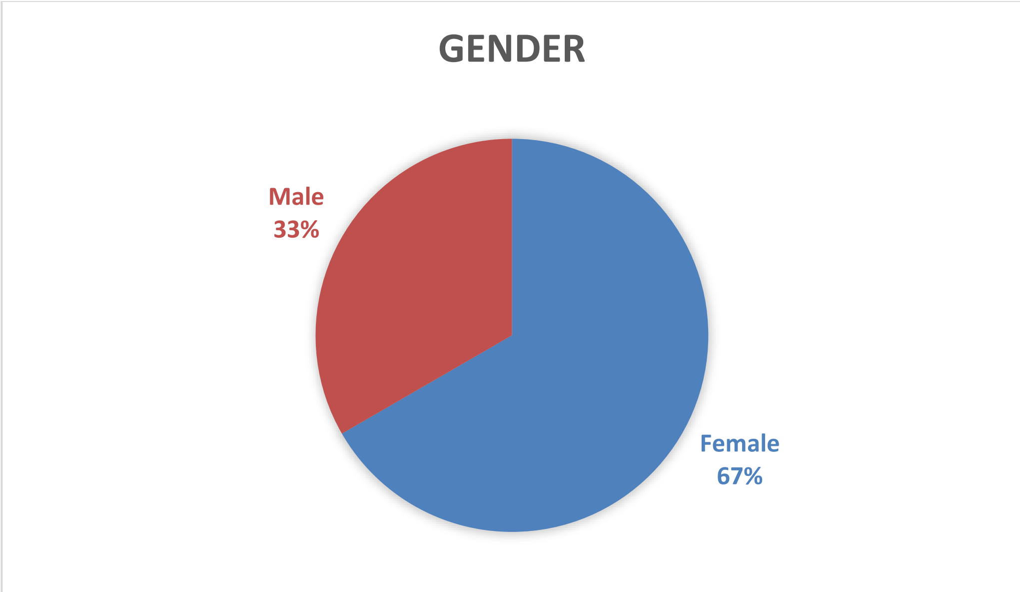

Figure 4.1: Pie chart depicting gender split of participants.

Age Group:

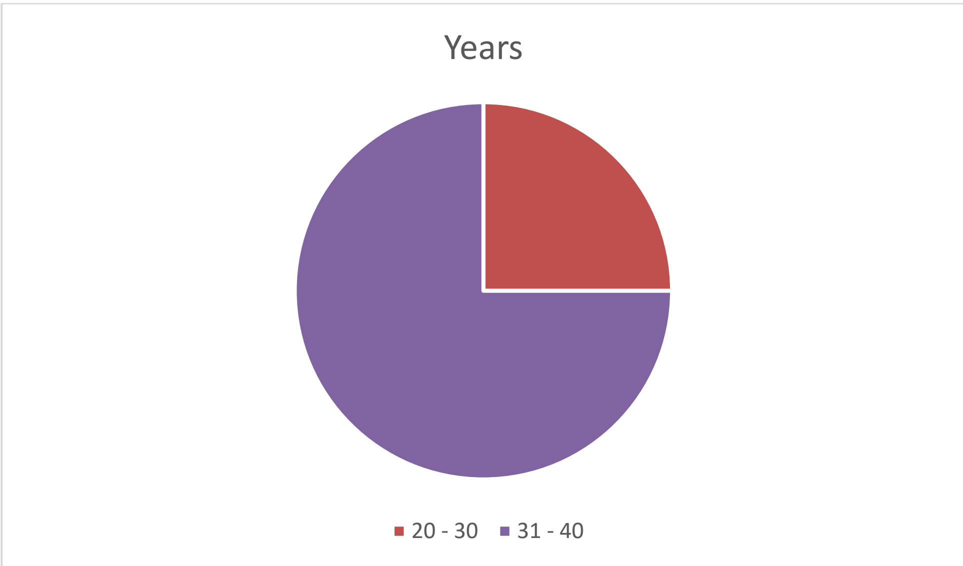

Figure 4.2: Pie chart depicting age group of participants.

Experience in IT (years):

- Range: 5 to 13 years
- Average: 8.5 years

Software Development Experience (years):

- Range: 5 to 13 years
- Average: 8.33 years

These demographic details provided a snapshot of the participants involved in the study. Most participants were female, with a slightly higher representation in the age range 31–40 years. The participants had diverse educational backgrounds ranging from undergraduate degrees to postgraduate qualifications in various fields. In terms of experience, the average number of years in IT and software development was approximately 8.5 years and 8.33 years, respectively.

Table 4.3 Participant demographic information and role

Participant	M/F	Age (years)	Highest Education Level	Experience in IT (years)	Role
1	F	31-40	BCom Informatics	7	Senior Business Analyst
2	F	31-40	Masters	11	Senior Business Analyst
3	F	20-30	BCom Economics & Information Systems	5	Intermediate Business Analyst
4	M	30	B Com Honours	7	Senior Business Analyst
5	M	31-40	MSc Engineering	11	Development Manager
6	M	31-40	Hon Information Systems	12	Senior Business Analyst
7	F	31-40	Hon Strategic management	12	Senior Business Analyst
8	F	20-30	BCom Information Systems	9	Intermediate Business Analyst
9	F	31-40	B Marketing & Management	13	Development Manager
10	F	31-40	Postgrad Management Diploma	5	Intermediate Business Analyst
11	M	31-40	Hon Computer Science	6	Senior Business Analyst
12	F	31-40	M Technology Entrepreneurship	9	Senior Business Analyst

Table 4.4 shows the cross-tabulation of the number of codes and code groups associated with each of the 12 interview transcripts in the first column. The table indicates that each transcript was thoroughly coded, with the transcript of Participant 2 having the most quotations (i.e., 26), followed by Participants 4 and 6, with 24 quotations. The transcript with the least number of quotations (i.e., 12) belonged to participant 9. The remaining frequencies (percentages) in Table 4.4 indicate that codes and code groups were spread relatively evenly across the dataset, indicating that the results of this analysis are grounded in the data.

Table 4.4 Code document table showing the number of codes and code groups per interview.

		BA concept... 6 36	BA play piv... 7 116	Challenges... 8 82	Conceptuali... 2 13	Efforts to en... 1 10	Stakeholder... 4 43	Totals
2: Partcipant 2	26	3,70% 2,78% 0,33%	55,56% 12,93% 5,00%	25,93% 8,54% 2,33%	3,70% 7,69% 0,33%	7,41% 20,00% 0,67%	3,70% 2,33% 0,33%	100,00% 9,00% 9,00%
3: Participant 10	17	20,00% 13,89% 1,67%	36,00% 7,76% 3,00%	20,00% 6,10% 1,67%	4,00% 7,69% 0,33%		20,00% 11,63% 1,67%	100,00% 8,33% 8,33%
4: Participant 11	22	11,11% 8,33% 1,00%	37,04% 8,62% 3,33%	29,63% 9,76% 2,67%	3,70% 7,69% 0,33%	7,41% 20,00% 0,67%	11,11% 6,98% 1,00%	100,00% 9,00% 9,00%
5: Participant 12	14	15,00% 8,33% 1,00%	40,00% 6,90% 2,67%	25,00% 6,10% 1,67%	5,00% 7,69% 0,33%		15,00% 6,98% 1,00%	100,00% 6,67% 6,67%
6: Participant 4	24	12,12% 11,11% 1,33%	33,33% 9,48% 3,67%	30,30% 12,20% 3,33%	3,03% 7,69% 0,33%		21,21% 16,28% 2,33%	100,00% 11,00% 11,00%
7: Participant 3	16	4,76% 2,78% 0,33%	52,38% 9,48% 3,67%	33,33% 8,54% 2,33%		4,76% 10,00% 0,33%	4,76% 2,33% 0,33%	100,00% 7,00% 7,00%
8: Participant 5	20	4,55% 2,78% 0,33%	45,45% 8,62% 3,33%	31,82% 8,54% 2,33%	9,09% 15,38% 0,67%		9,09% 4,65% 0,67%	100,00% 7,33% 7,33%
9: Participant 6	24	11,43% 11,11% 1,33%	37,14% 11,21% 4,33%	31,43% 13,41% 3,67%		2,86% 10,00% 0,33%	17,14% 13,95% 2,00%	100,00% 11,67% 11,67%
10: Participant 7	15	19,05% 11,11% 1,33%	19,05% 3,45% 1,33%	38,10% 9,76% 2,67%	4,76% 7,69% 0,33%		19,05% 9,30% 1,33%	100,00% 7,00% 7,00%
11: Participant 8	21	12,90% 11,11% 1,33%	29,03% 7,76% 3,00%	32,26% 12,20% 3,33%	9,68% 23,08% 1,00%		16,13% 11,63% 1,67%	100,00% 10,33% 10,33%
12: Participant 9	12	17,65% 8,33% 1,00%	41,18% 6,03% 2,33%	17,65% 3,66% 1,00%	5,88% 7,69% 0,33%	5,88% 10,00% 0,33%	11,76% 4,65% 0,67%	100,00% 5,67% 5,67%
14: Partcipant 1	20	14,29% 8,33% 1,00%	42,86% 7,76% 3,00%	4,76% 1,22% 0,33%	4,76% 7,69% 0,33%	14,29% 30,00% 1,00%	19,05% 9,30% 1,33%	100,00% 7,00% 7,00%
Totals		12,00% 100,00% 12,00%	38,67% 100,00% 38,67%	27,33% 100,00% 27,33%	4,33% 100,00% 4,33%	3,33% 100,00% 3,33%	14,33% 100,00% 14,33%	100,00% 100,00% 100,00%

Table 4.4 shows that 24 codes were generated from the data before saturation was reached, indicating that no new codes could be generated

from the dataset. The codes were then organised into discrete groups, which are denoted by the different colour codes shown in the table.

The table also shows code groundedness[2] and code density[3], which is an indication of the extent to which each code was assigned throughout the dataset. Thus, the most assigned code was “BA needs effective communication skills” (G = 33, D = 1) while the least assigned codes were “Reasons for digital transformation” (G = 2, D = 1) and “BA's role in fulfilling business needs using technology” (G = 2, D = 1).

Table 4.5: Analysis obtained 24 initial codes before saturation.

Code	Grounded	Density
1 ● BA as a jack of all trades master of none	5	1
2 ● BA bring in analytical and problem-solving skills	16	1
3 ● BA is a bridge between business and technology	11	2
4 ● BA is perceived as the go-to-person	13	1
5 ● BA needs effective communication skills	33	1
6 ● BA needs technical understanding	10	1
7 ● BA as a coach, advisor and leader in DT challenges	20	1
8 ● But we don't really need a BA	9	1
9 ● Change management	6	1
10 ● Digital natives vs digital migrants	4	1
11 ● DT initiative is about digitalising and modernising	24	1
12 ● DT means using technology to enhance business	11	2
13 ● Gather requirements, translate and test	6	0
14 ● Impatience	7	0
15 ● Implementation in the most challenging part	10	1
16 ● Lack of understanding about the role of BA	19	2
17 ● Managing stakeholder relationships is challenging	24	2

[2] This is the number of quotations or text segments coded with a specific code.
[3] Number of code to code connections

18	● Reasons for digital transformation	2	1
19	● Resistance to change	20	3
20	● Stakeholders have positive opinions	7	0
21	● BA's role in fulfilling business needs using technology	2	1
22	● The role of BA may differ from company to company	5	1
23	● There is team support for BA	10	0
24	● BA see as the thread connecting the entire initiative	5	1

As the analysis proceeded, *code co-occurrence tables* were used to identify codes that tended to overlap in quotations. Some codes overlapped because they were similar or related and were merged with other codes to form one code. Some overlapped because they were redundant and removed from the analysis. As an illustration, the Sankey diagram in Figure 4.3 shows codes that tended to overlap/co-occur with the code "BA as a jack of all trades master of none", indicating that all these codes might be somehow related.

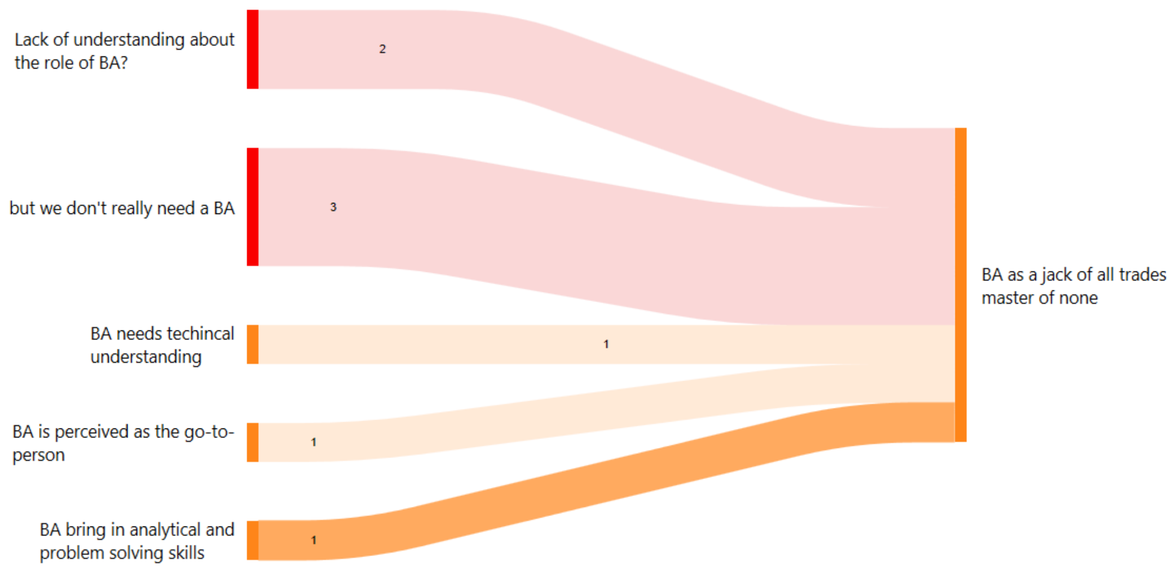

Figure 4.3 Code co-occurrence analysis showing overlapping codes.

In addition, codes that belonged to more than one group were refined such that each code belonged to one group only. These groups were treated as emerging categories or themes. In this manner, code groups (emerging categories) such as those displayed in Figure 4.2 began to emerge from the analysis.

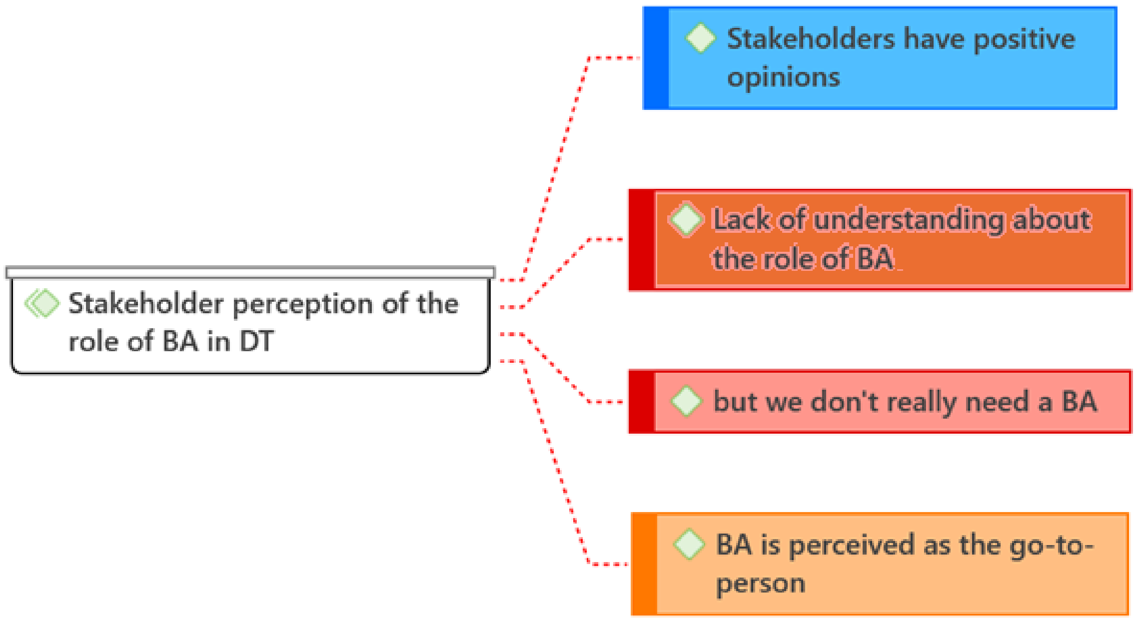

Figure 4.4 Moving from codes to groups to emerging categories.

In the process of moving from categories to themes, the researcher employed an iterative approach that involved the gradual refinement of categories. Initially, the researcher's focus was on delving deep within each category to search for connections and relationships among the various codes. This internal exploration, or 'working within,' allowed the researcher to uncover subtle nuances and commonalities that existed within each category (Rubin & Rubin, 2011).

Once the researcher had thoroughly examined the relationships within categories, the analysis expanded to encompass the categories themselves. This shift in perspective, often referred to as 'working across,' aimed to identify overarching patterns and connections that transcended individual categories. By comparing the categories across the dataset, the researcher sought to discern higher-level themes that could capture the broader essence of the data (Rubin & Rubin, 2011).

As this process unfolded, the researcher gradually distilled the initial seven categories into a more concise set of four overarching themes. These themes, which encapsulated the common threads and key insights derived from the analysis, are presented in the following section, which is followed by a detailed presentation of the results.

4.3 Results from the interviews

Data analysis revealed four themes linked to the research questions. Theme 1, which focuses on the conceptualisation of the business analyst’s role as a bridge between business and technology, addresses the first research question regarding the current understanding of the business analyst's role in digital transformation. Theme 2, which highlights the pivotal and complex role of business analysts in driving digital transformation initiatives, relates to both the second and third research questions, exploring the involvement of business analysts in such initiatives and evaluating their effectiveness in supporting them. Theme 3, which emphasises the varying perceptions of the business analyst’s role in digital transformation, corresponds to the fourth research question, examining stakeholder perspectives. Lastly, Theme 4, which underscores the inadequacy of efforts to recognise the contribution of business analysts in digital transformation, aligns with the fifth research question, investigating actions taken or being considered to enhance the organisational perception of business analysts and their involvement in digital transformation initiatives.

The following sub-sections present the results for each theme stated above.

4.3.1 *Theme 1: Business analyst as bridge between business and technology*

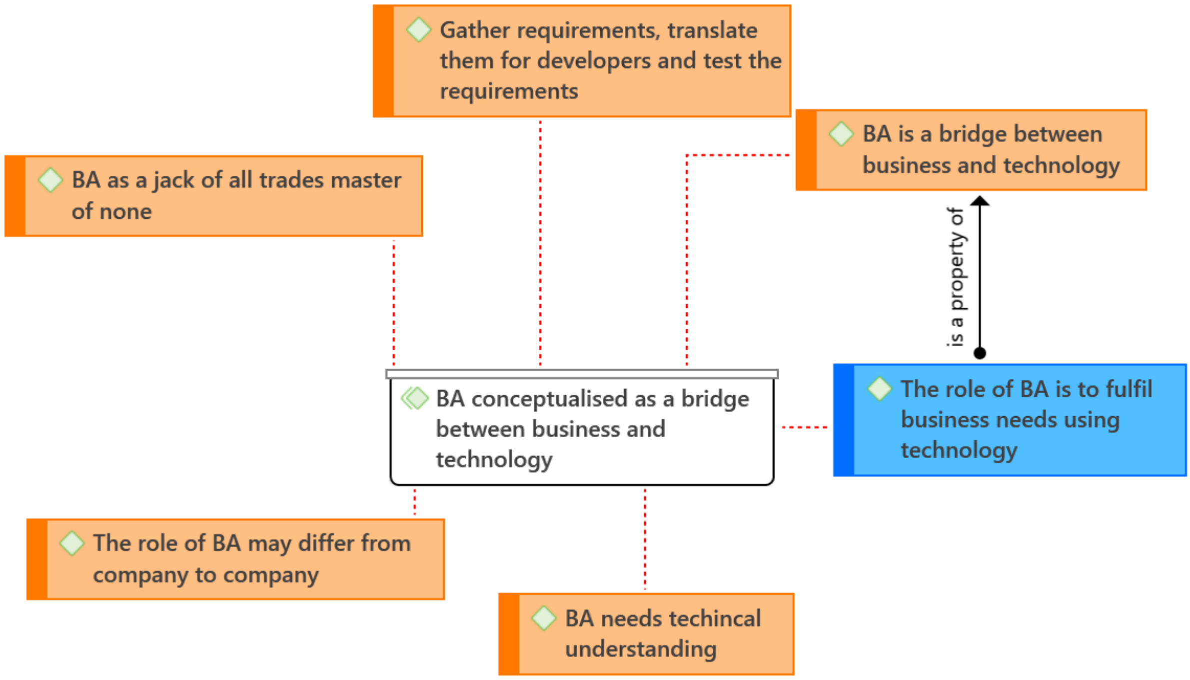

Figure 4.5: Relationship diagram depicting Theme 1 concepts.

Participants' responses provide insights into the role of BAs as intermediaries, translators, and facilitators in the context of IT projects and digital transformation. As can be seen in Figure 4.5 above the orange blocks highlights the common characteristics that are required by a business analyst as per the participants. The participants collectively emphasised the importance of BAs in bridging the gap between various stakeholders, including clients, stakeholders, delivery teams, project teams, testing teams, IT teams, and developers. BAs are considered key figures responsible for facilitating effective communication, collaboration, and coordination among these diverse parties. Below are some examples of verbatim quotation.

Participant 4 articulated the role of the BA as an intermediary, highlighting its function in connecting the different stakeholders involved in the project. Firstly, it implies that there may be a gap or a disconnect between the business side of an organization and the IT department. The participant sees it as their responsibility to bridge this gap, facilitating effective communication and understanding between these two areas. This interpretation suggests that there might be challenges in aligning the goals and objectives of the business with the technical requirements and capabilities of the IT department.

> *"The role of the BA is primarily as an intermediary between the clients, the stakeholders, the delivery team, the project team, the testing team and all the teams that are required to get a solution over the line." P4*

Participant 10 further emphasised BAs' role as a liaison and scrum master within the project. Secondly, the quote emphasizes the participants' role as a liaison. This suggests that they act as a mediator or facilitator, ensuring smooth collaboration and cooperation between the business and IT teams. They may possess a deep understanding of both the business processes and the technical aspects of the project, allowing them to translate and communicate effectively between the two groups. Additionally, the reference to a scrum master highlights an Agile project management approach. The participant sees their role as similar to that of a scrum master, who is responsible for coordinating and facilitating the Agile development process. This interpretation suggests that the participant might adopt Agile principles and methodologies in their work, aiming to improve project efficiency, collaboration, and delivery.

> *"I think part of my core responsibility is to serve as a bridge between the business and the IT guys. So, my role really is to play a liaison/scrum master within the project."*

Participant 3 perceives the BA as a middleman who translates and communicates between the IT and business domains. By positioning themselves as the "middleman," they recognize the significance of effectively translating the technical capabilities and possibilities offered by IT into meaningful solutions that align with the goals and requirements of the business. In this situation, the participant probably sees themselves as playing a key role in making sure that IT efforts and investments effectively contribute to the organization's overall success. Furthermore, the quote could reflect the participants awareness of the challenges associated with integrating IT into a business environment. It implies that there is a need for someone who can navigate the complexities of both domains, overcoming potential misunderstandings or miscommunications that may arise. This interpretation suggests that the participant recognizes the importance of effective IT-business alignment and acknowledges the potential difficulties in achieving it

> *“To me, it's always the middleman between the translation of IT and business.”*

Participant 11 emphasizes the need for BAs to understand the organisational landscape and identify opportunities for digital transformation. This implies that BAs need to have a holistic understanding of the organization, its processes, and its goals. By gaining this understanding, BAs can identify potential areas for improvement, guide digital transformation initiatives, and align technology solutions with the organization's strategic objectives:

> *“If the BA has the mandate, they need to walk into the organization that wants to do digital transformation and understand the landscape, understand where the opportunities are.”*

Participant 12 describes the BAs’ role in understanding the business landscape and collaborating with developers. The quote suggests that the business analyst's primary responsibility is to analyse the existing landscape, gather requirements, and effectively communicate them to the development team, ensuring that the resulting software aligns with the stakeholders' desires. Alternatively, the quote could also reflect a more sceptical viewpoint regarding the role of business analysts. In this interpretation, the participant might be implying that business analysts are often seen as individuals who enter a situation, quickly grasp the overall picture, and then act as mediators between stakeholders and developers:

> *“But for what we're talking about, I think that the business analyst is seen as someone who's going to come in, understand their landscape, and basically get the developers to build what they want.”*

Participant 6 highlights the BA's role in bridging the gap between developers and clients. This could be interpreted as necessitating learning about the business and compiling specifications. The role being referred to in the phrase is essential to understanding the client's business's needs and goals and to properly communicating those needs to the developers. This interpretation suggests that a deeper understanding of the business context is necessary to ensure successful development projects:

> *“That is, it's filling in the areas where bridging the gap between developers and clients. So whether that's actually understanding the business gathering requirements or it's doing an area of the business to make sure that developers work efficiently.”*

These quotes collectively illustrate the participants' perspectives on the role of BAs as a bridge between the business and technology realms. The participants' responses collectively demonstrate the pivotal role of BAs as intermediaries, translators, and facilitators in IT projects and digital transformation initiatives. BAs serve as connectors, ensuring effective communication, collaboration, and coordination among stakeholders from different domains. They possess a comprehensive understanding of the business landscape, bridge the gap between IT and business, and facilitate the successful delivery of technology solutions aligned with the organization's objectives.

It became clear from the interviews that having technical knowledge and skill is a desirable trait that all BAs should have. The participants' responses regarding the importance of technical knowledge among BAs reveal several underlying meanings. Several verbatim excerpts highlight the importance of technical skills among BAs:

Participant 2 is acknowledging that technical skills are not essential for everyone. That individuals who lack technical proficiency can still succeed or contribute effectively in their respective fields. By stating that being technical is not a requirement, the quote implies that non-technical individuals should not feel discouraged or inferior if they do not possess such skills. On the other hand, the quote also suggests that being technical can be advantageous. According to this perspective, people who are technically skilled are at an advantage or have a distinct advantage over others. It implies that being technically skilled opens up opportunities, enables problem-solving, or enhances one's effectiveness in certain tasks or roles. The participant seems to be suggesting that while technical proficiency is not obligatory, those who do possess it are likely to experience positive outcomes or excel in their chosen domains:

> *"You're really not required to be technical, but I think when you are technical, it does work to your advantage."*

Participant 10 highlights the ease that technical expertise brings, indicating that having a solid technical background can contribute to smoother and more efficient project execution for BAs. This suggests that technical knowledge enables BAs to navigate challenges more effectively and accomplish their tasks with greater ease:

> *"So if you've got that technical aspect, I think it makes things easier, whereas the weakness could be the lack of."*

Participant 11 emphasizes the benefits of BAs who understand the development cycle. This implies that familiarity with the technical aspects of the development process allows BAs to better comprehend and contribute to project requirements and deliverables. It suggests that BAs with knowledge of the development cycle can bridge the gap between business needs and technical implementation more effectively:

> *"It's always beneficial to have BAs who have a little bit of understanding about what goes on within the development cycle."*

Participant 12 expresses the weakness that arises when BAs lack technical background. This suggests that BAs who do not possess sufficient technical knowledge may face limitations and challenges in engaging in technical discussions and fully understanding the intricacies of the projects they are involved in. This weakness highlights the importance of technical expertise in enabling effective communication and participation in technical aspects of the project:

> *"This isn't one that I find is a problem personally, but I have seen because BAs come from all spheres, you have people with like psych backgrounds who come in and start doing BA work. Sometimes they do not have the technical background to be able to fully engage in these kinds of conversations. I'd say that is one of the biggest weaknesses."*

Participant 8 acknowledges the limitation of BAs in technical constraints. This implies that BAs, although not developers themselves, are responsible for realizing the end product and achieving the project goals. However, their lack of in-depth technical understanding may limit their awareness of technical constraints and requirements, which can be considered a weakness:

> *"Business analysts are not developers... We are more about the end product, bringing that goal into realization. So that is a weakness in itself because the technical constraints to build up to that goal, we might not be fully aware of..."*
>
> Participant 1 mentions the variation in technical understanding requirements among organisations. This suggests that the importance of technical skills for BAs may vary depending on the specific organization. In some organisations, BAs may be able to document business requirements without extensive technical understanding, while in others, technical expertise may be highly valued. This variation highlights the context-dependent nature of the technical knowledge requirements for BAs:
>
> > *"In some organisations, the business analyst can fairly be documenting the business requirement without a lot of technical understanding, and in some businesses, that's a really big need."*

Another desirable trait that became apparent is communication. Effective communication is essential for BAs to bridge the gap between stakeholders and solutions.

Participants 2 highlights the significance of understanding organisational issues, actively listening to clients and team members, and being a trusted ally. This strand emphasizes the role of BAs in gaining the confidence of stakeholders, building relationships based on trust, and effectively addressing their concerns:

> *"If you are a people's person... people gain confidence in the fact that you are doing things for them and you actually listen to them. A strength that is a BA can carry is demonstrating that you hear the client when they speak and that you listen. If you have built the right relationship where they know they can trust you, you listen to them and their concerns are actually carried forward... then they definitely see you as a key ally." P2*

Participant 4 highlights the need for business analysts to possess emotional intelligence and offer valuable advice to both clients and teams. This suggests a meaning is that BAs should not only understand the technical aspects but also demonstrate empathy, emotional awareness, and the ability to guide stakeholders through the transformation process effectively:

> *"Being able to communicate, a bit of emotional intelligence... to give advice to clients and to the team about a way forward."*

Participant 8 emphasizes the role of BAs in asking challenging questions to ensure that business goals are achieved. The underlying meaning is that BAs should be able to critically analyse requirements, challenge assumptions, and drive alignment between project objectives and desired outcomes.:

> *"We are there to ask the difficult questions in the beginning so that the business goal is made into a realization in the end."*

Participant 12 emphasizes strong communication skills as the thread that connects the entire digital transformation initiative and all the parties involved. The underlying meaning is that effective communication serves as the foundation for collaboration, understanding, and successful project outcomes:

> *"Strong communication skills... as the thread that connects the entire initiative and all the parties involved."*

Participant 9 highlights the integral role of communication in aligning stakeholders with the bigger picture of the project. This could mean that effective communication acts as a unifying element, connecting all parties involved and facilitating a shared understanding of project goals and how everyone contributes to them.

> *"Communication is key... getting everybody on the same page to see what the bigger picture is and how we all fit into it." P9*

Participants 2, 3, 4, and 5 highlight the need for BAs to adapt their communication style to different audiences and effectively convey requirements. The underlying meaning is that BAs should possess the ability to understand the diverse needs, perspectives, and knowledge levels of various stakeholders and tailor their communication to ensure clear and concise understanding.:

> *"Just demonstrating that you listened goes a long way in the client understanding that you are building a solution for them." P2*

> *"Negotiation is a key strength set of a business analyst... conveying and articulating a problem statement and a solution in the most concrete fashion." P3*

> *"To communicate the requirements and transform that into a solution that is understood by the various stakeholders." P4*

> *"Being able to explain the solution at different levels to different audiences." P5*

Several participants stressed the importance of BAs in managing expectations, adhering to timelines, and effectively communicating with stakeholders. The underlying meaning is that BAs play a critical role in aligning project delivery, stakeholder availability, managing risks, and mitigating potential issues to ensure the project stays on track and meets stakeholders' expectations:

> *"Making sure that we're sticking to timelines... people's availability... managing expectations." P3*

> *"Communicating the delivery has always been a bit of a challenge... communicating exact dates versus an estimated date." P4*

"Making sure the customer understands what the optimal requirements are... making sure the developers or the technical team understands what needs to be delivered." P6

"Managing risks from a mitigation standpoint and communicating with various stakeholders." P10

4.3.2 Theme 2: Role of business analysts in digital transformation Imperatives

The participants involvement spans various project types addressing challenges and adapting to different organisational contexts. This diversity is shown in Table 4.5 below:

Table 4.5: Examples of digital transformation initiatives in which participants have been involved.

Participant	Types of DT Initiatives	Industry/Sector
Participant 1	Transition from call-based lead generation to online activations	Financial services (insurance and healthcare)
Participant 2	Migration to digital systems, online storage, and remote access	Financial services (insurance)
Participant 3	Digitization of client processes for faster service delivery	Mining
Participant 4	Enhancement of websites and mobile applications, enabling self-service initiatives	Financial services (banking)

Participant 5	Automation of onboarding processes, digitization of reinsurance calculations	Financial services (insurance)
Participant 6	Overall digital transformation for a financial institute, transformation of online digital experience	Financial services (banking)
Participant 8	Utilization of project management tools, advancement of business goals through digital tools	Financial services (insurance and healthcare)
Participant 9	Utilization of platforms for rewards and healthier initiatives	Financial services (insurance and healthcare)
Participant 10	Improvement of business processes and innovation through technology	Mining
Participant 11	Optimization of processes, transformation of manual workflows into digital workflows	Agriculture
Participant 12	Transition from paper-based processes to digital solutions	Mining

1. Financial services (insurance, health and banking): Participants 1, 2, 4, 5, 6, 8, and 9 are from the financial services industry. Their DT initiatives focus on improving customer experiences, streamlining processes, and leveraging digital tools for more efficient operations.
2. Mining: Participants 3, 10, and 12 are from the mining industry. Their DT initiatives aim to digitize operations and optimize processes. This includes

digitizing client processes for faster service delivery, leveraging technology for innovation and business process improvement, and transitioning from paper-based processes to digital solutions. The mining industry is increasingly adopting digital technologies to improve efficiency, safety, and sustainability in mining operations.

3. Agriculture: Participant 11 represents the agriculture sector, where the focus is on optimizing processes and transforming manual workflows into digital workflows. This digital transformation initiative aims to increase productivity, reduce manual errors, and improve overall efficiency in agricultural operations. The integration of technology in agriculture has the potential to revolutionize farming practices, enabling better decision-making and resource management.

Participants mostly understood DT as modernisation – moving from inefficient manual processes to smooth digital automated systems. In short, DT is understood as leveraging technology to enhance business. This relationship is depicted in Figure 4.6 below.

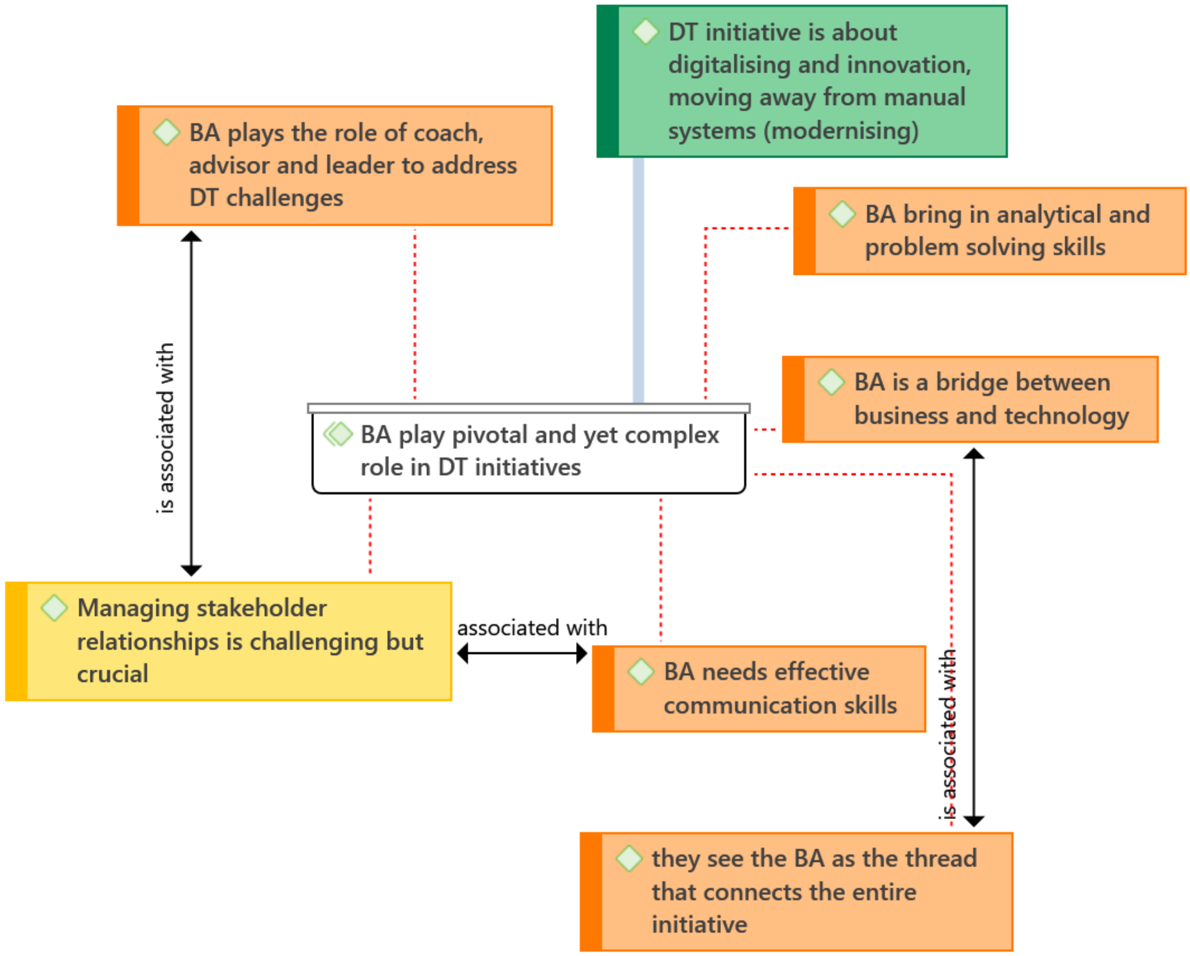

Figure 4.6: Diagram showing understanding of digital transformation.

Participant 11 emphasises the importance of optimising processes to allow individuals to focus on value-adding activities instead of time-consuming tasks. The participant suggests that digital transformation should involve streamlining manual processes and implementing digital workflows to free up time and enable people to focus on more valuable tasks:

> *"So there's a lot of work that that's done around that piece to make sure people understand that that you're here to help and you're here to optimize the process so they can focus on things that actually add value as opposed to just spending time on stuff that's just time consuming for the sake of being time-consuming."*

> *"There's a lot manual processes and they would transform this into a digital workflow to help free up time from these people stuck in doing admin so*

they can do more value add services as opposed to just doing a lot of manual boring and time consuming efforts that can be taken care of much quicker much more efficiently by putting systems into place”

The focus of this participant is on enhancing customer interactions and promoting self-service initiatives. They suggest transforming existing software and solutions to provide a better user experience, reduce the need for customer support calls, and enable clients to interact more with digital platforms for tasks like taking up insurance coverage:

“So from a transformation standpoint, I believe that it would be to update existing software or existing solution to a new look and feel and have more information. So enhancement of a website, enhancement of a mobile application. So in this case it is to reduce the need for clients to call the call centre and be able to have more self-service initiatives where the client actually interacts more with the app, in this case to take up take up insurance cover for their vehicles.” P4

Similarly, Participant 2 discusses the migration from manual processes to digital systems, enabling remote access and online storage. They highlight the importance of shifting from manual and paper-based workflows to digital platforms that allow users to perform tasks online, eliminating the need for face-to-face interactions and physical storage of information.

“And then what they are trying to do now is migrating to a system where you don't necessarily have to sit down with someone. So take your sales platform online, take it digital as they say where you're able to just log onto system and do what you would have done by sitting in front of someone before. So it's really I think about taking whatever solutions or the work that you do or the processes that you do within an organisation from a place where it is manual or it involves forms and things that you have to store somewhere, but taking it to a place where it is stored online.”

According to this participant 10, the main goal of digital transformation is to improve business processes and leverage technology for innovation. The participant emphasises the use of technology to enhance existing processes, drive efficiency, and find innovative ways to do business better.

> *"the main goal is to look at how do we improve. You look at the current ways of how the business is being run and how do we then improve and come up with innovation, do things better using technology. Basically it's how do we improve our business processes, how do we do business better using technology."*

Participant 5 highlights the modernization of outdated architecture and infrastructure, as well as the migration to cloud-based systems. They stress the importance of updating existing digital platforms and moving functionality to the cloud to improve reliability, scalability, and availability:

> *"So I think at this point we've reached a stage where most organisations have some level of digital platforms, but it's generally built on very outdated architecture and infrastructure. So I think today if you say digital transformation, it's a lot about modernization and moving functionality into clouds." P5*

Similar to Participant 5, this participant discusses modernization and cloud migration. They specifically mention the transformation of paper-based processes into structured digital solutions, emphasizing the importance of eliminating manual processes and utilizing digital tools for improved efficiency.

> *"So the current project that we're on is, it's actually called payments modernization here at a bank (financial institution). So what we're doing is they've got most of their infrastructure on premis and we've built a layer in the cloud between the the mainframes and the front end systems so that we can well firstly to modernise to move things to the cloud so they but mainly for the purpose of them being available 24/7." P12*

> *"So that's also a level of transformation. Moving away from pen and paper and Excel based spreadsheets and just making things more structured." P12*

Participant 6 focuses on utilizing technology to improve individual and business efficiency. They emphasize the importance of adopting technology to keep up with the times and enhance productivity in both personal and business contexts. This interpretation highlights the role of business analysts in digitizing manual, intensive processes using systems and data to reduce turnaround time and enhance client experience:

> *“So it's basically keeping up with times to make sure that you as an individual or business and everything you work with is working with technology to become better at doing things so that you can do more things.” P6*

This participant discusses the digitization of client processes to enable faster service delivery. They describe the transformation of manual and time-consuming processes into digital systems, leading to significant time savings and improved customer experience:

> *“Essentially we had a client base and how they usually structure and do their business with the clients is very manual and intensive to actually get to an endpoint, so everything was digitised with use of systems and data to make the process for the client instead of 30 days you'll be able to give it to them in 2 minutes that service delivery.”P3*

The insights shared by this participant revolve around utilizing information communications technology, project management tools, and digital capabilities to advance business goals. This interpretation emphasizes the use of technology, tools, and digital solutions by business analysts to facilitate seamless operations and support the end-to-end value chain of the business.:

> *“My understanding of digital transformation it is to utilise information communications technologies to do to perform basic operations that the business utilises to complete their end to end value chain”*

> *“So it's just using information for using information communications technologies and tools to actually deliver a seamless work”*

Overall, these interview excerpts highlight various aspects of digital transformation, including process optimization, software transformation, migration to digital systems, innovation through technology, modernization and cloud migration, digitization of client processes, automation, and utilization of information communications technology. Business analysts play a crucial role in driving these digital transformation initiatives within organisations**.**

The participants' experiences reveal an interesting tension between business analysts' ability to manage stakeholder relations and stakeholders' resistance to change. This resistance often arises due to various reasons. The excerpt below captures this tension.

Participant 3's mention of feeling undervalued in past projects indicates a common sentiment among business analysts (BAs) that their role is not always recognised or appreciated. This suggests that BAs may face difficulties in asserting their value and the importance of their contributions to digital transformation initiatives:

> *"I think we do get it a lot too, don't we? Yeah, always like ohh, but we don't really need a BA. And I've actually felt that in my past projects. Yeah, I think I can actually take it on the one that I'm currently on, which I'm moving on from because I do not feel valued."*

Participant 7's discussion of job losses and the moral dilemma associated with traditional processes being replaced highlights the ethical and social implications of digital transformation. This suggests that BAs and other stakeholders involved in digital transformation initiatives may encounter resistance from individuals whose livelihoods depend on traditional processes that may become obsolete.

> *"People pushed back. Obviously there people that were working in the tech departments, there were whole companies that closed down because we no longer processing cheques. So we have that moral thing that OK, a lot of people are going to lose their jobs. So all the problems that we've had have basically been just people that rely on or that need this to work for them to be able to survive."*

Participant 8's mention of sales agents fearing job replacement reflects a common concern among employees when adopting digital solutions. This suggests that employees may perceive digital transformation as a threat to their job security and may resist change as a result.

> *"They [sales agents] were not willing to be open to the process because for them this system was actually going to replace them in the company. So for them it felt as though the system was taking their jobs and replacing their core capability and what they had to contribute to the organisation."*

One participant stressed the significance of change management in facilitating successful digital transformation. Participant 7's reference to selling change as the stakeholders' own idea highlights the need for effective change management strategies to overcome resistance and ensure successful adoption of digital solutions. This indicates that organisations should prioritize change management strategies to ensure smooth transitions and overcome resistance to change.

> *"I even had to go on a brief 2 week course on change management. How to sell change in such a way that the very people that we are against it feel like it was their idea and it's the best thing since sliced bread change management. I cannot stress it enough how necessary it is, especially in environments like that." P7*

Participant 2's mention of fear and discomfort associated with adopting new approaches reflects the underlying fear of the unknown and the lack of confidence in the effectiveness of digital solutions. Participant 4's recognition that older individuals may exhibit more reluctance indicates that age and familiarity with new systems can influence the adoption of digital solutions.

> *"So there is, we've seen that there is a fear to migrate from you know, that world into a new way of doing things and there's general discomfort. "Oh what if it breaks?", "What if it doesn't work?", " Are you sure it's gonna do this or that?"P2*

> *"Old older people would have more reluctance to try something new." P4*

Participant 11's identification of resistance to fundamental changes highlights the challenge of introducing new processes and disrupting established practices. This suggests that the resistance to change may be deeply rooted in the organization's culture and long-standing ways of doing things.

> *"The biggest challenge is always change. You're walking into an organization and you're about to make fundamental changes to the way people have been doing things for 5-10, sometimes even 15 years. So you got a lot of resistance to that."*

Participant 3 and Participant 5 echo similar sentiments highlighting the lack of familiarity with new systems and processes can hinder adoption. This suggests that individuals may resist digital transformation initiatives due to their preference for familiar ways of working and a lack of understanding of the benefits that new technologies can bring.

> *"But then at the end of the day, it's the adoption because we're not used to doing it this way. I think that's the number one challenge." P3*
>
> *"People are fairly resistant to going digital if they've been doing things certain ways. So change management is probably your biggest challenge." P5*

These underlying meanings provide insights into the challenges, concerns, and potential barriers that organisations may face when implementing digital transformation initiatives. Understanding these underlying meanings can help in formulating effective strategies to address resistance, manage change, and promote successful adoption of digital solutions.

The participants highlighted the demanding nature of stakeholder management and the challenges they encounter in effectively engaging and aligning various stakeholders throughout the transformation process.

To establish credibility and build relationships, the participants mentioned the importance of piggybacking on established reputations, as Participant 2 noted below:

> *"So we never send BA by themselves a new one into this world and throw them there and everyone would say "Who's this person? We try and piggyback onto someone's reputation already. You work together with someone if you are new, someone that it's already built their relationship until you get to a place where you build your own relationship and then again if there's someone that the client is not really gelling with because they feel this person is not listening to us or is not doing it for us. We have found that pairing that person up with someone who's reputation with those guys has already been established works."*

Close collaboration with clients and software development teams was emphasized by Participant 10*:*

> *"it's really about working very closely with client and also working very closely with the software development team. Working very hand in hand and also engaging with end users and all the people that are actually involved."*

Effective communication, overcoming language and cultural barriers, was highlighted by Participant 10:

> *"One of the things that I've actually come across, I think this was when I worked on a project with some developers offshore. There's also the language barrier culture differences you know just educating yourself and having a better understanding of those people. I've been making sure that I connect with the team member beyond just work, but even on a personal. Also taking that extra step to not only rely on emails and sending chats I mean, things can be lost in translation. so just, yeah, taking the initiative of, you know, let's jump on a call, let me show you wireframes of what's needed screen sharing."*

Building rapport and relationships with stakeholders were identified as essential by Participant 10:

> *"I think also just building rapport, building that relationship with the stakeholders."*

Engaging with product managers and positioning oneself as an ally was emphasized by Participant 11

> *"So it's my responsibility to manage the relationship with the product manager develop a strategy. So a key thing with the people part of it, it's engagement and rebuilding those relationships. It's 100% that. So you go, you spend time with the different groups of users, you build relationships, understand what their challenges are, understand where they coming from with the existing processes and what they currently doing and position yourself as an ally and you're there to help them."*

To address challenges and promote cooperation, Participant 12 emphasized the importance of facilitating dialogue and aligning stakeholders' goals*:*

> *"it's been about getting people to talk to each other, getting people to understand their overall goal and then make get them to buy into the overall goal and consequently they end up being a bit more agreeable to making certain changes."*

Participant 3 mentioned balancing conflicting demands and managing expectations:

> *"Saying yes to everything is a weakness for BA's. Out of my experience you're trying to keep two sides happy. From a business perspective that wants everything now, but you also know you have the developing team that has only so much capacity. Sometimes it's very hard to balance that, and then it might cost you either the happiness of a client or user, or it could cost you the delivery of the team."*

Participant 5 highlighted overcoming resistance from senior management and involving stakeholders in decision-making processes:

“Often what you'll see is senior management on the client side would be like, “You don’t really have to talk to these guys, we know what to do. We will solve it in the boardroom and then go from there”. And that doesn't work.”

The participants recognised the role of BAs in managing client anxiety, establishing trust, and providing feedback. Participant 6 stated:

> *“The main thing is always establishing legitimacy with the business as a BA you are the front of the team. So you need to make sure that the client is or the customers are very comfortable speaking to you and they trust you as a trusted advisor.”*

> *“And then when the project goes in a certain direction as a BA you need to play this role of making sure that easing the clients anxiety by making sure that we're not going to fail. But also making sure that they're on board with the direction of the project or how the project should be going. To alleviate some of the risk that they may not see, but also just helping them and taking them along in the decision process.”*

Challenges in stakeholder management, such as making difficult decisions and holding people accountable, were acknowledged by Participant 6:

> *“Sometimes I think it's getting the right people to make the decisions and that is always going to be challenging at any company. But getting the right people in the room and making sure that holding people accountable to make decisions, it's very challenging.”*

Obtaining buy-in from influential individuals and regularly engaging with product owners were mentioned by Participant 8:

> *“There were a few sales agents that were very influential or that we're very trusted by the senior management. And those are the ones we approached first to say, hey we are thinking of doing this and this is how it's going to help you and your customers would you be willing to take on this particular pilot and be in partaking it so that we can see how it goes. Those were the people who actually helped us drive that initiative as well as help with the*

change management as well as just getting people to adopt the process because like I'm saying, they're very influential. So getting that buy in from the infrastructure team as well as the development team was initially very difficult, but because we had already gained the trust and also got buy in from the top management, it then became easier because they were the ones driving that processes."

The importance of building relationships and keeping stakeholders informed was emphasized by Participant 9*:*

"keeping everyone within the loop and also building the relationships on the other side so that it made it easier to have those kind of chats right, because when they don't know you, it's difficult for them to trust you and want to talk to you about these things. I would say it's building the relationship on the one end and then the other end is keeping everybody on the page on the system side."

Despite the crucial role business analysts (BAs) play in digital transformation initiatives, they face certain weaknesses that need to be acknowledged.

Participants 4 and 12 highlight the challenge faced by BAs in acquiring expertise in multiple domains. The underlying meaning is that BAs are required to have a broad understanding of various areas but may not have the depth of knowledge to provide expert advice or make technical decisions. This weakness suggests that BAs rely on collaboration and input from specialists in specific fields to ensure the accuracy and effectiveness of their work.

"The weakness is that though they are able to sit at the centre, they can't fully become experts in all the fields. So it's a matter of Jack of all trades, master of none. While they are able to express as best as they can for each particular sector. They can't necessarily give point of council in terms of what should be the way forward. In some cases, they would need to make sure that from a technical level that it is agreed upon by somebody from a tech standpoint and in terms of a business level, they can't approve of certain requirements but they would need to have buy-in as well. So

while they will be able to handle a lot of the work itself, they can't become a specialist in everything."

Participant 12 points out that BAs from different backgrounds may lack the technical knowledge necessary to engage in technical discussions effectively. The underlying meaning is that BAs without a technical background may face difficulties understanding and communicating technical requirements, constraints, and possibilities. This weakness implies the importance of having BAs with a solid technical foundation or the need to collaborate closely with technical experts to bridge the knowledge gap.

> *"This isn't one that I find is a problem personally, but I have seen because BAs come from all spheres, you have people with like psych backgrounds who come in and start doing BA work. Sometimes they do not have the technical background to be able to fully engage in these kinds of conversations. I'd say that is one of the biggest weaknesses."*

Participant 8 highlights that BAs are not developers and may lack comprehensive technical knowledge. The underlying meaning is that BAs may not have an in-depth understanding of technical constraints, technologies, and the latest advancements. This weakness suggests that BAs need to rely on technical experts to provide guidance and ensure that the proposed solutions align with technical feasibility and limitations:

> *"Business analysts are not developers. We won't be able to specify that this is the latest dotnet6. We are more about the end product bringing that goal into realisation. So that is a weakness in itself because the technical constraints to build up to that goal we might not be fully aware of and sometimes we might be a little bit over-ambitious because we just trying to make this digital transformation objective a realisation and therefore some of the technical constraints that would actually prohibit or play a role or challenge that particular goal comes into play and you're like "no, but I'm sure there's a way around it". So I think that's a weakness in itself because we are just not technical."*

Participant 4 mentions that clients and stakeholders may have difficulties understanding the role of BAs due to their involvement in multiple areas. The underlying meaning is that the responsibilities and contributions of BAs may not be clearly defined or communicated, leading to confusion and unrealistic expectations. This weakness indicates the need for better clarification and communication of the BA role to stakeholders to ensure their understanding and support.

> *"It's not set in stone, but because they sit in so many places, a lot more is expected of them than what is on paper. Which makes it difficult for clients or for stakeholders to understand exactly what the BA role actually entails."*

Participant 7 highlights the challenge BAs face in being flexible and adaptable when it comes to changing project requirements. The underlying meaning is that BAs may become overly focused on delivering the specified product as initially defined, making it challenging to accommodate changes or adjustments during the project. This weakness suggests the importance of fostering agility and adaptability within the BA role to respond effectively to evolving needs and priorities. Stating,

> *"I feel like because we are so focused on getting the product out the way that it has been specified, it may be a little bit difficult for us to flex and change here and there."*

Overall, these underlying meanings indicate that BAs face challenges related to expertise, technical knowledge, role understanding, and adaptability. Recognizing these weaknesses can help inform strategies to address them and improve the effectiveness of BAs in digital transformation initiatives.

4.3.3 *Theme 3: Perceptions of BAs in DT vary by context and circumstances.*

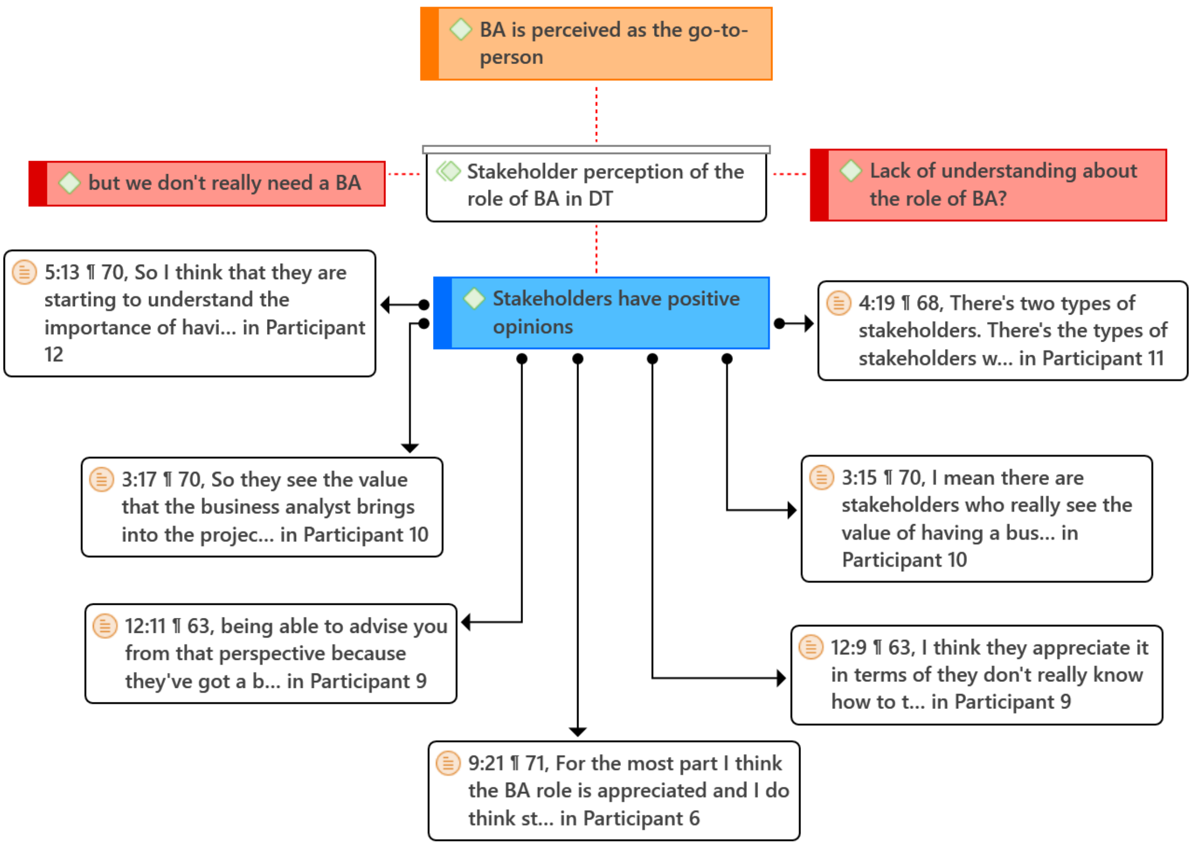

Figure 4.7: Diagram showing quotes on how BAs are perceived.

Stakeholders' perceptions of the value of business analysts in digital transformation initiatives vary depending on the context and circumstances. Figure 4.7 above depicts the many perceptions. Some stakeholders recognise the significance of having a business analyst involved in the project:

Participant 10 acknowledges that certain stakeholders truly see the value of having a business analyst during a digital transformation initiative. This suggests that these stakeholders understand and appreciate the specific contributions that BAs bring to the project, indicating a positive perception of their role.

> *"I mean there are stakeholders who really see the value of having a business analyst during digital transformation initiative for projects."*

Participant 10 mentions that stakeholders understand the value of BAs in terms of cutting down project costs. This suggests that stakeholders recognise the role of BAs in optimizing project efficiency, ensuring that resources are utilized effectively, and potentially reducing overall project expenses.

> *“So they see the value that the business analyst brings into the project and just making sure that you know and also one of the values would be just trying and cutting down on project cost.”*

Participant 11 distinguishes between two types of stakeholders. One type is open-minded and comprehends the value that BAs bring to the table. This indicates that some stakeholders are receptive to the contributions of BAs and understand the value they provide. The example shared by Participant 11 of a product manager quickly grasping the need for two BAs based on project scope and value demonstrates this positive perception.

> *“There's two types of stakeholders. There's the types of stakeholders who are very open and they understand the values that the BA handles. Like I've got a fantastic product manager right now, he's based in Canada and after just one session with him was able to explain to him the reason why I need two BAs on this team given the scope of the project and the value that they bring in.”*

Participant 12 notes that stakeholders are beginning to comprehend the importance of having a business analyst involved in the initial analysis phase before diving into implementation. This suggests a growing recognition of the value that BAs bring to digital transformation initiatives. Stakeholders are understanding the significance of conducting thorough analysis before moving forward with project activities.

> *“So I think that they are starting to understand the importance of having a business analyst come in and spend enough time on analysis before jumping into things.”*

Participant 6 believes that stakeholders appreciate the role of BAs and recognise the significant value they contribute to initiatives like digital transformation. This implies that stakeholders understand the unique skills and expertise that BAs possess, and they value their ability to drive successful transformation projects.

> *"For the most part I think the BA role is appreciated and I do think stakeholders do believe that we add a lot of value in initiatives like digital transformation.*"

Participant 9 highlights that stakeholders may not fully understand how to translate business requirements into system solutions. However, they appreciate the role of BAs in advising and guiding them in this process. This suggests that stakeholders recognise the domain knowledge and expertise of BAs in bridging the gap between business needs and technical solutions, enhancing their perception of the value that BAs bring.

> *"I think they appreciate it in terms of they don't really know how to translate it for systems and that's what the BA is there for."*

> *"being able to advise you from that perspective because they've got a bit more of the domain knowledge. So they basically appreciate the BA."*

Stakeholders often perceive the business analyst (BA) as the go-to person, regardless of their specific area of expertise. According to Participant 6, the role of the BA is crucial in solving problems and guiding others, even in areas outside their expertise. This ability to provide guidance and point stakeholders in the right direction establishes the BA's legitimacy:

> *"It's the role they play as generally the go-to person. It doesn't have to be specific to the area of expertise of the BA, but the BA would know where to go and how to solve the problem and that plays a big role in establishing legitimacy."*

> *"As a BA if someone comes to you and it's not really your of expertise and you can point them in the right direction or help them solve something. It's really good."*

Moreover, stakeholders see the BA as someone they can approach with concerns, thoughts, and ideas, as mentioned by Participant 2:

“So if there is anything that concerns them, any thoughts that they may have, any ideas, they will always be free to come to you to say “Hey I'm thinking of ABCDE”. So they basically see you as a person that will make things happen for them.”

Participant 10 emphasized that BAs are perceived as the main drivers of change and innovation, playing a pivotal role in bringing about positive transformations.

“my understanding is that business analyst I believe that they are actually the main drivers of change, of innovation.”

“as a BA one of your focus again is to try and create a positive change for the organisation and be the key middle person.”

Participant 4 highlighted the unique position of the BA, sitting at the centre and communicating with various individuals across different business units:

“the BA sits in the centre and they communicate with many people, what they have is a shared understanding of the different business units”

The importance of the BA's role is further emphasized by Participant 5,

“If it's a good BA they think that it's the most important person in the project onwards. Because this is the person that runs with the solution in their head and has the answer to the questions.”

With Participant 7 explaining the criticality as follows:

“We trace that those requirements are being followed through the book and we are the ones that quality check because then we are involved in creating the test cases that will verify that whatever we have specified is what is being built. So I feel that the role of the BA is basically the most important one.”

Participant 8 expressed the responsibility BAs bear:

“I think business analyst overall, we carry the burden of motivating for change in order to deliver on the business goals. That is something we

carry on our shoulders. We are there to ask the difficult questions in the beginning so that that business goal is made into a realisation in the end. We are there to make sure that we are the pillar driving those small objectives that build up to the goal.”

Participant 1 described how other teams rely on BAs as a critical partner:

“the go-to-person. I mean that's really what it is. The QA will turn to the BA's around in order to get understanding of that acceptance criteria that supports their tests.”

“developers will also liaise with the BA to further understand anything. And maybe if there is something that hasn't been considered, then the BA would be the go-to-person and they would speak to business to clarify those things”

“*And for business, I mean they're the one person to understand what's happening within the project, how are we delivering.”*

Participants expressed their observations and experiences regarding the understanding and expectations associated with the role of business analysts in digital transformation initiatives.

Participant 12 highlighted the misconception and unrealistic demands placed on business analysts, stating,

"Sometimes it's more of a capacity thing where businesses expect you to do a lot more than you can. They turn to you to find solutions to all problems. Which could be an unreasonable ask, but as a BA, you are here to please the client so you can't always say no. But sometimes you're expected to almost project manage as well, and they expect you to run with dependency management, which is not exactly a BA responsibility. I think that was the main thing, they expect you to work magic."

Participant 4 emphasized the ambiguity surrounding the BA role, stating, *"It's not set in stone, but because they sit in so many places, a lot more is expected of them than what is on paper. Which makes it difficult for clients or for stakeholders to understand exactly what the BA role actually entails."*

Participant 10 echoed this sentiment, adding,

"So I think there's definitely fair value. But I think there's still just a fair amount of stakeholders who still struggle to understand the role of BA."

Participant 4 further elaborated on the challenges faced in clarifying the BA role to stakeholders, noting,

"The BA role from a stakeholder standpoint is more on the lines of they know what BA is supposed to do, however, once it comes to the actual day-to-day, the hats always change. So on paper, the roles are clearly defined versus when a stakeholder would actually have to query or ask what this person does."

This sentiment was reinforced by Participant 6, who shared an instance where the BA was seen as a blocker in the project due to a lack of alignment with certain stakeholders.

To address the varied perceptions and ensure a consistent understanding, Participant 4 mentioned the importance of defining the BA role at different levels, stating,

"So what we've previously done, at a team level we've come up with roles and expectations of the BA, and then at a cross-team level and at an organisational level, the role has also been defined and agreed upon."

Additionally, Participant 4 highlighted collaborative efforts among BAs from different business units to establish a unified approach, stating,

"So much so that different BAs from different business units have got together to define what is it that you do as a BA in your space and sat together and set a uniformed approach that will be taken toward the role of a BA. So there have been certain agreements, alignments that have been put into place between different teams."

Participant 5 noted the existence of different types of BAs, stating,

> *"And I think there are two types of BAs which you get, like you get business-oriented BAs and you get more system analyst BAs who understand functional design."*

Participant 7 expressed a mixed perception of the BA role, with some appreciating their value while others perceiving them as a nuisance, stating,

> *"So I often feel that most people think that our role, while some people appreciate our role and see the value that we add in terms of making things clear so that the developers develop exactly what is specified. There are many who just see us as a nuisance and who think that they would rather just walk over to the developer's desk and tell the developer what they want in."*

These quotes illustrate the diverse understandings and challenges associated with the role of business analysts in digital transformation, underscoring the need for enhanced clarity and communication to align stakeholders' perception.

4.3.4 Theme 4: Inadequate Prominence of Business Analysts in DT

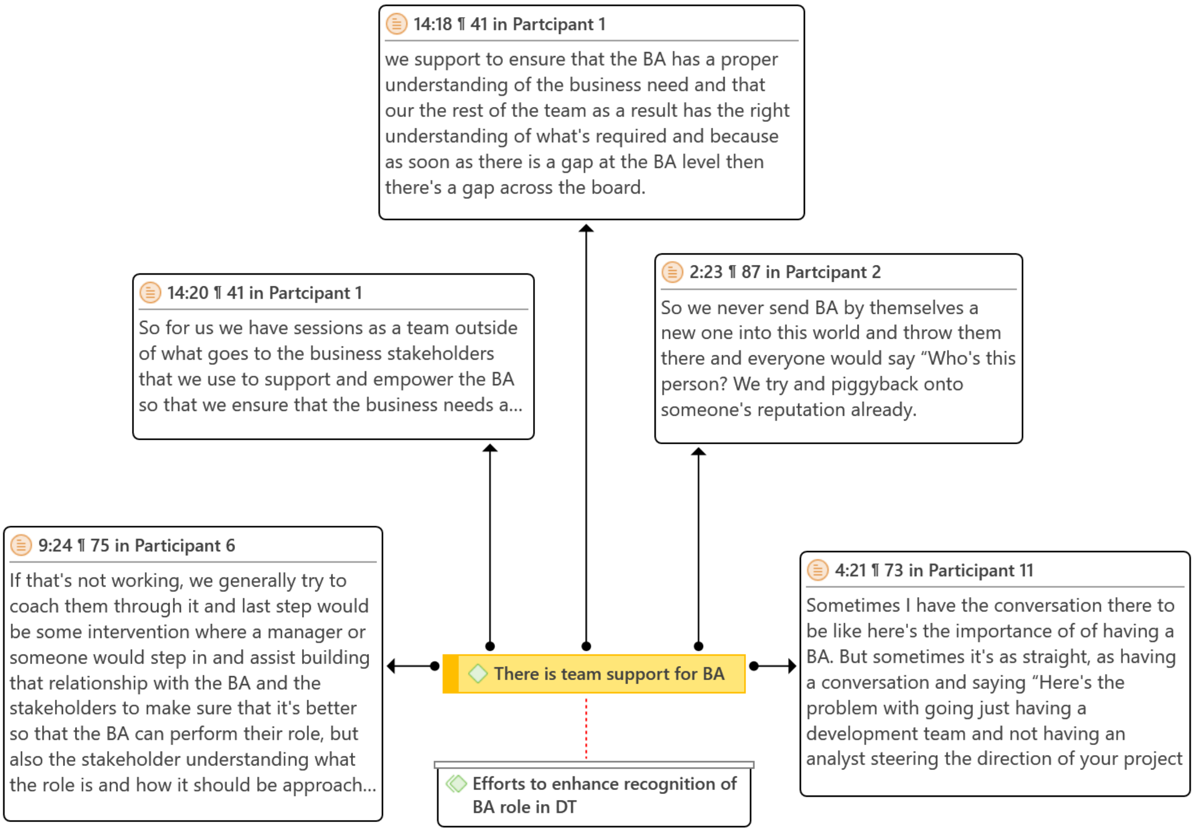

Figure 4.8: Diagram showing recognition of the BA role.

BAs work as a team and support each other as may be necessary. Figure 4.8 above highlights the participants quotes on how BAs support each other. Participant 2 emphasized the collaborative nature of the business analyst role, stating,

> *"So we never send BA by themselves a new one into this world and throw them there and everyone would say 'Who's this person? We try and piggyback onto someone's reputation already."*

This highlights the importance of leveraging the reputation and expertise of experienced team members to support the business analyst's integration into projects.

Furthermore, Participant 2 expressed the team-oriented perspective, stating, *"This helps to emphasize that whatever it is that I'm doing as the person that you know. I'm not doing it in isolation. This is a team thing. Our view or our ways of work are team wide."*

This quote underscores the collaborative nature of the work and reinforces the idea that successful digital transformation requires a collective effort from the entire team.

> “This helps to emphasise that whatever it is that I'm doing as the person that you know. I'm not doing it in isolation. This is a team thing. Our view or our ways of work are team wide.”

Participant 6 highlighted the support provided to business analysts, explaining,

". . .we generally try to coach them through it and last step would be some intervention where a manager or someone would step in and assist building that relationship with the BA and the stakeholders to make sure that it's better so that the BA can perform their role, but also the stakeholder understanding what the role is and how it should be approached there."

This demonstrates the commitment to helping business analysts navigate their role and ensure effective stakeholder engagement.

Participant 1 emphasized the team's support in understanding and meeting business needs, stating,

"We are a Scrum team specifically the team galvanized to support the BA. We support to ensure that the BA has a proper understanding of the business need and that our the rest of the team as a result has the right understanding of what's required. . . we have sessions as a team outside of what goes to the business stakeholders that we use to support and empower the BA. . . so that the business needs are being met and understood."

This highlights the collaborative efforts within the team to empower the business analyst and ensure a shared understanding of the business requirements.

Participant 9 emphasized the supportive measures for business analysts, stating,

> *"I would try to help the person. . . create opportunities for them to practice and improve those skills. . . giving them some sort of training or getting them a senior that can actually mentor them and give them that guidance and assistance."*

This quote highlights the importance of providing support, training, and mentorship to business analysts to enhance their skills and capabilities.

Participant 11 highlighted the importance of engaging stakeholders and emphasizing the value of having a business analyst (BA) on board. They stated,

> *"Sometimes I have the conversation there to be like here's the importance of having a BA. But sometimes it's as straightforward as having a conversation and saying, 'Here's the problem with going just having a development team and not having an analyst steering the direction of your project."*

This indicates that advocating for the presence of a BA and explaining the benefits they bring is crucial.

Moreover, Participant 11 shared a specific example where their efforts to promote the role of BAs were successful. They stated,

> *"So advocating for a BA, explaining to stakeholders about different experiences and challenges, other products now the clients have had and the value that the BA has added in for that has been beneficial for them. It's funny because we had a round of cost-cutting recently at the client, and I had two to three BAs on the team, but I didn't lose a single BA. Because of this type of motivation and because of the value that they've seen from having a BA with a team."*

This demonstrates the tangible value that BAs bring to projects and how their contributions can outweigh cost-cutting considerations.

Participant 3 also highlighted the importance of building processes and ensuring value-added recommendations as part of their role as a BA. They mentioned,

> *"So my first step is obviously to ensure building processes in the team, ensuring that my recommendations are of the best and of value add to the team."*

This further supports the notion that BAs actively contribute to project success by implementing effective processes and delivering valuable recommendations.

4.4 Summary of the findings

The findings reveal several important themes regarding the role of BAs in delivering successful DT initiatives. The first theme focuses on the role of BAs as a bridge between the business and technology realms. The participants highlighted the crucial function of BAs as intermediaries, aligning business goals with technology solutions. In addition, they emphasized the significance of technical knowledge and effective communication skills for BAs in fulfilling their role effectively.

In the second theme, the participants demonstrated a clear understanding of digital transformation as the modernization of processes through the adoption of digital technologies. BAs were recognised as playing a pivotal role in various initiatives, such as transitioning to digital workflows and enhancing customer experiences. However, the participants also acknowledged challenges such as stakeholder resistance and the need for change management and stakeholder engagement in driving successful digital transformation.

The third theme delves into stakeholders' perceptions of BAs in DT initiatives. The findings revealed a mixed reception, with some stakeholders recognizing and appreciating the contributions of BAs, while others held misconceptions about their role. To address this, efforts were made to enhance clarity and communication, including the definition of the BA role at different levels and aligning stakeholders' understanding.

Lastly, the study highlighted the collaborative nature of the BA role and the importance of support within the team. Collaboration, support, coaching, and training were identified as essential factors for successfully integrating BAs into projects. Additionally, advocacy for the role of BAs and active stakeholder engagement played a crucial role in highlighting their value.

Overall, these findings shed light on the multifaceted nature of the BA role in digital transformation initiatives, emphasizing the importance of their skills, understanding, and collaborative efforts within the team and with stakeholders. By addressing the challenges and leveraging the opportunities identified in these themes, organisations can enhance the effectiveness of BAs in delivering successful digital transformation initiatives.

Table 4.6 shows which sub-research questions were addressed under which themes.

Table 4.6: Table showing how themes relate to research sub-questions.

	Sub-research Questions (RQ1 -RQ5)				
Themes	RQ1	RQ2	RQ3	RQ4	RQ5
Theme 1	✓	✓			
Theme 2		✓	✓		
Theme 3				✓	
Theme 4				✓	✓

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 Introduction

This chapter comprehensively discusses the findings obtained from the data analysis, focusing on the key themes that emerged from the study. It highlights the implications, significance, and potential applications of the findings. The previous chapters explored in-depth the role of business analysts (BAs) in delivering successful digital transformation (DT) initiatives and analysed the participants' perspectives and experiences.

The primary objective of this chapter is to provide a thorough understanding of the main themes, which serve as the foundation for exploring the complexities and nuances surrounding the BA role in the context of digital transformation. By examining and discussing these themes in depth, the researcher aims to gain insights into the various aspects that influence the effectiveness of BAs and their contributions to successful DT initiatives.

The chapter is organised into sections, each focusing on one of the identified themes. Within each section, the researcher provides a comprehensive analysis of the findings, drawing upon relevant literature, theoretical frameworks, and conceptual models. This approach helps contextualise the findings within the existing knowledge and theoretical perspectives, enriching the understanding of the BA role in the context of DT.

Additionally, the researcher explores the implications of the findings for practice and propose recommendations for organisations to enhance their digital transformation efforts. By critically examining the challenges, opportunities, and variations in perceptions and practices surrounding the BA role, the researcher aims to provide valuable insights and practical guidance for both practitioners and researchers in the field.

Importantly, this chapter represents the culmination of an extensive research process, including data collection, analysis, and interpretation. The findings are derived from the rich perspectives and experiences of the study participants, providing a comprehensive view of the BA role in delivering successful DT initiatives. The discussion is guided by the research questions and objectives established at the outset of the study, ensuring coherence and relevance throughout the analysis.

In conclusion, this chapter serves as a platform for a comprehensive discussion and interpretation of the findings, offering valuable insights into the role of BAs in the context of DT. By exploring the identified themes, their implications, and practical recommendations, we contribute to the existing body of knowledge and provide a foundation for further research and exploration in this dynamic and rapidly evolving field.

5.2 Discussion

This chapter explores the implications of the findings, discuss their significance, and provide insights into the role of business analysts (BAs) in delivering successful digital transformation initiatives.

5.2.1 Theme 1: Business analyst as a bridge between business and technology.

Theme 1 focuses on the conceptualisation of the business analyst's role as a bridge between business and technology. It addresses the first research question:

RQ1: "What is the current understanding of the role of business analysts within the organisation regarding their contributions to digital transformation initiatives?"

This research question focuses on exploring the current understanding of the role of business analysts (BAs) and their contribution to digital transformation initiatives within organisations. The findings from the participants' perspectives shed light on this understanding by highlighting various aspects of BAs' role in digital transformation.

The participants had a shared understanding, emphasising that BAs play a pivotal role as intermediaries and connectors within the organisation. They act as bridges between different stakeholders, such as clients, project teams, testing teams, and delivery teams (Camara et al., 2022). These findings contribute to our understanding of the multifaceted roles of BAs in project settings. They also indicate that BAs facilitate the exchange of information, requirements, and feedback, ensuring effective and smooth collaboration and coordination among different parties involved in the project. Their role is geared toward bridging communication gaps between the business and IT teams (Harris & Clark, 2023).

However, the type of intermediary role that BAs played depended on the project methodology or framework adopted by the organisation. Some participants indicated that they find themselves playing scrum master roles and project leads and sometimes have to put on the product owner hat. Again, we reiterated the multiple dimensions of the BA role. From the findings, it was also evident that BAs considered themselves as “jack of all trades”, suggesting that because the role is broadly defined, they were expected to take on any role that is required of them. This is supported by the literature, where Madampe et al. (2020) mention the challenges faced by business analysts, specifically in agile environments. The role of business analysts may not be fully utilised, leading to a drop in their contentment.

Participants also noted that their understanding of both technical aspects and business requirements enabled them to align technological solutions with the organisation’s strategic objectives. Thus, they can identify the gaps and recommend solutions to those gaps. This is in line with Pillay (2018), who asserts that consultants should be able to come in and make recommendations that help organisations reengineer their business processes to help them optimise performance.

The top skills that would help the BA excel in their job were communication and technical understanding. All participants seemed to agree that their technical ability or understanding enabled them to have a deeper understanding of organisational technical capabilities, which helped them gauge the technological maturity or lack thereof of the organisation. This allows them to make better-informed decisions when recommending any technological solution as well as advise on which would be suitable for the problem at hand. With a technical understanding, they can communicate and relay the technical requirements better to developers and guide the development of the solution (Venkatesh et al., 2019; Zeerak et al., 2023).

The participants also expressed that the BAs' limited technical understanding may hamper the progress or success of a DT initiative, stating that in as much as there are no developers, BAs are responsible for seeing the DT initiative through. Therefore, the lack of technical understanding may limit their awareness of technical constraints and requirements. This may be seen as a weakness, supporting Verma et al. (2022) that, among other professions, BAs require technical and computing skills along with soft skills for certain industries. The technical aspect is also contrary to the literature, which does not identify. Technical expertise is a core competency that a BA should have for them to perform their role; instead, the literature states that a technical business analyst is a role in itself (Harris & Clark, 2023).

While the findings indicate that technical knowledge may not be mandatory for all BAs, it is generally considered beneficial and enhances their effectiveness in various aspects of their roles. The participants stressed that acquiring technical expertise enables smoother project execution, better comprehension of requirements, and improved communication with technical teams. However, the importance of technical skills may vary depending on the organisation and its specific needs. Some participants mentioned that the organisation preferred to focus on documenting business requirements and forging relationships with their stakeholders.

As much as this technical aspect was mentioned, none of the participants mentioned that technical understanding would assist them to empathise with their technical counterparts better. If the BA acts as a project manager or product owner, it will help them understand the challenges that their technical counterparts experience, empowering them with the information required to manage their expectations when negotiating deadlines. Such experience could also help them when estimating technical pieces of work that are required if the organisation follows a type of framework that requires work or task breakdowns. Marsden and Wittwer (2022) outlined that empathy is seen as valuable but not always considered necessary in engineering; it is particularly relevant in leadership roles and the design process. Therefore, a holistic approach that combines technical understanding with empathy is needed to foster better understanding and collaboration in technical fields.

Other authors believe that technical advancements are one of the challenges that BAs involved in DT initiatives face. This suggests that technical understanding is beneficial for BAs driving DT initiatives.

The ability to communicate is essential. BAs often engage with different stakeholders and, in most cases, find themselves having to adapt their communication style to cater to their audiences. For example, when engaging with business, they often find themselves articulating technical jargon to lamens terms for their business stakeholders to understand and vice versa. Their ability to clearly articulate requirements is vital to ensure that the right solution is delivered (Gobov et al., 2020). Along with communication, the participants also highlighted that actively listening to their stakeholders bought them favour. If you refer to a conversation you had with the stakeholder in the past to acknowledge that you have remembered their pain points, this helps build rapport as a BA. Active listening could also be ascribed to the ability of the BA to hear what is not being said by the stakeholder, reading between the lines and being able to take parts of information to create a whole meaning. This suggests that this could encourage stakeholders to have confidence in BA.

From the findings, it appeared that communication was key in helping stakeholders align and that everyone in the room clearly understood the objective and goal of the DT initiative. This is supported by some authors who state that it is one of the key traits that a business analyst should have (Brukhansky & Spilnyk, 2022; Ouanhlee, 2023).

However, what was not explicitly stated by the participants was the differentiation of whether they referred to effective verbal communication or written communication. Because BAs produce artifacts, such as business cases, business requirements specification, and comms in the form of email, their ability to produce these in a way that the intended audience is able to understand the message being conveyed. Additionally, reading cues such as body language could also be a factor in establishing effective communication. In other words, the ability to deduce meaning from something rather than from explicit statements could also be beneficial (Sonteya & Seymour, 2012; Zerbato et al., 2022).

5.2.2 Theme 2: Role of business analysts in DT imperatives.

Theme 2 highlights the pivotal and complex role of business analysts in driving digital transformation initiatives. It relates to both the second and third research questions.

RQ2: "What is the involvement of business analysts in digital transformation initiatives within organisations?"

RQ3: "How effective is the business analyst's role in supporting digital transformation initiatives from the perspective of those involved, and what are the strengths and weaknesses attributed to this role?"

The findings showed that there was a spread of various sectors in which participants were involved. When asked about their understanding of DT, most participants understood it to be modernisation. Moving from inefficient manual processes to smooth digital automated systems.

Different perspectives of DT surfaced from the findings, suggesting that the participants could relate their understanding based on the current change they were involved in. For example, some participants viewed DT from the process domain. Their involvement encompasses mapping out current processes (BPMN) (Zerbato et al., 2022) within a business unit from the unit from which bottlenecks need to be identified. Then, the BA had to collaborate with stakeholders to find ways to improve bottlenecks to streamline these processes. From this experience, it could be inferred that the TO-BE process had to be mapped out as the proposed solution. It could also mean that throughout the discovery of how these processes could be made better, some new ways or out-of-the-box ways were suggested.

Another example of the process domain is customer experience redesign. In mapping out the processes, it may have been discovered that the organisation had to introduce certain capabilities. This would allow the organisation to provide customers with a better experience. One participant mentioned self-service capability, which would allow the customer to take up a new product without having to interact with a call centre agent. This is an example of leveraging technology to gain competitive advantage.

The other aspect of the process domain initiative that emerged in the findings was the automation of mundane repetitive tasks. This suggests that BAs are geared toward improving organisational productivity while enhancing employee satisfaction. By automating tasks, employees can focus more on other value-adding tasks because their time has been freed up.

Another DT perspective that was evident from the findings was technology implementation (Hanelt et al., 2021). Most participants were involved in initiatives requiring new technologies to enable digital capabilities. This finding underscores the fact that many organisations still have legacy infrastructure that may hinder their digital potential. However, market forces, such as the introduction of a new law, could force an organisation to take on a DT initiative, corroborating Rogers (2016), who asserts that before an organisation can transform its operating model, it should adopt new technology. In the previous section, the technical understanding of BAs was discussed; however, it is in this domain that it is relevant if not a prerequisite. This variation underscores the context-dependent nature of the technical knowledge requirements for BAs.

The findings also highlight how BA contributes to the domain of the date strategy for organisations. The BA's involvement in a data migration initiative would be to analyse the current system, perform a feasibility and benefit evaluation, and define the requirements. Hence, Xu et al. (2022) attribute the BAs’ role as having the ability to identify and suggest mitigation of risks derived from data gathered.

In as much as DT initiatives are supposed to benefit the organisation and improve employee satisfaction, BA faces challenges. Participants highlighted that seeing a DT initiative was not easy, especially if the BA came in as a consultant.

The findings showed that the BAs are often met with resistance. Studies on the emotional consequences of lean manufacturing changes show that workers initially experience high levels of uncertainty and stress, leading to resistance to the proposed changes. This resistance is characterised by denial, anger, and bargaining, as workers seek positive elements to cope with the situation (Castillo, 2022). Here, the participants emphasised the importance of buy-in from stakeholders. Based on these findings, resistance can stem from the following:

- It works, why fix it? Mindset –This is where the BA is trying to sell the change, but the stakeholders do not see the need for the change. Lack of confidence in the effectiveness of DT.
- Fear of job loss/becoming irrelevant: Some stakeholders choose to withhold knowledge to protect their jobs. Participants provided an example of sales agents who did not want to articulate their process end-to-end for this to be documented and improved on.
- Change not being communicated from top-down. The findings revealed that top management would just call-in consultants to implement change without communicating this to the people on the ground first.

Evidently, this is where the BA's role becomes more complex as change drivers; they normally find themselves advocating for change. The findings also indicated that BAs understand that bringing along the people on the journey was an important aspect of DT, verifying studies on the importance of involving people during digital transformation initiatives (Castillo, 2022; Kane, 2019). Castillo (2022) and Kane (2019b) emphasised the "human factor" and the power of empathy. Furthermore, they argued that people are key to successful digital transformation. This perspective aligns with the sociotechnical perspective, which emphasises the importance of considering both social and technical factors in digital transformation. The study revealed that by engaging with their stakeholders, BAs won the battle by putting people first. By positioning themselves as allies of influential stakeholders, the BAs were able to do their jobs effectively. In the context of employee intentions to learn and adopt digital technology, proactive and reactive upskilling and reskilling of employees, along with their innovativeness and risk-taking ability, are dynamic capabilities that contribute to the success of digital transformation (Chaudhuri et al., 2023)

What stood out from these findings was that stakeholder management was demanding. Participants would normally find themselves conflicted in cases where one stakeholder required something different from another equally important stakeholder. They found this to be a challenge, especially regarding decision making and holding people accountable. They often found themselves managing client anxiety. Furthermore, they emphasised the need to establish legitimacy, build comfort, trust stakeholders, and position themselves as trusted advisors. is that BA mitigates risk and ensures stakeholder satisfaction by alleviating stakeholders' anxiety and involving them in the decision-making process.

A finding that stood out was that the BA found themselves in a remote working setting. Close collaboration to work hand in hand with stakeholders was emphasised, particularly in overcoming language and cultural barriers. The building of relationships beyond work and the use of various communication channels, such as calls, screen sharing, and virtual boards, were highlighted as some of the ways used by BAs to avoid misunderstanding. This approach fostered trust and credibility. Another challenge that pointed out as a result of the remote work setting was that BA's found themselves having to come up with ways to get the audience to engage. When conducting virtual requirements collection workshops, getting people to talk to was a mission. BA's found that "ice-beakers'-mechanism to get people to bring their guard down to talk–helped them a lot. This facilitation of dialogue and aligning goals addressed the challenge of balancing business expectations with development team capacity and negotiating scope and delivery deadlines.

By keeping everyone informed and on the same page, BA can enhance collaboration and support transformation.

Participants identified several weaknesses in the role of business analysts (BAs) within digital transformation initiatives. First, BAs face limitations in their expertise and specialisation, as they cannot become experts in all fields. Although they can express requirements from different sectors, they may lack specialised guidance and technical expertise, necessitating collaboration with domain experts. Second, BAs without a technical background may struggle to engage in technical conversations and understand technical constraints, thereby highlighting the importance of a balanced skill set within the BA role (Mukozho & Seymour, 2020). Additionally, BAs may have limited detailed technical knowledge and overlook certain constraints, thus emphasising the need for collaboration with technical experts. Misunderstandings about the role of BAs can lead to unclear expectations from stakeholders, requiring clarification and education regarding the role's responsibilities. Finally, BAs may encounter difficulties in adapting to changes during project execution, emphasising the importance of agility and adaptability. Addressing these weaknesses requires a collaborative approach, continuous skill development, and clear communication to maximise BA effectiveness in driving successful digital transformation initiatives.

Another finding that stood out was that none of the participants recognised the DT initiatives as a journey or long-term project, as highlighted in the literature. This suggests that the participants did not fully comprehend the digital transformation.

5.2.3 Theme 3: Perceptions of BAs in DT vary by context and circumstances.

Theme 3, which emphasises the varying perceptions of the business analyst's role in digital transformation, corresponds to the fourth research question, examining stakeholder perspectives:

RQ4: "How do stakeholders within an organisation perceive the role and contribution of business analysts in digital transformation initiatives?"

The findings highlight that stakeholders may not fully understand how to translate business requirements into system solutions, and this is where BAs bridge the gap. This is in line with Ouanhlee (2023), who states that stakeholders appreciate BAs for their ability to advise and guide them in translating their business needs into viable system solutions. This highlights the importance of BAs' domain knowledge and its role in facilitating effective communication and understanding between stakeholders and technical teams.

Something that stood out from the findings was that stakeholders perceive BAs as approachable individuals with whom they can freely share concerns, thoughts, and ideas, reiterating (Ouanhlee, 2023), who emphasises that BAs are viewed as catalysts for making things happen. Moreover, BAs are seen as the main drivers of change and innovation and are responsible for creating positive transformations within the organisation. Their unique position at the centre allows them to communicate with various individuals across different business units, fostering shared understanding. However, being at the centre was something that was brought up by some participants, emphasising that this made it difficult for them to be specialists in specific domains, as they had to know when they needed to be in detail when they needed to see the forest in the trees.

The findings showed that stakeholders viewed BAs as go-to persons, problem solvers, and drivers of change. Furthermore, the BAs expressed that stakeholders rely on them as trusted resources, recognising their ability to guide and provide solutions beyond their immediate areas of expertise. The findings emphasise the criticality of the BA's role in achieving project success and driving organisational objectives (Gobov et al., 2020; Parviainen et al., 2017). Participants mentioned that they often bore the responsibility of motivating change, asking difficult questions, and ensuring the realisation of business goals. Being at the centre was a unique position that allowed them to foster shared understanding, coordinate project activities, and verify requirements. The criticality of recognising and leveraging the expertise of BAs in achieving successful digital transformations within organisations is highlighted in the findings and is supported by Kadenic and Tambo (2023).

Another interesting view that emerged from the findings is the misconceptions and unrealistic demands placed on BAs. The participants noted that businesses often expect BAs to address all problems and find solutions beyond their capacity. This places undue pressure on BAs, who are expected to please clients and fulfil unrealistic expectations. Some participants mentioned that BAs are sometimes expected to undertake project management tasks and handle dependency management, which may not align with their core responsibilities. This finding indicates a lack of clarity regarding the specific responsibilities and boundaries of BA's role in DT initiatives (Harris & Clark, 2023).

Participants highlighted that the role of BAs is not well defined and varies depending on the specific context and stakeholders involved. This lack of clarity makes it challenging for clients and stakeholders to fully understand the role of BAs in DT initiatives (Harris & Clark, 2023). Participants mentioned that stakeholders may have an initial understanding of what BAs are supposed to do based on their job descriptions, but in regard to day-to-day activities, the roles and expectations become unclear. This ambiguity can lead to misalignments and confusion within projects.

To address these challenges, participants emphasised the importance of defining the BA role at different levels, including the team, cross-team, and organisational levels. Establishing clear roles and expectations for BAs can help stakeholders understand their responsibilities and contributions to DT initiatives. Additionally, collaborative efforts among BAs from different business units were mentioned as a way to establish a unified approach and ensure consistency in understanding the role of BAs.

The participants also noted the existence of different types of BAs. Some participants mentioned business-oriented BAs that focused on understanding and addressing business requirements, while others mentioned system analyst BAs that specialise in functional design. This finding suggests that BA's role can vary depending on the specific skills and expertise required within the organisation.

Interestingly, there were mixed expectations that the participants expressed around the BA role, while some individuals appreciated the value that BAs bring in terms of clarifying requirements and ensuring developers build exactly what is specified (Brukhansky & Spilnyk, 2022), others perceived BAs as a nuisance and preferred direct communication with developers. This finding highlights the need for effective communication and collaboration among stakeholders to better understand and appreciate the contributions of BAs to DT initiatives.

5.2.4 Theme 4: Inadequate prominence of business analysts in DT

Theme 4 highlights the inadequacy of efforts to recognise the contribution of business analysts in digital transformation, aligns with the fifth research question. It investigates actions taken or being considered to enhance the organisational perception of business analysts and their involvement in digital transformation initiatives:

RQ5: “What actions have been taken or are being considered to enhance the organisational perception of business analysts and their involvement in digital transformation initiatives?”

The findings from the participants’ responses shed light on the crucial role of teamwork and support among BAs. The participants emphasised the collaborative nature of the BA role, highlighting the importance of leveraging the reputation and expertise of experienced team members to facilitate the integration of new BAs into projects. Participants mentioned how they would pair up with a new BA, ensuring a smooth transition of BAs integration into new projects. They also emphasised the team-wide approach, emphasising that the work of BAs is not performed in isolation but as a collective effort. The participants further emphasised the support provided to BAs, including coaching, intervention, and relationship building with stakeholders, all aimed at ensuring effective stakeholder engagement. The findings also highlight the team's role in empowering BAs through shared understanding, sessions to enhance business needs comprehension, and support in meeting those needs. Additionally, the participants recognised the significance of support, training, and mentorship for BAs in enhancing their skills and capabilities.

5.3 Conclusion

This chapter assessed and discussed the findings presented in Chapter 4 by aligning them with the literature review. Overall, the discussion showed that, among other roles, BAs’ main function was intermediary. Evidently, BA is one of the main drivers of change and contributes to the success of DT initiatives. When faced with challenges, they find solutions to navigate the environment. However, the perceptions of other stakeholders within the ecosystem are determined by their understanding of their role. Furthermore, the multifaceted nature of the BA role that brings about the challenges of implementing measures to support them. This is discussed in summary using the 4D model reviewed in the literature.

5.3.1 Context

The analysis showed that BAs are involved in all three key focus areas: technology implementation, process redesign, and customer experience redesign. Here, the BA utilises business process modelling techniques to map out workflows of specific teams or departments to identify inefficiencies. From this exercise, based on capability mapping, recommendations may be made for new technology implementation. To implement this new cutting-edge technology to complement the transformed business models, BA may be required to acquire the necessary knowledge to understand them. This will allow the BA to ensure that the technology is in line with the organisation's strategic objectives. This event can happen at various levels within the organisation, and therefore, the extent of the impact of the DT initiative is highly dependent on the digital maturity of the organisation where the BA will be.

5.3.2 Content

One of the main functions of BAs is to enable valuable changes within the organisation (A. Iiba, 2015). The findings showed that BAs must be smart in terms of how they advocate for change. According to Kane (2019b), people contribute more to the success of DT initiatives than technology does. This means that when faced with resistance, BAs act as change managers to ensure the success of the change. Buy-in from people will ease the burden of managing difficult stakeholders. The BAs add value by understanding the organisational culture and contributing to the development of a change management plan. Among others, this could be done by identifying skills knowledge gap and recommending upskilling or repurposing of employees that will support the DT initiative throughout the organisation (Armstrong & Lee, 2021)

5.3.3 Process

To drive change effectively, BAs need to possess a deep understanding of the current problems and issues within the organisation before moving into the planning phase. The findings indicate that this understanding allows them to identify areas that require improvement and to determine the scope and objectives of the change initiative. This information can be used to evaluate the feasibility of the proposed changes and develop a business case. They assess the potential risks, benefits, and resource requirements associated with implementing the proposed changes (Stjepić et al., 2020) Through careful analysis and stakeholder consultation, BAs can identify the most viable and impactful solutions, ensuring that the proposed changes align with the organisation's goals and objectives. This is where technical understanding is weighted. If the BA understands technological advancements that can help the organisation reach or realise its objectives, it is a win. The need for a wider skill set was also evident, as the BAs felt thinly stretched by playing multiple roles at once.

5.3.4 Outcome

The findings show that BA has contributed to the success of DT initiatives. However, there are mixed views and experiences in this regard. There was a belief that showing the value that the BA adds and educates stakeholders about the role. The perception of the BA’s value add would not be questioned; instead, it would be improved.

The various roles played by BAs in digital transformation initiatives have been clarified by this chapter. The chapter emphasized the value of their bridging role, their participation in numerous DT domains, and the abilities necessary for their success. The next chapter will focus on the practical implications of the findings.

CHAPTER 6: CONCLUSION

6.1 Introduction

The research question aimed to understand the role of business analysts (BAs) in driving successful (DT) initiatives with a specific focus on advisory services. The detailed components of the research question are discussed in Chapter 5, with each question mapped to the emerging themes in the context of the literature review.

The adopted conceptual framework for this study is the context, content, process, and outcomes. This framework provided a detailed framework for comprehending the various facets of business analysts' involvement in DT initiatives. It considers the context-specific elements that define the business analysts’ position, the unique duties and responsibilities they carry out (content), the interaction process with stakeholders and IT teams, and the results achieved through their involvement. The data collected for this study was analysed using a qualitative method of semistructured interviews. These interviews allowed for in-depth exploration of the research questions, which aimed to understand the role of business analysts in driving successful DT initiatives, with a particular emphasis on the advisory services they provide.

The findings of the research and practical recommendations based on the findings and suggestions for future research are outlined in this chapter.

6.2 Summary of findings

Table 6.1: Summary of findings

Research objectives	Findings

1. Current understanding of the role of BAs in DT initiatives	The findings showed that BAs are valued as significant contributors who bridge the gap between business and technology. They have the required ability facilitate effective communication, collaboration, and coordination among stakeholders, playing the role of mediators, connectors, interpreters, and facilitators. However, there is still some confusion and ambiguity over the exact expectations of BAs in DT initiatives. Organizations should focus on defining the role of BAs, setting clear expectations, and encouraging collaboration between BAs and stakeholders to address this issue.
2. Involvement of BAs in DT initiatives within organizations	BAs are perceived as go-to people, problem solvers, and change agents who are crucial for fostering good communication, directing project teams, and ensuring project success.
3. Effectiveness of the BA's role in supporting DT initiatives	Technical expertise is identified as crucial for BAs to improve their efficacy and engage effectively in technical aspects of projects. However, some BAs without technical backgrounds face challenges, indicating the need for professional development plans and hiring procedures to address this variability. BAs may be less adaptable to changes during project execution because their primary focus is on delivering the necessary outputs. Giving BAs the chance to improve their technical expertise and abilities can help them steer successful DT initiatives.

4. Perception of BAs' role by stakeholders in DT initiatives	Stakeholder management is a complex aspect of DT initiatives, requiring relationship building, effective communication, conversation facilitation, and goal alignment. To ensure the success of DT efforts, BAs can overcome challenges and get support from stakeholders.
5. Actions taken to enhance organizational perception of BAs in DT initiatives	Adaptability is identified as the most critical skill for BAs in the dynamic nature of DT. Organizations can support BAs by encouraging continuous learning and providing opportunities for professional development. Leveraging insights from the study can help organizations enhance the effectiveness of BAs, foster collaboration, and navigate the complexities of DT, leading to successful organizational change.

6.3 Conclusions and recommendations

The results show that BAs are valued as significant contributors who link the business and technological worlds. They facilitate effective communication, collaboration, and coordination among stakeholders as mediators, connectors, interpreters, and facilitators. According to the participants, knowing the organisational landscape, matching technological solutions with business goals, and working with developers are all qualities of business analysts that help organisations successfully implement digital transformation initiatives.

BAs are seen by stakeholders as go-to people, problem solvers, and change agents, who are essential to fostering good communication, directing project teams, and guaranteeing project success. Although BA’s function in DT is becoming more widely acknowledged, there is still some confusion and ambiguity over what exactly is expected. Organisations should concentrate on defining the function of the BA, setting up clear expectations, and encouraging collaboration between BAs and stakeholders to address this. Clarity and alignment can help BAs use their talent and knowledge more effectively to spearhead successful digital transformation initiatives.

Technical expertise for BAs was identified as crucial because it improves their efficacy, enabling 'more efficient project execution as well as effective communication and engagement in technical parts of projects. The study identified some of the difficulties faced by BAs without technical backgrounds and the variability in technical comprehension standards across organisational contexts. These observations can guide BAs' professional development plans and hiring procedures.

However, the BAs' function has several shortcomings. As long as BAs sit in the centre of DT initiative activities, they cannot become specialists in every domain, making it difficult to provide specialised advice or technical know-how. Those without technical experience could find it difficult to participate in technical discussions and fully comprehend technical limitations. To avoid misunderstandings and work productively across various areas, it is crucial to have defined roles and clear expectations. Additionally, because BAs are primarily concerned with providing the required output, they may find it challenging to adjust to changes when projects are being conducted. These limitations must be addressed for BAs to be more effective in leading successful digital transformation programs. Organisations should provide opportunities for BAs to develop and enhance their technical knowledge and skills. Training programmes, workshops, and certifications can equip Bas with the necessary technical understanding to effectively engage in technical discussions, comprehend project intricacies, and bridge the gap between business needs and technical implementation.

Additionally, managing stakeholders is a complicated and difficult component of digital transformation initiatives. For stakeholders to be successfully engaged and aligned throughout the change process, relationship building, effective communication, conversation facilitation, and goal alignment are essential. Using these techniques, BAs may overcome obstacles, win support, and help enterprises succeed in their digital transformation initiatives.

Overall, it is evident from the above that the most critical skill for BA is its ability to adapt. Given the dynamic nature of digital transformation, BAs should develop adaptability and flexibility. This includes being open to change, embracing new technologies, and continuously updating their knowledge to remain relevant in an evolving digital landscape. Organisations can support BAs in this regard by encouraging continuous learning and providing opportunities for professional development.

Implications are summarised in a table below to show actionable steps that be taken. Organisations can leverage these insights to enhance the effectiveness of BAs, foster collaboration, and navigate the complexities of digital transformation, ultimately leading to successful organisational change.

Table 1.2: Actionable steps

Implications	Practical Recommendations	Managerial Recommendations	Policy Recommendations
Role Definition	Clearly define and communicate the responsibilities and contributions of business analysts (BAs) in digital transformation (DT) initiatives to all stakeholders.	Create a structure for outlining BAs' responsibilities in DT projects in unambiguous terms, and make sure it is in line with corporate objectives.	Develop organizational policies or guidelines that outline the role and responsibilities of BAs in DT initiatives.

Collaboration and Communication	Foster a culture of collaboration by encouraging regular interactions and knowledge-sharing between BAs and stakeholders involved in DT initiatives.	Provide training and workshops to enhance BAs' communication and interpersonal skills, emphasizing the importance of effective collaboration.	Incorporate collaboration and communication metrics into performance evaluations and reward systems to promote a collaborative work environment.
Technical Expertise	Offer technical training programs, workshops, and certifications to enhance BAs' technical knowledge and skills, ensuring they are equipped to understand and engage in technical discussions.	Incorporate technical expertise as a requirement in BA job descriptions and include technical assessments in the hiring process to ensure proficiency.	Develop policies to support BAs' continuous technical skill development, such as providing dedicated time for learning or allocating resources for training opportunities.
Defined Roles and Expectations	Establish clear and defined roles for BAs within DT initiatives, specifying their responsibilities and areas of	Communicate the roles and expectations of BAs to all stakeholders involved in DT projects to ensure	Develop standardized guidelines or frameworks at the organizational level that define the roles and

	expertise to avoid role ambiguity and conflicts.	a common understanding and alignment.	expectations of BAs in DT initiatives to promote consistency and clarity.
Adaptability and Flexibility	Encourage BAs to embrace change, stay updated with emerging technologies, and continuously enhance their skills through professional development opportunities.	Provide resources and support for BAs to pursue continuous learning and stay informed about the latest trends and advancements in the digital landscape.	Incorporate adaptability and flexibility as desired competencies in BA job descriptions and consider them in performance evaluations and career progression.
Stakeholder Management	Equip BAs with effective relationship-building, communication, and facilitation skills to engage and manage stakeholders throughout the DT process.	Promote a collaborative approach to stakeholder engagement, facilitating regular communication and feedback exchanges between BAs and stakeholders.	Develop policies that recognize and reward BAs for their effective stakeholder management skills and their ability to build and maintain strong relationships.

6.4 Limitations and Suggestions for future research

The study encompasses certain limitations that stem from various aspects of data collection and interpretation. Firstly, these limitations arise due to the primary reliance on participant self-reports, potentially introducing bias or inaccuracies. This implication revolves around participants possibly providing socially acceptable responses or not possessing complete awareness of their own contributions or limitations. Furthermore, the qualitative data had to be interpreted by the researcher prior to analysis, which may have introduced subjectivity and bias. Consequently, the study's results and conclusions can be susceptible to how different researchers interpret the data. The limitations related to data collection methods are supplemented by the mode of interviews conducted. Virtual interviews, as opposed to in-person ones, may restrict the interviewer's ability to assess nonverbal cues, as not all individuals exhibit the same level of articulation and perceptiveness. In contrast, in-person interviews may introduce the potential for bias through the researcher's presence during data collection. This blend of limitations encompasses various dimensions of the study's methodology.

To further enhance the understanding of the role of BA in digital transformation initiatives, the following areas of future research can be explored.

1. **Role of BAs in specific industries:** Investigate the challenges and opportunities faced by BAs in different industries undergoing digital transformation. This research may shed light on industry-specific requirements and help develop industry-specific best practices for BAs.
2. **Impact of emerging technologies:** Analyse the role of BAs in incorporating emerging technologies such as artificial intelligence, blockchain, and the Internet of Things in digital transformation initiatives. This research can explore the challenges and opportunities these technologies present for BAs and how they can effectively integrate them into organisational processes.
3. **Evaluation of BA performance metrics:** Develop and evaluate performance metrics specific to BAs involved in digital transformation initiatives. This research focuses on identifying key performance indicators

(KPIs) that measure the effectiveness and impact of BAs in driving successful digital transformation initiatives.

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APPENDIX A: RESEARCH LETTER

Dear Participant

My name is Refilwe Molekwa. I am a Master of Management student in the field of Digital Business at Wits Business School. As part of my studies, I am required to conduct research. I intend to understand the role of business analyst in delivering successful digital transformation initiatives: an advisory services perspective under the supervision of Nixon Ochara.

As part of this project, I would like to invite you to take part in a Microsoft Teams or Zoom interview. This activity will involve answering questions relating to your experience with organisational perception of the business analyst. With your permission, I would also like to audio record the interview session. Your name and personal identifying information will be removed from the data collected during the interview, and only the researchers will have access to the data. The data will be kept in a secure location and will only be used for the purpose of this study. This recording will be used only for data analysis by myself and my supervisor. It will then be forwarded to the university as proof of research.

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study at any time. If you experience any distress or discomfort at any point in this process, we will stop the interview or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me or my supervisor on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. The data collected from this research project will be stored in the university's database. If you have any concerns or complaints regarding the ethical procedures of this 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,

Refilwe Molekwa

Participant name:

Contact number:

Email address:

Do you consent to participate in this study?

Yes	
No	

Electronic signature:

Please

- ***Indicate your response with an "X"***
- ***Attach an electronic signature***
- ***Forward myself and Nixon Ochara a non-editable PDF version***

Research student:

382097@students.wits.ac.za, 076 095 9090

Supervisor:

Nixon Ochara,

nixon.ochara@wits.ac.za, 011 717 3543

APPENDIX B: INTERVIEW GUIDE

My name is Refilwe. I am a Master of Management student in the field of Digital Business at Wits Business School. As part of my studies, I am required to conduct research. I intend to understand how the role of the business analyst is organisationally perceived concerning the delivery of digital transformation initiatives.

As per the consent letter I sent earlier, I'd like to remind you that you are free to withdraw from the study at any time without any cost to you. Please do answer my questions as best and honest as you can. This session is being recorded and I will only be using it for data analysis and thereafter forward it to the university.

Request verbal consent: Would you still like to continue?

<u>Commence interview</u>

Part A: I would like to first talk about your background so that I can better understand your feedback. This is to ensure that I understand what influences your decision making.

Descriptive data	Question
Gender	1. By observation
Age group	2. Use age bracket such as 20 to 30, 31 to 40 and so on rather than the exact age.
Educational qualification	3. What is your highest qualification? 3.1. What year did you obtain it?
Years in IT industry?	4. For how long you have been working within the IT industry?
Years in software development?	5. For how long you have been in software development?
Job description	6. May you please provide me with an overview of your current role?
Experience	7. For how long you have been in your current role?
Experience looking after teams	8. What experience do you have working with looking after teams?

Understanding of DT	9. What is your understanding of digital transformation initiatives?

Part B: I would like to find out how you understand the role of the business analysts with respect to delivering digital transformation initiatives. This includes their role across the various industries in any project that may or may not include software development.

10. What is your overall understanding of the role of the business analyst within the organization?
11. What are some of the digital transformation initiatives you have worked on in the last 3 years?
12. What challenges have you encountered in implementing these digital transformation initiatives? How did the business analysts contribute towards addressing these challenges?
13. What are the major strengths you have observed about business analysts in supporting digital transformation initiatives?
14. What are the major weaknesses you have observed about business analysts that affect the delivery of digital transformation initiatives?
15. Overall, what are the stakeholders' opinions regarding the role and contribution of the business analyst in digital transformation initiatives?
16. What steps have been taken to improve the organizational perception of the business analyst and their role in digital transformation initiatives?
17. We have reached the end of our interview session, thank you for your time and participation. Do you have any questions for me?

You can reach me by email and cellphone should you have any concerns or think about something at a later stage.

APPENDIX C: CONSISTENCY MATRIX

Research question	Proposition	Interview Questions	Data analysis method
Main question: What is the role of the business analyst in delivering successful digital transformation initiatives?			
What is the current understanding of the role of the business analyst within the organization regarding their contribution to digital transformation initiatives?	The current understanding of the role of the business analyst within the organization regarding their contribution to digital transformation initiatives is unclear	Question 9, 10 and 11	Thematic Analysis
What is the involvement of business analysts in digital transformation initiatives within the organization?	The level of involvement of business analysts in digital transformation initiatives within an organization is a topic of investigation	Question 9, 10 and 12	Thematic Analysis
How effective is the role of the business analyst in supporting digital transformation initiatives, from the perspective of those involved, and what are the strengths and weaknesses attributed to this role?	The perceived strengths and weaknesses of the business analyst in supporting digital transformation initiatives should be identified and analysed.	Question 13, 14 and 15	Thematic Analysis
How do stakeholders within the organization perceive the role and contribution of business analysts in digital transformation initiatives?	The perception of the stakeholders within the organization towards the role and contribution of the business analyst in digital transformation initiatives.	Question 15	Thematic Analysis

What actions have been taken or are being considered to enhance the organizational perception of the business analyst and their involvement in digital transformation initiatives?	The efforts being made or under consideration to better the organizational view and recognition of the business analyst and their contribution in digital transformation initiatives. The improvement of the organizational perception of the business analyst and their role in digital transformation initiatives through current steps taken or under consideration	Question 16	Thematic Analysis